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November 15, 2024

TO: Molly Gardner, Wisconsin Department of Natural Resources

CC: Leland Roberts, Rio Tinto; Steve Donohue, Foth Infrastructure & Environment, LLC; Bill Adams, Red Cap Consulting; Bob Gensemer, Jennifer Lynch, and Ashley Romero, GEI Consultants, Inc.

FR: Nick Glander and Mark Ciardelli, Foth Infrastructure & Environment, LLC

RE: Stream C April – August 2024 Sampling Results Summary
Reclaimed Flambeau Mine, Ladysmith, Wisconsin

1. Introduction

Foth Infrastructure & Environment, LLC (Foth) and GEI Consultants, Inc. (GEI) prepared a plan to evaluate Stream C, located on the Reclaimed Flambeau Mine site in Ladysmith, Wisconsin (WI). Figure 1 provides the location of the Reclaimed Flambeau Mine. The *Stream C Evaluation Work Plan – Revision 2 (Work Plan)* (Foth and GEI, 2024) was submitted to the Wisconsin Department of Natural Resources (Department) on August 30, 2024.

This memorandum presents the activities and results from the spring and summer of 2024 (April through August) Stream C sampling period.

2. Scope of Work

As outlined in the *Work Plan*, the spring and summer scope of work included the following:

- ◆ Flow monitoring
- ◆ Water chemistry

2.1 Flow

Flow monitoring consisted of visual observations and flow rate determination. Visual observations were conducted at a frequency of twice per month from April through June 2024 – prior to increasing the frequency to weekly starting in July using a combination of field notes and photos. The flow inspection forms are provided in Attachment 1.

When there was flow, the flow rate was manually monitored near the mouth of Stream C with a hand-held velocimeter unit, which records velocity and depth at a single location at a stream cross-section and automatically calculates flow rate. The location of flow monitoring near the mouth of Stream C, at SW-STM, was established during the first event based on field observations; and the same location was used during subsequent flow monitoring. Its location is shown on Figure 2.

Flow rates were monitored with a hand-held velocimeter unit at the Highway 27 and Copper Park Lane culverts until dedicated pressure transducers were installed to continuously monitor the pressure/flow. The pressure transducers were installed on April 12, 2024, in the existing staff gauge brackets at the two culverts and were set to record water depth every 15 minutes. Pressure-to-flow conversion was accomplished with a combination of continuous depth monitoring and known flow hydraulics associated with the culvert characteristics using the standard operating procedure (SOP) established in the *Work Plan*.

The results of individual monitoring events are presented in Section 3.

2.2 Water Chemistry

When there was visible surface flow within Stream C, water quality monitoring was completed at 10 locations approximately every 14 days. The monitoring locations are shown on Figure 2. Based on flow conditions, water quality samples were collected twice in May, once in July, and once in August. One duplicate sample was collected during each sampling event. Analytical laboratory reports are provided in Attachment 2, and analytical results are summarized in Table 1.

Field parameters were measured and recorded using a water quality meter. Water samples were collected using a peristaltic pump and new tubing for each sample to minimize the potential for sediment disturbance and cross-contamination between samples following the guidance outlined in the *Work Plan*.

Laboratory analytical activities were performed by Pace Analytical Services (Pace), located in Green Bay, WI. Pace is a WI Admin. Code NR 149-certified laboratory.

Where appropriate, elements of the 2020 *Quality Assurance Project Plan (QAPP)* (Foth, 2020) were utilized to manage quality through all phases of each sampling event, including sample collection, sample custody and transportation, and data validation and management.

3. April to August 2024 Stream C Sampling Event Summaries

3.1 May 8, 2024 Sampling Event

On May 8, 2024, a sampling event was completed following over 2.2 inches of rain over the previous week. Field parameters and surface water samples were collected from the 10 sample locations throughout the day. The field forms are provided in Attachment 3. The collected samples were delivered to Pace for analysis. The analytical report is provided in Attachment 2, and the results are summarized in Table 1.

Flow was noted at the beginning of the sampling event. Velocity measurements were taken at the upstream end of the two culverts and at sample location SW-STM near the confluence of the Flambeau River. This data is provided on the cover page of the field forms in Attachment 3.

On May 9, 2024 Stream C samples were collected for Whole Effluent Toxicity (WET) testing. The analytical report is provided in Attachment 2.

3.2 May 23, 2024 Sampling Event

A second May sampling event was conducted on May 23, 2024, following the recording of 2.61 inches of rain starting on May 22, 2024. The rain occurred overnight, and the sampling

began the following morning. Field parameters and surface water samples were collected from the 10 sample locations. The field forms from the May 23, 2024 sampling event are provided in Attachment 4. The collected samples were delivered to Pace for analysis. The analytical report is provided in Attachment 2, and the results are summarized in Table 1.

3.3 July 24, 2024 Sampling Event

On July 24, 2024, a sampling event was completed following 1.42 inches of rain starting on July 23, 2024. The rain occurred overnight, and the sampling began the following morning. Field parameters and surface water samples were collected from the 10 sample locations. The field forms are provided in Attachment 5. The collected samples were delivered to Pace for analysis. The analytical report is provided in Attachment 2, and the results are summarized in Table 1.

3.4 August 30, 2024 Sampling Event

On August 28, 2024, 0.66 inches of precipitation recorded, along with an additional 1.06 inches of precipitation on August 29 and 30, 2024, provided enough precipitation volume to induce flow throughout Stream C, leading to a sampling event on August 30, 2024. Field parameters and surface water samples were collected from the 10 sample locations. The field forms are provided in Attachment 6. The collected samples were delivered to Pace for analysis. The analytical report is provided in Attachment 2, and the results are summarized in Table 1.

4. Future Sampling Events

Stream C sampling events will continue throughout fall 2024 (September through November) as flow conditions allow. Flow analysis will continue with weekly inspections and data downloads from the dedicated transducers.

5. References

Foth Infrastructure & Environment, LLC, 2020. *Quality Assurance Project Plan: Long-Term Care Monitoring for the Reclaimed Flambeau Mine*. August 2020.

Foth and GEI Consultants, Inc., 2024. *Stream C Evaluation Work Plan – Revision 2*. August 30, 2024.

Attachments:

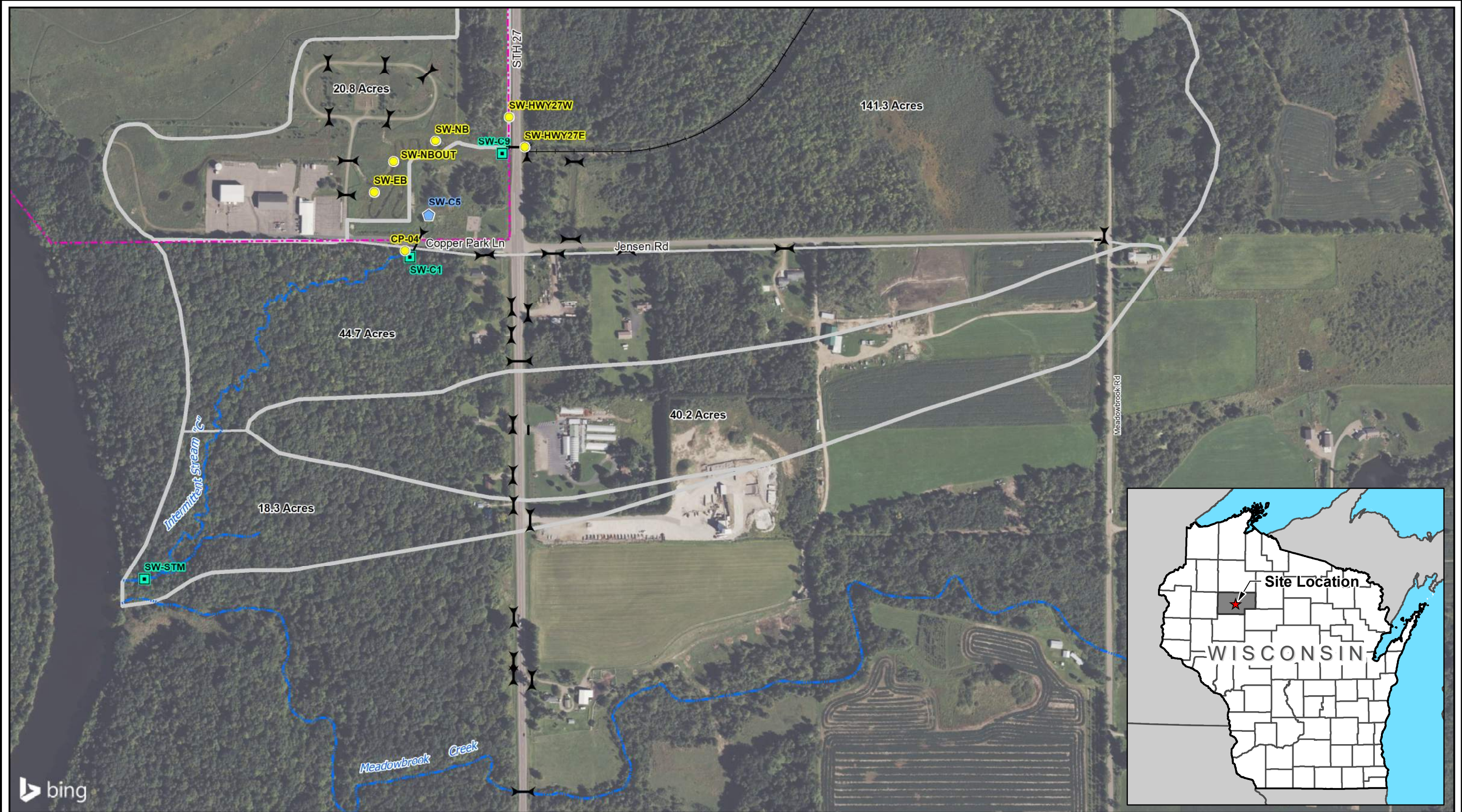
Figures

- Figure 1 Site Location Map
- Figure 2 Stream C Evaluation Locations

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- Table 1 2024 Analytical Results Summary
- Attachment 1 Flow Inspection Forms
- Attachment 2 Pace Laboratory Analytical Reports
- Attachment 3 Field Forms – May 8, 2024
- Attachment 4 Field Forms – May 23, 2024
- Attachment 5 Field Forms – July 24, 2024
- Attachment 6 Field Forms – August 30, 2024

Figures



NOTES:
 1. Base imagery from esri.com, courtesy of the Microsoft Corporation and its data suppliers.
 2. Horizontal datum based on NAD 1983. Horizontal coordinates based on Wisconsin State Plane North (Feet).

LEGEND	
	Intermittent Stream
	Flambeau Project Area
	Intermittent Stream C Drainage Area
	Flow, Visual Observation, Water Quality, WET Test
	Visual Observation, Water Quality, WET Test
	Visual Observation, Water Quality
	Approximate Culvert Location

Foth Infrastructure & Environment, LLC			
REVISED	DATE	BY	DESCRIPTION
PREPARED BY:	MCC2	DATE:	MAR.'23
CHECKED BY:	SVF	DATE:	MAR.'23
APPROVED BY:	SVF	DATE:	MAR.'23

FLAMBEAU MINING COMPANY

FIGURE 2

STREAM C EVALUATION LOCATIONS
 STREAM C EVALUATION WORK PLAN

Scale:

Date: MARCH 2023

Drafted by: DAT

Project No: 17F777.23



Tables

Table 1
Stream C Analytical Results Summary

		Location	CP-04			CP-04			CP-04			CP-04		
		Sample Name	CP-04_20240508			CP-04_20240523			CP-04_20240724			CP-04_20240830		
		Sample Data	5/8/2024			5/23/2024			7/24/2024			8/30/2024		
		Sample Type	Normal			Normal			Normal			Normal		
Parameter	Total / Dissolved	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	154			141								
Alkalinity as CaCO ₃	Dissolved	mg/L	148	M0		143								
Calcium	Total	ug/L	16800			13100								
Calcium	Dissolved	ug/L	19100	D9		14800	D9							
Chloride	Total	mg/L	127			66.0								
Chloride	Dissolved	mg/L	128	D9		69.9	D9							
Copper	Total	ug/L	28.4			28.0			33.7			6.1	J	
Copper	Dissolved	ug/L	22.8			24.7			22.2			5.4	J	
Dissolved Organic Carbon	Dissolved	mg/L	13.0			18.1			24.0			10.5		
Dissolved Oxygen	Total	mg/L	1.78			2.28			1.63			0.9		
Hardness	Total	mg/L	78.8			59.5			61.0			87.8		
Hardness	Dissolved	mg/L	86.9			67.5			62.8			90.4	D9	
Iron	Total	ug/L	720			736								
Iron	Dissolved	ug/L	95.7	J		190	J							
Magnesium	Total	ug/L	8970			6500								
Magnesium	Dissolved	ug/L	9510	D9		7400	D9							
Manganese	Total	ug/L	33.0			95.3								
Manganese	Dissolved	ug/L	22.2			18.1								
pH	Total	s.u.	6.99			7.28			7.19			7.34		
Potassium	Total	ug/L	1670			1400								
Potassium	Dissolved	ug/L	1690	D9		1500	D9							
Redox Potential	Total	mV	168.7			178.7			163.6			165.6		
Sodium	Total	ug/L	126000			78600								
Sodium	Dissolved	ug/L	129000	D9		93500	D9							
Specific Conductance	Total	umhos/cm	736			462			376			288		
Sulfate	Total	mg/L	4.5			2.8	J D3							
Sulfate	Dissolved	mg/L	4.5			< 2.2	U D3							
Sulfide	Total	mg/L	1.6	J		< 1.2	U							
Sulfide	Dissolved	mg/L	< 1.2	U		1.2	J							
Temperature	Total	deg c	15.8			13.02			19.76			18.47		
Total Suspended Solids	Total	mg/L	3.0			4.6								
Zinc	Total	ug/L	< 10.3	U		< 10.3	U		16.6	J		< 10.3	U	
Zinc	Dissolved	ug/L	< 10.3	U		< 10.3	U		< 10.3	U		< 10.3	U	
Comment - Sample Color	Total	None	Stained light brown			Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None	None			None			None			None		
Comment - Sample Turbidity	Total	None	Slight			Slight			Slight			Slight		

Table 1 (continued)

Parameter	Location		SW-C1			SW-C1			SW-C1			SW-C1		
	Total / Dissolved	Sample Name Sample Data Sample Type	SW-C1_20240508 5/8/2024 Normal	Lab Qualifier	Validation Qualifier	SW-C1_20240523 5/23/2024 Normal	Lab Qualifier	Validation Qualifier	SW-C1_20240724 7/24/2024 Normal	Lab Qualifier	Validation Qualifier	SW-C1_20240830 8/30/2024 Normal	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	15.9	J		11.1	J		35.1			29.2		
Alkalinity as CaCO ₃	Dissolved	mg/L	13.0	J		10.8	J		32.2			31.0		
Calcium	Total	ug/L	5150			4910			11700			8920		
Calcium	Dissolved	ug/L	5350	D9		5270	D9		12000	D9		8880		
Chloride	Total	mg/L	8.1			5.4	J D3		29.3			23.0		
Chloride	Dissolved	mg/L	7.6			5.4	J D3		28.4			22.3		
Copper	Total	ug/L	16.8			13.6			11.8			12.9		
Copper	Dissolved	ug/L	14.5			12.5			6.7			8.5		
Dissolved Organic Carbon	Dissolved	mg/L	15.6			16.2			10.3			11.3		
Dissolved Oxygen	Total	mg/L	6.76			3.93			2.68			1.25		
Hardness	Total	mg/L	21.0			19.5			48.8			37.8		
Hardness	Dissolved	mg/L	21.4			21.0			49.7			37.6		
Iron	Total	ug/L	915			914			2320			1740		
Iron	Dissolved	ug/L	324			557			603			427		
Magnesium	Total	ug/L	1980			1770			4730			3760		
Magnesium	Dissolved	ug/L	1960			1900	D9		4790	D9		3750		
Manganese	Total	ug/L	18.8			27.3			562			116		
Manganese	Dissolved	ug/L	9.3			21.2			557			102		
pH	Total	s.u.	6.57			6.41			6.64			6.72		
Potassium	Total	ug/L	792			418	J		556	J		1690		
Potassium	Dissolved	ug/L	741	J		414	J		534	J		1590		
Redox Potential	Total	mV	178.4			174.4			160.7			101.2		
Sodium	Total	ug/L	6870			3590			11200			12700		
Sodium	Dissolved	ug/L	7320	D9		3970	D9		11200			12800	D9	
Specific Conductance	Total	umhos/cm	66			48			159			140		
Sulfate	Total	mg/L	1.5	J		< 2.2	U D3		3.3			2.4		
Sulfate	Dissolved	mg/L	1.4	J		< 2.2	U D3		3.5	D9		2.3		
Sulfide	Total	mg/L	1.2	J		1.8	J		< 1.2	U		< 1.2	U	
Sulfide	Dissolved	mg/L	< 1.2	U		< 1.2	U		< 1.2	U		< 1.2	U	
Temperature	Total	deg c	15.88			13.29			17.33			18.04		
Total Suspended Solids	Total	mg/L	4.0			1.7	T3,PP		6.9			5.3		
Zinc	Total	ug/L	12.8	J		14.7	J		18.7	J		< 10.3	U	
Zinc	Dissolved	ug/L	12.2	J		14.4	J		14.9	J		< 10.3	U	
Comment - Sample Color	Total	None	Stained light brown			Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None	None			None			None			None		
Comment - Sample Turbidity	Total	None	Slight			Slight			Slight			Slight		

Table 1 (continued)

Parameter	Location		SW-C1			SW-C5			SW-C5			SW-C5		
	Total / Dissolved	Sample Name	SW-C1-DUP-20240508	Lab	Validation	SW-C5_20240508	Lab	Validation	SW-C5_20240523	Lab	Validation	SW-C5_20240724	Lab	Validation
	Units	Sample Data	5/8/2024	Qualifier	Qualifier	5/8/2024	Qualifier	Qualifier	5/23/2024	Qualifier	Qualifier	7/24/2024	Qualifier	Qualifier
	Sample Type	Field Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Alkalinity as CaCO ₃	Total	mg/L	17.3	J		16.3	J		10	J		43.2		
Alkalinity as CaCO ₃	Dissolved	mg/L	13.1	J		11.0	J		8.6	J		20.5	J	
Calcium	Total	ug/L	5230			4150			3980			5930		
Calcium	Dissolved	ug/L	5490	D9		4700	D9		4400	D9		6040	D9	
Chloride	Total	mg/L	7.9	M0		6.5			3.6	J M0,D3		12.0		
Chloride	Dissolved	mg/L	7.9			6.4			3.9	J D3		11.4		
Copper	Total	ug/L	17.1			15.9			13.2			12.5		
Copper	Dissolved	ug/L	14.5			13.9			11.8			5.0	J	
Dissolved Organic Carbon	Dissolved	mg/L	15.6			15.8			16.6			11.0		
Dissolved Oxygen	Total	mg/L				6.14			3.37			1.15		
Hardness	Total	mg/L	21.4			17.3			15.7			24.2		
Hardness	Dissolved	mg/L	22.3			18.8			17.3			24.8		
Iron	Total	ug/L	841			866			865			1700		
Iron	Dissolved	ug/L	308			350			528			661		
Magnesium	Total	ug/L	2030			1680			1410			2280		
Magnesium	Dissolved	ug/L	2090	D9		1720	D9		1540	D9		2350	D9	
Manganese	Total	ug/L	20.5			14.3			22.0			571		
Manganese	Dissolved	ug/L	9.2			7.2			16.3			586	D9	
pH	Total	s.u.				6.54			6.17			6.31		
Potassium	Total	ug/L	804			721	J		349	J		377	J	
Potassium	Dissolved	ug/L	784	J		715	J		358	J		378	J	
Redox Potential	Total	mV				232.3			183.4			88		
Sodium	Total	ug/L	7080			5900			2880			7010		
Sodium	Dissolved	ug/L	7210	D9		6470	D9		3130	D9		7240	D9	
Specific Conductance	Total	umhos/cm				56			39			84		
Sulfate	Total	mg/L	1.5	J M0		1.4	J		< 2.2	U M0,D3		2.1		
Sulfate	Dissolved	mg/L	1.5	J		1.3	J		< 2.2	U D3		2.2	D9	
Sulfide	Total	mg/L	< 1.2	U		1.2	J		< 1.2	U		< 1.2	U	
Sulfide	Dissolved	mg/L	< 1.2	U		< 1.2	U		< 1.2	U		< 1.2	U	
Temperature	Total	deg c				15.26			13.52			17.6		
Total Suspended Solids	Total	mg/L	4.1			1.8	T3,PP		1.6	T3,PP		4.8	1q	
Zinc	Total	ug/L	13.8	J		13.9	J		13.9	J		19.3	J	
Zinc	Dissolved	ug/L	< 10.3	U		24.4	J		13.7	J		20.8	J	
Comment - Sample Color	Total	None				Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None				None			None			None		
Comment - Sample Turbidity	Total	None				None			None			None		

Table 1 (continued)

		Location	SW-C5			SW-C5			SW-C9			SW-C9		
		Sample Name	SW-C5_20240830			SW-C5-DUP-20240724			SW-C9_20240508			SW-C9_20240523		
		Sample Data	8/30/2024			7/24/2024			5/8/2024			5/23/2024		
		Sample Type	Normal			Field Duplicate			Normal			Normal		
Parameter	Total / Dissolved	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	23.6	J		18.5	J		10.3	J		< 7.4	U	
Alkalinity as CaCO ₃	Dissolved	mg/L	27.2			19.7	J		< 7.4	U		< 7.4	U	
Calcium	Total	ug/L	7610			6470			3370			3100	M0	
Calcium	Dissolved	ug/L	7410			6100			3460	D9		2890		
Chloride	Total	mg/L	19.0			11.9			3.7			< 3.0	U D3	
Chloride	Dissolved	mg/L	19.4	D9		11.5			3.2			< 3.0	U D3	
Copper	Total	ug/L	12.2			13.1			9.7			6.5		
Copper	Dissolved	ug/L	8.5			5.2	J		8.2			4.6	J	
Dissolved Organic Carbon	Dissolved	mg/L	10.9			10.9			15.8			17.2		
Dissolved Oxygen	Total	mg/L	1.18						4.9			3.88		
Hardness	Total	mg/L	31.5			26.0			13.4			12.0		
Hardness	Dissolved	mg/L	31.2			24.7			13.5			11.5		
Iron	Total	ug/L	1530			1760			1300			1260		
Iron	Dissolved	ug/L	536			690			587			459		
Magnesium	Total	ug/L	3030			2400			1220			1020		
Magnesium	Dissolved	ug/L	3070	D9		2310			1190			1040	D9	
Manganese	Total	ug/L	91.6			598			45.7			57.7		
Manganese	Dissolved	ug/L	84.0			583			24.4			46.6		
pH	Total	s.u.	6.36						6.31			6.15		
Potassium	Total	ug/L	1530			384	J		938			797		
Potassium	Dissolved	ug/L	1530			389	J		854			764	J	
Redox Potential	Total	mV	32.2						174			214.5		
Sodium	Total	ug/L	11100			7250			3910			1840		
Sodium	Dissolved	ug/L	11300	D9		6980			4180	D9		1950	D9	
Specific Conductance	Total	umhos/cm	119						36			26		
Sulfate	Total	mg/L	1.8	J		2.1			0.74	J		< 2.2	U D3	
Sulfate	Dissolved	mg/L	1.9	J		2.2	D9		0.72	J		< 2.2	U D3	
Sulfide	Total	mg/L	< 1.2	U		< 1.2	U		< 1.2	U R1	UJ	< 1.2	U	
Sulfide	Dissolved	mg/L	< 1.2	U		< 1.2	U		< 1.2	U		< 1.2	U	
Temperature	Total	deg c	18.11						11.94			13.69		
Total Suspended Solids	Total	mg/L	3.6			6.4	1q		6.6			3.4		
Zinc	Total	ug/L	11.9	J		21.3	J		15.5	J		15.5	J	
Zinc	Dissolved	ug/L	< 10.3	U		19.6	J		13.6	J		15.4	J	
Comment - Sample Color	Total	None	Stained light brown						Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None	None						None			None		
Comment - Sample Turbidity	Total	None	None						Moderate			Moderate		

Table 1 (continued)

Parameter	Location		SW-C9 SW-C9_20240724 7/24/2024 Normal			SW-C9 SW-C9_20240830 8/30/2024 Normal			SW-C9 SW-C9-DUP-20240523 5/23/2024 Field Duplicate			SW-EB SW-EB_20240508 5/8/2024 N			
	Total / Dissolved	Sample Name Sample Data Sample Type	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total		mg/L	10.3	J		10.7	J		< 7.4	U		33.0		
Alkalinity as CaCO ₃	Dissolved		mg/L	8.4	J		12.0	J		< 7.4	U		31.2		
Calcium	Total		ug/L	2930			2750			3120			8850		
Calcium	Dissolved		ug/L	2860			2630			2950			10500	D9	
Chloride	Total		mg/L	7.9			5.2			3.2	J D3		25.2		
Chloride	Dissolved		mg/L	7.5			5.1	M0		< 3.0	U D3		12.7		
Copper	Total		ug/L	16.6			14.0			6.6			14.1		
Copper	Dissolved		ug/L	11.7			11.4			5.2	J		11.8		
Dissolved Organic Carbon	Dissolved		mg/L	12.3			13.5			17.2			11.0		
Dissolved Oxygen	Total		mg/L	3.16			1.17						7.69		
Hardness	Total		mg/L	11.4			10.8			12.0			36.5		
Hardness	Dissolved		mg/L	11.1			10.1			11.5			43.5		
Iron	Total		ug/L	3100			2610			1290			1170		
Iron	Dissolved		ug/L	960			1000			442			547		
Magnesium	Total		ug/L	990			954			1030			3500		
Magnesium	Dissolved		ug/L	953			859			1010			4220	D9	
Manganese	Total		ug/L	143			117			59.8			29.3		
Manganese	Dissolved		ug/L	90.3			99.6			49.4			8.3		
pH	Total		s.u.	6.29			6.05						7.15		
Potassium	Total		ug/L	668	J		1250			807			1100		
Potassium	Dissolved		ug/L	629	J		1160			764	J		1130	D9	
Redox Potential	Total		mV	89.7			197.6						228.4		
Sodium	Total		ug/L	7420			6410			1890			14800		
Sodium	Dissolved		ug/L	7700	D9		6530	D9		2400	CR		7870		
Specific Conductance	Total		umhos/cm	170			41						121		
Sulfate	Total		mg/L	1.7	J		1.4	J		< 2.2	U D3		2.1		
Sulfate	Dissolved		mg/L	1.6	J		1.3	J M0		< 2.2	U D3		4.5	D9	
Sulfide	Total		mg/L	< 1.2	U		< 1.2	U		< 1.2	U		1.8	J	
Sulfide	Dissolved		mg/L	< 1.2	U		< 1.2	U		< 1.2	U		< 1.2	U	
Temperature	Total		deg c	18.97			18.13						14.86		
Total Suspended Solids	Total		mg/L	9.2			5.2			2.9			3.4		
Zinc	Total		ug/L	< 10.3	U		13.6	J		17.7	J		14.6	J	
Zinc	Dissolved		ug/L	< 10.3	U		13.2	J		18.4	J		< 10.3	U	
Comment - Sample Color	Total		None	Stained light brown			Stained light brown						Stained light brown		
Comment - Sample Odor	Total		None	Slight organic			None						Slight organic		
Comment - Sample Turbidity	Total		None	Slight			Slight						Slight		

Table 1 (continued)

		Location Sample Name Sample Data Sample Type	SW-EB SW-EB_20240523 5/23/2024 N			SW-EB SW-EB_20240724 7/24/2024 N			SW-EB SW-EB_20240830 8/30/2024 N			SW-HWY27E SW-HWY27E_20240508 5/8/2024 N		
Parameter	Total / Dissolved	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	29.4									10	J	
Alkalinity as CaCO ₃	Dissolved	mg/L	31.7									< 7.4	U M0	
Calcium	Total	ug/L	9220									2830		
Calcium	Dissolved	ug/L	10000	D9								3090	D9	
Chloride	Total	mg/L	12.3									2.1		
Chloride	Dissolved	mg/L	11.6									2.5	D9	
Copper	Total	ug/L	11.3			3.7	J		12.4			8.9		
Copper	Dissolved	ug/L	9.2			3.0	J		7.5			7.5		
Dissolved Organic Carbon	Dissolved	mg/L	18.4			12.4			7.7			15.5		
Dissolved Oxygen	Total	mg/L	3.79			1.21			1.22			3.43		
Hardness	Total	mg/L	39.8			54.5			49.8			11.6		
Hardness	Dissolved	mg/L	42.0			56.2			50.3	D9		12.2		
Iron	Total	ug/L	1470									1150		
Iron	Dissolved	ug/L	708									450		
Magnesium	Total	ug/L	4060									1110		
Magnesium	Dissolved	ug/L	4140	D9								1080		
Manganese	Total	ug/L	99.5									24.3		
Manganese	Dissolved	ug/L	92.6									14.5		
pH	Total	s.u.	7.02			6.48			6.81			6.38		
Potassium	Total	ug/L	957									1010		
Potassium	Dissolved	ug/L	954									996		
Redox Potential	Total	mV	161.8			49.2			59.3			177		
Sodium	Total	ug/L	9440									2490		
Sodium	Dissolved	ug/L	9950	D9								2840	D9	
Specific Conductance	Total	umhos/cm	107			214			156			25		
Sulfate	Total	mg/L	< 2.2	U M0								0.84	J	
Sulfate	Dissolved	mg/L	< 2.2	U D3								0.88	J	
Sulfide	Total	mg/L	< 1.2	U								< 1.2	U	
Sulfide	Dissolved	mg/L	< 1.2	U								< 1.2	U	
Temperature	Total	deg c	13.62			21.16			19.51			11.6		
Total Suspended Solids	Total	mg/L	4.1									4.0		
Zinc	Total	ug/L	10.4	J		< 10.3	U		< 10.3	U		12.0	J	
Zinc	Dissolved	ug/L	< 10.3	U		< 10.3	U		< 10.3	U		< 10.3	U	
Comment - Sample Color	Total	None	Stained light brown			Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None	Slight organic			Slight organic			Slight organic			Slight organic		
Comment - Sample Turbidity	Total	None	Slight			Slight			Slight			Moderate		

Table 1 (continued)

		Location Sample Name Sample Data Sample Type	SW-HWY27E SW-HWY27E_20240523 5/23/2024 N			SW-HWY27E SW-HWY27E_20240724 7/24/2024 N			SW-HWY27E SW-HWY27E_20240830 8/30/2024 N			SW-HWY27W SW-HWY27W_20240508 5/8/2024 N		
Parameter	Total / Dissolved	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	< 7.4	U								10.4	J	
Alkalinity as CaCO ₃	Dissolved	mg/L	< 7.4	U								8.1	J	
Calcium	Total	ug/L	2750									5690		
Calcium	Dissolved	ug/L	2990	D9								5700	D9	
Chloride	Total	mg/L	< 3.0	U D3								51.7		
Chloride	Dissolved	mg/L	< 3.0	U D3								51.8	D9	
Copper	Total	ug/L	5.4	J		8.2			13.7			16.5		
Copper	Dissolved	ug/L	5.0	J		6.8			9.5			14.0		
Dissolved Organic Carbon	Dissolved	mg/L	17.7			9.1			10.1			28.1		
Dissolved Oxygen	Total	mg/L	4.23			3.17			1.22			3.58		
Hardness	Total	mg/L	10.9			8.9			8.1			21.4		
Hardness	Dissolved	mg/L	11.5			8.5			6.5			21.3		
Iron	Total	ug/L	930									1930		
Iron	Dissolved	ug/L	611									1270		
Magnesium	Total	ug/L	972									1740		
Magnesium	Dissolved	ug/L	974	D9								1710		
Manganese	Total	ug/L	33.5									23.4		
Manganese	Dissolved	ug/L	29.8									19.6		
pH	Total	s.u.	6.12			6.17			6.03			6.29		
Potassium	Total	ug/L	697	J								1250		
Potassium	Dissolved	ug/L	679	J								1250		
Redox Potential	Total	mV	210.6			21.4			176.6			174.4		
Sodium	Total	ug/L	932									36500		
Sodium	Dissolved	ug/L	998	D9								35900		
Specific Conductance	Total	umhos/cm	21			31			25			200		
Sulfate	Total	mg/L	< 2.2	U D3								0.94	J	
Sulfate	Dissolved	mg/L	< 2.2	U D3								0.92	J	
Sulfide	Total	mg/L	< 1.2	U								< 1.2	U	
Sulfide	Dissolved	mg/L	< 1.2	U								< 1.2	U	
Temperature	Total	deg c	15.08			19.17			17.86			12.56		
Total Suspended Solids	Total	mg/L	1.7	T3,PP								1.1	T3,PP	
Zinc	Total	ug/L	12.9	J		12.4	J		13.9	J		30.4	J	
Zinc	Dissolved	ug/L	13.3	J		11.0	J		< 10.3	U		27.7	J	
Comment - Sample Color	Total	None	Stained light brown			Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None	Slight organic			Slight organic			Slight organic			Slight organic		
Comment - Sample Turbidity	Total	None	Moderate			Moderate			Moderate			None		

Table 1 (continued)

		Location Sample Name Sample Data Sample Type	SW-HWY27W SW-HWY27W_20240523 5/23/2024 N			SW-HWY27W SW-HWY27W_20240724 7/24/2024 N			SW-HWY27W SW-HWY27W_20240830 8/30/2024 N			SW-HWY27W SW-HWY27W-DUP_20240830 8/30/2024 FD		
Parameter	Total / Dissolved	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	10.1	J										
Alkalinity as CaCO ₃	Dissolved	mg/L	9.2	J										
Calcium	Total	ug/L	5490											
Calcium	Dissolved	ug/L	5990	D9										
Chloride	Total	mg/L	24.2											
Chloride	Dissolved	mg/L	23.2											
Copper	Total	ug/L	9.8			14.7			20.4			19.8		
Copper	Dissolved	ug/L	8.0			7.1			11.5			11.5		
Dissolved Organic Carbon	Dissolved	mg/L	31.1			13.3			15.5			15.4		
Dissolved Oxygen	Total	mg/L	2.24			3.36			1.12					
Hardness	Total	mg/L	20.2			28.2			27.6			27.8		
Hardness	Dissolved	mg/L	22.2			27.1			27.2			27.3		
Iron	Total	ug/L	2600											
Iron	Dissolved	ug/L	1780											
Magnesium	Total	ug/L	1570											
Magnesium	Dissolved	ug/L	1760	D9										
Manganese	Total	ug/L	34.6											
Manganese	Dissolved	ug/L	34.1											
pH	Total	s.u.	6.28			5.78			5.74					
Potassium	Total	ug/L	779	J										
Potassium	Dissolved	ug/L	834	D9										
Redox Potential	Total	mV	152			176.1			107.5					
Sodium	Total	ug/L	16000											
Sodium	Dissolved	ug/L	18000	D9										
Specific Conductance	Total	umhos/cm	120			154			304					
Sulfate	Total	mg/L	< 2.2	U D3										
Sulfate	Dissolved	mg/L	< 2.2	U D3										
Sulfide	Total	mg/L	< 1.2	U										
Sulfide	Dissolved	mg/L	< 1.2	U										
Temperature	Total	deg c	14.56			21.21			19.18					
Total Suspended Solids	Total	mg/L	3.5											
Zinc	Total	ug/L	22.4	J		33.6	J		24.3	J		27.1	J	
Zinc	Dissolved	ug/L	23.4	J		27.0	J		25.9	J		20.7	J	
Comment - Sample Color	Total	None	Stained light brown			Stained light brown			Stained light brown					
Comment - Sample Odor	Total	None	Slight organic			Slight organic			Slight organic					
Comment - Sample Turbidity	Total	None	Slight			Slight			Slight					

Table 1 (continued)

		Location	SW-NB SW-NB_20240508 5/8/2024 N			SW-NB SW-NB_20240523 5/23/2024 N			SW-NB SW-NB_20240724 7/24/2024 N			SW-NB SW-NB_20240830 8/30/2024 N			
Parameter	Total / Dissolved	Sample Name Sample Data Sample Type	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total		mg/L	10.5	J		15.3	J							
Alkalinity as CaCO ₃	Dissolved		mg/L	10.1	J		15.4	J							
Calcium	Total		ug/L	7340			7500								
Calcium	Dissolved		ug/L	7760	D9		7400								
Chloride	Total		mg/L	38.4			19.1								
Chloride	Dissolved		mg/L	38.4			17.7								
Copper	Total		ug/L	18.0			16.8			4.6	J		7.5		
Copper	Dissolved		ug/L	15.6			15.0			3.2	J		4.3	J	
Dissolved Organic Carbon	Dissolved		mg/L	24.6			24.8			11.2			13.3		
Dissolved Oxygen	Total		mg/L	5.94			3.21			4.76			0.95		
Hardness	Total		mg/L	29.7			29.4			38.5			46.7		
Hardness	Dissolved		mg/L	31.0			29.9			37.8			47.5	D9	
Iron	Total		ug/L	1680			2110								
Iron	Dissolved		ug/L	774			1200								
Magnesium	Total		ug/L	2760			2600								
Magnesium	Dissolved		ug/L	2820	D9		2760	D9							
Manganese	Total		ug/L	40.8			73.1								
Manganese	Dissolved		ug/L	30.9			65.9								
pH	Total		s.u.	6.21			6.44			6.5			6.27		
Potassium	Total		ug/L	1010			650	J							
Potassium	Dissolved		ug/L	995			613	J							
Redox Potential	Total		mV	130.3			132.7			147.7			82.5		
Sodium	Total		ug/L	23400			11500								
Sodium	Dissolved		ug/L	23600	D9		12600	D9							
Specific Conductance	Total		umhos/cm	159			104			237			273		
Sulfate	Total		mg/L	1.1	J		< 2.2	U M0							
Sulfate	Dissolved		mg/L	1.1	J		< 2.2	U D3							
Sulfide	Total		mg/L	1.2	J		< 1.2	U							
Sulfide	Dissolved		mg/L	< 1.2	U		< 1.2	U							
Temperature	Total		deg c	13.91			12.02			28.02			18.2		
Total Suspended Solids	Total		mg/L	2.6			4.6								
Zinc	Total		ug/L	30.5	J		24.7	J		< 10.3	U		< 10.3	U	
Zinc	Dissolved		ug/L	24.3	J		24.8	J		< 10.3	U		< 10.3	U	
Comment - Sample Color	Total		None	Stained light brown			Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total		None	Slight organic			Slight organic			Slight organic			Slight organic		
Comment - Sample Turbidity	Total		None	Slight			Slight			Slight			Slight		

Table 1 (continued)

		Location Sample Name Sample Data Sample Type	SW-NBOUT SW-NBOUT_20240508 5/8/2024 N			SW-NBOUT SW-NBOUT_20240523 5/23/2024 N			SW-NBOUT SW-NBOUT_20240724 7/24/2024 N			SW-NBOUT SW-NBOUT_20240830 8/30/2024 N		
Parameter	Total / Dissolved	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	40.2			45.2								
Alkalinity as CaCO ₃	Dissolved	mg/L	35.6			43.7								
Calcium	Total	ug/L	10600			12000								
Calcium	Dissolved	ug/L	11100	D9		12600	D9							
Chloride	Total	mg/L	7.5			6.7	J M0							
Chloride	Dissolved	mg/L	6.3			6.9	J D3							
Copper	Total	ug/L	9.9			8.0			2.6	J		4.7	J	
Copper	Dissolved	ug/L	8.1			7.2			< 1.9	U		3.4	J	
Dissolved Organic Carbon	Dissolved	mg/L	15.4			16.5			9.9			12.7		
Dissolved Oxygen	Total	mg/L	6.17			3.40			2.62			1.48		
Hardness	Total	mg/L	45.5			51.5			54.4			61.6		
Hardness	Dissolved	mg/L	48.3			54.1			54.5			60.9		
Iron	Total	ug/L	755			988								
Iron	Dissolved	ug/L	179	J		456								
Magnesium	Total	ug/L	4640			5220								
Magnesium	Dissolved	ug/L	5010	D9		5500	D9							
Manganese	Total	ug/L	15.9			46.0								
Manganese	Dissolved	ug/L	8.6			42.6								
pH	Total	s.u.	6.75			6.86			6.58			6.81		
Potassium	Total	ug/L	1060			518	J							
Potassium	Dissolved	ug/L	1050			505	J							
Redox Potential	Total	mV	224.9			172			156.3			109.1		
Sodium	Total	ug/L	5610			5030								
Sodium	Dissolved	ug/L	5390			5460	D9							
Specific Conductance	Total	umhos/cm	102			111			217			218		
Sulfate	Total	mg/L	2.7			< 2.2	U M0							
Sulfate	Dissolved	mg/L	2.7			< 2.2	U D3							
Sulfide	Total	mg/L	1.8	J		< 1.2	U							
Sulfide	Dissolved	mg/L	< 1.2	U		< 1.2	U							
Temperature	Total	deg c	13.58			12.04			21.28			19.05		
Total Suspended Solids	Total	mg/L	2.0	T3,PP		2.2	T3,PP							
Zinc	Total	ug/L	< 10.3	U		< 10.3	U		< 10.3	U		< 10.3	U	
Zinc	Dissolved	ug/L	< 10.3	U		< 10.3	U		< 10.3	U		< 10.3	U	
Comment - Sample Color	Total	None	Stained light brown			Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None	Slight organic			Slight organic			Slight organic			Slight organic		
Comment - Sample Turbidity	Total	None	Slight			Slight			Slight			Slight		

Table 1 (continued)

		Location Sample Name Sample Data Sample Type	SW-STM SW-STM_20240508 5/8/2024 N			SW-STM SW-STM_20240523 5/23/2024 N			SW-STM SW-STM_20240724 7/24/2024 N			SW-STM SW-STM_20240830 8/30/2024 N		
Parameter	Total / Dissolved	Units	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier	Result	Lab Qualifier	Validation Qualifier
Alkalinity as CaCO ₃	Total	mg/L	15.4	J		10.8	J		31.9			33.5		
Alkalinity as CaCO ₃	Dissolved	mg/L	13.1	J		10.3	J		30.1			34.4		
Calcium	Total	ug/L	5430			4850			12800			12000		
Calcium	Dissolved	ug/L	5670	D9		5320	D9		12900	D9		11800		
Chloride	Total	mg/L	10.6			7.4	J D3		38.4			35.4		
Chloride	Dissolved	mg/L	10.5			7.1	J D3		37.1			34.3		
Copper	Total	ug/L	15.6			13.0			7.6			8.6		
Copper	Dissolved	ug/L	12.8			12.6			5.5	J		5.9	J	
Dissolved Organic Carbon	Dissolved	mg/L	16.0			16.0			10.5			9.9		
Dissolved Oxygen	Total	mg/L	8.76			2.99			4.39			1.39		
Hardness	Total	mg/L	22.1			19.8			53.3			50.4		
Hardness	Dissolved	mg/L	22.5			21.6			53.6			49.4		
Iron	Total	ug/L	1090			1010			1010			1130		
Iron	Dissolved	ug/L	319			500			184	J		315		
Magnesium	Total	ug/L	2070			1860			5220			4970		
Magnesium	Dissolved	ug/L	2030			2020	D9		5200			4820		
Manganese	Total	ug/L	35.3			24.0			99.7			52.9		
Manganese	Dissolved	ug/L	11.5			16.3			13.2			28.7		
pH	Total	s.u.	7.16			6.83			7.21			7.43		
Potassium	Total	ug/L	1070			823			1210			1770		
Potassium	Dissolved	ug/L	1030			853	D9		1250	D9		1690		
Redox Potential	Total	mV	191.1			157.6			161.5			125.5		
Sodium	Total	ug/L	8660			4930			13700			16600		
Sodium	Dissolved	ug/L	9300	D9		5670	D9		14000	D9		16200		
Specific Conductance	Total	umhos/cm	74			52			185			174		
Sulfate	Total	mg/L	1.7	J		< 2.2	U D3		7.9			3.0		
Sulfate	Dissolved	mg/L	1.7	J		< 2.2	U D3		4.1			2.9		
Sulfide	Total	mg/L	1.2	J		< 1.2	U		< 1.2	U		< 1.2	U	
Sulfide	Dissolved	mg/L	< 1.2	U		< 1.2	U		< 1.2	U		< 1.2	U	
Temperature	Total	deg c	17.60			12.80			18.23			18.09		
Total Suspended Solids	Total	mg/L	8.1			4.6			7.1			4.1		
Zinc	Total	ug/L	13.3	J		12.7	J		< 10.3	U		< 10.3	U	
Zinc	Dissolved	ug/L	< 10.3	U		< 10.3	U		< 10.3	U		< 10.3	U	
Comment - Sample Color	Total	None	Stained light brown			Stained light brown			Stained light brown			Stained light brown		
Comment - Sample Odor	Total	None	None			None			None			None		
Comment - Sample Turbidity	Total	None	Slight			Slight			Slight			Slight		

Prepared by: MCC2
Checked by: KMC2

Attachment 1
Flow Inspection Forms



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	5/3/2024	Prepared by:	Nick Glander / Foth
Weather:	72°, Fair / Fog in morning, 16-21 mph west wind, 1.3-in. precip. event		

Inspection Notes

Precipitation event of greater than 1.3-inches of precipitation starting on 3-MAY-2024 with continual daily rainfall of an additional 0.8-inches over the next few days. Stream C flow was observed and documented. Due to the volume of precipitation, the sampling event will be conducted after high flow has passed and the precipitation has adequate time to interact with the Stream C riverbed.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	5/17/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 78°, Overcast/Partly Cloudy, 13-18 mph south wind		

Inspection Notes

Stream C was inspected today. Low to limited flow noted and was unable to be measured with a meter. Flow was not continuous to the Flambeau River.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	5/31/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 71°, Overcast/Cloudy, 4-9 mph south wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. A few pools of water were observed in a few portions of the Stream C streambed.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	6/7/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 66°, Overcast/Cloudy, 15-19mph west wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. Conditions are dry.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	6/14/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 78°, Fair/Cloudy, 3-8mph west wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. Conditions are dry.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	6/17/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 77°, Cloudy / Lt. Rain, 9-14mph east wind		

Inspection Notes

Stream C was inspected today after a 0.9-inch rain event on June 16th. With conditions dry, this rain event did not fill the Stream C system and there was limited, sporadic flow that was unable to be measured with a meter. Flow was not continuous to the Flambeau River.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	6/24/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 83°, Fair/Partly Cloudy, 11-16mph south wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. Conditions are dry.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	7/1/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 76°, Fair, 15-20mph south wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. Conditions are dry.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	7/8/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 80°, Overcast, 3-8mph west wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. Conditions are dry.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	7/15/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 80°, Overcast / Lt. Rain, 3-8mph west wind		

Inspection Notes

Stream C was inspected today. 0.42-inches of precipitation on July 14th. System continues to be dryer, and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	7/23/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 73°, Cloudy, 4-9mph north wind		

Inspection Notes

Stream C was inspected today due to at 1.42-inches of precipitation beginning on July 23rd. Continuous flow was noted throughout the system and minimal flow was observed at the Flambeau River. A surface water sampling event will be conducted on July 24th.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	7/30/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 70°, Fair, 7-12mph south wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. Conditions are dry. A few pools of water were noted along the Stream C streambed.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	8/5/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 67°, Overcast / Lt. Rain, 11-15mph east wind		

Inspection Notes

Stream C was inspected today with precipitation beginning on August 4th. A total of 1.1-inches of rain was recorded. Due to the dryness, of the Stream C system, no continuous flow now seen to the Flambeau River. System still not full to capacity that would have flowing water.

END OF NOTES

Stream C - Flow Monitoring Inspection Report



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	8/15/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 78°, Overcast / Lt. Rain, 8-12mph south wind		

Inspection Notes

Stream C was inspected today with precipitation beginning on August 12th. A total of 1.25-inches of rain was recorded. Due to the dryness of the Stream C system, no continuous flow now seen to the Flambeau River. System still not full to capacity.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	8/23/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 79°, Fair / Mostly Cloudy, 5-10mph south wind		

Inspection Notes

Stream C was inspected today. Low to no flow noted and flow was unable to be measured with a meter. Flow was not continuous to the Flambeau River. Conditions are dry. A few pools of water were noted along the Stream C streambed.

END OF NOTES



Client:	Flambeau Mining Company	Scope ID	17F777.24
Project:	Stream C – Flow Monitoring	Inspected by:	Jim Engelhardt / Merjent
Date:	8/28/2024	Prepared by:	Nick Glander / Foth
Weather:	High of 72°, Cloudy, 5-10mph east wind		

Inspection Notes

Stream C was inspected today with 0.66-inch of precipitation beginning on August 27th. The Stream C system has flowing water; however, was unable to measure flow at Copper Park culvert. No continuous flow to the Flambeau River was noted.

END OF NOTES

Attachment 2
Pace Laboratory Analytical Reports



May 24, 2024

Nick Glander
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: FMC-2024_04 FLAMBEAU MINE CO.
Pace Project No.: 40278088

Dear Nick Glander:

Enclosed are the analytical results for sample(s) received by the laboratory on May 10, 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 - Green Bay

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

Sincerely,

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: MARK CIARDELLI, Foth Infrastructure & Environment, LLC
Krystal Clark, Foth Infrastructure & Environment
SHARON KOZICKI, Foth Infrastructure & Environment, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40278088001	SW-C9_202405	Water	05/08/24 10:27	05/10/24 08:00
40278088002	SW-C1_202405	Water	05/08/24 13:37	05/10/24 08:00
40278088003	SW-STM_202405	Water	05/08/24 15:01	05/10/24 08:00
40278088004	SW-C5_202405	Water	05/08/24 12:34	05/10/24 08:00
40278088005	SW-EB_202405	Water	05/08/24 12:20	05/10/24 08:00
40278088006	SW-NBOUT_202405	Water	05/08/24 11:58	05/10/24 08:00
40278088007	SW-NB_202405	Water	05/08/24 11:04	05/10/24 08:00
40278088008	SW-HWY27W_202405	Water	05/08/24 10:03	05/10/24 08:00
40278088009	SW-HWY27E_202405	Water	05/08/24 09:40	05/10/24 08:00
40278088010	CP-04_202405	Water	05/08/24 13:00	05/10/24 08:00
40278088011	SW-C1-DUP-202405	Water	05/08/24 13:37	05/10/24 08:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40278088001	SW-C9_202405	EPA 6020B	KXS	9
		EPA 6020B	TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278088002	SW-C1_202405	EPA 6020B	KXS	9
		EPA 6020B	TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278088003	SW-STM_202405	EPA 6020B	KXS	9
		EPA 6020B	TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278088004	SW-C5_202405	EPA 6020B	KXS	9
		EPA 6020B	TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40278088005	SW-EB_202405	EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	KXS	9
		EPA 6020B	KXS, TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
40278088006	SW-NBOUT_202405	EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	KXS	9
		EPA 6020B	KXS, TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
40278088007	SW-NB_202405	EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	KXS	9
		EPA 6020B	KXS, TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
40278088008	SW-HWY27W_202405	EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	KXS	9
		EPA 6020B	KXS, TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278088009	SW-HWY27E_202405	EPA 6020B	KXS	9
		EPA 6020B	KXS, TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278088010	CP-04_202405	EPA 6020B	KXS	9
		EPA 6020B	KXS, TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278088011	SW-C1-DUP-202405	EPA 6020B	KXS	9
		EPA 6020B	KXS, TXW	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.
Pace Project No.: 40278088

Lab ID	Sample ID	Method	Analysts	Analytes Reported
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PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: EPA 6020B

Description: 6020B MET ICPMS

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: EPA 6020B

Description: 6020B MET ICPMS, Dissolved

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: SM 2540D

Description: 2540D Total Suspended Solids

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for SM 2540D 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.

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.

Duplicate Sample:

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

Additional Comments:

Analyte Comments:

QC Batch: 474504

PP: The mass of dried residue obtained did not meet the test method requirements based on volume used.

- SW-C5_202405 (Lab ID: 40278088004)
 - Total Suspended Solids
- SW-HWY27W_202405 (Lab ID: 40278088008)
 - Total Suspended Solids
- SW-NBOUT_202405 (Lab ID: 40278088006)
 - Total Suspended Solids

T3: Insufficient sample received from client to perform the analysis per EPA method requirements.

- SW-C5_202405 (Lab ID: 40278088004)
 - Total Suspended Solids
- SW-HWY27W_202405 (Lab ID: 40278088008)
 - Total Suspended Solids
- SW-NBOUT_202405 (Lab ID: 40278088006)
 - Total Suspended Solids

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide, Iodometric

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for SM 4500-S F (2000) 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.

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: 474329

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278088001

R1: RPD value was outside control limits.

- MSD (Lab ID: 2716079)
- Sulfide

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide,Diss Iodometric

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for SM 4500-S F (2000) 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: EPA 300.0

Description: 300.0 IC Anions

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for EPA 300.0 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.

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: 474528

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278022001,40278088011

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

- MS (Lab ID: 2717305)
 - Chloride
 - Sulfate
- MSD (Lab ID: 2717306)
 - Chloride
 - Sulfate

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: EPA 300.0

Description: 300.0 IC Anions, Dissolved

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for EPA 300.0 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.

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: 474718

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278082012,40278144004

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

- MS (Lab ID: 2719098)
 - Chloride, Dissolved
 - Sulfate, Dissolved

Additional Comments:

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: EPA 310.2

Description: 310.2 Alkalinity

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for EPA 310.2 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: EPA 310.2

Description: 310.2 Alkalinity, Dissolved

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for EPA 310.2 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.

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: 474308

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278088010,40278142001

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

- MS (Lab ID: 2715990)
 - Alkalinity, Total as CaCO₃, Dissolved
- MS (Lab ID: 2715992)
 - Alkalinity, Total as CaCO₃, Dissolved
- MSD (Lab ID: 2715991)
 - Alkalinity, Total as CaCO₃, Dissolved
- MSD (Lab ID: 2715993)
 - Alkalinity, Total as CaCO₃, Dissolved

QC Batch: 474307

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278077016,40278088009

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

- MS (Lab ID: 2715984)
 - Alkalinity, Total as CaCO₃, Dissolved
- MSD (Lab ID: 2715985)
 - Alkalinity, Total as CaCO₃, Dissolved
- MSD (Lab ID: 2715987)
 - Alkalinity, Total as CaCO₃, Dissolved

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Method: SM 5310C

Description: 5310C Dissolved Organic Carbon

Client: Foth Infrastructure & Environment

Date: May 24, 2024

General Information:

11 samples were analyzed for SM 5310C 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.

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:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C9_202405 Lab ID: 40278088001 Collected: 05/08/24 10:27 Received: 05/10/24 08:00 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									
Calcium	3370	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 18:17	7440-70-2	
Copper	9.7	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 18:17	7440-50-8	
Iron	1300	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 18:17	7439-89-6	
Magnesium	1220	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 18:17	7439-95-4	
Manganese	45.7	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 18:17	7439-96-5	
Potassium	938	ug/L	789	237	1	05/13/24 06:51	05/20/24 18:17	7440-09-7	
Sodium	3910	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 18:17	7440-23-5	
Total Hardness by 2340B	13.4	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 18:17		
Zinc	15.5J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 18:17	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	3460	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 10:51	7440-70-2	D9
Copper, Dissolved	8.2	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 10:51	7440-50-8	
Iron, Dissolved	587	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 10:51	7439-89-6	
Magnesium, Dissolved	1190	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 10:51	7439-95-4	
Manganese, Dissolved	24.4	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 10:51	7439-96-5	
Potassium, Dissolved	854	ug/L	789	237	1	05/13/24 06:47	05/22/24 10:51	7440-09-7	
Sodium, Dissolved	4180	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 10:51	7440-23-5	D9
Total Hardness by 2340B, Dissolved	13.5	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 10:51		
Zinc, Dissolved	13.6J	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 10:51	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	6.6	mg/L	1.0	0.48	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/14/24 13:44		R1
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:23		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	3.7	mg/L	2.0	0.59	1		05/17/24 21:49	16887-00-6	
Sulfate	0.74J	mg/L	2.0	0.44	1		05/17/24 21:49	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	3.2	mg/L	2.0	0.59	1		05/21/24 14:42	16887-00-6	
Sulfate, Dissolved	0.72J	mg/L	2.0	0.44	1		05/21/24 14:42	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C9_202405 Lab ID: 40278088001 Collected: 05/08/24 10:27 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	10.3J	mg/L	25.0	7.4	1		05/20/24 11:43		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	<7.4	mg/L	25.0	7.4	1		05/14/24 14:33		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	15.8	mg/L	0.50	0.19	1		05/14/24 22:51		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C1_202405 Lab ID: 40278088002 Collected: 05/08/24 13:37 Received: 05/10/24 08:00 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									
Calcium	5150	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 18:39	7440-70-2	
Copper	16.8	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 18:39	7440-50-8	
Iron	915	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 18:39	7439-89-6	
Magnesium	1980	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 18:39	7439-95-4	
Manganese	18.8	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 18:39	7439-96-5	
Potassium	792	ug/L	789	237	1	05/13/24 06:51	05/20/24 18:39	7440-09-7	
Sodium	6870	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 18:39	7440-23-5	
Total Hardness by 2340B	21.0	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 18:39		
Zinc	12.8J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 18:39	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	5350	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 11:12	7440-70-2	D9
Copper, Dissolved	14.5	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 11:12	7440-50-8	
Iron, Dissolved	324	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 11:12	7439-89-6	
Magnesium, Dissolved	1960	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 11:12	7439-95-4	
Manganese, Dissolved	9.3	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 11:12	7439-96-5	
Potassium, Dissolved	741J	ug/L	789	237	1	05/13/24 06:47	05/22/24 11:12	7440-09-7	
Sodium, Dissolved	7320	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 11:12	7440-23-5	D9
Total Hardness by 2340B, Dissolved	21.4	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 11:12		
Zinc, Dissolved	12.2J	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 11:12	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.0	mg/L	1.0	0.49	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.2J	mg/L	4.0	1.2	1		05/14/24 14:14		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:27		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	8.1	mg/L	2.0	0.59	1		05/17/24 22:04	16887-00-6	
Sulfate	1.5J	mg/L	2.0	0.44	1		05/17/24 22:04	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	7.6	mg/L	2.0	0.59	1		05/21/24 14:56	16887-00-6	
Sulfate, Dissolved	1.4J	mg/L	2.0	0.44	1		05/21/24 14:56	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C1_202405 Lab ID: 40278088002 Collected: 05/08/24 13:37 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	15.9J	mg/L	25.0	7.4	1		05/20/24 11:44		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	13.0J	mg/L	25.0	7.4	1		05/14/24 14:34		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	15.6	mg/L	0.50	0.19	1		05/14/24 23:09		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-STM_202405 Lab ID: 40278088003 Collected: 05/08/24 15:01 Received: 05/10/24 08:00 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									
Calcium	5430	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 18:49	7440-70-2	
Copper	15.6	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 18:49	7440-50-8	
Iron	1090	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 18:49	7439-89-6	
Magnesium	2070	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 18:49	7439-95-4	
Manganese	35.3	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 18:49	7439-96-5	
Potassium	1070	ug/L	789	237	1	05/13/24 06:51	05/20/24 18:49	7440-09-7	
Sodium	8660	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 18:49	7440-23-5	
Total Hardness by 2340B	22.1	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 18:49		
Zinc	13.3J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 18:49	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	5670	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 11:23	7440-70-2	D9
Copper, Dissolved	12.8	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 11:23	7440-50-8	
Iron, Dissolved	319	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 11:23	7439-89-6	
Magnesium, Dissolved	2030	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 11:23	7439-95-4	
Manganese, Dissolved	11.5	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 11:23	7439-96-5	
Potassium, Dissolved	1030	ug/L	789	237	1	05/13/24 06:47	05/22/24 11:23	7440-09-7	
Sodium, Dissolved	9300	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 11:23	7440-23-5	D9
Total Hardness by 2340B, Dissolved	22.5	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 11:23		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 11:23	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	8.1	mg/L	1.0	0.49	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.2J	mg/L	4.0	1.2	1		05/14/24 14:18		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:29		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	10.6	mg/L	2.0	0.59	1		05/17/24 22:18	16887-00-6	
Sulfate	1.7J	mg/L	2.0	0.44	1		05/17/24 22:18	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	10.5	mg/L	2.0	0.59	1		05/21/24 15:11	16887-00-6	
Sulfate, Dissolved	1.7J	mg/L	2.0	0.44	1		05/21/24 15:11	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-STM_202405 Lab ID: 40278088003 Collected: 05/08/24 15:01 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	15.4J	mg/L	25.0	7.4	1		05/20/24 11:45		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	13.1J	mg/L	25.0	7.4	1		05/14/24 14:35		
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	16.0	mg/L	0.50	0.19	1		05/14/24 23:26		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C5_202405 Lab ID: 40278088004 Collected: 05/08/24 12:34 Received: 05/10/24 08:00 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									
Calcium	4150	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 18:55	7440-70-2	
Copper	15.9	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 18:55	7440-50-8	
Iron	866	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 18:55	7439-89-6	
Magnesium	1680	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 18:55	7439-95-4	
Manganese	14.3	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 18:55	7439-96-5	
Potassium	721J	ug/L	789	237	1	05/13/24 06:51	05/20/24 18:55	7440-09-7	
Sodium	5900	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 18:55	7440-23-5	
Total Hardness by 2340B	17.3	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 18:55		
Zinc	13.9J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 18:55	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	4700	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 11:28	7440-70-2	D9
Copper, Dissolved	13.9	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 11:28	7440-50-8	
Iron, Dissolved	350	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 11:28	7439-89-6	
Magnesium, Dissolved	1720	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 11:28	7439-95-4	D9
Manganese, Dissolved	7.2	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 11:28	7439-96-5	
Potassium, Dissolved	715J	ug/L	789	237	1	05/13/24 06:47	05/22/24 11:28	7440-09-7	
Sodium, Dissolved	6470	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 11:28	7440-23-5	D9
Total Hardness by 2340B, Dissolved	18.8	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 11:28		
Zinc, Dissolved	24.4J	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 11:28	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	1.8	mg/L	1.0	0.48	1		05/15/24 14:25		PP,T3
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.2J	mg/L	4.0	1.2	1		05/14/24 14:55		
4500S2F Sulfide,Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:30		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	6.5	mg/L	2.0	0.59	1		05/17/24 22:32	16887-00-6	
Sulfate	1.4J	mg/L	2.0	0.44	1		05/17/24 22:32	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	6.4	mg/L	2.0	0.59	1		05/21/24 15:25	16887-00-6	
Sulfate, Dissolved	1.3J	mg/L	2.0	0.44	1		05/21/24 15:25	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C5_202405 Lab ID: 40278088004 Collected: 05/08/24 12:34 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	16.3J	mg/L	25.0	7.4	1		05/20/24 11:46		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	11.0J	mg/L	25.0	7.4	1		05/14/24 14:36		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	15.8	mg/L	0.50	0.19	1		05/14/24 23:44		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-EB_202405 Lab ID: 40278088005 Collected: 05/08/24 12:20 Received: 05/10/24 08:00 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									
Calcium	8850	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 19:00	7440-70-2	
Copper	14.1	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 19:00	7440-50-8	
Iron	1170	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 19:00	7439-89-6	
Magnesium	3500	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 19:00	7439-95-4	
Manganese	29.3	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 19:00	7439-96-5	
Potassium	1100	ug/L	789	237	1	05/13/24 06:51	05/20/24 19:00	7440-09-7	
Sodium	14800	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 19:00	7440-23-5	
Total Hardness by 2340B	36.5	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 19:00		
Zinc	14.6J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 19:00	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	10500	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 11:44	7440-70-2	D9
Copper, Dissolved	11.8	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 11:44	7440-50-8	
Iron, Dissolved	547	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 11:44	7439-89-6	
Magnesium, Dissolved	4220	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 11:44	7439-95-4	D9
Manganese, Dissolved	8.3	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 11:44	7439-96-5	
Potassium, Dissolved	1130	ug/L	789	237	1	05/13/24 06:47	05/22/24 11:44	7440-09-7	D9
Sodium, Dissolved	7870	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 22:56	7440-23-5	
Total Hardness by 2340B, Dissolved	43.5	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 11:44		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 11:44	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	3.4	mg/L	1.0	0.48	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.8J	mg/L	4.0	1.2	1		05/14/24 14:56		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:32		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	25.2	mg/L	2.0	0.59	1		05/17/24 23:30	16887-00-6	
Sulfate	2.1	mg/L	2.0	0.44	1		05/17/24 23:30	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	12.7	mg/L	2.0	0.59	1		05/21/24 15:39	16887-00-6	
Sulfate, Dissolved	4.5	mg/L	2.0	0.44	1		05/21/24 15:39	14808-79-8	D9

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-EB_202405 Lab ID: 40278088005 Collected: 05/08/24 12:20 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	33.0	mg/L	25.0	7.4	1		05/20/24 11:47		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	31.2	mg/L	25.0	7.4	1		05/14/24 14:37		
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	11.0	mg/L	0.50	0.19	1		05/15/24 00:00		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-NBOUT_202405 Lab ID: 40278088006 Collected: 05/08/24 11:58 Received: 05/10/24 08:00 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									
Calcium	10600	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 19:05	7440-70-2	
Copper	9.9	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 19:05	7440-50-8	
Iron	755	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 19:05	7439-89-6	
Magnesium	4640	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 19:05	7439-95-4	
Manganese	15.9	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 19:05	7439-96-5	
Potassium	1060	ug/L	789	237	1	05/13/24 06:51	05/20/24 19:05	7440-09-7	
Sodium	5610	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 19:05	7440-23-5	
Total Hardness by 2340B	45.5	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 19:05		
Zinc	<10.3	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 19:05	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	11100	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 11:50	7440-70-2	D9
Copper, Dissolved	8.1	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 11:50	7440-50-8	
Iron, Dissolved	179J	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 11:50	7439-89-6	
Magnesium, Dissolved	5010	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 11:50	7439-95-4	D9
Manganese, Dissolved	8.6	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 11:50	7439-96-5	
Potassium, Dissolved	1050	ug/L	789	237	1	05/13/24 06:47	05/22/24 11:50	7440-09-7	
Sodium, Dissolved	5390	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 23:02	7440-23-5	
Total Hardness by 2340B, Dissolved	48.3	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 11:50		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 11:50	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	2.0	mg/L	1.0	0.49	1		05/15/24 14:25		PP,T3
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.8J	mg/L	4.0	1.2	1		05/14/24 14:58		
4500S2F Sulfide,Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:34		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	7.5	mg/L	2.0	0.59	1		05/17/24 23:44	16887-00-6	
Sulfate	2.7	mg/L	2.0	0.44	1		05/17/24 23:44	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	6.3	mg/L	2.0	0.59	1		05/21/24 15:54	16887-00-6	
Sulfate, Dissolved	2.7	mg/L	2.0	0.44	1		05/21/24 15:54	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-NBOUT_202405 Lab ID: 40278088006 Collected: 05/08/24 11:58 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	40.2	mg/L	25.0	7.4	1		05/20/24 11:48		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	35.6	mg/L	25.0	7.4	1		05/14/24 14:38		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	15.4	mg/L	0.50	0.19	1		05/15/24 00:18		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-NB_202405 Lab ID: 40278088007 Collected: 05/08/24 11:04 Received: 05/10/24 08:00 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									
Calcium	7340	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 19:21	7440-70-2	
Copper	18.0	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 19:21	7440-50-8	
Iron	1680	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 19:21	7439-89-6	
Magnesium	2760	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 19:21	7439-95-4	
Manganese	40.8	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 19:21	7439-96-5	
Potassium	1010	ug/L	789	237	1	05/13/24 06:51	05/20/24 19:21	7440-09-7	
Sodium	23400	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 19:21	7440-23-5	
Total Hardness by 2340B	29.7	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 19:21		
Zinc	30.5J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 19:21	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	7760	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 11:55	7440-70-2	D9
Copper, Dissolved	15.6	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 11:55	7440-50-8	
Iron, Dissolved	774	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 11:55	7439-89-6	
Magnesium, Dissolved	2820	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 11:55	7439-95-4	D9
Manganese, Dissolved	30.9	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 11:55	7439-96-5	
Potassium, Dissolved	995	ug/L	789	237	1	05/13/24 06:47	05/22/24 11:55	7440-09-7	
Sodium, Dissolved	23600	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 23:07	7440-23-5	D9
Total Hardness by 2340B, Dissolved	31.0	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 11:55		
Zinc, Dissolved	24.3J	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 11:55	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	2.6	mg/L	1.0	0.48	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.2J	mg/L	4.0	1.2	1		05/14/24 14:59		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:35		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	38.4	mg/L	2.0	0.59	1		05/17/24 23:58	16887-00-6	
Sulfate	1.1J	mg/L	2.0	0.44	1		05/17/24 23:58	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	38.4	mg/L	2.0	0.59	1		05/21/24 16:08	16887-00-6	
Sulfate, Dissolved	1.1J	mg/L	2.0	0.44	1		05/21/24 16:08	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-NB_202405 Lab ID: 40278088007 Collected: 05/08/24 11:04 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	10.5J	mg/L	25.0	7.4	1		05/20/24 11:49		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	10.1J	mg/L	25.0	7.4	1		05/14/24 14:39		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	24.6	mg/L	0.50	0.19	1		05/15/24 00:38		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-HWY27W_202405 Lab ID: 40278088008 Collected: 05/08/24 10:03 Received: 05/10/24 08:00 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									
Calcium	5690	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 19:27	7440-70-2	
Copper	16.5	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 19:27	7440-50-8	
Iron	1930	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 19:27	7439-89-6	
Magnesium	1740	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 19:27	7439-95-4	
Manganese	23.4	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 19:27	7439-96-5	
Potassium	1250	ug/L	789	237	1	05/13/24 06:51	05/20/24 19:27	7440-09-7	
Sodium	36500	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 19:27	7440-23-5	
Total Hardness by 2340B	21.4	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 19:27		
Zinc	30.4J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 19:27	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	5700	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 12:00	7440-70-2	D9
Copper, Dissolved	14.0	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 12:00	7440-50-8	
Iron, Dissolved	1270	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 12:00	7439-89-6	
Magnesium, Dissolved	1710	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 12:00	7439-95-4	
Manganese, Dissolved	19.6	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 12:00	7439-96-5	
Potassium, Dissolved	1250	ug/L	789	237	1	05/13/24 06:47	05/22/24 12:00	7440-09-7	
Sodium, Dissolved	35900	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 23:12	7440-23-5	
Total Hardness by 2340B, Dissolved	21.3	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 12:00		
Zinc, Dissolved	27.7J	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 12:00	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	1.1	mg/L	1.0	0.48	1		05/15/24 14:25		PP,T3
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/14/24 15:03		
4500S2F Sulfide,Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:37		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	51.7	mg/L	2.0	0.59	1		05/18/24 00:13	16887-00-6	
Sulfate	0.94J	mg/L	2.0	0.44	1		05/18/24 00:13	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	51.8	mg/L	2.0	0.59	1		05/21/24 16:22	16887-00-6	D9
Sulfate, Dissolved	0.92J	mg/L	2.0	0.44	1		05/21/24 16:22	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-HWY27W_202405 Lab ID: 40278088008 Collected: 05/08/24 10:03 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	10.4J	mg/L	25.0	7.4	1		05/20/24 11:50		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	8.1J	mg/L	25.0	7.4	1		05/14/24 14:40		
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	28.1	mg/L	3.0	1.1	6		05/15/24 19:43		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-HWY27E_202405 Lab ID: 40278088009 Collected: 05/08/24 09:40 Received: 05/10/24 08:00 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									
Calcium	2830	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 19:32	7440-70-2	
Copper	8.9	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 19:32	7440-50-8	
Iron	1150	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 19:32	7439-89-6	
Magnesium	1110	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 19:32	7439-95-4	
Manganese	24.3	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 19:32	7439-96-5	
Potassium	1010	ug/L	789	237	1	05/13/24 06:51	05/20/24 19:32	7440-09-7	
Sodium	2490	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 19:32	7440-23-5	
Total Hardness by 2340B	11.6	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 19:32		
Zinc	12.0J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 19:32	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	3090	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 12:06	7440-70-2	D9
Copper, Dissolved	7.5	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 12:06	7440-50-8	
Iron, Dissolved	450	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 12:06	7439-89-6	
Magnesium, Dissolved	1080	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 12:06	7439-95-4	
Manganese, Dissolved	14.5	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 12:06	7439-96-5	
Potassium, Dissolved	996	ug/L	789	237	1	05/13/24 06:47	05/22/24 12:06	7440-09-7	
Sodium, Dissolved	2840	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 23:18	7440-23-5	D9
Total Hardness by 2340B, Dissolved	12.2	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 12:06		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 12:06	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.0	mg/L	1.0	0.49	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/14/24 15:07		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:38		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	2.1	mg/L	2.0	0.59	1		05/18/24 00:27	16887-00-6	
Sulfate	0.84J	mg/L	2.0	0.44	1		05/18/24 00:27	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	2.5	mg/L	2.0	0.59	1		05/21/24 16:37	16887-00-6	D9
Sulfate, Dissolved	0.88J	mg/L	2.0	0.44	1		05/21/24 16:37	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-HWY27E_202405 Lab ID: 40278088009 Collected: 05/08/24 09:40 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	10J	mg/L	25.0	7.4	1		05/20/24 11:51		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	<7.4	mg/L	25.0	7.4	1		05/14/24 14:41		M0
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	15.5	mg/L	0.50	0.19	1		05/15/24 01:18		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: CP-04_202405 **Lab ID:** 40278088010 Collected: 05/08/24 13:00 Received: 05/10/24 08:00 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									
Calcium	16800	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 19:37	7440-70-2	
Copper	28.4	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 19:37	7440-50-8	
Iron	720	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 19:37	7439-89-6	
Magnesium	8970	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 19:37	7439-95-4	
Manganese	33.0	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 19:37	7439-96-5	
Potassium	1670	ug/L	789	237	1	05/13/24 06:51	05/20/24 19:37	7440-09-7	
Sodium	126000	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 19:37	7440-23-5	
Total Hardness by 2340B	78.8	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 19:37		
Zinc	<10.3	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 19:37	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	19100	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 12:11	7440-70-2	D9
Copper, Dissolved	22.8	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 12:11	7440-50-8	
Iron, Dissolved	95.7J	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 12:11	7439-89-6	
Magnesium, Dissolved	9510	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 12:11	7439-95-4	D9
Manganese, Dissolved	22.2	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 12:11	7439-96-5	
Potassium, Dissolved	1690	ug/L	789	237	1	05/13/24 06:47	05/22/24 12:11	7440-09-7	D9
Sodium, Dissolved	129000	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 23:23	7440-23-5	D9
Total Hardness by 2340B, Dissolved	86.9	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 12:11		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 12:11	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	3.0	mg/L	1.0	0.48	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.6J	mg/L	4.0	1.2	1		05/14/24 15:10		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:39		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	127	mg/L	10.0	3.0	5		05/20/24 14:21	16887-00-6	
Sulfate	4.5	mg/L	2.0	0.44	1		05/18/24 00:41	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	128	mg/L	10.0	3.0	5		05/22/24 16:22	16887-00-6	D9
Sulfate, Dissolved	4.5	mg/L	2.0	0.44	1		05/21/24 16:51	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: CP-04_202405 Lab ID: 40278088010 Collected: 05/08/24 13:00 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	154	mg/L	25.0	7.4	1		05/20/24 11:55		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	148	mg/L	25.0	7.4	1		05/14/24 14:50		M0
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	13.0	mg/L	0.50	0.19	1		05/15/24 01:55		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C1-DUP-202405 **Lab ID:** 40278088011 Collected: 05/08/24 13:37 Received: 05/10/24 08:00 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									
Calcium	5230	ug/L	254	76.2	1	05/13/24 06:51	05/20/24 19:43	7440-70-2	
Copper	17.1	ug/L	6.4	1.9	1	05/13/24 06:51	05/20/24 19:43	7440-50-8	
Iron	841	ug/L	250	58.0	1	05/13/24 06:51	05/20/24 19:43	7439-89-6	
Magnesium	2030	ug/L	250	31.2	1	05/13/24 06:51	05/20/24 19:43	7439-95-4	
Manganese	20.5	ug/L	4.0	1.2	1	05/13/24 06:51	05/20/24 19:43	7439-96-5	
Potassium	804	ug/L	789	237	1	05/13/24 06:51	05/20/24 19:43	7440-09-7	
Sodium	7080	ug/L	250	42.0	1	05/13/24 06:51	05/20/24 19:43	7440-23-5	
Total Hardness by 2340B	21.4	mg/L	1.7	0.32	1	05/13/24 06:51	05/20/24 19:43		
Zinc	13.8J	ug/L	34.4	10.3	1	05/13/24 06:51	05/20/24 19:43	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	5490	ug/L	254	76.2	1	05/13/24 06:47	05/22/24 12:17	7440-70-2	D9
Copper, Dissolved	14.5	ug/L	6.4	1.9	1	05/13/24 06:47	05/22/24 12:17	7440-50-8	
Iron, Dissolved	308	ug/L	250	58.0	1	05/13/24 06:47	05/22/24 12:17	7439-89-6	
Magnesium, Dissolved	2090	ug/L	250	31.2	1	05/13/24 06:47	05/22/24 12:17	7439-95-4	D9
Manganese, Dissolved	9.2	ug/L	4.0	1.2	1	05/13/24 06:47	05/22/24 12:17	7439-96-5	
Potassium, Dissolved	784J	ug/L	789	237	1	05/13/24 06:47	05/22/24 12:17	7440-09-7	
Sodium, Dissolved	7210	ug/L	250	42.0	1	05/13/24 06:47	05/22/24 23:28	7440-23-5	D9
Total Hardness by 2340B, Dissolved	22.3	mg/L	1.7	0.32	1	05/13/24 06:47	05/22/24 12:17		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	05/13/24 06:47	05/22/24 12:17	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.1	mg/L	1.0	0.48	1		05/15/24 14:25		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/14/24 15:12		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/14/24 15:40		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	7.9	mg/L	2.0	0.59	1		05/18/24 00:56	16887-00-6	M0
Sulfate	1.5J	mg/L	2.0	0.44	1		05/18/24 00:56	14808-79-8	M0
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	7.9	mg/L	2.0	0.59	1		05/21/24 17:48	16887-00-6	
Sulfate, Dissolved	1.5J	mg/L	2.0	0.44	1		05/21/24 17:48	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Sample: SW-C1-DUP-202405 Lab ID: 40278088011 Collected: 05/08/24 13:37 Received: 05/10/24 08:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	17.3J	mg/L	25.0	7.4	1		05/20/24 11:56		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	13.1J	mg/L	25.0	7.4	1		05/14/24 14:53		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	15.6	mg/L	0.50	0.19	1		05/15/24 02:13		

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474176	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

METHOD BLANK: 2715500 Matrix: Water
 Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	ug/L	<76.2	254	05/17/24 00:52	
Copper	ug/L	<1.9	6.4	05/17/24 00:52	
Iron	ug/L	<58.0	250	05/17/24 00:52	
Magnesium	ug/L	<31.2	250	05/17/24 00:52	
Manganese	ug/L	<1.2	4.0	05/17/24 00:52	
Potassium	ug/L	<237	789	05/17/24 00:52	
Sodium	ug/L	<42.0	250	05/17/24 00:52	
Total Hardness by 2340B	mg/L	<0.32	1.7	05/17/24 00:52	
Zinc	ug/L	<10.3	34.4	05/17/24 00:52	

LABORATORY CONTROL SAMPLE: 2715501

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	10200	102	80-120	
Copper	ug/L	250	235	94	80-120	
Iron	ug/L	10000	9910	99	80-120	
Magnesium	ug/L	10000	9740	97	80-120	
Manganese	ug/L	250	251	100	80-120	
Potassium	ug/L	10000	9860	99	80-120	
Sodium	ug/L	10000	9390	94	80-120	
Total Hardness by 2340B	mg/L		65.5			
Zinc	ug/L	250	251	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715502 2715503

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278088001 Result	MS Spike Conc.	MSD Spike Conc.	MSD Result								
Calcium	ug/L	3370	10000	10000	13800	14100	104	108	75-125	2	20		
Copper	ug/L	9.7	250	250	271	272	104	105	75-125	0	20		
Iron	ug/L	1300	10000	10000	12300	12300	110	109	75-125	0	20		
Magnesium	ug/L	1220	10000	10000	11800	11700	106	105	75-125	1	20		
Manganese	ug/L	45.7	250	250	316	318	108	109	75-125	1	20		
Potassium	ug/L	938	10000	10000	11000	11000	101	101	75-125	0	20		
Sodium	ug/L	3910	10000	10000	14300	14400	104	104	75-125	1	20		
Total Hardness by 2340B	mg/L	13.4			83.0	83.5				1	20		
Zinc	ug/L	15.5J	250	250	274	270	103	102	75-125	1	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.

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474170	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

METHOD BLANK: 2715477 Matrix: Water
 Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium, Dissolved	ug/L	<76.2	254	05/22/24 10:40	
Copper, Dissolved	ug/L	<1.9	6.4	05/22/24 10:40	
Iron, Dissolved	ug/L	<58.0	250	05/22/24 10:40	
Magnesium, Dissolved	ug/L	<31.2	250	05/22/24 10:40	
Manganese, Dissolved	ug/L	<1.2	4.0	05/22/24 10:40	
Potassium, Dissolved	ug/L	<237	789	05/22/24 10:40	
Sodium, Dissolved	ug/L	<42.0	250	05/22/24 10:40	
Total Hardness by 2340B, Dissolved	mg/L	<0.32	1.7	05/22/24 10:40	
Zinc, Dissolved	ug/L	<10.3	34.4	05/22/24 10:40	

LABORATORY CONTROL SAMPLE: 2715478

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium, Dissolved	ug/L	10000	11400	114	80-120	
Copper, Dissolved	ug/L	250	277	111	80-120	
Iron, Dissolved	ug/L	10000	11200	112	80-120	
Magnesium, Dissolved	ug/L	10000	11200	112	80-120	
Manganese, Dissolved	ug/L	250	279	112	80-120	
Potassium, Dissolved	ug/L	10000	11200	112	80-120	
Sodium, Dissolved	ug/L	10000	10800	108	80-120	
Total Hardness by 2340B, Dissolved	mg/L		74.8			
Zinc, Dissolved	ug/L	250	281	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715479 2715480

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278088001 Result	Spike Conc.	Spike Conc.	MS Result						
Calcium, Dissolved	ug/L	3460	10000	10000	14100	14400	106	110	75-125	3	20
Copper, Dissolved	ug/L	8.2	250	250	278	279	108	108	75-125	0	20
Iron, Dissolved	ug/L	587	10000	10000	11500	11700	109	111	75-125	2	20
Magnesium, Dissolved	ug/L	1190	10000	10000	12000	12400	108	112	75-125	3	20
Manganese, Dissolved	ug/L	24.4	250	250	295	299	108	110	75-125	1	20
Potassium, Dissolved	ug/L	854	10000	10000	11800	11900	110	110	75-125	1	20
Sodium, Dissolved	ug/L	4180	10000	10000	14900	15400	107	112	75-125	3	20

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Parameter	Units	2715479		2715480		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Total Hardness by 2340B, Dissolved	mg/L	13.5			84.7	87.1					3	20	
Zinc, Dissolved	ug/L	13.6J	250	250	280	282	107	107	75-125		1	20	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474504	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

METHOD BLANK:	2717176	Matrix:	Water
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	05/15/24 14:24	

LABORATORY CONTROL SAMPLE: 2717177						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	104	104	80-120	

SAMPLE DUPLICATE: 2717178						
Parameter	Units	40278029001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	32.4	33.2	2	10	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474331	Analysis Method:	SM 4500-S F (2000)
QC Batch Method:	SM 4500-S F (2000)	Analysis Description:	4500S2F Sulfide, Dissolved Iodometric
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

METHOD BLANK: 2716080 Matrix: Water

Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	05/14/24 15:19	

LABORATORY CONTROL SAMPLE: 2716081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	47.6	46.8	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2716082 2716083

Parameter	Units	40278088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	<1.2	47.6	47.6	45.6	46.4	95	97	80-120	2	20	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474329	Analysis Method:	SM 4500-S F (2000)
QC Batch Method:	SM 4500-S F (2000)	Analysis Description:	4500S2F Sulfide, Iodometric
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

METHOD BLANK:	2716076	Matrix:	Water
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	05/14/24 13:33	

LABORATORY CONTROL SAMPLE: 2716077						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	46.8	49.6	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2716078												2716079	
Parameter	Units	40278088001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Sulfide	mg/L	<1.2	46.8	46.8	42.0	50.4	88	106	80-120	18	10	R1	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474718	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions,Dissolved
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

METHOD BLANK: 2719096 Matrix: Water
 Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	05/21/24 11:36	
Sulfate	mg/L	<0.44	2.0	05/21/24 11:36	

LABORATORY CONTROL SAMPLE: 2719097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.7	99	90-110	
Sulfate	mg/L	20	19.7	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2719098 2719099

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Chloride	mg/L	44.4	100	100	162	153	118	108	90-110	6	15	M0	
Sulfate	mg/L	34.3	100	100	152	142	118	108	90-110	7	15	M0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2719100 2719101

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Chloride	mg/L	42.1	400	400	440	444	99	100	90-110	1	15		
Sulfate	mg/L	652	400	400	1030	1030	94	93	90-110	0	15		

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474528	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

METHOD BLANK: 2717301 Matrix: Water
 Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	05/17/24 18:00	
Sulfate	mg/L	<0.44	2.0	05/17/24 18:00	

LABORATORY CONTROL SAMPLE: 2717302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.7	98	90-110	
Sulfate	mg/L	20	21.8	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2717303 2717304

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result						
Chloride	mg/L	22.4J	400	400	447	446	106	106	90-110	0	15
Sulfate	mg/L	676	400	400	1080	1090	101	104	90-110	1	15

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2717305 2717306

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result						
Chloride	mg/L	7.9	20	20	31.1	30.5	116	113	90-110	2	15 M0
Sulfate	mg/L	1.5J	20	20	23.8	23.9	112	112	90-110	0	15 M0

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474699	Analysis Method:	EPA 310.2
QC Batch Method:	EPA 310.2	Analysis Description:	310.2 Alkalinity
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

METHOD BLANK:	2718776	Matrix:	Water
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.4	25.0	05/20/24 11:29	

LABORATORY CONTROL SAMPLE: 2718777

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	98.2	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2718778 2718779

Parameter	Units	40277996001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2718780 2718781

Parameter	Units	40278101004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474307	Analysis Method:	EPA 310.2
QC Batch Method:	EPA 310.2	Analysis Description:	310.2 Alkalinity, Dissolved
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009		

METHOD BLANK:	2715982	Matrix:	Water
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	<7.4	25.0	05/14/24 14:12	

LABORATORY CONTROL SAMPLE: 2715983

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3, Dissolved	mg/L	100	98.9	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715984 2715985

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Result	Spike Conc.						
Alkalinity, Total as CaCO3, Dissolved	mg/L	133	100	100	247	247	114	114	90-110	0	20 M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715986 2715987

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Result	Spike Conc.						
Alkalinity, Total as CaCO3, Dissolved	mg/L	<7.4	100	100	114	116	108	111	90-110	2	20 M0

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474308	Analysis Method:	EPA 310.2
QC Batch Method:	EPA 310.2	Analysis Description:	310.2 Alkalinity, Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278088010, 40278088011

METHOD BLANK: 2715988 Matrix: Water

Associated Lab Samples: 40278088010, 40278088011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	<7.4	25.0	05/14/24 14:48	

LABORATORY CONTROL SAMPLE: 2715989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	100	98.4	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715990 2715991

Parameter	Units	40278088010		2715991		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	148	100	100	213	262	65	114	20	20	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715992 2715993

Parameter	Units	40278142001		2715993		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	95.2	100	100	207	209	112	114	1	20	M0

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

QC Batch:	474287	Analysis Method:	SM 5310C
QC Batch Method:	SM 5310C	Analysis Description:	5310C Dissolved Organic Carbon
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011		

METHOD BLANK: 2715903 Matrix: Water
 Associated Lab Samples: 40278088001, 40278088002, 40278088003, 40278088004, 40278088005, 40278088006, 40278088007, 40278088008, 40278088009, 40278088010, 40278088011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	<0.19	0.50	05/14/24 19:41	

LABORATORY CONTROL SAMPLE: 2715904

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	12.5	12.4	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715905 2715906

Parameter	Units	40278077012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2715907 2715908

Parameter	Units	40278077013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual

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QUALIFIERS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

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

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

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

PP The mass of dried residue obtained did not meet the test method requirements based on volume used.

R1 RPD value was outside control limits.

T3 Insufficient sample received from client to perform the analysis per EPA method requirements.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40278088001	SW-C9_202405	EPA 3010A	474176	EPA 6020B	474264
40278088002	SW-C1_202405	EPA 3010A	474176	EPA 6020B	474264
40278088003	SW-STM_202405	EPA 3010A	474176	EPA 6020B	474264
40278088004	SW-C5_202405	EPA 3010A	474176	EPA 6020B	474264
40278088005	SW-EB_202405	EPA 3010A	474176	EPA 6020B	474264
40278088006	SW-NBOUT_202405	EPA 3010A	474176	EPA 6020B	474264
40278088007	SW-NB_202405	EPA 3010A	474176	EPA 6020B	474264
40278088008	SW-HWY27W_202405	EPA 3010A	474176	EPA 6020B	474264
40278088009	SW-HWY27E_202405	EPA 3010A	474176	EPA 6020B	474264
40278088010	CP-04_202405	EPA 3010A	474176	EPA 6020B	474264
40278088011	SW-C1-DUP-202405	EPA 3010A	474176	EPA 6020B	474264
40278088001	SW-C9_202405	EPA 3010A	474170	EPA 6020B	474263
40278088002	SW-C1_202405	EPA 3010A	474170	EPA 6020B	474263
40278088003	SW-STM_202405	EPA 3010A	474170	EPA 6020B	474263
40278088004	SW-C5_202405	EPA 3010A	474170	EPA 6020B	474263
40278088005	SW-EB_202405	EPA 3010A	474170	EPA 6020B	474263
40278088006	SW-NBOUT_202405	EPA 3010A	474170	EPA 6020B	474263
40278088007	SW-NB_202405	EPA 3010A	474170	EPA 6020B	474263
40278088008	SW-HWY27W_202405	EPA 3010A	474170	EPA 6020B	474263
40278088009	SW-HWY27E_202405	EPA 3010A	474170	EPA 6020B	474263
40278088010	CP-04_202405	EPA 3010A	474170	EPA 6020B	474263
40278088011	SW-C1-DUP-202405	EPA 3010A	474170	EPA 6020B	474263
40278088001	SW-C9_202405	SM 2540D	474504		
40278088002	SW-C1_202405	SM 2540D	474504		
40278088003	SW-STM_202405	SM 2540D	474504		
40278088004	SW-C5_202405	SM 2540D	474504		
40278088005	SW-EB_202405	SM 2540D	474504		
40278088006	SW-NBOUT_202405	SM 2540D	474504		
40278088007	SW-NB_202405	SM 2540D	474504		
40278088008	SW-HWY27W_202405	SM 2540D	474504		
40278088009	SW-HWY27E_202405	SM 2540D	474504		
40278088010	CP-04_202405	SM 2540D	474504		
40278088011	SW-C1-DUP-202405	SM 2540D	474504		
40278088001	SW-C9_202405	SM 4500-S F (2000)	474329		
40278088002	SW-C1_202405	SM 4500-S F (2000)	474329		
40278088003	SW-STM_202405	SM 4500-S F (2000)	474329		
40278088004	SW-C5_202405	SM 4500-S F (2000)	474329		
40278088005	SW-EB_202405	SM 4500-S F (2000)	474329		
40278088006	SW-NBOUT_202405	SM 4500-S F (2000)	474329		
40278088007	SW-NB_202405	SM 4500-S F (2000)	474329		
40278088008	SW-HWY27W_202405	SM 4500-S F (2000)	474329		
40278088009	SW-HWY27E_202405	SM 4500-S F (2000)	474329		
40278088010	CP-04_202405	SM 4500-S F (2000)	474329		
40278088011	SW-C1-DUP-202405	SM 4500-S F (2000)	474329		
40278088001	SW-C9_202405	SM 4500-S F (2000)	474331		
40278088002	SW-C1_202405	SM 4500-S F (2000)	474331		
40278088003	SW-STM_202405	SM 4500-S F (2000)	474331		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40278088004	SW-C5_202405	SM 4500-S F (2000)	474331		
40278088005	SW-EB_202405	SM 4500-S F (2000)	474331		
40278088006	SW-NBOUT_202405	SM 4500-S F (2000)	474331		
40278088007	SW-NB_202405	SM 4500-S F (2000)	474331		
40278088008	SW-HWY27W_202405	SM 4500-S F (2000)	474331		
40278088009	SW-HWY27E_202405	SM 4500-S F (2000)	474331		
40278088010	CP-04_202405	SM 4500-S F (2000)	474331		
40278088011	SW-C1-DUP-202405	SM 4500-S F (2000)	474331		
40278088001	SW-C9_202405	EPA 300.0	474528		
40278088002	SW-C1_202405	EPA 300.0	474528		
40278088003	SW-STM_202405	EPA 300.0	474528		
40278088004	SW-C5_202405	EPA 300.0	474528		
40278088005	SW-EB_202405	EPA 300.0	474528		
40278088006	SW-NBOUT_202405	EPA 300.0	474528		
40278088007	SW-NB_202405	EPA 300.0	474528		
40278088008	SW-HWY27W_202405	EPA 300.0	474528		
40278088009	SW-HWY27E_202405	EPA 300.0	474528		
40278088010	CP-04_202405	EPA 300.0	474528		
40278088011	SW-C1-DUP-202405	EPA 300.0	474528		
40278088001	SW-C9_202405	EPA 300.0	474718		
40278088002	SW-C1_202405	EPA 300.0	474718		
40278088003	SW-STM_202405	EPA 300.0	474718		
40278088004	SW-C5_202405	EPA 300.0	474718		
40278088005	SW-EB_202405	EPA 300.0	474718		
40278088006	SW-NBOUT_202405	EPA 300.0	474718		
40278088007	SW-NB_202405	EPA 300.0	474718		
40278088008	SW-HWY27W_202405	EPA 300.0	474718		
40278088009	SW-HWY27E_202405	EPA 300.0	474718		
40278088010	CP-04_202405	EPA 300.0	474718		
40278088011	SW-C1-DUP-202405	EPA 300.0	474718		
40278088001	SW-C9_202405	EPA 310.2	474699		
40278088002	SW-C1_202405	EPA 310.2	474699		
40278088003	SW-STM_202405	EPA 310.2	474699		
40278088004	SW-C5_202405	EPA 310.2	474699		
40278088005	SW-EB_202405	EPA 310.2	474699		
40278088006	SW-NBOUT_202405	EPA 310.2	474699		
40278088007	SW-NB_202405	EPA 310.2	474699		
40278088008	SW-HWY27W_202405	EPA 310.2	474699		
40278088009	SW-HWY27E_202405	EPA 310.2	474699		
40278088010	CP-04_202405	EPA 310.2	474699		
40278088011	SW-C1-DUP-202405	EPA 310.2	474699		
40278088001	SW-C9_202405	EPA 310.2	474307		
40278088002	SW-C1_202405	EPA 310.2	474307		
40278088003	SW-STM_202405	EPA 310.2	474307		
40278088004	SW-C5_202405	EPA 310.2	474307		
40278088005	SW-EB_202405	EPA 310.2	474307		
40278088006	SW-NBOUT_202405	EPA 310.2	474307		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278088

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40278088007	SW-NB_202405	EPA 310.2	474307		
40278088008	SW-HWY27W_202405	EPA 310.2	474307		
40278088009	SW-HWY27E_202405	EPA 310.2	474307		
40278088010	CP-04_202405	EPA 310.2	474308		
40278088011	SW-C1-DUP-202405	EPA 310.2	474308		
40278088001	SW-C9_202405	SM 5310C	474287		
40278088002	SW-C1_202405	SM 5310C	474287		
40278088003	SW-STM_202405	SM 5310C	474287		
40278088004	SW-C5_202405	SM 5310C	474287		
40278088005	SW-EB_202405	SM 5310C	474287		
40278088006	SW-NBOUT_202405	SM 5310C	474287		
40278088007	SW-NB_202405	SM 5310C	474287		
40278088008	SW-HWY27W_202405	SM 5310C	474287		
40278088009	SW-HWY27E_202405	SM 5310C	474287		
40278088010	CP-04_202405	SM 5310C	474287		
40278088011	SW-C1-DUP-202405	SM 5310C	474287		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 1
Cooler #: 2 of 2

COC # **FMC-2024_04**

40278088

Required Ship to Lab:		Required Project Information:			Required Invoice Information:			TAT: Standard 10 day <input checked="" type="checkbox"/> Rush <input type="checkbox"/> Mark One <input type="checkbox"/>		
Lab Name: Pace Analytical Services		*Facility ID #: Flambeau Mina Co			Send Invoice to: Accounting			If Rush, Date due		
Address: 1241 Bellavua Straet - Suite 9, Green Bay, WI		*Task Code #: FMC-2024_04			Address: 2121 Innovation Court P O. Box 5126, Da Pere, WI.			QC level Required: Standard <input checked="" type="checkbox"/> Special <input type="checkbox"/> Mark one <input type="checkbox"/>		
Site Address: --		City/State: Da Para, WI 54115			Ph #: 920-497-2500					
Lab PM: Tod Noltamayar		City: LADYSMITH State: WI			17F777.23-07-73			Lab Project ID (lab use)		
Phone/Fax: (608) 232-3300		Project Contact: Mark Ciardelli			Send EDD to: Nick Glander			Requested Analyses		
Lab PM email: Tod Noltameyer@pacelabs.com		Phone/Fax: 920-496-6656			CC Hardcopy report to: Sharon Kozicka, Nick Glander			Filtered (Y/N)		
Applicable Lab Quota #:		Email: Mark Ciardelli@foth.com			CC electronic copy report to: Sharon.Kozicki@foth.com nick.glander@foth.com			N Y N Y Y N N Y		

ITEM #	*SAMPLE ID Samples IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX DRINKING WATER WS GROUND WATER WS WASTE WATER WF FREE PRODUCT SD SOIL DL WPE SW AMBIENT AIR AA EVE AIR AC SOIL GAS GG	MATRIX SURFACE WATER WS WATER OIL WO SLUDGE SL RISSATE RL LAB LEACHATE - ELB LAB LEACHATE - TOLP	*MATRIX CODE	SAMPLE TYPE G-GRAB G-COMP	SAMPLE DATE	SAMPLE TIME (Military)	# OF CONTAINERS	Preservatives												Comments/ Lab Sample I.D.	
									Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Zinc Acetate & NaOH	Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Total Alkalinity, Cl, Sulfate	Dissolved Alkalinity, Cl, Sulfate		DOC
1	SW-C9_202405	WS	G	5/8/2024	10:27	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	001
2	SW-C1_202405	WS	G	5/8/2024	13:37	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	002
3	SW-STM_202405	WS	G	5/8/2024	15:01	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	003
4	SW-C5_202405	WS	G	5/8/2024	12:34	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	004
5	SW-EB-202405	WS	G	5/8/2024	12:20	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	005
6	SW-NBOUT_202405	WS	G	5/8/2024	11:58	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	006
7	SW-NB_202405	WS	G	5/8/2024	11:04	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	007
8	SW-HWY27W_202405	WS	G	5/8/2024	10:03	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	008
9	SW-HWY27E_202405	WS	G	5/8/2024	9:40	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	009
10	CP-04_202405	WS	G	5/8/2024	13:00	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	010
11	SW-C1-DUP-202405	WS	G	5/8/2024	13:37	8	3 1 2	2	X	X	X	X	X	X	X	X	X	X	X	X	X	011

Additional Comments/Special Instructions:	RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions			
	Jim Engelhardt/Merjent		9-May	1000					Y/N	Y/N	Y/N	
	<i>Waltw</i>		<i>5/8/24</i>	<i>0800</i>	<i>Waltw</i>		<i>5/10/24</i>	<i>0800</i>	Y/N	Y/N	Y/N	
									Y/N	Y/N	Y/N	
Include Equis EDD's	SHIPPING METHOD: (mark as appropriate)				SAMPLER NAME AND SIGNATURE				Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
	UPS COURIER FEDEX				Jim Engelhardt							
	US MAIL				SIGNATURE of SAMPLER <i>Jim Engelhardt</i> DATE Signed 5/8/2024 Time 22:00							


https://merjent1-my.sharepoint.com/personal/jim_engelhardt_merjent_com/Documents/Desktop/Flambeau Mine
Monitoring/COC/2024_FMC_StreamC_COC_202405082024_FMC_StreamC_COC_20240508COC PACE SW-Stream C

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Foth

WO#: 40278088



40278088

Courier: CS Logistics Fed Ex Speedee UPS Walco
 Client Pace Other: _____

Tracking #: 3892519

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 - 120 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 1,1,2 / Corr: 1,1,2

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: 8/10/24 / Initials: mld
 Labeled By Initials: YH

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

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

WHOLE EFFLUENT TOXICITY (WET) TEST REPORT FORM

GENERAL INFORMATION			
FACILITY:	Foth Infrastructure & Env.	WPDES PERMIT NO.:	N/A
OUTFALL NO.:	Various	LABORATORY NAME:	Cove Environmental
RECEIVING WATER:	N/A		

SAMPLE INFORMATION												
SAMPLE NO.	SAMPLE COLLECTION			SAMPLE TEMP °C		pH at LAB	HAND DELIVER? (If Yes, ≤ 4 hr?)		HOLD TIME ≤ 36 HR?		SAMPLE ACCEPTABLE?	
	SAMPLE TYPE	BEGINNING DATE	END DATE	COLLEC TION	AT LAB		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
1	SW-STM		5/9/2024		2.2	6.86	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
2	SW-C5		5/9/2024		2.0	6.31	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
3	SW-C9		5/9/2024		1.8	6.09	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
4	SW-C1		5/9/2024		2.4	6.28	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
							<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
							<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Describe any unusual conditions during sampling that may influence test results. (see Part 6.1.2 of the Methods Manual for examples.)

COMMENTS:

TEST INFORMATION						
ACUTE				CHRONIC		
Date Test Initiated:	5/10/2024					
Tests Are For:	▼			▼		
Date of Initial Test:						
ZID/IWC Info.:	ZID Compliance Concentration = 100.00			Instream Waste Concentration =		
Dilution Water:	<i>C. dubia</i>	FHM	Other	<i>C. dubia</i>	FHM	Other
	<input type="checkbox"/> RW	<input type="checkbox"/> RW	<input type="checkbox"/> RW	<input type="checkbox"/> RW	<input type="checkbox"/> RW	<input type="checkbox"/> RW
	<input checked="" type="checkbox"/> LW	<input checked="" type="checkbox"/> LW	<input type="checkbox"/> LW	<input type="checkbox"/> LW	<input type="checkbox"/> LW	<input type="checkbox"/> LW

QA/QC CONDITIONS		
	ACUTE	CHRONIC
Temperatures maintained during test? (20 ± 1°C or 25 ± 1°C)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Dissolved oxygen ≥ 4.0 mg/l throughout test?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Effluent pH maintained within 6.0 - 9.0 s.u. throughout test?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Concurrent or monthly reference tests within acceptable limits?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
Tests conducted in a carbon dioxide atmosphere throughout test?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Were effluent samples modified prior to testing?(ex. filtration, aeration, chem addition)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

COMMENTS:

WATER CHEMISTRY (All values reported in mg/L, except pH)						
SAMPLE TYPE	NO.	HARDNESS	ALKALINITY	TOTAL AMMONIA	pH (s.u.) After Warming	TOTAL RESIDUAL CHLORINE
Effluent	SW-STM	72	24	0.031	7.4	Not detected
	SW-C5	64	16	0.023	6.9	Not detected
	SW-C9	148	20	0.017	6.3	Not detected
	SW-C1	124	26	0.019	6.2	Not detected
Lab Water	MH7324	110	60	N/A	7.4	Not detected

COMMENTS: TRC measured via DPD powder packets, per WI protocol.

ACUTE TEST CONTROL PERFORMANCE

RECEIVING WATER CONTROLS		LAB WATER CONTROLS	
Fathead Minnow	<i>Ceriodaphnia dubia</i>	Fathead Minnow	<i>Ceriodaphnia dubia</i>
Survival \geq 90%	Survival \geq 90%	Survival \geq 90%	Survival \geq 90%
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

COMMENTS:

ACUTE TEST DATA

SPECIES	EFFLUENT TREATMENT	Percent Survival By Replicate				Mean Percent Survival
		1	2	3	4	
Fathead Minnow Age of Organism: 5 Days	MH Control	100	100	100	100	100.0
	SW-STM	100	100	100	100	100.0
	SW-C5	100	100	100	100	100.0
	SW-C9	100	100	100	100	100.0
	SW-C1	100	100	100	100	100.0

FATHEAD MINNOW ACUTE RESULTS: $LC_{50} = >100$ **C.I.% = NC** $TU_a = <1$

Please describe any unusual behavior and/or appearance of organisms.(see Part 6.1.2 of the Methods Manual for ex.)

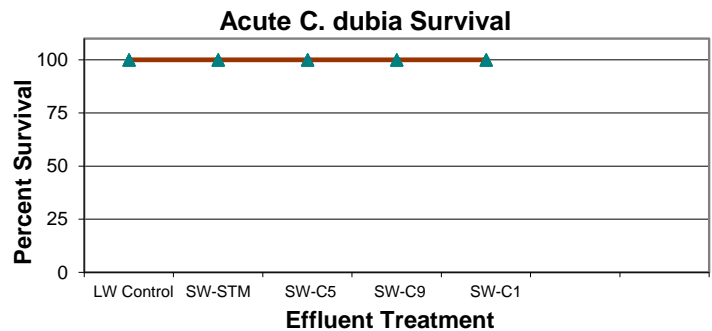
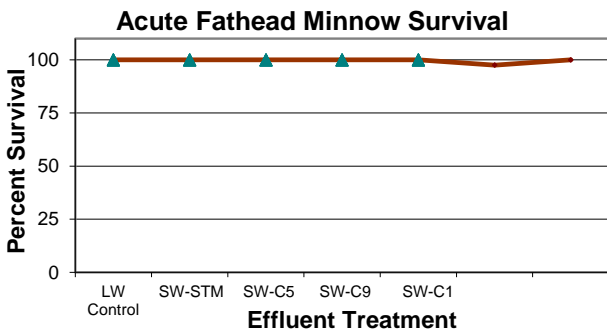
COMMENTS: Not enough statistical difference to run Spearman-Karber, Trimmed Spearman-Karber, or Probit Method for statistical analysis.

SPECIES	EFFLUENT TREATMENT	Percent Survival By Replicate				Mean Percent Survival
		1	2	3	4	
<i>Ceriodaphnia dubia</i> Age of Organism: < 24 Hours Old	MH Control	100	100	100	100	100.0
	SW-STM	100	100	100	100	100.0
	SW-C5	100	100	100	100	100.0
	SW-C9	100	100	100	100	100.0
	SW-C1	100	100	100	100	100.0

***Ceriodaphnia dubia* ACUTE RESULTS:** $LC_{50} = >100$ **C.I.% = NC** $TU_a = <1$

Please describe any unusual behavior and/or appearance of organisms.(see Part 6.1.2 of the Methods Manual for ex.)

COMMENTS: Not enough statistical difference to run Spearman-Karber, Trimmed Spearman-Karber, or Probit Method for statistical analysis.




Facility : Foth Infrastructure & Environment, LLC

Permit # : N/A

Acute Test Date : 5/10/2024

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

LAB REPRESENTATIVE:	Sarah Brown	SIGNATURE:			
PHONE:	(405) 372-2122	LAB CERT #:	399154580	DATE:	5/20/2024
PERMITTEE REPRESENTATIVE:		SIGNATURE:			
PHONE:		DATE:			

Send **all 4 pages** of this form (plus any attachments or additional information which you believe to be relevant to the test) to: **Biomonitoring Coordinator, Bureau of Watershed Management, Department of Natural Resources, 101 South Webster St., P.O. Box 7921, Madison, WI 53707-7921; according to the timelines specified in your WPDES permit.**

Copies of the State of Wisconsin Aquatic Life Toxicity Testing Methods Manual (Methods Manual) and the WET Guidance Document can be obtained from the Biomonitoring Coordinator at the address given above or at: <http://dnr.wi.gov/org/water/wm/ww/biomon/biomon.htm>

TO BE COMPLETED BY THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES					
		DID TESTS PASS?			
ACUTE	Fathead Minnow	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Inconclusive	<input type="checkbox"/> Unacceptable
	<i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Inconclusive	<input type="checkbox"/> Unacceptable
CHRONIC	Fathead Minnow	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Inconclusive	<input type="checkbox"/> Unacceptable
	<i>Ceriodaphnia dubia</i>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Inconclusive	<input type="checkbox"/> Unacceptable
Retests Required?	<input type="checkbox"/> Yes <input type="checkbox"/> No	_____ Acute / Chronic: Both Species <input type="checkbox"/> <i>C.dubia</i> only <input type="checkbox"/> FHM only			
Due To:	<input type="checkbox"/> Failure <input type="checkbox"/> QA Problem				
WET Limit Violation?	<input type="checkbox"/> Yes <input type="checkbox"/> No limit in permit	Results Entered Into Database?		<input type="checkbox"/> Yes	<input type="checkbox"/> No
COMMENTS:					
REVIEWED BY:		DATE:			
CC:			BASIN ENGINEER		
			PERMIT COORDINATOR		
			PERMIT FILE		

Facility : Foth Infrastructure & Environment, LLC
 Permit # : N/A
 Test Date : 5/10/2024

CLIENT: 191 TEST DATE: 5/10/24
 TEST ID: 191-1-24

100% EFFLUENT

Sample ID	Alkalinity mg/L	Hardness mg/L CaCO3	Ammonia mg/L NH3N
051024-06	24	72	0.031
051024-07	16	64	0.023
051024-08	20	148	0.017
051024-09	26	124	0.019

CONTROL / DILUTION WATER

Sample ID	Alkalinity mg/L	Hardness mg/L CaCO3	Ammonia mg/L NH3N
MH7324	60	110	N/A

Comments:

CLIENT: 191 TEST DATE: 5/10/2024
 TEST ID: 191-1-24

Comments:

Concentration	Sample ID	Control Water	Client ID	Dilution	Initial				Sample ID	Control Water	Client ID	Dilution	Final			
					pH (s.u.)	DO (mg/L)	Conductivity (uS/cm)	Temp (°C)					pH (s.u.)	DO (mg/L)	Conductivity (uS/cm)	Temp (°C)
0% (SYN)	N/A	MH7324	191	S	7.41	8.12	339	25.4	N/A	MH7324	191	S	7.57	7.83	365	24.2
SW-STM 100%	051024-06	N/A	191	SW-STM	7.39	8.89	101	25.4	051024-06	N/A	191	SW-STM	7.83	7.83	106	24.2
SW-C5 100%	051024-07	N/A	191	SW-C5	6.89	7.25	68	25.5	051024-07	N/A	191	SW-C5	7.82	7.87	71	24.1
SW-C9 100%	051024-08	N/A	191	SW-C9	6.28	6.65	38	25.5	051024-08	N/A	191	SW-C9	7.75	7.86	41	24.0
SW-C1 100%	051024-09	N/A	191	SW-C1	6.2	6.72	84	25.5	051024-09	N/A	191	SW-C1	7.59	7.84	87	24.0

Concentration	Sample ID	Control Water	Client ID	Dilution	Initial				Sample ID	Control Water	Client ID	Dilution	Final			
					pH (s.u.)	DO (mg/L)	Conductivity (uS/cm)	Temp (°C)					pH (s.u.)	DO (mg/L)	Conductivity (uS/cm)	Temp (°C)
0% (SYN)	N/A	MH7324	191	S	7.54	7.90	356	25.5	N/A	MH7324	191	S	7.55	7.84	369	25.0
SW-STM 100%	051024-06	N/A	191	SW-STM	6.43	8.99	103	25.5	051024-06	N/A	191	SW-STM	7.23	8.08	109	24.9
SW-C5 100%	051024-07	N/A	191	SW-C5	6.02	8.87	69	25.5	051024-07	N/A	191	SW-C5	7.24	7.95	77	24.8
SW-C9 100%	051024-08	N/A	191	SW-C9	5.65	8.37	46	25.4	051024-08	N/A	191	SW-C9	7.5	7.76	49	24.8
SW-C1 100%	051024-09	N/A	191	SW-C1	5.41	8.22	90	25.3	051024-09	N/A	191	SW-C1	7.27	7.80	100	24.8

CLIENT: <u>191</u>	STUDY ID: <u>191-1-24</u>	START DATE: <u>5/10/2024</u>
TEST TYPE: <u>Screen</u>		SYN WATER TYPE: <u>MH</u>
ORGANISM SOURCE: <u>Cove</u>	PHOTOPERIOD: <u>16 hrs light/8 hrs dark</u>	

TEST ORGANISM: <u>C. dubia</u> ORGANISM BATCH #: <u>Cd2024-131</u>	TEST ORGANISM: <u>P. promelas</u> ORGANISM BATCH #: <u>Pp2024-127</u>
TEST METHOD: <u>WI PUB-WT-797</u> ALGAE BATCH #: <u>ABSAIg2024-17</u>	TEST METHOD: <u>WI PUB-WT-797</u> BRINE BATCH #: <u>Brine2024-01</u>
TEST VESSEL CAPACITY: <u>30 mL</u> YCT BATCH #: <u>YCT0124</u>	TEST VESSEL CAPACITY: <u>250 mL</u> FED 2HRS BEFORE START: <u>CO</u>
TEST SOLUTION VOLUME: <u>15 mL</u> FED 2HRS BEFORE START: <u>CO</u>	TEST SOLUTION VOLUME: <u>200 mL</u> RANDOMIZED: <u>CO</u>
NO. ORGANISMS/VESSEL: <u>5</u> RANDOMIZED: <u>CO</u>	NO. ORGANISMS/VESSEL: <u>10</u> AGE: _____
NO. REPLICATES: <u>4</u>	NO. REPLICATES: <u>4</u> TEMPERATURE: _____
LIGHT STATION: <u>CO2 Chamber</u>	LIGHT STATION: <u>CO2 Chamber</u>

Conc (%)	Vessel ID	Survival (#)				DEAD
		0	24	48	DEAD	
Syn - 0 %	S1	5	5	5	0	
	S2	5	5	5	0	
	S3	5	5	5	0	
	S4	5	5	5	0	
SW-STM - 100%	A1	5	5	5	0	
	A2	5	5	5	0	
	A3	5	5	5	0	
	A4	5	5	5	0	
SW-C5 - 100%	B1	5	5	5	0	
	B2	5	5	5	0	
	B3	5	5	5	0	
	B4	5	5	5	0	
SW-C9 - 100%	C1	5	5	5	0	
	C2	5	5	5	0	
	C3	5	5	5	0	
	C4	5	5	5	0	
SW-C1 - 100%	D1	5	5	5	0	
	D2	5	5	5	0	
	D3	5	5	5	0	
	D4	5	5	5	0	

Initials:	SS	JS	CO
Time:	1805	1230	1800
Date:	5/10	5/11	5/12
Checked:	SS	JS	

Dilutions	Initials	CO	CO
	Time:	1755	1145

Conc (%)	Vessel ID	Survival (#)					DEAD
		0	24	48	72	96	
Syn - 0 %	S1	10	10	10	10	10	0
	S2	10	10	10	10	10	0
	S3	10	10	10	10	10	0
	S4	10	10	10	10	10	0
SW-STM - 100%	A1	10	10	10	10	10	0
	A2	10	10	10	10	10	0
	A3	10	10	10	10	10	0
	A4	10	10	10	10	10	0
SW-C5 - 100%	B1	10	10	10	10	10	0
	B2	10	10	10	10	10	0
	B3	10	10	10	10	10	0
	B4	10	10	10	10	10	0
SW-C9 - 100%	C1	10	10	10	10	10	0
	C2	10	10	10	10	10	0
	C3	10	10	10	10	10	0
	C4	10	10	10	10	10	0
SW-C1 - 100%	D1	10	10	10	10	10	0
	D2	10	10	10	10	10	0
	D3	10	10	10	10	10	0
	D4	10	10	10	10	10	0

Initials	JS	JS	SS	SS	SS
Time:	1800	1240	1240	1245	1800
Date:	5/10	5/11	5/12	5/13	5/14
Checked:	CO	JS	SS	SS	

Dilutions	Initials	CO	CO
	Time:	1755	1145

Comments:

Reviewed by:	SS
QA Review:	SB

Cove Aquatic Toxicity Laboratory WI Sample Receipt Checklist:

Study ID: 191-1-24 Checked in by: SG

Date: 5/10/24 Time: 0915

1. Upon arrival by:
 - Client -was cooler closed and intact and w/ COC? ~~YES~~ NO
 - Shipping Courier- was cooler sealed with tape and/or custody seal and was COC attached?
2. Is the COC filled out correctly?
 - Client Name ~~YES~~ NO
 - Analysis Requested ~~YES~~ NO
 - Sample location ~~YES~~ NO
 - Sampler's Signature ~~YES~~ NO
 - Date/Time On/Off ~~YES~~ NO
 - Preservation Type (if Any) ~~YES~~ NO
3. Were the sample(s) received below 6°C? ~~YES~~ NO
4. Was ice or ice packs present? ~~YES~~ NO
5. Were the sample(s) received within 36 hours of collection? ~~YES~~ NO
6. Were the sample(s) shipped in appropriate containers and sealed? ~~YES~~ NO
7. Were the sample(s) easy to identify? (Labeled correctly if different?) ~~YES~~ NO
8. Was total volume of sample adequate to perform the required analysis? ~~YES~~ NO

Sample ID	Description	pH	DO	TRC	Pull off Date/Time	NH3/pH dups pulled?
051024-06	SW-STM	6.86	9.96	—	5/9 1150	N/A
-07	SW-C5	6.31	6.99	—	↓ 1000	↓
-08	SW-C9	6.09	6.93	—	↓ 0930	↓
-09	SW-C1	6.29	7.29	—	↓ 1100	↓

WI Secondary Checklist

NH3 STD	NH3 Blank	NH3 Dup	NH3	Chlorine
SG	SG	SG	SG	N/A

ULR Vials for NH3 // Run chlorine only if sample is positive

Comments:
 Concurrent WI Reftox necessary
 Do Not Dechlorinate

COVE ENVIRONMENTAL

AQUATIC TOXICITY LABORATORY
3400 W. Lakeview Rd. Stillwater, OK 74075
Phone 405.372.2122
www.covesciences.com

Client/Facility Name: <i>FLAMBEAU MINE CO.</i>		Submit report to: <i>SHARON KOZICKI / NICK GLANDER</i>						FOR LAB USE ONLY			
		Email: <i>SHARON.KOZICKI@FOTW.COM / NICK.GLANDER@FOTW.COM</i>						Client# - Project# - Work Order# <i>191-1-24</i>			
		Phone: <i>(920) 362-8744</i> PO No.						TYPES: C-Compliance S-Screen O-Other			
Test Sample No.	Sample Location	Type of Sample			No. of Cont.	Cont. Type (P/G)	Type of Preserv.	Analysis Required	TEST TYPE	SAMPLE ID:	TEMP
		Composite		Grab							
		Date/Time On	Date/Time Off	Date/Time							
<i>1</i>	<i>SW-STM</i>	<i>-</i>	<i>-</i>	<i>5/9/24-1150</i>	<i>1</i>	<i>P</i>	<i>NONE</i>	<i>WET TEST / TOXICITY</i>	<i>051024-06</i>	<i>2.2°C</i>	
<i>2</i>	<i>SW-CS</i>	<i>-</i>	<i>-</i>	<i>5/9/24-1000</i>	<i>1</i>	<i>P</i>	<i>NONE</i>	<i>WET TEST / TOXICITY</i>	<i>-07</i>	<i>2.0°C</i>	
<i>3</i>	<i>SW-C9</i>	<i>-</i>	<i>-</i>	<i>5/9/24-0930</i>	<i>1</i>	<i>P</i>	<i>NONE</i>	<i>WET TEST / TOXICITY</i>	<i>-06</i>	<i>1.8°C</i>	
<i>4</i>	<i>SW-C1</i>	<i>-</i>	<i>-</i>	<i>5/9/24-1100</i>	<i>1</i>	<i>P</i>	<i>NONE</i>	<i>WET TEST / TOXICITY</i>	<i>-09</i>	<i>2.4°C</i>	
Sampler's Signature: <i>[Signature]</i>		Comments:									
Sample Relinquished by: <i>Jim ENGELHARD?</i>		Date/Time <i>5/9/24</i>			Sample Received by:			Date/Time <i>5/10/24 0915</i>			

CHAIN OF CUSTODY RECORD

(Please complete form as thoroughly as possible, using black or blue ink.)

* UNLESS OTHERWISE NOTED, ALL SAMPLES ARE STORED BELOW 6°C *

Cove Aquatic Toxicity Laboratory Shipping Label Receipt:

Study ID: 191-1-24

Sample ID: 051024-06

-07

-08

-09





June 12, 2024

Nick Glander
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: FMC-2024_04 FLAMBEAU MINE CO.
Pace Project No.: 40278809

Dear Nick Glander:

Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 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 - Green Bay

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

Sincerely,

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: MARK CIARDELLI, Foth Infrastructure & Environment, LLC
Krystal Clark, Foth Infrastructure & Environment
SHARON KOZICKI, Foth Infrastructure & Environment, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40278809001	SW-C9_20240523	Water	05/23/24 10:37	05/24/24 11:05
40278809002	SW-C1_20240523	Water	05/23/24 09:44	05/24/24 11:05
40278809003	SW-STM_20240523	Water	05/23/24 07:07	05/24/24 11:05
40278809004	SW-C5_20240523	Water	05/23/24 10:05	05/24/24 11:05
40278809005	SW-EB_20240523	Water	05/23/24 08:57	05/24/24 11:05
40278809006	SW-NBOUT_20240523	Water	05/23/24 08:32	05/24/24 11:05
40278809007	SW-NB_20240523	Water	05/23/24 08:02	05/24/24 11:05
40278809008	SW-HWY27W_20240523	Water	05/23/24 11:35	05/24/24 11:05
40278809009	SW-HWY27E_20240523	Water	05/23/24 12:17	05/24/24 11:05
40278809010	CP-04_20240523	Water	05/23/24 09:22	05/24/24 11:05
40278809011	SW-C9-DUP-20240523	Water	05/23/24 10:37	05/24/24 11:05

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40278809001	SW-C9_20240523	EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278809002	SW-C1_20240523	EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278809003	SW-STM_20240523	EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40278809004	SW-C5_20240523	EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40278809005	SW-EB_20240523	EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	TXW	9
40278809006	SW-NBOUT_20240523	EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
SM 4500-S F (2000)	TXW	1		
40278809007	SW-NB_20240523	EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
40278809008	SW-HWY27W_20240523	SM 5310C	TJJ	1
		EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
		SM 4500-S F (2000)	TXW	1

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40278809009	SW-HWY27E_20240523	SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
40278809010	CP-04_20240523	SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1
40278809011	SW-C9-DUP-20240523	SM 4500-S F (2000)	TXW	1
		EPA 300.0	HMB	2
		EPA 300.0	TMK	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
		EPA 6020B	TXW	9
		EPA 6020B	TXW	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	TXW	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_04 FLAMBEAU MINE CO.
Pace Project No.: 40278809

Lab ID	Sample ID	Method	Analysts	Analytes Reported
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PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 6020B

Description: 6020B MET ICPMS

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 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.

QC Batch: 475331

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278809001

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

- MS (Lab ID: 2722864)
- Calcium

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 6020B

Description: 6020B MET ICPMS, Dissolved

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: SM 2540D

Description: 2540D Total Suspended Solids

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for SM 2540D 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.

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.

Duplicate Sample:

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

Additional Comments:

Analyte Comments:

QC Batch: 475590

PP: The mass of dried residue obtained did not meet the test method requirements based on volume used.

- SW-C1_20240523 (Lab ID: 40278809002)
 - Total Suspended Solids
- SW-C5_20240523 (Lab ID: 40278809004)
 - Total Suspended Solids
- SW-HWY27E_20240523 (Lab ID: 40278809009)
 - Total Suspended Solids
- SW-NBOUT_20240523 (Lab ID: 40278809006)
 - Total Suspended Solids

T3: Insufficient sample received from client to perform the analysis per EPA method requirements.

- SW-C1_20240523 (Lab ID: 40278809002)
 - Total Suspended Solids
- SW-C5_20240523 (Lab ID: 40278809004)
 - Total Suspended Solids
- SW-HWY27E_20240523 (Lab ID: 40278809009)
 - Total Suspended Solids
- SW-NBOUT_20240523 (Lab ID: 40278809006)
 - Total Suspended Solids

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide, Iodometric

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for SM 4500-S F (2000) 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide,Diss Iodometric

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for SM 4500-S F (2000) 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 300.0

Description: 300.0 IC Anions

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for EPA 300.0 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.

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: 475848

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278809004

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

- MS (Lab ID: 2725174)
 - Chloride
 - Sulfate

Additional Comments:

Analyte Comments:

QC Batch: 475847

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- SW-C1_20240523 (Lab ID: 40278809002)
 - Chloride
 - Sulfate
- SW-C9_20240523 (Lab ID: 40278809001)
 - Chloride
 - Sulfate
- SW-STM_20240523 (Lab ID: 40278809003)
 - Chloride
 - Sulfate

QC Batch: 475848

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- CP-04_20240523 (Lab ID: 40278809010)
 - Sulfate
- SW-C5_20240523 (Lab ID: 40278809004)
 - Chloride

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 300.0

Description: 300.0 IC Anions

Client: Foth Infrastructure & Environment

Date: June 12, 2024

Analyte Comments:

QC Batch: 475848

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- SW-C5_20240523 (Lab ID: 40278809004)
 - Sulfate
- SW-C9-DUP-20240523 (Lab ID: 40278809011)
 - Chloride
 - Sulfate
- SW-HWY27E_20240523 (Lab ID: 40278809009)
 - Chloride
 - Sulfate
- SW-HWY27W_20240523 (Lab ID: 40278809008)
 - Sulfate

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 300.0

Description: 300.0 IC Anions, Dissolved

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for EPA 300.0 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.

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: 475997

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40278790010,40278809006

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

- MSD (Lab ID: 2726179)
- Sulfate, Dissolved

Additional Comments:

Analyte Comments:

QC Batch: 475997

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- SW-C1_20240523 (Lab ID: 40278809002)
 - Chloride, Dissolved
 - Sulfate, Dissolved
- SW-C5_20240523 (Lab ID: 40278809004)
 - Chloride, Dissolved
 - Sulfate, Dissolved
- SW-C9_20240523 (Lab ID: 40278809001)
 - Chloride, Dissolved
 - Sulfate, Dissolved
- SW-EB_20240523 (Lab ID: 40278809005)
 - Sulfate, Dissolved
- SW-NBOUT_20240523 (Lab ID: 40278809006)
 - Chloride, Dissolved
 - Sulfate, Dissolved
- SW-STM_20240523 (Lab ID: 40278809003)
 - Chloride, Dissolved
 - Sulfate, Dissolved

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 300.0

Description: 300.0 IC Anions, Dissolved

Client: Foth Infrastructure & Environment

Date: June 12, 2024

Analyte Comments:

QC Batch: 476089

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- CP-04_20240523 (Lab ID: 40278809010)
 - Sulfate, Dissolved
- SW-C9-DUP-20240523 (Lab ID: 40278809011)
 - Chloride, Dissolved
 - Sulfate, Dissolved
- SW-HWY27E_20240523 (Lab ID: 40278809009)
 - Chloride, Dissolved
 - Sulfate, Dissolved
- SW-HWY27W_20240523 (Lab ID: 40278809008)
 - Sulfate, Dissolved
- SW-NB_20240523 (Lab ID: 40278809007)
 - Sulfate, Dissolved

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 310.2

Description: 310.2 Alkalinity

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for EPA 310.2 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: EPA 310.2

Description: 310.2 Alkalinity, Dissolved

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for EPA 310.2 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Method: SM 5310C

Description: 5310C Dissolved Organic Carbon

Client: Foth Infrastructure & Environment

Date: June 12, 2024

General Information:

11 samples were analyzed for SM 5310C 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.

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:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C9_20240523 Lab ID: 40278809001 Collected: 05/23/24 10:37 Received: 05/24/24 11:05 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									
Calcium	3100	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 13:31	7440-70-2	M0
Copper	6.5	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 13:31	7440-50-8	
Iron	1260	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 13:31	7439-89-6	
Magnesium	1020	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 13:31	7439-95-4	
Manganese	57.7	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 13:31	7439-96-5	
Potassium	797	ug/L	789	237	1	05/28/24 06:50	06/08/24 13:31	7440-09-7	
Sodium	1840	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 13:31	7440-23-5	
Total Hardness by 2340B	12.0	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 13:31		
Zinc	15.5J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 13:31	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	2890	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 10:49	7440-70-2	
Copper, Dissolved	4.6J	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 10:49	7440-50-8	
Iron, Dissolved	459	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 10:49	7439-89-6	
Magnesium, Dissolved	1040	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 10:49	7439-95-4	D9
Manganese, Dissolved	46.6	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 10:49	7439-96-5	
Potassium, Dissolved	764J	ug/L	789	237	1	06/03/24 07:25	06/08/24 10:49	7440-09-7	
Sodium, Dissolved	1950	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 10:49	7440-23-5	D9
Total Hardness by 2340B, Dissolved	11.5	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 10:49		
Zinc, Dissolved	15.4J	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 10:49	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	3.4	mg/L	1.1	0.50	1		05/29/24 15:40		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 11:46		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 12:49		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	<3.0	mg/L	10.0	3.0	5		06/05/24 01:38	16887-00-6	D3
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 01:38	14808-79-8	D3
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	<3.0	mg/L	10.0	3.0	5		06/06/24 15:37	16887-00-6	D3
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 15:37	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C9_20240523 Lab ID: 40278809001 Collected: 05/23/24 10:37 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	<7.4	mg/L	25.0	7.4	1		05/29/24 10:23		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	<7.4	mg/L	25.0	7.4	1		05/29/24 11:34		
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	17.2	mg/L	0.50	0.19	1		06/03/24 11:05		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C1_20240523 Lab ID: 40278809002 Collected: 05/23/24 09:44 Received: 05/24/24 11:05 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									
Calcium	4910	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:00	7440-70-2	
Copper	13.6	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:00	7440-50-8	
Iron	914	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:00	7439-89-6	
Magnesium	1770	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:00	7439-95-4	
Manganese	27.3	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:00	7439-96-5	
Potassium	418J	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:00	7440-09-7	
Sodium	3590	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:00	7440-23-5	
Total Hardness by 2340B	19.5	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:00		
Zinc	14.7J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:00	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	5270	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:14	7440-70-2	D9
Copper, Dissolved	12.5	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:14	7440-50-8	
Iron, Dissolved	557	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:14	7439-89-6	
Magnesium, Dissolved	1900	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:14	7439-95-4	D9
Manganese, Dissolved	21.2	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:14	7439-96-5	
Potassium, Dissolved	414J	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:14	7440-09-7	
Sodium, Dissolved	3970	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:14	7440-23-5	D9
Total Hardness by 2340B, Dissolved	21.0	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:14		
Zinc, Dissolved	14.4J	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:14	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	1.7	mg/L	1.1	0.50	1		05/29/24 15:40		PP,T3
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	1.8J	mg/L	4.0	1.2	1		05/30/24 11:51		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 12:53		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	5.4J	mg/L	10.0	3.0	5		06/05/24 01:53	16887-00-6	D3
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 01:53	14808-79-8	D3
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	5.4J	mg/L	10.0	3.0	5		06/06/24 15:52	16887-00-6	D3
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 15:52	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C1_20240523 Lab ID: 40278809002 Collected: 05/23/24 09:44 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	11.1J	mg/L	25.0	7.4	1		05/29/24 10:24		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	10.8J	mg/L	25.0	7.4	1		05/29/24 11:35		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	16.2	mg/L	0.50	0.19	1		06/03/24 11:22		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-STM_20240523 **Lab ID:** 40278809003 Collected: 05/23/24 07:07 Received: 05/24/24 11:05 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									
Calcium	4850	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:08	7440-70-2	
Copper	13.0	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:08	7440-50-8	
Iron	1010	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:08	7439-89-6	
Magnesium	1860	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:08	7439-95-4	
Manganese	24.0	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:08	7439-96-5	
Potassium	823	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:08	7440-09-7	
Sodium	4930	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:08	7440-23-5	
Total Hardness by 2340B	19.8	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:08		
Zinc	12.7J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:08	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	5320	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:22	7440-70-2	D9
Copper, Dissolved	12.6	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:22	7440-50-8	
Iron, Dissolved	500	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:22	7439-89-6	
Magnesium, Dissolved	2020	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:22	7439-95-4	D9
Manganese, Dissolved	16.3	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:22	7439-96-5	
Potassium, Dissolved	853	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:22	7440-09-7	D9
Sodium, Dissolved	5670	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:22	7440-23-5	D9
Total Hardness by 2340B, Dissolved	21.6	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:22		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:22	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.6	mg/L	1.1	0.50	1		05/29/24 15:40		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 11:52		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 12:55		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	7.4J	mg/L	10.0	3.0	5		06/05/24 02:08	16887-00-6	D3
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 02:08	14808-79-8	D3
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	7.1J	mg/L	10.0	3.0	5		06/06/24 16:51	16887-00-6	D3
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 16:51	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-STM_20240523 Lab ID: 40278809003 Collected: 05/23/24 07:07 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	10.8J	mg/L	25.0	7.4	1		05/29/24 10:25		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	10.3J	mg/L	25.0	7.4	1		05/29/24 11:36		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	16.0	mg/L	0.50	0.19	1		06/03/24 11:39		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C5_20240523 Lab ID: 40278809004 Collected: 05/23/24 10:05 Received: 05/24/24 11:05 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									
Calcium	3980	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:13	7440-70-2	
Copper	13.2	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:13	7440-50-8	
Iron	865	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:13	7439-89-6	
Magnesium	1410	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:13	7439-95-4	
Manganese	22.0	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:13	7439-96-5	
Potassium	349J	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:13	7440-09-7	
Sodium	2880	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:13	7440-23-5	
Total Hardness by 2340B	15.7	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:13		
Zinc	13.9J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:13	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	4400	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:26	7440-70-2	D9
Copper, Dissolved	11.8	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:26	7440-50-8	
Iron, Dissolved	528	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:26	7439-89-6	
Magnesium, Dissolved	1540	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:26	7439-95-4	D9
Manganese, Dissolved	16.3	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:26	7439-96-5	
Potassium, Dissolved	358J	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:26	7440-09-7	
Sodium, Dissolved	3130	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:26	7440-23-5	D9
Total Hardness by 2340B, Dissolved	17.3	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:26		
Zinc, Dissolved	13.7J	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:26	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	1.6	mg/L	1.0	0.49	1		05/29/24 15:40		PP,T3
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 11:54		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 13:00		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	3.6J	mg/L	10.0	3.0	5		06/05/24 15:48	16887-00-6	D3,M0
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 15:48	14808-79-8	D3,M0
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	3.9J	mg/L	10.0	3.0	5		06/06/24 17:06	16887-00-6	D3
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 17:06	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C5_20240523 Lab ID: 40278809004 Collected: 05/23/24 10:05 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	10J	mg/L	25.0	7.4	1		05/29/24 10:26		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	8.6J	mg/L	25.0	7.4	1		05/29/24 11:37		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	16.6	mg/L	0.50	0.19	1		06/03/24 11:57		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: **SW-EB_20240523** Lab ID: **40278809005** Collected: 05/23/24 08:57 Received: 05/24/24 11:05 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									
Calcium	9220	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 13:52	7440-70-2	
Copper	11.3	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 13:52	7440-50-8	
Iron	1470	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 13:52	7439-89-6	
Magnesium	4060	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 13:52	7439-95-4	
Manganese	99.5	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 13:52	7439-96-5	
Potassium	957	ug/L	789	237	1	05/28/24 06:50	06/08/24 13:52	7440-09-7	
Sodium	9440	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 13:52	7440-23-5	
Total Hardness by 2340B	39.8	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 13:52		
Zinc	10.4J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 13:52	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	10000	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:30	7440-70-2	D9
Copper, Dissolved	9.2	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:30	7440-50-8	
Iron, Dissolved	708	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:30	7439-89-6	
Magnesium, Dissolved	4140	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:30	7439-95-4	D9
Manganese, Dissolved	92.6	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:30	7439-96-5	
Potassium, Dissolved	954	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:30	7440-09-7	
Sodium, Dissolved	9950	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:30	7440-23-5	D9
Total Hardness by 2340B, Dissolved	42.0	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:30		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:30	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.1	mg/L	1.1	0.51	1		05/29/24 15:40		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 11:56		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 13:01		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	12.3	mg/L	10.0	3.0	5		06/05/24 16:33	16887-00-6	
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 16:33	14808-79-8	M0
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	11.6	mg/L	10.0	3.0	5		06/06/24 17:21	16887-00-6	
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 17:21	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-EB_20240523 Lab ID: 40278809005 Collected: 05/23/24 08:57 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	29.4	mg/L	25.0	7.4	1		05/29/24 10:27		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	31.7	mg/L	25.0	7.4	1		05/29/24 11:38		
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	18.4	mg/L	1.5	0.57	3		06/03/24 12:44		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-NBOUT_20240523 Lab ID: 40278809006 Collected: 05/23/24 08:32 Received: 05/24/24 11:05 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									
Calcium	12000	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:17	7440-70-2	
Copper	8.0	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:17	7440-50-8	
Iron	988	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:17	7439-89-6	
Magnesium	5220	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:17	7439-95-4	
Manganese	46.0	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:17	7439-96-5	
Potassium	518J	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:17	7440-09-7	
Sodium	5030	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:17	7440-23-5	
Total Hardness by 2340B	51.5	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:17		
Zinc	<10.3	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:17	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	12600	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:35	7440-70-2	D9
Copper, Dissolved	7.2	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:35	7440-50-8	
Iron, Dissolved	456	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:35	7439-89-6	
Magnesium, Dissolved	5500	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:35	7439-95-4	D9
Manganese, Dissolved	42.6	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:35	7439-96-5	
Potassium, Dissolved	505J	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:35	7440-09-7	
Sodium, Dissolved	5460	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:35	7440-23-5	D9
Total Hardness by 2340B, Dissolved	54.1	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:35		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:35	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	2.2	mg/L	1.0	0.48	1		05/29/24 15:40		PP,T3
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 11:59		
4500S2F Sulfide,Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 13:03		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	6.7J	mg/L	10.0	3.0	5		06/05/24 16:47	16887-00-6	M0
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 16:47	14808-79-8	M0
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	6.9J	mg/L	10.0	3.0	5		06/06/24 17:36	16887-00-6	D3
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 17:36	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-NBOUT_20240523 Lab ID: 40278809006 Collected: 05/23/24 08:32 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	45.2	mg/L	25.0	7.4	1		05/29/24 10:28		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	43.7	mg/L	25.0	7.4	1		05/29/24 11:42		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	16.5	mg/L	0.50	0.19	1		06/03/24 13:56		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-NB_20240523 Lab ID: 40278809007 Collected: 05/23/24 08:02 Received: 05/24/24 11:05 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									
Calcium	7500	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:21	7440-70-2	
Copper	16.8	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:21	7440-50-8	
Iron	2110	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:21	7439-89-6	
Magnesium	2600	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:21	7439-95-4	
Manganese	73.1	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:21	7439-96-5	
Potassium	650J	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:21	7440-09-7	
Sodium	11500	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:21	7440-23-5	
Total Hardness by 2340B	29.4	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:21		
Zinc	24.7J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:21	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	7400	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:39	7440-70-2	
Copper, Dissolved	15.0	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:39	7440-50-8	
Iron, Dissolved	1200	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:39	7439-89-6	
Magnesium, Dissolved	2760	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:39	7439-95-4	D9
Manganese, Dissolved	65.9	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:39	7439-96-5	
Potassium, Dissolved	613J	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:39	7440-09-7	
Sodium, Dissolved	12600	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:39	7440-23-5	D9
Total Hardness by 2340B, Dissolved	29.9	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:39		
Zinc, Dissolved	24.8J	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:39	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.6	mg/L	1.0	0.49	1		05/29/24 15:40		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 12:00		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 13:05		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	19.1	mg/L	10.0	3.0	5		06/05/24 17:02	16887-00-6	
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 17:02	14808-79-8	M0
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	17.7	mg/L	10.0	3.0	5		06/06/24 18:50	16887-00-6	
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 18:50	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-NB_20240523 Lab ID: 40278809007 Collected: 05/23/24 08:02 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	15.3J	mg/L	25.0	7.4	1		05/29/24 10:29		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	15.4J	mg/L	25.0	7.4	1		05/29/24 11:43		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	24.8	mg/L	1.0	0.38	2		06/03/24 14:12		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-HWY27W_20240523 Lab ID: 40278809008 Collected: 05/23/24 11:35 Received: 05/24/24 11:05 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									
Calcium	5490	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:25	7440-70-2	
Copper	9.8	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:25	7440-50-8	
Iron	2600	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:25	7439-89-6	
Magnesium	1570	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:25	7439-95-4	
Manganese	34.6	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:25	7439-96-5	
Potassium	779J	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:25	7440-09-7	
Sodium	16000	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:25	7440-23-5	
Total Hardness by 2340B	20.2	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:25		
Zinc	22.4J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:25	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	5990	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:43	7440-70-2	D9
Copper, Dissolved	8.0	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:43	7440-50-8	
Iron, Dissolved	1780	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:43	7439-89-6	
Magnesium, Dissolved	1760	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:43	7439-95-4	D9
Manganese, Dissolved	34.1	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:43	7439-96-5	
Potassium, Dissolved	834	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:43	7440-09-7	D9
Sodium, Dissolved	18000	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:43	7440-23-5	D9
Total Hardness by 2340B, Dissolved	22.2	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:43		
Zinc, Dissolved	23.4J	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:43	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	3.5	mg/L	1.2	0.58	1		05/29/24 15:41		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 12:01		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 13:06		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	24.2	mg/L	10.0	3.0	5		06/05/24 17:17	16887-00-6	
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 17:17	14808-79-8	D3
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	23.2	mg/L	10.0	3.0	5		06/06/24 20:19	16887-00-6	
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 20:19	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-HWY27W_20240523 Lab ID: 40278809008 Collected: 05/23/24 11:35 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	10.1J	mg/L	25.0	7.4	1		05/29/24 10:30		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	9.2J	mg/L	25.0	7.4	1		05/29/24 11:44		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	31.1	mg/L	1.5	0.57	3		06/03/24 14:28		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-HWY27E_20240523 Lab ID: 40278809009 Collected: 05/23/24 12:17 Received: 05/24/24 11:05 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									
Calcium	2750	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:29	7440-70-2	
Copper	5.4J	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:29	7440-50-8	
Iron	930	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:29	7439-89-6	
Magnesium	972	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:29	7439-95-4	
Manganese	33.5	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:29	7439-96-5	
Potassium	697J	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:29	7440-09-7	
Sodium	932	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:29	7440-23-5	
Total Hardness by 2340B	10.9	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:29		
Zinc	12.9J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:29	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	2990	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:47	7440-70-2	D9
Copper, Dissolved	5.0J	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:47	7440-50-8	
Iron, Dissolved	611	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:47	7439-89-6	
Magnesium, Dissolved	974	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:47	7439-95-4	D9
Manganese, Dissolved	29.8	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:47	7439-96-5	
Potassium, Dissolved	679J	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:47	7440-09-7	
Sodium, Dissolved	998	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:47	7440-23-5	D9
Total Hardness by 2340B, Dissolved	11.5	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:47		
Zinc, Dissolved	13.3J	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:47	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	1.7	mg/L	1.0	0.48	1		05/29/24 15:41		PP,T3
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 12:03		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 13:56		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	<3.0	mg/L	10.0	3.0	5		06/05/24 17:32	16887-00-6	D3
Sulfate	<2.2	mg/L	10.0	2.2	5		06/05/24 17:32	14808-79-8	D3
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	<3.0	mg/L	10.0	3.0	5		06/06/24 20:34	16887-00-6	D3
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 20:34	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-HWY27E_20240523 Lab ID: 40278809009 Collected: 05/23/24 12:17 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	<7.4	mg/L	25.0	7.4	1		05/29/24 10:31		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	<7.4	mg/L	25.0	7.4	1		05/29/24 11:45		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	17.7	mg/L	0.50	0.19	1		06/03/24 14:45		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: CP-04_20240523 Lab ID: 40278809010 Collected: 05/23/24 09:22 Received: 05/24/24 11:05 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									
Calcium	13100	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:42	7440-70-2	
Copper	28.0	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:42	7440-50-8	
Iron	736	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:42	7439-89-6	
Magnesium	6500	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:42	7439-95-4	
Manganese	95.3	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:42	7439-96-5	
Potassium	1400	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:42	7440-09-7	
Sodium	78600	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:42	7440-23-5	
Total Hardness by 2340B	59.5	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:42		
Zinc	<10.3	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:42	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	14800	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 11:51	7440-70-2	D9
Copper, Dissolved	24.7	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 11:51	7440-50-8	
Iron, Dissolved	190J	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 11:51	7439-89-6	
Magnesium, Dissolved	7400	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 11:51	7439-95-4	D9
Manganese, Dissolved	18.1	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 11:51	7439-96-5	
Potassium, Dissolved	1500	ug/L	789	237	1	06/03/24 07:25	06/08/24 11:51	7440-09-7	D9
Sodium, Dissolved	93500	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 11:51	7440-23-5	D9
Total Hardness by 2340B, Dissolved	67.5	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 11:51		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 11:51	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.6	mg/L	1.0	0.48	1		05/29/24 15:41		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 12:05		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	1.2J	mg/L	4.0	1.2	1		05/30/24 14:00		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	66.0	mg/L	10.0	3.0	5		06/10/24 13:23	16887-00-6	
Sulfate	2.8J	mg/L	10.0	2.2	5		06/10/24 13:23	14808-79-8	D3
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	69.9	mg/L	10.0	3.0	5		06/06/24 20:49	16887-00-6	D9
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 20:49	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: CP-04_20240523 Lab ID: 40278809010 Collected: 05/23/24 09:22 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	141	mg/L	25.0	7.4	1		05/29/24 10:32		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	143	mg/L	25.0	7.4	1		05/29/24 11:50		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	18.1	mg/L	1.0	0.38	2		06/03/24 15:02		

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C9-DUP-20240523 **Lab ID:** 40278809011 Collected: 05/23/24 10:37 Received: 05/24/24 11:05 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									
Calcium	3120	ug/L	254	76.2	1	05/28/24 06:50	06/08/24 14:46	7440-70-2	
Copper	6.6	ug/L	6.4	1.9	1	05/28/24 06:50	06/08/24 14:46	7440-50-8	
Iron	1290	ug/L	250	58.0	1	05/28/24 06:50	06/08/24 14:46	7439-89-6	
Magnesium	1030	ug/L	250	31.2	1	05/28/24 06:50	06/08/24 14:46	7439-95-4	
Manganese	59.8	ug/L	4.0	1.2	1	05/28/24 06:50	06/08/24 14:46	7439-96-5	
Potassium	807	ug/L	789	237	1	05/28/24 06:50	06/08/24 14:46	7440-09-7	
Sodium	1890	ug/L	250	42.0	1	05/28/24 06:50	06/08/24 14:46	7440-23-5	
Total Hardness by 2340B	12.0	mg/L	1.7	0.32	1	05/28/24 06:50	06/08/24 14:46		
Zinc	17.7J	ug/L	34.4	10.3	1	05/28/24 06:50	06/08/24 14:46	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	2950	ug/L	254	76.2	1	06/03/24 07:25	06/08/24 12:12	7440-70-2	
Copper, Dissolved	5.2J	ug/L	6.4	1.9	1	06/03/24 07:25	06/08/24 12:12	7440-50-8	
Iron, Dissolved	442	ug/L	250	58.0	1	06/03/24 07:25	06/08/24 12:12	7439-89-6	
Magnesium, Dissolved	1010	ug/L	250	31.2	1	06/03/24 07:25	06/08/24 12:12	7439-95-4	
Manganese, Dissolved	49.4	ug/L	4.0	1.2	1	06/03/24 07:25	06/08/24 12:12	7439-96-5	
Potassium, Dissolved	764J	ug/L	789	237	1	06/03/24 07:25	06/08/24 12:12	7440-09-7	
Sodium, Dissolved	2400	ug/L	250	42.0	1	06/03/24 07:25	06/08/24 12:12	7440-23-5	CR
Total Hardness by 2340B, Dissolved	11.5	mg/L	1.7	0.32	1	06/03/24 07:25	06/08/24 12:12		
Zinc, Dissolved	18.4J	ug/L	34.4	10.3	1	06/03/24 07:25	06/08/24 12:12	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	2.9	mg/L	1.0	0.48	1		05/29/24 15:41		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		05/30/24 12:06		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		05/30/24 14:02		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	3.2J	mg/L	10.0	3.0	5		06/10/24 14:20	16887-00-6	D3
Sulfate	<2.2	mg/L	10.0	2.2	5		06/10/24 14:20	14808-79-8	D3
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	<3.0	mg/L	10.0	3.0	5		06/06/24 21:04	16887-00-6	D3
Sulfate, Dissolved	<2.2	mg/L	10.0	2.2	5		06/06/24 21:04	14808-79-8	D3

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ANALYTICAL RESULTS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Sample: SW-C9-DUP-20240523 Lab ID: 40278809011 Collected: 05/23/24 10:37 Received: 05/24/24 11:05 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	<7.4	mg/L	25.0	7.4	1		05/29/24 10:36		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	<7.4	mg/L	25.0	7.4	1		05/29/24 11:56		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	17.2	mg/L	0.50	0.19	1		06/03/24 15:18		

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475331	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011		

METHOD BLANK:	2722862	Matrix:	Water
Associated Lab Samples:	40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	ug/L	<76.2	254	06/08/24 13:06	
Copper	ug/L	<1.9	6.4	06/08/24 13:06	
Iron	ug/L	<58.0	250	06/08/24 13:06	
Magnesium	ug/L	<31.2	250	06/08/24 13:06	
Manganese	ug/L	<1.2	4.0	06/08/24 13:06	
Potassium	ug/L	<237	789	06/08/24 13:06	
Sodium	ug/L	<42.0	250	06/08/24 13:06	
Total Hardness by 2340B	mg/L	<0.32	1.7	06/08/24 13:06	
Zinc	ug/L	<10.3	34.4	06/08/24 13:06	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	11700	117	80-120	
Copper	ug/L	250	268	107	80-120	
Iron	ug/L	10000	10900	109	80-120	
Magnesium	ug/L	10000	10700	107	80-120	
Manganese	ug/L	250	268	107	80-120	
Potassium	ug/L	10000	10200	102	80-120	
Sodium	ug/L	10000	10200	102	80-120	
Total Hardness by 2340B	mg/L		73.1			
Zinc	ug/L	250	278	111	80-120	

Parameter	Units	2722864		2722865		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278809001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	ug/L	3100	10000	10000	16200	15000	131	119	75-125	8	20 MO
Copper	ug/L	6.5	250	250	299	284	117	111	75-125	5	20
Iron	ug/L	1260	10000	10000	13100	12400	118	112	75-125	5	20
Magnesium	ug/L	1020	10000	10000	12800	12100	118	111	75-125	5	20
Manganese	ug/L	57.7	250	250	353	336	118	111	75-125	5	20
Potassium	ug/L	797	10000	10000	11800	11200	110	104	75-125	5	20
Sodium	ug/L	1840	10000	10000	13000	12500	112	106	75-125	4	20
Total Hardness by 2340B	mg/L	12.0			93.1	87.4				6	20
Zinc	ug/L	15.5J	250	250	320	297	122	113	75-125	7	20

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475332	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

METHOD BLANK: 2722866 Matrix: Water
 Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium, Dissolved	ug/L	<76.2	254	06/08/24 10:24	
Copper, Dissolved	ug/L	<1.9	6.4	06/08/24 10:24	
Iron, Dissolved	ug/L	<58.0	250	06/08/24 10:24	
Magnesium, Dissolved	ug/L	<31.2	250	06/08/24 10:24	
Manganese, Dissolved	ug/L	<1.2	4.0	06/08/24 10:24	
Potassium, Dissolved	ug/L	<237	789	06/08/24 10:24	
Sodium, Dissolved	ug/L	<42.0	250	06/08/24 10:24	
Total Hardness by 2340B, Dissolved	mg/L	<0.32	1.7	06/08/24 10:24	
Zinc, Dissolved	ug/L	<10.3	34.4	06/08/24 10:24	

LABORATORY CONTROL SAMPLE: 2722867

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium, Dissolved	ug/L	10000	11300	113	80-120	
Copper, Dissolved	ug/L	250	269	108	80-120	
Iron, Dissolved	ug/L	10000	10900	109	80-120	
Magnesium, Dissolved	ug/L	10000	10600	106	80-120	
Manganese, Dissolved	ug/L	250	268	107	80-120	
Potassium, Dissolved	ug/L	10000	10400	104	80-120	
Sodium, Dissolved	ug/L	10000	10400	104	80-120	
Total Hardness by 2340B, Dissolved	mg/L		72.0			
Zinc, Dissolved	ug/L	250	285	114	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2722868 2722869

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278809001 Result	Spike Conc.	Spike Conc.	MS Result						
Calcium, Dissolved	ug/L	2890	10000	10000	14600	15300	117	125	75-125	5	20
Copper, Dissolved	ug/L	4.6J	250	250	278	283	109	112	75-125	2	20
Iron, Dissolved	ug/L	459	10000	10000	11400	11600	110	111	75-125	1	20
Magnesium, Dissolved	ug/L	1040	10000	10000	11900	12200	108	112	75-125	3	20
Manganese, Dissolved	ug/L	46.6	250	250	320	325	110	111	75-125	1	20
Potassium, Dissolved	ug/L	764J	10000	10000	11100	11300	104	105	75-125	1	20
Sodium, Dissolved	ug/L	1950	10000	10000	12500	12700	105	108	75-125	2	20

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.
 Pace Project No.: 40278809

Parameter	Units	2722868		2722869		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278809001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Total Hardness by 2340B, Dissolved	mg/L	11.5			85.4	88.6					4	20	
Zinc, Dissolved	ug/L	15.4J	250	250	300	301	114	114	75-125		0	20	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475590	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

METHOD BLANK: 2723921 Matrix: Water

Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	05/29/24 15:38	

LABORATORY CONTROL SAMPLE: 2723922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	96.0	96	80-120	

SAMPLE DUPLICATE: 2723923

Parameter	Units	40278761001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	37.0	34.0	8	10	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch: 475602 Analysis Method: SM 4500-S F (2000)
 QC Batch Method: SM 4500-S F (2000) Analysis Description: 4500S2F Sulfide, Dissolved Iodometric
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

METHOD BLANK: 2723998 Matrix: Water
 Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	05/30/24 12:29	

LABORATORY CONTROL SAMPLE: 2723999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	44.8	43.2	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2724000 2724001

Parameter	Units	40278809001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	<1.2	44.8	44.8	41.6	45.6	92	101	80-120	9	20	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475601	Analysis Method:	SM 4500-S F (2000)
QC Batch Method:	SM 4500-S F (2000)	Analysis Description:	4500S2F Sulfide, Iodometric
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

METHOD BLANK: 2723994 Matrix: Water

Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	05/30/24 11:03	

LABORATORY CONTROL SAMPLE: 2723995

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	43.2	34.8	81	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2723996 2723997

Parameter	Units	40278809001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfide	mg/L	<1.2	43.2	43.2	40.8	41.6	93	94	80-120	2	10	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475997	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions,Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006

METHOD BLANK: 2726176 Matrix: Water
 Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	06/06/24 10:17	
Sulfate	mg/L	<0.44	2.0	06/06/24 10:17	

LABORATORY CONTROL SAMPLE: 2726177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.0	105	90-110	
Sulfate	mg/L	20	21.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2726178 2726179

Parameter	Units	40278790010		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	28.1	100	100	133	132	105	104	90-110	1	15		
Sulfate	mg/L	182	100	100	272	270	91	88	90-110	1	15 M0		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2726180 2726181

Parameter	Units	40278809006		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	6.9J	100	100	113	112	106	105	90-110	1	15		
Sulfate	mg/L	<2.2	100	100	110	108	109	107	90-110	1	15		

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	476089	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions,Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

METHOD BLANK: 2726736 Matrix: Water
 Associated Lab Samples: 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	06/06/24 18:20	
Sulfate	mg/L	<0.44	2.0	06/06/24 18:20	

LABORATORY CONTROL SAMPLE: 2726737

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.0	105	90-110	
Sulfate	mg/L	20	21.2	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2726738 2726739

Parameter	Units	40278809007		2726739		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	17.7	100	100	123	128	105	110	90-110	4	15
Sulfate	mg/L	<2.2	100	100	106	109	106	109	90-110	3	15

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475847	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809001, 40278809002, 40278809003

METHOD BLANK: 2725163 Matrix: Water
 Associated Lab Samples: 40278809001, 40278809002, 40278809003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	06/04/24 22:40	
Sulfate	mg/L	<0.44	2.0	06/04/24 22:40	

LABORATORY CONTROL SAMPLE: 2725164

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	
Sulfate	mg/L	20	20.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2725165 2725166

Parameter	Units	2725165		2725166		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278773001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	123	400	400	532	541	102	104	90-110	2	15
Sulfate	mg/L	116	400	400	523	533	102	104	90-110	2	15

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475848	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011		

METHOD BLANK:	2725172	Matrix:	Water
Associated Lab Samples:	40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	06/05/24 15:18	
Sulfate	mg/L	<0.44	2.0	06/05/24 15:18	

LABORATORY CONTROL SAMPLE: 2725173						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.9	100	90-110	
Sulfate	mg/L	20	19.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2725174												2725175	
Parameter	Units	40278809004 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max		
			Spike Conc.	MS Spike Conc.	MS Result	MSD Result					RPD	Qual	
Chloride	mg/L	3.6J	100	100	117	109	114	106	90-110	7	15	M0	
Sulfate	mg/L	<2.2	100	100	113	107	113	107	90-110	6	15	M0	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475489	Analysis Method:	EPA 310.2
QC Batch Method:	EPA 310.2	Analysis Description:	310.2 Alkalinity
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011		

METHOD BLANK:	2723324	Matrix:	Water
Associated Lab Samples:	40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.4	25.0	05/29/24 10:10	

LABORATORY CONTROL SAMPLE:	2723325					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	104	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	2723326			2723327								
Parameter	Units	40278850001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	154	100	100	248	251	95	97	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	2723328			2723329								
Parameter	Units	40278839001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	71.8	100	100	182	177	110	105	90-110	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475491	Analysis Method:	EPA 310.2
QC Batch Method:	EPA 310.2	Analysis Description:	310.2 Alkalinity, Dissolved
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009		

METHOD BLANK:	2723336	Matrix:	Water
Associated Lab Samples:	40278809001, 40278809002, 40278809003, 40278809004, 40278809005, 40278809006, 40278809007, 40278809008, 40278809009		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	<7.4	25.0	05/29/24 11:16	

LABORATORY CONTROL SAMPLE: 2723337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	100	102	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2723338 2723339

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Conc.								
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	267	100	100	365	367	98	100	90-110	0	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2723340 2723341

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Conc.								
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	<7.4	100	100	107	105	107	105	90-110	2	20		

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch: 475492	Analysis Method: EPA 310.2
QC Batch Method: EPA 310.2	Analysis Description: 310.2 Alkalinity, Dissolved
	Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809010, 40278809011

METHOD BLANK: 2723342 Matrix: Water

Associated Lab Samples: 40278809010, 40278809011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	<7.4	25.0	05/29/24 11:48	

LABORATORY CONTROL SAMPLE: 2723343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	100	104	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2723344 2723345

Parameter	Units	2723344		2723345		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40278809010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	143	100	100	251	251	108	107	90-110	0	20		

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch: 475731 Analysis Method: SM 5310C
 QC Batch Method: SM 5310C Analysis Description: 5310C Dissolved Organic Carbon
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004

METHOD BLANK: 2724561 Matrix: Water
 Associated Lab Samples: 40278809001, 40278809002, 40278809003, 40278809004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	<0.19	0.50	06/03/24 04:15	

LABORATORY CONTROL SAMPLE: 2724562

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	12.5	12.6	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2724563 2724564

Parameter	Units	40278579001		40278579002		40278579003		40278579004		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Dissolved Organic Carbon	mg/L	1.3	6	6	6	6.9	7.2	94	98	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2724565 2724566

Parameter	Units	40278579002		40278579003		40278579004		40278579001		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.				
Dissolved Organic Carbon	mg/L	6.0	12	12	12	18.1	18.0	100	100	80-120	0	20	

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QUALITY CONTROL DATA

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

QC Batch:	475863	Analysis Method:	SM 5310C
QC Batch Method:	SM 5310C	Analysis Description:	5310C Dissolved Organic Carbon
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

METHOD BLANK: 2725790 Matrix: Water

Associated Lab Samples: 40278809005, 40278809006, 40278809007, 40278809008, 40278809009, 40278809010, 40278809011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	0.45J	0.50	06/03/24 12:13	

LABORATORY CONTROL SAMPLE: 2725791

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	12.5	12.6	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2725792 2725793

Parameter	Units	2725792		2725793		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40278809005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Dissolved Organic Carbon	mg/L	18.4	18	18	36.3	35.8	99	97	80-120	1	20	

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QUALIFIERS

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

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

CR The dissolved metal result was greater than the total metal result for this element. Results were confirmed by reanalysis.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

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

PP The mass of dried residue obtained did not meet the test method requirements based on volume used.

T3 Insufficient sample received from client to perform the analysis per EPA method requirements.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40278809001	SW-C9_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809002	SW-C1_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809003	SW-STM_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809004	SW-C5_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809005	SW-EB_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809006	SW-NBOUT_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809007	SW-NB_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809008	SW-HWY27W_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809009	SW-HWY27E_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809010	CP-04_20240523	EPA 3010A	475331	EPA 6020B	475455
40278809011	SW-C9-DUP-20240523	EPA 3010A	475331	EPA 6020B	475455
40278809001	SW-C9_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809002	SW-C1_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809003	SW-STM_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809004	SW-C5_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809005	SW-EB_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809006	SW-NBOUT_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809007	SW-NB_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809008	SW-HWY27W_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809009	SW-HWY27E_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809010	CP-04_20240523	EPA 3010A	475332	EPA 6020B	475955
40278809011	SW-C9-DUP-20240523	EPA 3010A	475332	EPA 6020B	475955
40278809001	SW-C9_20240523	SM 2540D	475590		
40278809002	SW-C1_20240523	SM 2540D	475590		
40278809003	SW-STM_20240523	SM 2540D	475590		
40278809004	SW-C5_20240523	SM 2540D	475590		
40278809005	SW-EB_20240523	SM 2540D	475590		
40278809006	SW-NBOUT_20240523	SM 2540D	475590		
40278809007	SW-NB_20240523	SM 2540D	475590		
40278809008	SW-HWY27W_20240523	SM 2540D	475590		
40278809009	SW-HWY27E_20240523	SM 2540D	475590		
40278809010	CP-04_20240523	SM 2540D	475590		
40278809011	SW-C9-DUP-20240523	SM 2540D	475590		
40278809001	SW-C9_20240523	SM 4500-S F (2000)	475601		
40278809002	SW-C1_20240523	SM 4500-S F (2000)	475601		
40278809003	SW-STM_20240523	SM 4500-S F (2000)	475601		
40278809004	SW-C5_20240523	SM 4500-S F (2000)	475601		
40278809005	SW-EB_20240523	SM 4500-S F (2000)	475601		
40278809006	SW-NBOUT_20240523	SM 4500-S F (2000)	475601		
40278809007	SW-NB_20240523	SM 4500-S F (2000)	475601		
40278809008	SW-HWY27W_20240523	SM 4500-S F (2000)	475601		
40278809009	SW-HWY27E_20240523	SM 4500-S F (2000)	475601		
40278809010	CP-04_20240523	SM 4500-S F (2000)	475601		
40278809011	SW-C9-DUP-20240523	SM 4500-S F (2000)	475601		
40278809001	SW-C9_20240523	SM 4500-S F (2000)	475602		
40278809002	SW-C1_20240523	SM 4500-S F (2000)	475602		
40278809003	SW-STM_20240523	SM 4500-S F (2000)	475602		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40278809004	SW-C5_20240523	SM 4500-S F (2000)	475602		
40278809005	SW-EB_20240523	SM 4500-S F (2000)	475602		
40278809006	SW-NBOUT_20240523	SM 4500-S F (2000)	475602		
40278809007	SW-NB_20240523	SM 4500-S F (2000)	475602		
40278809008	SW-HWY27W_20240523	SM 4500-S F (2000)	475602		
40278809009	SW-HWY27E_20240523	SM 4500-S F (2000)	475602		
40278809010	CP-04_20240523	SM 4500-S F (2000)	475602		
40278809011	SW-C9-DUP-20240523	SM 4500-S F (2000)	475602		
40278809001	SW-C9_20240523	EPA 300.0	475847		
40278809002	SW-C1_20240523	EPA 300.0	475847		
40278809003	SW-STM_20240523	EPA 300.0	475847		
40278809004	SW-C5_20240523	EPA 300.0	475848		
40278809005	SW-EB_20240523	EPA 300.0	475848		
40278809006	SW-NBOUT_20240523	EPA 300.0	475848		
40278809007	SW-NB_20240523	EPA 300.0	475848		
40278809008	SW-HWY27W_20240523	EPA 300.0	475848		
40278809009	SW-HWY27E_20240523	EPA 300.0	475848		
40278809010	CP-04_20240523	EPA 300.0	475848		
40278809011	SW-C9-DUP-20240523	EPA 300.0	475848		
40278809001	SW-C9_20240523	EPA 300.0	475997		
40278809002	SW-C1_20240523	EPA 300.0	475997		
40278809003	SW-STM_20240523	EPA 300.0	475997		
40278809004	SW-C5_20240523	EPA 300.0	475997		
40278809005	SW-EB_20240523	EPA 300.0	475997		
40278809006	SW-NBOUT_20240523	EPA 300.0	475997		
40278809007	SW-NB_20240523	EPA 300.0	476089		
40278809008	SW-HWY27W_20240523	EPA 300.0	476089		
40278809009	SW-HWY27E_20240523	EPA 300.0	476089		
40278809010	CP-04_20240523	EPA 300.0	476089		
40278809011	SW-C9-DUP-20240523	EPA 300.0	476089		
40278809001	SW-C9_20240523	EPA 310.2	475489		
40278809002	SW-C1_20240523	EPA 310.2	475489		
40278809003	SW-STM_20240523	EPA 310.2	475489		
40278809004	SW-C5_20240523	EPA 310.2	475489		
40278809005	SW-EB_20240523	EPA 310.2	475489		
40278809006	SW-NBOUT_20240523	EPA 310.2	475489		
40278809007	SW-NB_20240523	EPA 310.2	475489		
40278809008	SW-HWY27W_20240523	EPA 310.2	475489		
40278809009	SW-HWY27E_20240523	EPA 310.2	475489		
40278809010	CP-04_20240523	EPA 310.2	475489		
40278809011	SW-C9-DUP-20240523	EPA 310.2	475489		
40278809001	SW-C9_20240523	EPA 310.2	475491		
40278809002	SW-C1_20240523	EPA 310.2	475491		
40278809003	SW-STM_20240523	EPA 310.2	475491		
40278809004	SW-C5_20240523	EPA 310.2	475491		
40278809005	SW-EB_20240523	EPA 310.2	475491		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_04 FLAMBEAU MINE CO.

Pace Project No.: 40278809

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40278809006	SW-NBOUT_20240523	EPA 310.2	475491		
40278809007	SW-NB_20240523	EPA 310.2	475491		
40278809008	SW-HWY27W_20240523	EPA 310.2	475491		
40278809009	SW-HWY27E_20240523	EPA 310.2	475491		
40278809010	CP-04_20240523	EPA 310.2	475492		
40278809011	SW-C9-DUP-20240523	EPA 310.2	475492		
40278809001	SW-C9_20240523	SM 5310C	475731		
40278809002	SW-C1_20240523	SM 5310C	475731		
40278809003	SW-STM_20240523	SM 5310C	475731		
40278809004	SW-C5_20240523	SM 5310C	475731		
40278809005	SW-EB_20240523	SM 5310C	475863		
40278809006	SW-NBOUT_20240523	SM 5310C	475863		
40278809007	SW-NB_20240523	SM 5310C	475863		
40278809008	SW-HWY27W_20240523	SM 5310C	475863		
40278809009	SW-HWY27E_20240523	SM 5310C	475863		
40278809010	CP-04_20240523	SM 5310C	475863		
40278809011	SW-C9-DUP-20240523	SM 5310C	475863		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed and accurate

40278809

Page: 1 of 3
Cooler #: 1 of 3

COC # FMC-2024_0523

Required Ship to Lab:		Required Project Information:				Required Invoice Information:							
Lab Name	Pace Analytical Services	*Facility ID #:	Flambeau Mine Co	Send Invoice to	Accounting	TAT. Standard 10 day	X	Rush		Mark One			
Address		*Task Code #	FMC-2024_04	Address	2121 Innovation Court P O Box 5126, De Pere, WI	If Rush, Date due							
1241 Bellevue Street - Suite 9, Green Bay, WI		Site Address	-	City/State	De Pere, WI 54115	Ph #	920-497-2500	QC level Required	Standard	X	Special		Mark one
Lab PM	Tod Noltemeyer	City	LADYSMITH	State	WI	17F777.4 <i>ms</i>		Lab Project ID (lab use)					
Phone/Fax	(608) 232-3300	Project Contact	Mark Ciardelli	Send EDD to	Nick Glander	Requested Analyses							
Lab PM email	Tod.Noltemeyer@pacelabs.com	Phone/Fax	920-496-6656	CC Hardcopy report to	Sharon Kozicki, Nick Glander	Filtered (Y/N)							
Applicable Lab Quote #		Email	Mark.Ciardelli@foth.com	CC electronic copy report to	Sharon Kozicki@foth.com nick.glander@foth.com	N	Y	N	Y	Y	N	N	Y

ITEM #	Valid Matrix Codes MATRIX DRINKING WATER WP GROUND WATER WG WASTE WATER WW FREE PRODUCT LP SOIL SO OIL OIL WIPE WPE AMBIENT AIR AA SVE AIR AE SOIL GAS GS	MATRIX SURFACE WATER WS WATER OC SLUDGE SL RINSEATE RH LIME LEACHATE-LL SPLP LAB LEACHATE-LLT TELP	*MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME (Military)	# OF CONTAINERS	Preservatives											Comments/ Lab Sample I.D.								
								Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Zinc Acetate & NaOH	Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Total Alkalinity, Cl, Sulfate		Dissolved Alkalinity, Cl, Sulfate	DOC	TSS	Total Sulfide	Dissolved Sulfide			
1	SW-C9_20240523		WS	G	05/23/2024	1037	8	3	1	2							2	X	X	X	X	X	X	X	X	X	001
2	SW-C1_20240523		WS	G	05/23/2024	0944	8	3	1	2							2	X	X	X	X	X	X	X	X	X	002
3	SW-STM_20240523		WS	G	05/23/2024	0707	8	3	1	2							2	X	X	X	X	X	X	X	X	X	003
4	SW-C5_20240523		WS	G	05/23/2024	1005	8	3	1	2							2	X	X	X	X	X	X	X	X	X	004
5	SW-EB-20240523		WS	G	05/23/2024	0857	8	3	1	2							2	X	X	X	X	X	X	X	X	X	005
6	SW-NBOUT_20240523		WS	G	05/23/2024	0832	8	3	1	2							2	X	X	X	X	X	X	X	X	X	006
7	SW-NB_20240523		WS	G	05/23/2024	0802	8	3	1	2							2	X	X	X	X	X	X	X	X	X	007
8	SW-HWY27W_20240523		WS	G	05/23/2024	1135	8	3	1	2							2	X	X	X	X	X	X	X	X	X	008
9	SW-HWY27E_20240523		WS	G	05/23/2024	1217	8	3	1	2							2	X	X	X	X	X	X	X	X	X	009
10	CP-04_20240523		WS	G	05/23/2024	0922	8	3	1	2							2	X	X	X	X	X	X	X	X	X	010
11	SW-C9-DUP-20240523		WS	G	05/23/2024	1037	8	3	1	2							2	X	X	X	X	X	X	X	X	X	011

Additional Comments/Special Instructions:	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions		
	Jim Engelhardt/Merjent	23-May	1403	<i>Jim Engelhardt</i>	5/23/24	1403	Y/N	Y/N	Y/N
	<i>Jim Engelhardt</i>	5/23/24	1105	<i>Mark Ciardelli</i>	05/23/24	11:05	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N
Include Equis EDD's	SHIPPING METHOD: (mark as appropriate)		SAMPLER NAME AND SIGNATURE			Temp in °C	Samples on ice?	Sample intact?	Trip Blank?
	UPS COURIER FEDEX	Jim Engelhardt	SIGNATURE OF SAMPLER		DATE Signed				
*Required Information for electronic data deliverable.	US MAIL			<i>Jim Engelhardt</i>	05/23/2024	Time			



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT | All relevant fields must be completed and accurate

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COC #

FMC-2024_0523

Required Ship to Lab:		Required Project Information:				Required Invoice Information:													
Lab Name	Pace Analytical Services	*Facility ID #:	Flambeau Mine Co		Send Invoice to	Accounting		TAT Standard 10 day	X	Rush		Mark One							
Address		*Task Code #:	FMC-2024_04		Address	2121 Innovation Court P O Box 5128, De Pere, WI		If Rush, Date due											
1241 Bellevue Street - Suite 9, Green Bay, WI		Site Address	--		City/State	De Pere, WI 54115		Ph #	920-497-2500		QC level Required. Standard	X	Special		Mark one				
Lab PM	Tod Noltemeyer	City	LADYSMITH	State	WI	17F777.2304		Lab Project ID (lab use)											
Phone/Fax	(608) 232-3300	Project Contact		Mark Ciardelli		Send EDD to:		Nick Glander											
Lab PM email	Tod.Noltemeyer@pacelabs.com	Phone/Fax	920-496-6656		CC Hardcopy report to		Sharon Kozicki, Nick Glander												
Applicable Lab Quote #		Email:	Mark.Ciardelli@foth.com		CC electronic copy report to		Sharon Kozicki@foth.com nick.glander@foth.com												
												Requested Analyses							
												Filtered (Y/N)							
												N	Y	N	Y	Y	N	N	Y

ITEM #	*SAMPLE ID Samples IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX DRINKING WATER WP GROUND WATER WG WASTE WATER WW FREE PRODUCT LP SOIL SO OIL OL WPE AMBIENT AIR AA SVE AIR AE SOIL GAS GS	MATRIX SURFACE WATER WS WATER OO SLUDGE SL MINESEATE MS LAB LEACHATE- LLS SPLP LAB LEACHATE- LLL TCLP LLT	*MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME (Military)	# OF CONTAINERS	Preservatives								Zinc Acetate & NaOH Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Total Alkalinity, Cl, Sulfate	Dissolved Alkalinity, Cl, Sulfate	DOC	TSS	Total Sulfide	Dissolved Sulfide	Comments/ Lab Sample I.D.
									Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol										
1	SW-C9_20240523			WS	G	05/23/2024	1037	8	3	1	2													001	
2	SW-C1_20240523			WS	G	05/23/2024	0944	8	3	1	2													002	
3	SW-STM_20240523			WS	G	05/23/2024	0707	8	3	1	2													003	
4	SW-C5_20240523			WS	G	05/23/2024	1005	8	3	1	2													004	
5	SW-EB-20240523			WS	G	05/23/2024	0857	8	3	1	2													005	
6	SW-NBOUT_20240523			WS	G	05/23/2024	0832	8	3	1	2													006	
7	SW-NB_20240523			WS	G	05/23/2024	0802	8	3	1	2													007	
8	SW-HWY27W_20240523			WS	G	05/23/2024	1135	8	3	1	2													008	
9	SW-HWY27E_20240523			WS	G	05/23/2024	1217	8	3	1	2													009	
10	CP-04_20240523			WS	G	05/23/2024	0922	8	3	1	2													010	
11	SW-C9-DUP-20240523			WS	G	05/23/2024	1037	8	3	1	2													011	

Additional Comments/Special Instructions:	RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	Sample Receipt Conditions			
	Jim Engelhardt/Merjent		23-May	1403	[Signature] (FOTH)		5/29/24	1403		Y/N	Y/N	Y/N
	[Signature] (FOTH)		5/29/24	1105	[Signature] (FOTH)		5/29/24	1105	0.0	Y/N	Y/N	Y/N
										Y/N	Y/N	Y/N
Include Equis EDD's	SHIPPING METHOD: (mark as appropriate)				SAMPLER NAME AND SIGNATURE				Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?
	UPS COURIER FEDEX	Jim Engelhardt			[Signature]							
*Required information for electronic data deliverable.				US MAIL	SIGNATURE of SAMPLER	[Signature]	DATE Signed	05/23/2024	Time			



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT | All relevant fields must be completed and accurate

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Cooler # 3 of 3

COC # FMC-2024_0623

Required Ship to Lab:		Required Project Information:				Required Invoice Information:							
Lab Name	Pace Analytical Services	*Facility ID #:	Flambeau Mine Co	Send Invoice to	Accounting	TAT, Standard 10 day	X	Rush		Mark One			
Address		*Task Code #	FMC-2024_04	Address	2121 Innovation Court P O Box 5126, De Pere, WI	If Rush, Date due							
1241 Bellevue Street - Suite 9, Green Bay, WI		Site Address	--	City/State	De Pere, WI 54115	Ph #	920-497-2500	QC level Required	Standard	X	Special		Mark one
Lab PM	Tod Noltemeyer	City	LADYSMITH	State	WI	17F777.210708		Lab Project ID (lab use)					
Phone/Fax	(608) 232-3300	Project Contact	Mark Ciardelli	Send EDD to	Nick Glander	Requested Analyses							
Lab PM email	Tod.Noltemeyer@pacelabs.com	Phone/Fax	920-496-6656	CC Hardcopy report to	Sharon Kozicki, Nick Glander	Filtered (Y/N)							
Applicable Lab Quote #		Email	Mark.Ciardelli@foth.com	CC electronic copy report to	Sharon.Kozicki@foth.com nick.glander@foth.com	N	Y	N	Y	Y	N	N	Y

ITEM #	SAMPLE ID Samples IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX DRINKING WATER WP GROUND WATER WG WASTE WATER WH FREE PRODUCT LP SOIL SO OIL OL WPE AMBIENT AIR AA SVE AIR AE SOIL GAS GB	MATRIX SURFACE WATER WS WATER QC WQ SLUDGE SL RINSEATE LR LAB LEACHATE LLB SLIP LAB LEACHATE - TCLP LLT	*MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME (Military)	# OF CONTAINERS	Preservatives										Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness	Total Alkalinity, Cl, Sulfate	Dissolved Alkalinity, Cl, Sulfate	DOC	TSS	Total Sulfide	Dissolved Sulfide	Comments/ Lab Sample I.D.	
									Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Zinc Acetate & NaOH												
1	SW-C9_20240523			WS	G	05/23/2024	1037	8	3	1	2							2	X	X	X	X	X	X	X	X	X	001
2	SW-C1_20240523			WS	G	05/23/2024	0944	8	3	1	2							2	X	X	X	X	X	X	X	X	X	002
3	SW-STM_20240523			WS	G	05/23/2024	0707	8	3	1	2							2	X	X	X	X	X	X	X	X	X	003
4	SW-C5_20240523			WS	G	05/23/2024	1005	8	3	1	2							2	X	X	X	X	X	X	X	X	X	004
5	SW-EB-20240523			WS	G	05/23/2024	0857	8	3	1	2							2	X	X	X	X	X	X	X	X	X	005
6	SW-NBOUT_20240523			WS	G	05/23/2024	0832	8	3	1	2							2	X	X	X	X	X	X	X	X	X	006
7	SW-NB_20240523			WS	G	05/23/2024	0802	8	3	1	2							2	X	X	X	X	X	X	X	X	X	007
8	SW-HWY27W_20240523			WS	G	05/23/2024	1135	8	3	1	2							2	X	X	X	X	X	X	X	X	X	008
9	SW-HWY27E_20240523			WS	G	05/23/2024	1217	8	3	1	2							2	X	X	X	X	X	X	X	X	X	009
10	CP-04_20240523			WS	G	05/23/2024	0922	8	3	1	2							2	X	X	X	X	X	X	X	X	X	010
11	SW-C9-DUP-20240523			WS	G	05/23/2024	1037	8	3	1	2							2	X	X	X	X	X	X	X	X	X	011

Additional Comments/Special Instructions:	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Sample Receipt Conditions				
	Jim Engelhardt/Merjent	23-May	1403	Matthew GOTH	5/23/24	1403	Y/N	Y/N	Y/N	Y/N	Y/N
				Matthew GOTH	5/24/24	11:05	Y/N	Y/N	Y/N	Y/N	Y/N
							Y/N	Y/N	Y/N	Y/N	Y/N
Include Equis EDD's	SHIPPING METHOD: (mark as appropriate)		SAMPLER NAME AND SIGNATURE								
	UPS COURIER FEDEX	Jim Engelhardt	SIGNATURE of SAMPLER		DATE Signed	05/23/2024	Time	Temp in °C	Samples on ice?	Sample intact?	Trp Blank?
*Required information for electronic data deliverable.	US MAIL										

Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Foth

WO#: 40278809

Courier: CS Logistics Fed Ex Speedee UPS Walco
 Client Pace Other: _____



Tracking #: _____

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 - 121, 124, 121 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 0.5, 0.5, 0.5 Corr: 0.0, 0.0, 0.0

Temp Blank Present: yes no Biological Tissue is Frozen: yes no

Person examining contents:
 Date: 05/24/2024 Initials: MJS
 Labeled By Initials: SG

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

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

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



August 08, 2024

Nick Glander
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: FMC-2024_Q4 FLAMBEAU MINE CO.
Pace Project No.: 40281683

Dear Nick Glander:

Enclosed are the analytical results for sample(s) received by the laboratory on July 26, 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 - Green Bay

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

Sincerely,

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: MARK CIARDELLI, Foth Infrastructure & Environment, LLC
Krystal Clark, Foth Infrastructure & Environment
SHARON KOZICKI, Foth Infrastructure & Environment, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40281683001	SW-C9_20240724	Water	07/24/24 12:48	07/26/24 07:50
40281683002	SW-C1_20240724	Water	07/24/24 16:43	07/26/24 07:50
40281683003	SW-STM_20240724	Water	07/24/24 17:27	07/26/24 07:50
40281683004	SW-C5_20240724	Water	07/24/24 16:10	07/26/24 07:50
40281683005	SW-EB_20240724	Water	07/24/24 14:36	07/26/24 07:50
40281683006	SW-NBOUT_20240724	Water	07/24/24 14:23	07/26/24 07:50
40281683007	SW-NB_20240724	Water	07/24/24 13:49	07/26/24 07:50
40281683008	SW-HWY27W_20240724	Water	07/24/24 13:02	07/26/24 07:50
40281683009	SW-HWY27E_20240724	Water	07/24/24 12:27	07/26/24 07:50
40281683010	CP-04_20240724	Water	07/24/24 15:10	07/26/24 07:50
40281683011	SW-C5-DUP-20240724	Water	07/24/24 16:10	07/26/24 07:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40281683001	SW-C9_20240724	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40281683002	SW-C1_20240724	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40281683003	SW-STM_20240724	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40281683004	SW-C5_20240724	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40281683005	SW-EB_20240724	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40281683006	SW-NBOUT_20240724	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40281683007	SW-NB_20240724	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40281683008	SW-HWY27W_20240724	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40281683009	SW-HWY27E_20240724	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40281683010	CP-04_20240724	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40281683011	SW-C5-DUP-20240724	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	TXW	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1

PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: EPA 6020B

Description: 6020B MET ICPMS

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

11 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.
Pace Project No.: 40281683

Method: EPA 6020B
Description: 6020B MET ICPMS, Dissolved
Client: Foth Infrastructure & Environment
Date: August 08, 2024

General Information:

11 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: SM 2540D

Description: 2540D Total Suspended Solids

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

5 samples were analyzed for SM 2540D 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.

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.

Duplicate Sample:

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

Additional Comments:

Analyte Comments:

QC Batch: 480675

1q: Filtration >10min.

- SW-C5-DUP-20240724 (Lab ID: 40281683011)
 - Total Suspended Solids
- SW-C5_20240724 (Lab ID: 40281683004)
 - Total Suspended Solids

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide, Iodometric

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

5 samples were analyzed for SM 4500-S F (2000) 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide,Diss Iodometric

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

5 samples were analyzed for SM 4500-S F (2000) 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: EPA 300.0

Description: 300.0 IC Anions

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

5 samples were analyzed for EPA 300.0 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.

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: 480512

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40281669003,40281685006

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

- MS (Lab ID: 2752306)
 - Sulfate
- MSD (Lab ID: 2752307)
 - Sulfate
- MSD (Lab ID: 2752309)
 - Sulfate

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: EPA 300.0

Description: 300.0 IC Anions, Dissolved

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

5 samples were analyzed for EPA 300.0 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.

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: 480825

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40281323001

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

- MS (Lab ID: 2753628)
 - Sulfate, Dissolved
- MSD (Lab ID: 2753629)
 - Chloride, Dissolved

Additional Comments:

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: EPA 310.2

Description: 310.2 Alkalinity

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

5 samples were analyzed for EPA 310.2 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: EPA 310.2

Description: 310.2 Alkalinity, Dissolved

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

5 samples were analyzed for EPA 310.2 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Method: SM 5310C

Description: 5310C Dissolved Organic Carbon

Client: Foth Infrastructure & Environment

Date: August 08, 2024

General Information:

11 samples were analyzed for SM 5310C 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.

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:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C9_20240724 Lab ID: 40281683001 Collected: 07/24/24 12:48 Received: 07/26/24 07:50 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									
Calcium	2930	ug/L	254	76.2	1	07/31/24 06:08	07/31/24 18:28	7440-70-2	
Copper	16.6	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 18:28	7440-50-8	
Iron	3100	ug/L	250	58.0	1	07/31/24 06:08	07/31/24 18:28	7439-89-6	
Magnesium	990	ug/L	250	31.2	1	07/31/24 06:08	07/31/24 18:28	7439-95-4	
Manganese	143	ug/L	4.0	1.2	1	07/31/24 06:08	07/31/24 18:28	7439-96-5	
Potassium	668J	ug/L	789	237	1	07/31/24 06:08	07/31/24 18:28	7440-09-7	
Sodium	7420	ug/L	250	42.0	1	07/31/24 06:08	07/31/24 18:28	7440-23-5	
Total Hardness by 2340B	11.4	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 18:28		
Zinc	<10.3	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 18:28	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	2860	ug/L	254	76.2	1	07/31/24 06:17	07/31/24 20:05	7440-70-2	
Copper, Dissolved	11.7	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 20:05	7440-50-8	
Iron, Dissolved	960	ug/L	250	58.0	1	07/31/24 06:17	07/31/24 20:05	7439-89-6	
Magnesium, Dissolved	953	ug/L	250	31.2	1	07/31/24 06:17	07/31/24 20:05	7439-95-4	
Manganese, Dissolved	90.3	ug/L	4.0	1.2	1	07/31/24 06:17	07/31/24 20:05	7439-96-5	
Potassium, Dissolved	629J	ug/L	789	237	1	07/31/24 06:17	07/31/24 20:05	7440-09-7	
Sodium, Dissolved	7700	ug/L	250	42.0	1	07/31/24 06:17	07/31/24 20:05	7440-23-5	D9
Total Hardness by 2340B, Dissolved	11.1	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 20:05		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 20:05	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	9.2	mg/L	2.5	1.2	1		07/30/24 11:42		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		07/31/24 16:51		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		07/31/24 17:17		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	7.9	mg/L	2.0	0.59	1		07/30/24 18:24	16887-00-6	
Sulfate	1.7J	mg/L	2.0	0.44	1		07/30/24 18:24	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	7.5	mg/L	2.0	0.59	1		07/31/24 13:37	16887-00-6	
Sulfate, Dissolved	1.6J	mg/L	2.0	0.44	1		07/31/24 13:37	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C9_20240724 Lab ID: 40281683001 Collected: 07/24/24 12:48 Received: 07/26/24 07:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	10.3J	mg/L	25.0	7.4	1		08/01/24 11:27		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	8.4J	mg/L	25.0	7.4	1		08/01/24 12:52		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	12.3	mg/L	1.0	0.38	2		07/30/24 03:47		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C1_20240724 **Lab ID:** 40281683002 Collected: 07/24/24 16:43 Received: 07/26/24 07:50 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									
Calcium	11700	ug/L	254	76.2	1	07/31/24 06:08	07/31/24 18:45	7440-70-2	
Copper	11.8	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 18:45	7440-50-8	
Iron	2320	ug/L	250	58.0	1	07/31/24 06:08	07/31/24 18:45	7439-89-6	
Magnesium	4730	ug/L	250	31.2	1	07/31/24 06:08	07/31/24 18:45	7439-95-4	
Manganese	562	ug/L	4.0	1.2	1	07/31/24 06:08	07/31/24 18:45	7439-96-5	
Potassium	556J	ug/L	789	237	1	07/31/24 06:08	07/31/24 18:45	7440-09-7	
Sodium	11200	ug/L	250	42.0	1	07/31/24 06:08	07/31/24 18:45	7440-23-5	
Total Hardness by 2340B	48.8	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 18:45		
Zinc	18.7J	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 18:45	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	12000	ug/L	254	76.2	1	07/31/24 06:17	07/31/24 20:22	7440-70-2	D9
Copper, Dissolved	6.7	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 20:22	7440-50-8	
Iron, Dissolved	603	ug/L	250	58.0	1	07/31/24 06:17	07/31/24 20:22	7439-89-6	
Magnesium, Dissolved	4790	ug/L	250	31.2	1	07/31/24 06:17	07/31/24 20:22	7439-95-4	D9
Manganese, Dissolved	557	ug/L	4.0	1.2	1	07/31/24 06:17	07/31/24 20:22	7439-96-5	
Potassium, Dissolved	534J	ug/L	789	237	1	07/31/24 06:17	07/31/24 20:22	7440-09-7	
Sodium, Dissolved	11200	ug/L	250	42.0	1	07/31/24 06:17	07/31/24 20:22	7440-23-5	
Total Hardness by 2340B, Dissolved	49.7	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 20:22		
Zinc, Dissolved	14.9J	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 20:22	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	6.9	mg/L	2.8	1.3	1		07/30/24 11:43		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		07/31/24 16:57		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		07/31/24 17:22		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	29.3	mg/L	2.0	0.59	1		07/30/24 18:35	16887-00-6	
Sulfate	3.3	mg/L	2.0	0.44	1		07/30/24 18:35	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	28.4	mg/L	2.0	0.59	1		08/01/24 20:51	16887-00-6	
Sulfate, Dissolved	3.5	mg/L	2.0	0.44	1		08/01/24 20:51	14808-79-8	D9

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C1_20240724 Lab ID: 40281683002 Collected: 07/24/24 16:43 Received: 07/26/24 07:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	35.1	mg/L	25.0	7.4	1		08/01/24 11:30		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	32.2	mg/L	25.0	7.4	1		08/01/24 13:36		
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	10.3	mg/L	1.0	0.38	2		07/30/24 04:57		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-STM_20240724 **Lab ID:** 40281683003 Collected: 07/24/24 17:27 Received: 07/26/24 07:50 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									
Calcium	12800	ug/L	254	76.2	1	07/31/24 06:08	07/31/24 18:54	7440-70-2	
Copper	7.6	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 18:54	7440-50-8	
Iron	1010	ug/L	250	58.0	1	07/31/24 06:08	07/31/24 18:54	7439-89-6	
Magnesium	5220	ug/L	250	31.2	1	07/31/24 06:08	07/31/24 18:54	7439-95-4	
Manganese	99.7	ug/L	4.0	1.2	1	07/31/24 06:08	07/31/24 18:54	7439-96-5	
Potassium	1210	ug/L	789	237	1	07/31/24 06:08	07/31/24 18:54	7440-09-7	
Sodium	13700	ug/L	250	42.0	1	07/31/24 06:08	07/31/24 18:54	7440-23-5	
Total Hardness by 2340B	53.3	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 18:54		
Zinc	<10.3	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 18:54	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	12900	ug/L	254	76.2	1	07/31/24 06:17	07/31/24 20:30	7440-70-2	D9
Copper, Dissolved	5.5J	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 20:30	7440-50-8	
Iron, Dissolved	184J	ug/L	250	58.0	1	07/31/24 06:17	07/31/24 20:30	7439-89-6	
Magnesium, Dissolved	5200	ug/L	250	31.2	1	07/31/24 06:17	07/31/24 20:30	7439-95-4	
Manganese, Dissolved	13.2	ug/L	4.0	1.2	1	07/31/24 06:17	07/31/24 20:30	7439-96-5	
Potassium, Dissolved	1250	ug/L	789	237	1	07/31/24 06:17	07/31/24 20:30	7440-09-7	D9
Sodium, Dissolved	14000	ug/L	250	42.0	1	07/31/24 06:17	07/31/24 20:30	7440-23-5	D9
Total Hardness by 2340B, Dissolved	53.6	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 20:30		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 20:30	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	7.1	mg/L	1.0	0.48	1		07/30/24 11:43		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		07/31/24 16:59		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		07/31/24 17:23		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	38.4	mg/L	2.0	0.59	1		07/30/24 18:46	16887-00-6	
Sulfate	7.9	mg/L	2.0	0.44	1		07/30/24 18:46	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	37.1	mg/L	2.0	0.59	1		08/01/24 21:05	16887-00-6	
Sulfate, Dissolved	4.1	mg/L	2.0	0.44	1		08/01/24 21:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-STM_20240724 Lab ID: 40281683003 Collected: 07/24/24 17:27 Received: 07/26/24 07:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	31.9	mg/L	25.0	7.4	1		08/01/24 11:31		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	30.1	mg/L	25.0	7.4	1		08/01/24 13:37		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	10.5	mg/L	0.50	0.19	1		07/30/24 05:46		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C5_20240724 **Lab ID:** 40281683004 Collected: 07/24/24 16:10 Received: 07/26/24 07:50 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									
Calcium	5930	ug/L	254	76.2	1	07/31/24 06:08	07/31/24 18:58	7440-70-2	
Copper	12.5	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 18:58	7440-50-8	
Iron	1700	ug/L	250	58.0	1	07/31/24 06:08	07/31/24 18:58	7439-89-6	
Magnesium	2280	ug/L	250	31.2	1	07/31/24 06:08	07/31/24 18:58	7439-95-4	
Manganese	571	ug/L	4.0	1.2	1	07/31/24 06:08	07/31/24 18:58	7439-96-5	
Potassium	377J	ug/L	789	237	1	07/31/24 06:08	07/31/24 18:58	7440-09-7	
Sodium	7010	ug/L	250	42.0	1	07/31/24 06:08	07/31/24 18:58	7440-23-5	
Total Hardness by 2340B	24.2	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 18:58		
Zinc	19.3J	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 18:58	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	6040	ug/L	254	76.2	1	07/31/24 06:17	07/31/24 20:34	7440-70-2	D9
Copper, Dissolved	5.0J	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 20:34	7440-50-8	
Iron, Dissolved	661	ug/L	250	58.0	1	07/31/24 06:17	07/31/24 20:34	7439-89-6	
Magnesium, Dissolved	2350	ug/L	250	31.2	1	07/31/24 06:17	07/31/24 20:34	7439-95-4	D9
Manganese, Dissolved	586	ug/L	4.0	1.2	1	07/31/24 06:17	07/31/24 20:34	7439-96-5	D9
Potassium, Dissolved	378J	ug/L	789	237	1	07/31/24 06:17	07/31/24 20:34	7440-09-7	
Sodium, Dissolved	7240	ug/L	250	42.0	1	07/31/24 06:17	07/31/24 20:34	7440-23-5	D9
Total Hardness by 2340B, Dissolved	24.8	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 20:34		
Zinc, Dissolved	20.8J	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 20:34	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.8	mg/L	3.2	1.5	1		07/30/24 11:43		1q
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		07/31/24 17:03		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		07/31/24 17:26		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	12.0	mg/L	2.0	0.59	1		07/30/24 18:57	16887-00-6	
Sulfate	2.1	mg/L	2.0	0.44	1		07/30/24 18:57	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	11.4	mg/L	2.0	0.59	1		08/01/24 21:19	16887-00-6	
Sulfate, Dissolved	2.2	mg/L	2.0	0.44	1		08/01/24 21:19	14808-79-8	D9

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C5_20240724 Lab ID: 40281683004 Collected: 07/24/24 16:10 Received: 07/26/24 07:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	43.2	mg/L	25.0	7.4	1		08/01/24 11:32		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	20.5J	mg/L	25.0	7.4	1		08/01/24 13:38		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	11.0	mg/L	0.50	0.19	1		07/30/24 06:04		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-EB_20240724 Lab ID: 40281683005 Collected: 07/24/24 14:36 Received: 07/26/24 07:50 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									
Copper	3.7J	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 19:02	7440-50-8	
Total Hardness by 2340B	54.5	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 19:02		
Zinc	<10.3	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 19:02	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	3.0J	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 20:39	7440-50-8	
Total Hardness by 2340B, Dissolved	56.2	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 20:39		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 20:39	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	12.4	mg/L	0.50	0.19	1		07/30/24 06:22		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-NBOUT_20240724 Lab ID: 40281683006 Collected: 07/24/24 14:23 Received: 07/26/24 07:50 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									
Copper	2.6J	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 19:06	7440-50-8	
Total Hardness by 2340B	54.4	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 19:06		
Zinc	<10.3	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 19:06	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	<1.9	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 20:43	7440-50-8	
Total Hardness by 2340B, Dissolved	54.5	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 20:43		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 20:43	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	9.9	mg/L	0.50	0.19	1		07/30/24 06:39		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-NB_20240724 Lab ID: 40281683007 Collected: 07/24/24 13:49 Received: 07/26/24 07:50 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									
Copper	4.6J	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 19:19	7440-50-8	
Total Hardness by 2340B	38.5	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 19:19		
Zinc	<10.3	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 19:19	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	3.2J	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 20:55	7440-50-8	
Total Hardness by 2340B, Dissolved	37.8	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 20:55		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 20:55	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	11.2	mg/L	0.50	0.19	1		07/30/24 06:55		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-HWY27W_20240724 Lab ID: 40281683008 Collected: 07/24/24 13:02 Received: 07/26/24 07:50 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									
Copper	14.7	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 19:23	7440-50-8	
Total Hardness by 2340B	28.2	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 19:23		
Zinc	33.6J	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 19:23	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	7.1	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 21:00	7440-50-8	
Total Hardness by 2340B, Dissolved	27.1	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 21:00		
Zinc, Dissolved	27.0J	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 21:00	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	13.3	mg/L	0.50	0.19	1		07/30/24 07:12		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-HWY27E_20240724 Lab ID: 40281683009 Collected: 07/24/24 12:27 Received: 07/26/24 07:50 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									
Copper	8.2	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 19:27	7440-50-8	
Total Hardness by 2340B	8.9	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 19:27		
Zinc	12.4J	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 19:27	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	6.8	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 21:04	7440-50-8	
Total Hardness by 2340B, Dissolved	8.5	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 21:04		
Zinc, Dissolved	11.0J	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 21:04	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	9.1	mg/L	0.50	0.19	1		07/30/24 07:49		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: CP-04_20240724 Lab ID: 40281683010 Collected: 07/24/24 15:10 Received: 07/26/24 07:50 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									
Copper	33.7	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 19:31	7440-50-8	
Total Hardness by 2340B	61.0	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 19:31		
Zinc	16.6J	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 19:31	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	22.2	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 21:08	7440-50-8	
Total Hardness by 2340B, Dissolved	62.8	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 21:08		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 21:08	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	24.0	mg/L	1.5	0.57	3		07/30/24 08:06		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C5-DUP-20240724 Lab ID: 40281683011 Collected: 07/24/24 16:10 Received: 07/26/24 07:50 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									
Calcium	6470	ug/L	254	76.2	1	07/31/24 06:08	07/31/24 19:36	7440-70-2	
Copper	13.1	ug/L	6.4	1.9	1	07/31/24 06:08	07/31/24 19:36	7440-50-8	
Iron	1760	ug/L	250	58.0	1	07/31/24 06:08	07/31/24 19:36	7439-89-6	
Magnesium	2400	ug/L	250	31.2	1	07/31/24 06:08	07/31/24 19:36	7439-95-4	
Manganese	598	ug/L	4.0	1.2	1	07/31/24 06:08	07/31/24 19:36	7439-96-5	
Potassium	384J	ug/L	789	237	1	07/31/24 06:08	07/31/24 19:36	7440-09-7	
Sodium	7250	ug/L	250	42.0	1	07/31/24 06:08	07/31/24 19:36	7440-23-5	
Total Hardness by 2340B	26.0	mg/L	1.7	0.32	1	07/31/24 06:08	07/31/24 19:36		
Zinc	21.3J	ug/L	34.4	10.3	1	07/31/24 06:08	07/31/24 19:36	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	6100	ug/L	254	76.2	1	07/31/24 06:17	07/31/24 21:12	7440-70-2	
Copper, Dissolved	5.2J	ug/L	6.4	1.9	1	07/31/24 06:17	07/31/24 21:12	7440-50-8	
Iron, Dissolved	690	ug/L	250	58.0	1	07/31/24 06:17	07/31/24 21:12	7439-89-6	
Magnesium, Dissolved	2310	ug/L	250	31.2	1	07/31/24 06:17	07/31/24 21:12	7439-95-4	
Manganese, Dissolved	583	ug/L	4.0	1.2	1	07/31/24 06:17	07/31/24 21:12	7439-96-5	
Potassium, Dissolved	389J	ug/L	789	237	1	07/31/24 06:17	07/31/24 21:12	7440-09-7	
Sodium, Dissolved	6980	ug/L	250	42.0	1	07/31/24 06:17	07/31/24 21:12	7440-23-5	
Total Hardness by 2340B, Dissolved	24.7	mg/L	1.7	0.32	1	07/31/24 06:17	07/31/24 21:12		
Zinc, Dissolved	19.6J	ug/L	34.4	10.3	1	07/31/24 06:17	07/31/24 21:12	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	6.4	mg/L	2.8	1.3	1		07/30/24 11:43		1q
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		07/31/24 17:06		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		07/31/24 17:27		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	11.9	mg/L	2.0	0.59	1		07/30/24 19:40	16887-00-6	
Sulfate	2.1	mg/L	2.0	0.44	1		07/30/24 19:40	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	11.5	mg/L	2.0	0.59	1		08/01/24 21:34	16887-00-6	
Sulfate, Dissolved	2.2	mg/L	2.0	0.44	1		08/01/24 21:34	14808-79-8	D9

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Sample: SW-C5-DUP-20240724 Lab ID: 40281683011 Collected: 07/24/24 16:10 Received: 07/26/24 07:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	18.5J	mg/L	25.0	7.4	1		08/01/24 11:33		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	19.7J	mg/L	25.0	7.4	1		08/01/24 13:39		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	10.9	mg/L	0.50	0.19	1		07/30/24 08:24		

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480751	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40281683001, 40281683002, 40281683003, 40281683004, 40281683005, 40281683006, 40281683007, 40281683008, 40281683009, 40281683010, 40281683011		

METHOD BLANK: 2753194 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683005, 40281683006, 40281683007, 40281683008, 40281683009, 40281683010, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	ug/L	<76.2	254	07/31/24 15:29	
Copper	ug/L	<1.9	6.4	07/31/24 15:29	
Iron	ug/L	<58.0	250	07/31/24 15:29	
Magnesium	ug/L	<31.2	250	07/31/24 15:29	
Manganese	ug/L	<1.2	4.0	07/31/24 15:29	
Potassium	ug/L	<237	789	07/31/24 15:29	
Sodium	ug/L	<42.0	250	07/31/24 15:29	
Total Hardness by 2340B	mg/L	<0.32	1.7	07/31/24 15:29	
Zinc	ug/L	<10.3	34.4	07/31/24 15:29	

LABORATORY CONTROL SAMPLE: 2753195

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	10100	101	80-120	
Copper	ug/L	250	266	107	80-120	
Iron	ug/L	10000	10200	102	80-120	
Magnesium	ug/L	10000	10100	101	80-120	
Manganese	ug/L	250	254	102	80-120	
Potassium	ug/L	10000	10100	101	80-120	
Sodium	ug/L	10000	10100	101	80-120	
Total Hardness by 2340B	mg/L		66.9			
Zinc	ug/L	250	252	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753196 2753197

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40281683001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	ug/L	2930	10000	10000	12800	12700	99	98	75-125	1	20
Copper	ug/L	16.6	250	250	268	263	100	98	75-125	2	20
Iron	ug/L	3100	10000	10000	13500	13200	104	101	75-125	2	20
Magnesium	ug/L	990	10000	10000	11000	11000	100	100	75-125	0	20
Manganese	ug/L	143	250	250	405	392	105	100	75-125	3	20
Potassium	ug/L	668J	10000	10000	10800	10700	102	100	75-125	2	20
Sodium	ug/L	7420	10000	10000	17800	17500	104	100	75-125	2	20
Total Hardness by 2340B	mg/L	11.4			77.4	77.1				0	20
Zinc	ug/L	<10.3	250	250	260	256	100	99	75-125	2	20

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480752	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683005, 40281683006, 40281683007, 40281683008, 40281683009, 40281683010, 40281683011

METHOD BLANK: 2753198 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683005, 40281683006, 40281683007, 40281683008, 40281683009, 40281683010, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium, Dissolved	ug/L	<76.2	254	07/31/24 16:07	
Copper, Dissolved	ug/L	<1.9	6.4	07/31/24 16:07	
Iron, Dissolved	ug/L	<58.0	250	07/31/24 16:07	
Magnesium, Dissolved	ug/L	<31.2	250	07/31/24 16:07	
Manganese, Dissolved	ug/L	<1.2	4.0	07/31/24 16:07	
Potassium, Dissolved	ug/L	<237	789	07/31/24 16:07	
Sodium, Dissolved	ug/L	<42.0	250	07/31/24 16:07	
Total Hardness by 2340B, Dissolved	mg/L	<0.32	1.7	07/31/24 16:07	
Zinc, Dissolved	ug/L	<10.3	34.4	07/31/24 16:07	

LABORATORY CONTROL SAMPLE: 2753199

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium, Dissolved	ug/L	10000	9890	99	80-120	
Copper, Dissolved	ug/L	250	262	105	80-120	
Iron, Dissolved	ug/L	10000	9970	100	80-120	
Magnesium, Dissolved	ug/L	10000	9550	96	80-120	
Manganese, Dissolved	ug/L	250	250	100	80-120	
Potassium, Dissolved	ug/L	10000	9650	96	80-120	
Sodium, Dissolved	ug/L	10000	9480	95	80-120	
Total Hardness by 2340B, Dissolved	mg/L		64.0			
Zinc, Dissolved	ug/L	250	251	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753200 2753201

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40281683001 Result	Spike Conc.	Spike Conc.	MS Result						
Calcium, Dissolved	ug/L	2860	10000	10000	12900	12700	100	99	75-125	1	20
Copper, Dissolved	ug/L	11.7	250	250	259	258	99	99	75-125	0	20
Iron, Dissolved	ug/L	960	10000	10000	11100	11000	101	100	75-125	1	20
Magnesium, Dissolved	ug/L	953	10000	10000	10700	10600	98	96	75-125	2	20
Manganese, Dissolved	ug/L	90.3	250	250	340	337	100	99	75-125	1	20
Potassium, Dissolved	ug/L	629J	10000	10000	10500	10500	99	98	75-125	1	20
Sodium, Dissolved	ug/L	7700	10000	10000	17300	16800	96	91	75-125	2	20

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Parameter	Units	2753200		2753201		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40281683001 Result	MS Spike Conc.	MSD Spike Conc.									
Total Hardness by 2340B, Dissolved	mg/L	11.1			76.3	75.3					1	20	
Zinc, Dissolved	ug/L	<10.3	250	250	260	257	101	99	75-125		1	20	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480675	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

METHOD BLANK: 2752826 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	07/30/24 11:42	

LABORATORY CONTROL SAMPLE: 2752827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	100	100	80-120	

SAMPLE DUPLICATE: 2752919

Parameter	Units	40281689001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	89.0	98.0	10	10	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch: 480790 Analysis Method: SM 4500-S F (2000)
 QC Batch Method: SM 4500-S F (2000) Analysis Description: 4500S2F Sulfide, Dissolved Iodometric
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

METHOD BLANK: 2753317 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	07/31/24 17:13	

LABORATORY CONTROL SAMPLE: 2753318

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	40	38.0	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753319 2753320

Parameter	Units	2753319		2753320		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40281683001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Sulfide	mg/L	<1.2	40	40	41.6	40.0	104	100	80-120	4	10

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480789	Analysis Method:	SM 4500-S F (2000)
QC Batch Method:	SM 4500-S F (2000)	Analysis Description:	4500S2F Sulfide, Iodometric
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

METHOD BLANK: 2753313 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	07/31/24 16:47	

LABORATORY CONTROL SAMPLE: 2753314

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	40.8	39.6	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753315 2753316

Parameter	Units	2753315		2753316		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	<1.2	40.8	37.6	38.4	92	94	80-120	2	10	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480506	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions,Dissolved
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40281683001

METHOD BLANK: 2752282 Matrix: Water

Associated Lab Samples: 40281683001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	0.60J	2.0	07/29/24 18:15	
Sulfate	mg/L	<0.44	2.0	07/29/24 18:15	

LABORATORY CONTROL SAMPLE: 2752283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.0	100	90-110	
Sulfate	mg/L	20	20.1	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2752284 2752285

Parameter	Units	40281669002		2752285		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	130	400	546	553	104	106	90-110	1	15	
Sulfate	mg/L	905	2000	3010	2760	105	93	90-110	9	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2752286 2752287

Parameter	Units	40281683001		2752287		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	7.5	20	28.8	28.7	107	106	90-110	0	15	
Sulfate	mg/L	1.6J	20	22.5	22.5	105	105	90-110	0	15	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch: 480825 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions,Dissolved
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 40281683002, 40281683003, 40281683004, 40281683011

METHOD BLANK: 2753626 Matrix: Water
 Associated Lab Samples: 40281683002, 40281683003, 40281683004, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	08/01/24 19:39	
Sulfate	mg/L	<0.44	2.0	08/01/24 19:39	

LABORATORY CONTROL SAMPLE: 2753627

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.8	109	90-110	
Sulfate	mg/L	20	21.9	110	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753628 2753629

Parameter	Units	40281323001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.3	20	20	30.3	30.5	110	111	90-110	1	15	M0
Sulfate	mg/L	58.5	100	100	176	165	117	107	90-110	6	15	M0

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480512	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

METHOD BLANK: 2752304 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	07/30/24 14:58	
Sulfate	mg/L	<0.44	2.0	07/30/24 14:58	

LABORATORY CONTROL SAMPLE: 2752305

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.6	103	90-110	
Sulfate	mg/L	20	21.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2752306 2752307

Parameter	Units	40281669003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	3.0J	100	100	114	118	111	115	90-110	3	15 M0	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2752308 2752309

Parameter	Units	40281685006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	mg/L	10.3	20	20	32.2	32.9	110	113	90-110	2	15 M0	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480884	Analysis Method:	EPA 310.2
QC Batch Method:	EPA 310.2	Analysis Description:	310.2 Alkalinity
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

METHOD BLANK: 2753929 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.4	25.0	08/01/24 11:25	

LABORATORY CONTROL SAMPLE: 2753930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	105	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753931 2753932

Parameter	Units	40281683001		40281683002		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO3	mg/L	10.3J	100	100	108	112	98	101	90-110	3	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753933 2753934

Parameter	Units	40281724015		40281724016		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Alkalinity, Total as CaCO3	mg/L	603	200	200	788	789	93	93	90-110	0	20

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch: 480888 Analysis Method: EPA 310.2
 QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity, Dissolved
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

METHOD BLANK: 2753962 Matrix: Water
 Associated Lab Samples: 40281683001, 40281683002, 40281683003, 40281683004, 40281683011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	<7.4	25.0	08/01/24 12:50	

LABORATORY CONTROL SAMPLE: 2753963

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	100	108	108	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2753964 2753965

Parameter	Units	40281683001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	8.4J	100	100	107	115	99	107	90-110	7	20	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

QC Batch:	480621	Analysis Method:	SM 5310C
QC Batch Method:	SM 5310C	Analysis Description:	5310C Dissolved Organic Carbon
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40281683001, 40281683002, 40281683003, 40281683004, 40281683005, 40281683006, 40281683007, 40281683008, 40281683009, 40281683010, 40281683011		

METHOD BLANK:	2752612	Matrix:	Water
Associated Lab Samples:	40281683001, 40281683002, 40281683003, 40281683004, 40281683005, 40281683006, 40281683007, 40281683008, 40281683009, 40281683010, 40281683011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	<0.19	0.50	07/30/24 02:41	

LABORATORY CONTROL SAMPLE: 2752613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	12.5	12.7	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2752614 2752615

Parameter	Units	40281683001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Dissolved Organic Carbon	mg/L	12.3	12	25.1	25.1	107	107	80-120	0	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2752616 2752617

Parameter	Units	40281683002 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Dissolved Organic Carbon	mg/L	10.3	12	22.9	22.5	105	102	80-120	2	20		

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QUALIFIERS

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

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

1q Filtration >10min.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Table with 6 columns: Lab ID, Sample ID, QC Batch Method, QC Batch, Analytical Method, Analytical Batch. It lists various sample IDs and their corresponding QC and analytical data.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_Q4 FLAMBEAU MINE CO.

Pace Project No.: 40281683

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40281683004	SW-C5_20240724	EPA 300.0	480825		
40281683011	SW-C5-DUP-20240724	EPA 300.0	480825		
40281683001	SW-C9_20240724	EPA 310.2	480884		
40281683002	SW-C1_20240724	EPA 310.2	480884		
40281683003	SW-STM_20240724	EPA 310.2	480884		
40281683004	SW-C5_20240724	EPA 310.2	480884		
40281683011	SW-C5-DUP-20240724	EPA 310.2	480884		
40281683001	SW-C9_20240724	EPA 310.2	480888		
40281683002	SW-C1_20240724	EPA 310.2	480888		
40281683003	SW-STM_20240724	EPA 310.2	480888		
40281683004	SW-C5_20240724	EPA 310.2	480888		
40281683011	SW-C5-DUP-20240724	EPA 310.2	480888		
40281683001	SW-C9_20240724	SM 5310C	480621		
40281683002	SW-C1_20240724	SM 5310C	480621		
40281683003	SW-STM_20240724	SM 5310C	480621		
40281683004	SW-C5_20240724	SM 5310C	480621		
40281683005	SW-EB_20240724	SM 5310C	480621		
40281683006	SW-NBOUT_20240724	SM 5310C	480621		
40281683007	SW-NB_20240724	SM 5310C	480621		
40281683008	SW-HWY27W_20240724	SM 5310C	480621		
40281683009	SW-HWY27E_20240724	SM 5310C	480621		
40281683010	CP-04_20240724	SM 5310C	480621		
40281683011	SW-C5-DUP-20240724	SM 5310C	480621		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Foth

WO#: 40281683



Courier: CS Logistics Fed Ex Speedee UPS Walto

Client Pace Other: _____

Tracking #: 3954164-2, 3954164-1

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-171 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 0.5 / Corr: 0.0

Temp Blank Present: yes no Biological Tissue is Frozen: yes no

Person examining contents:
 Date: 07/26/2024 Initials: MVS
 Labeled By Initials: JA

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

Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
- DI VOA Samples frozen upon receipt <input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
Correct Type: <u>Pace Green Bay</u> Pace IR, Non-Pace	
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>W</u>	<u>Sample point 007 has its AGHS time of sampling on the label as 14:39 in stead of 13:44 as on the provided COC. placed with process of elimination. MVS 07/26/2024</u>
Trip Blank Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): _____	

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 logii



September 17, 2024

Nick Glander
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: FMC-2024_Q4 FLAMBEAU MINE CO
Pace Project No.: 40283424

Dear Nick Glander:

Enclosed are the analytical results for sample(s) received by the laboratory on August 30, 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 - Green Bay

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

Sincerely,

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: MARK CIARDELLI, Foth Infrastructure & Environment, LLC
Krystal Clark, Foth Infrastructure & Environment
SHARON KOZICKI, Foth Infrastructure & Environment, LLC



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

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

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40283424001	SW-C9_20240830	Water	08/30/24 11:57	08/30/24 17:40
40283424002	SW-C1_20240830	Water	08/30/24 09:35	08/30/24 17:40
40283424003	SW-STM_20240830	Water	08/30/24 08:00	08/30/24 17:40
40283424004	SW-C5_20240830	Water	08/30/24 09:55	08/30/24 17:40
40283424005	SW-EB_20240830	Water	08/30/24 11:01	08/30/24 17:40
40283424006	SW-NBOUT_20240830	Water	08/30/24 10:42	08/30/24 17:40
40283424007	SW-NB_20240830	Water	08/30/24 10:21	08/30/24 17:40
40283424008	SW-HWY27W_20240830	Water	08/30/24 11:33	08/30/24 17:40
40283424009	SW-HWY27E_20240830	Water	08/30/24 11:16	08/30/24 17:40
40283424010	CP-04_20240830	Water	08/30/24 09:23	08/30/24 17:40
40283424011	SW-HWY27W-DUP_20240830	Water	08/30/24 11:33	08/30/24 17:40

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SAMPLE ANALYTE COUNT

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40283424001	SW-C9_20240830	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40283424002	SW-C1_20240830	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40283424003	SW-STM_20240830	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40283424004	SW-C5_20240830	EPA 6020B	KXS	9
		EPA 6020B	KXS	9
		SM 2540D	LMB	1
		SM 4500-S F (2000)	LMB	1
		SM 4500-S F (2000)	LMB	1
		EPA 300.0	HMB	2
		EPA 300.0	HMB	2

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 310.2	MT	1
		EPA 310.2	MT	1
		SM 5310C	TJJ	1
40283424005	SW-EB_20240830	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40283424006	SW-NBOUT_20240830	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40283424007	SW-NB_20240830	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40283424008	SW-HWY27W_20240830	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40283424009	SW-HWY27E_20240830	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40283424010	CP-04_20240830	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1
40283424011	SW-HWY27W-DUP_20240830	EPA 6020B	KXS	3
		EPA 6020B	KXS	3
		SM 5310C	TJJ	1

PASI-G = Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: EPA 6020B

Description: 6020B MET ICPMS

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

11 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: EPA 6020B

Description: 6020B MET ICPMS, Dissolved

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

11 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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: SM 2540D

Description: 2540D Total Suspended Solids

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

4 samples were analyzed for SM 2540D 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.

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.

Duplicate Sample:

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

QC Batch: 483505

R1: RPD value was outside control limits.

- DUP (Lab ID: 2767919)
- Total Suspended Solids

Additional Comments:

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide, Iodometric

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

4 samples were analyzed for SM 4500-S F (2000) 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.

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: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: SM 4500-S F (2000)

Description: 4500S2F Sulfide,Diss Iodometric

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

4 samples were analyzed for SM 4500-S F (2000) 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: EPA 300.0

Description: 300.0 IC Anions

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

4 samples were analyzed for EPA 300.0 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.

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: 483760

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40283424001,40283503001

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

- MS (Lab ID: 2769784)
 - Sulfate
- MSD (Lab ID: 2769785)
 - Sulfate

Additional Comments:

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: EPA 300.0

Description: 300.0 IC Anions, Dissolved

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

4 samples were analyzed for EPA 300.0 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.

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: 483584

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40283424001

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

- MS (Lab ID: 2768343)
 - Chloride, Dissolved
 - Sulfate, Dissolved

Additional Comments:

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: EPA 310.2

Description: 310.2 Alkalinity

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

4 samples were analyzed for EPA 310.2 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: EPA 310.2

Description: 310.2 Alkalinity, Dissolved

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

4 samples were analyzed for EPA 310.2 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.

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:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Method: SM 5310C

Description: 5310C Dissolved Organic Carbon

Client: Foth Infrastructure & Environment

Date: September 17, 2024

General Information:

11 samples were analyzed for SM 5310C 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.

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:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-C9_20240830 Lab ID: 40283424001 Collected: 08/30/24 11:57 Received: 08/30/24 17:40 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									
Calcium	2750	ug/L	254	76.2	1	09/03/24 11:29	09/06/24 09:42	7440-70-2	
Copper	14.0	ug/L	6.4	1.9	1	09/03/24 11:29	09/06/24 09:42	7440-50-8	
Iron	2610	ug/L	250	58.0	1	09/03/24 11:29	09/06/24 09:42	7439-89-6	
Magnesium	954	ug/L	250	31.2	1	09/03/24 11:29	09/06/24 09:42	7439-95-4	
Manganese	117	ug/L	4.0	1.2	1	09/03/24 11:29	09/06/24 09:42	7439-96-5	
Potassium	1250	ug/L	789	237	1	09/03/24 11:29	09/06/24 09:42	7440-09-7	
Sodium	6410	ug/L	250	42.0	1	09/03/24 11:29	09/06/24 09:42	7440-23-5	
Total Hardness by 2340B	10.8	mg/L	1.7	0.32	1	09/03/24 11:29	09/06/24 09:42		
Zinc	13.6J	ug/L	34.4	10.3	1	09/03/24 11:29	09/06/24 09:42	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	2630	ug/L	254	76.2	1	09/03/24 11:30	09/06/24 08:09	7440-70-2	
Copper, Dissolved	11.4	ug/L	6.4	1.9	1	09/03/24 11:30	09/06/24 08:09	7440-50-8	
Iron, Dissolved	1000	ug/L	250	58.0	1	09/03/24 11:30	09/06/24 08:09	7439-89-6	
Magnesium, Dissolved	859	ug/L	250	31.2	1	09/03/24 11:30	09/06/24 08:09	7439-95-4	
Manganese, Dissolved	99.6	ug/L	4.0	1.2	1	09/03/24 11:30	09/06/24 08:09	7439-96-5	
Potassium, Dissolved	1160	ug/L	789	237	1	09/03/24 11:30	09/06/24 08:09	7440-09-7	
Sodium, Dissolved	6530	ug/L	250	42.0	1	09/03/24 11:30	09/06/24 08:09	7440-23-5	D9
Total Hardness by 2340B, Dissolved	10.1	mg/L	1.7	0.32	1	09/03/24 11:30	09/06/24 08:09		
Zinc, Dissolved	13.2J	ug/L	34.4	10.3	1	09/03/24 11:30	09/06/24 08:09	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	5.2	mg/L	2.0	0.95	1		09/04/24 09:04		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		09/06/24 14:25		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		09/06/24 13:59		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	5.2	mg/L	2.0	0.59	1		09/10/24 18:59	16887-00-6	
Sulfate	1.4J	mg/L	2.0	0.44	1		09/10/24 18:59	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	5.1	mg/L	2.0	0.59	1		09/05/24 14:52	16887-00-6	M0
Sulfate, Dissolved	1.3J	mg/L	2.0	0.44	1		09/05/24 14:52	14808-79-8	M0

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-C9_20240830 Lab ID: 40283424001 Collected: 08/30/24 11:57 Received: 08/30/24 17:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	10.7J	mg/L	25.0	7.4	1		09/03/24 15:11		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	12.0J	mg/L	25.0	7.4	1		09/03/24 15:26		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	13.5	mg/L	1.5	0.57	3		09/06/24 04:11		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-C1_20240830 Lab ID: 40283424002 Collected: 08/30/24 09:35 Received: 08/30/24 17:40 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									
Calcium	8920	ug/L	254	76.2	1	09/03/24 11:29	09/06/24 09:58	7440-70-2	
Copper	12.9	ug/L	6.4	1.9	1	09/03/24 11:29	09/06/24 09:58	7440-50-8	
Iron	1740	ug/L	250	58.0	1	09/03/24 11:29	09/06/24 09:58	7439-89-6	
Magnesium	3760	ug/L	250	31.2	1	09/03/24 11:29	09/06/24 09:58	7439-95-4	
Manganese	116	ug/L	4.0	1.2	1	09/03/24 11:29	09/06/24 09:58	7439-96-5	
Potassium	1690	ug/L	789	237	1	09/03/24 11:29	09/06/24 09:58	7440-09-7	
Sodium	12700	ug/L	250	42.0	1	09/03/24 11:29	09/06/24 09:58	7440-23-5	
Total Hardness by 2340B	37.8	mg/L	1.7	0.32	1	09/03/24 11:29	09/06/24 09:58		
Zinc	<10.3	ug/L	34.4	10.3	1	09/03/24 11:29	09/06/24 09:58	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	8880	ug/L	254	76.2	1	09/03/24 11:30	09/06/24 08:26	7440-70-2	
Copper, Dissolved	8.5	ug/L	6.4	1.9	1	09/03/24 11:30	09/06/24 08:26	7440-50-8	
Iron, Dissolved	427	ug/L	250	58.0	1	09/03/24 11:30	09/06/24 08:26	7439-89-6	
Magnesium, Dissolved	3750	ug/L	250	31.2	1	09/03/24 11:30	09/06/24 08:26	7439-95-4	
Manganese, Dissolved	102	ug/L	4.0	1.2	1	09/03/24 11:30	09/06/24 08:26	7439-96-5	
Potassium, Dissolved	1590	ug/L	789	237	1	09/03/24 11:30	09/06/24 08:26	7440-09-7	
Sodium, Dissolved	12800	ug/L	250	42.0	1	09/03/24 11:30	09/06/24 08:26	7440-23-5	D9
Total Hardness by 2340B, Dissolved	37.6	mg/L	1.7	0.32	1	09/03/24 11:30	09/06/24 08:26		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/06/24 08:26	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	5.3	mg/L	1.2	0.57	1		09/04/24 13:35		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		09/06/24 14:29		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		09/06/24 14:06		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	23.0	mg/L	2.0	0.59	1		09/10/24 19:42	16887-00-6	
Sulfate	2.4	mg/L	2.0	0.44	1		09/10/24 19:42	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	22.3	mg/L	2.0	0.59	1		09/05/24 15:35	16887-00-6	
Sulfate, Dissolved	2.3	mg/L	2.0	0.44	1		09/05/24 15:35	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-C1_20240830 Lab ID: 40283424002 Collected: 08/30/24 09:35 Received: 08/30/24 17:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3	29.2	mg/L	25.0	7.4	1		09/03/24 15:12		
310.2 Alkalinity, Dissolved									
Analytical Method: EPA 310.2									
Pace Analytical Services - Green Bay									
Alkalinity, Total as CaCO3, Dissolved	31.0	mg/L	25.0	7.4	1		09/03/24 15:29		
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	11.3	mg/L	1.5	0.57	3		09/06/24 04:59		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-STM_20240830 **Lab ID:** 40283424003 Collected: 08/30/24 08:00 Received: 08/30/24 17:40 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									
Calcium	12000	ug/L	254	76.2	1	09/03/24 11:29	09/06/24 10:07	7440-70-2	
Copper	8.6	ug/L	6.4	1.9	1	09/03/24 11:29	09/06/24 10:07	7440-50-8	
Iron	1130	ug/L	250	58.0	1	09/03/24 11:29	09/06/24 10:07	7439-89-6	
Magnesium	4970	ug/L	250	31.2	1	09/03/24 11:29	09/06/24 10:07	7439-95-4	
Manganese	52.9	ug/L	4.0	1.2	1	09/03/24 11:29	09/06/24 10:07	7439-96-5	
Potassium	1770	ug/L	789	237	1	09/03/24 11:29	09/06/24 10:07	7440-09-7	
Sodium	16600	ug/L	250	42.0	1	09/03/24 11:29	09/06/24 10:07	7440-23-5	
Total Hardness by 2340B	50.4	mg/L	1.7	0.32	1	09/03/24 11:29	09/06/24 10:07		
Zinc	<10.3	ug/L	34.4	10.3	1	09/03/24 11:29	09/06/24 10:07	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	11800	ug/L	254	76.2	1	09/03/24 11:30	09/06/24 08:34	7440-70-2	
Copper, Dissolved	5.9J	ug/L	6.4	1.9	1	09/03/24 11:30	09/06/24 08:34	7440-50-8	
Iron, Dissolved	315	ug/L	250	58.0	1	09/03/24 11:30	09/06/24 08:34	7439-89-6	
Magnesium, Dissolved	4820	ug/L	250	31.2	1	09/03/24 11:30	09/06/24 08:34	7439-95-4	
Manganese, Dissolved	28.7	ug/L	4.0	1.2	1	09/03/24 11:30	09/06/24 08:34	7439-96-5	
Potassium, Dissolved	1690	ug/L	789	237	1	09/03/24 11:30	09/06/24 08:34	7440-09-7	
Sodium, Dissolved	16200	ug/L	250	42.0	1	09/03/24 11:30	09/06/24 08:34	7440-23-5	
Total Hardness by 2340B, Dissolved	49.4	mg/L	1.7	0.32	1	09/03/24 11:30	09/06/24 08:34		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/06/24 08:34	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	4.1	mg/L	1.0	0.48	1		09/04/24 13:35		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		09/06/24 14:33		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		09/06/24 14:10		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	35.4	mg/L	2.0	0.59	1		09/10/24 19:57	16887-00-6	
Sulfate	3.0	mg/L	2.0	0.44	1		09/10/24 19:57	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	34.3	mg/L	2.0	0.59	1		09/05/24 15:49	16887-00-6	
Sulfate, Dissolved	2.9	mg/L	2.0	0.44	1		09/05/24 15:49	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-STM_20240830 Lab ID: 40283424003 Collected: 08/30/24 08:00 Received: 08/30/24 17:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	33.5	mg/L	25.0	7.4	1		09/03/24 15:13		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	34.4	mg/L	25.0	7.4	1		09/03/24 15:33		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	9.9	mg/L	1.5	0.57	3		09/06/24 05:34		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-C5_20240830 **Lab ID:** 40283424004 Collected: 08/30/24 09:55 Received: 08/30/24 17:40 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									
Calcium	7610	ug/L	254	76.2	1	09/03/24 11:29	09/06/24 10:11	7440-70-2	
Copper	12.2	ug/L	6.4	1.9	1	09/03/24 11:29	09/06/24 10:11	7440-50-8	
Iron	1530	ug/L	250	58.0	1	09/03/24 11:29	09/06/24 10:11	7439-89-6	
Magnesium	3030	ug/L	250	31.2	1	09/03/24 11:29	09/06/24 10:11	7439-95-4	
Manganese	91.6	ug/L	4.0	1.2	1	09/03/24 11:29	09/06/24 10:11	7439-96-5	
Potassium	1530	ug/L	789	237	1	09/03/24 11:29	09/06/24 10:11	7440-09-7	
Sodium	11100	ug/L	250	42.0	1	09/03/24 11:29	09/06/24 10:11	7440-23-5	
Total Hardness by 2340B	31.5	mg/L	1.7	0.32	1	09/03/24 11:29	09/06/24 10:11		
Zinc	11.9J	ug/L	34.4	10.3	1	09/03/24 11:29	09/06/24 10:11	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Calcium, Dissolved	7410	ug/L	254	76.2	1	09/03/24 11:30	09/06/24 08:38	7440-70-2	
Copper, Dissolved	8.5	ug/L	6.4	1.9	1	09/03/24 11:30	09/06/24 08:38	7440-50-8	
Iron, Dissolved	536	ug/L	250	58.0	1	09/03/24 11:30	09/06/24 08:38	7439-89-6	
Magnesium, Dissolved	3070	ug/L	250	31.2	1	09/03/24 11:30	09/06/24 08:38	7439-95-4	D9
Manganese, Dissolved	84.0	ug/L	4.0	1.2	1	09/03/24 11:30	09/06/24 08:38	7439-96-5	
Potassium, Dissolved	1530	ug/L	789	237	1	09/03/24 11:30	09/06/24 08:38	7440-09-7	
Sodium, Dissolved	11300	ug/L	250	42.0	1	09/03/24 11:30	09/06/24 08:38	7440-23-5	D9
Total Hardness by 2340B, Dissolved	31.2	mg/L	1.7	0.32	1	09/03/24 11:30	09/06/24 08:38		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/06/24 08:38	7440-66-6	
2540D Total Suspended Solids									
Analytical Method: SM 2540D									
Pace Analytical Services - Green Bay									
Total Suspended Solids	3.6	mg/L	1.3	0.63	1		09/04/24 13:35		
4500S2F Sulfide, Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide	<1.2	mg/L	4.0	1.2	1		09/06/24 14:36		
4500S2F Sulfide, Diss Iodometric									
Analytical Method: SM 4500-S F (2000)									
Pace Analytical Services - Green Bay									
Sulfide, Dissolved	<1.2	mg/L	4.0	1.2	1		09/06/24 14:12		
300.0 IC Anions									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride	19.0	mg/L	2.0	0.59	1		09/10/24 20:11	16887-00-6	
Sulfate	1.8J	mg/L	2.0	0.44	1		09/10/24 20:11	14808-79-8	
300.0 IC Anions, Dissolved									
Analytical Method: EPA 300.0									
Pace Analytical Services - Green Bay									
Chloride, Dissolved	19.4	mg/L	2.0	0.59	1		09/05/24 16:05	16887-00-6	D9
Sulfate, Dissolved	1.9J	mg/L	2.0	0.44	1		09/05/24 16:05	14808-79-8	

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-C5_20240830 Lab ID: 40283424004 Collected: 08/30/24 09:55 Received: 08/30/24 17:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
310.2 Alkalinity	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3	23.6J	mg/L	25.0	7.4	1		09/03/24 15:14		
310.2 Alkalinity, Dissolved	Analytical Method: EPA 310.2 Pace Analytical Services - Green Bay								
Alkalinity, Total as CaCO3, Dissolved	27.2	mg/L	25.0	7.4	1		09/03/24 15:34		
5310C Dissolved Organic Carbon	Analytical Method: SM 5310C Pace Analytical Services - Green Bay								
Dissolved Organic Carbon	10.9	mg/L	1.5	0.57	3		09/06/24 05:48		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-EB_20240830 Lab ID: 40283424005 Collected: 08/30/24 11:01 Received: 08/30/24 17:40 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									
Copper	12.4	ug/L	6.4	1.9	1	09/03/24 11:29	09/05/24 18:59	7440-50-8	
Total Hardness by 2340B	49.8	mg/L	1.7	0.32	1	09/03/24 11:29	09/05/24 18:59		
Zinc	<10.3	ug/L	34.4	10.3	1	09/03/24 11:29	09/05/24 18:59	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	7.5	ug/L	6.4	1.9	1	09/03/24 11:30	09/05/24 17:14	7440-50-8	
Total Hardness by 2340B, Dissolved	50.3	mg/L	1.7	0.32	1	09/03/24 11:30	09/05/24 17:14		D9
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/05/24 17:14	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	7.7	mg/L	1.5	0.57	3		09/06/24 06:03		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-NBOUT_20240830 Lab ID: 40283424006 Collected: 08/30/24 10:42 Received: 08/30/24 17:40 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									
Copper	4.7J	ug/L	6.4	1.9	1	09/03/24 11:29	09/05/24 19:04	7440-50-8	
Total Hardness by 2340B	61.6	mg/L	1.7	0.32	1	09/03/24 11:29	09/05/24 19:04		
Zinc	<10.3	ug/L	34.4	10.3	1	09/03/24 11:29	09/05/24 19:04	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	3.4J	ug/L	6.4	1.9	1	09/03/24 11:30	09/05/24 17:18	7440-50-8	
Total Hardness by 2340B, Dissolved	60.9	mg/L	1.7	0.32	1	09/03/24 11:30	09/05/24 17:18		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/05/24 17:18	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	12.7	mg/L	1.5	0.57	3		09/06/24 06:18		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: **SW-NB_20240830** Lab ID: **40283424007** Collected: 08/30/24 10:21 Received: 08/30/24 17:40 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									
Copper	7.5	ug/L	6.4	1.9	1	09/03/24 11:29	09/05/24 19:08	7440-50-8	
Total Hardness by 2340B	46.7	mg/L	1.7	0.32	1	09/03/24 11:29	09/05/24 19:08		
Zinc	<10.3	ug/L	34.4	10.3	1	09/03/24 11:29	09/05/24 19:08	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	4.3J	ug/L	6.4	1.9	1	09/03/24 11:30	09/05/24 17:22	7440-50-8	
Total Hardness by 2340B, Dissolved	47.5	mg/L	1.7	0.32	1	09/03/24 11:30	09/05/24 17:22		D9
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/05/24 17:22	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	13.3	mg/L	1.5	0.57	3		09/06/24 06:33		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-HWY27W_20240830 Lab ID: 40283424008 Collected: 08/30/24 11:33 Received: 08/30/24 17:40 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									
Copper	20.4	ug/L	6.4	1.9	1	09/03/24 11:29	09/05/24 19:12	7440-50-8	
Total Hardness by 2340B	27.6	mg/L	1.7	0.32	1	09/03/24 11:29	09/05/24 19:12		
Zinc	24.3J	ug/L	34.4	10.3	1	09/03/24 11:29	09/05/24 19:12	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	11.5	ug/L	6.4	1.9	1	09/03/24 11:30	09/05/24 17:27	7440-50-8	
Total Hardness by 2340B, Dissolved	27.2	mg/L	1.7	0.32	1	09/03/24 11:30	09/05/24 17:27		
Zinc, Dissolved	25.9J	ug/L	34.4	10.3	1	09/03/24 11:30	09/05/24 17:27	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	15.5	mg/L	1.5	0.57	3		09/06/24 06:49		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-HWY27E_20240830 Lab ID: 40283424009 Collected: 08/30/24 11:16 Received: 08/30/24 17:40 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									
Copper	13.7	ug/L	6.4	1.9	1	09/03/24 11:29	09/05/24 19:16	7440-50-8	
Total Hardness by 2340B	8.1	mg/L	1.7	0.32	1	09/03/24 11:29	09/05/24 19:16		
Zinc	13.9J	ug/L	34.4	10.3	1	09/03/24 11:29	09/05/24 19:16	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	9.5	ug/L	6.4	1.9	1	09/03/24 11:30	09/05/24 17:31	7440-50-8	
Total Hardness by 2340B, Dissolved	6.5	mg/L	1.7	0.32	1	09/03/24 11:30	09/05/24 17:31		
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/05/24 17:31	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	10.1	mg/L	1.5	0.57	3		09/06/24 07:05		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: CP-04_20240830 Lab ID: 40283424010 Collected: 08/30/24 09:23 Received: 08/30/24 17:40 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									
Copper	6.1J	ug/L	6.4	1.9	1	09/03/24 11:29	09/05/24 19:29	7440-50-8	
Total Hardness by 2340B	87.8	mg/L	1.7	0.32	1	09/03/24 11:29	09/05/24 19:29		
Zinc	<10.3	ug/L	34.4	10.3	1	09/03/24 11:29	09/05/24 19:29	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	5.4J	ug/L	6.4	1.9	1	09/03/24 11:30	09/05/24 17:35	7440-50-8	
Total Hardness by 2340B, Dissolved	90.4	mg/L	1.7	0.32	1	09/03/24 11:30	09/05/24 17:35		D9
Zinc, Dissolved	<10.3	ug/L	34.4	10.3	1	09/03/24 11:30	09/05/24 17:35	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	10.5	mg/L	1.5	0.57	3		09/06/24 07:21		

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ANALYTICAL RESULTS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Sample: SW-HWY27W-DUP_20240830 Lab ID: 40283424011 Collected: 08/30/24 11:33 Received: 08/30/24 17:40 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									
Copper	19.8	ug/L	6.4	1.9	1	09/03/24 11:29	09/05/24 19:33	7440-50-8	
Total Hardness by 2340B	27.8	mg/L	1.7	0.32	1	09/03/24 11:29	09/05/24 19:33		
Zinc	27.1J	ug/L	34.4	10.3	1	09/03/24 11:29	09/05/24 19:33	7440-66-6	
6020B MET ICPMS, Dissolved									
Analytical Method: EPA 6020B Preparation Method: EPA 3010A									
Pace Analytical Services - Green Bay									
Copper, Dissolved	11.5	ug/L	6.4	1.9	1	09/03/24 11:30	09/05/24 17:56	7440-50-8	
Total Hardness by 2340B, Dissolved	27.3	mg/L	1.7	0.32	1	09/03/24 11:30	09/05/24 17:56		
Zinc, Dissolved	20.7J	ug/L	34.4	10.3	1	09/03/24 11:30	09/05/24 17:56	7440-66-6	
5310C Dissolved Organic Carbon									
Analytical Method: SM 5310C									
Pace Analytical Services - Green Bay									
Dissolved Organic Carbon	15.4	mg/L	1.5	0.57	3		09/06/24 07:36		

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483422	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40283424001, 40283424002, 40283424003, 40283424004, 40283424005, 40283424006, 40283424007, 40283424008, 40283424009, 40283424010, 40283424011		

METHOD BLANK: 2767720 Matrix: Water
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004, 40283424005, 40283424006, 40283424007, 40283424008, 40283424009, 40283424010, 40283424011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	ug/L	<76.2	254	09/06/24 08:51	
Copper	ug/L	<1.9	6.4	09/06/24 08:51	
Iron	ug/L	<58.0	250	09/06/24 08:51	
Magnesium	ug/L	<31.2	250	09/06/24 08:51	
Manganese	ug/L	<1.2	4.0	09/06/24 08:51	
Potassium	ug/L	<237	789	09/06/24 08:51	
Sodium	ug/L	<42.0	250	09/06/24 08:51	
Total Hardness by 2340B	mg/L	<0.32	1.7	09/06/24 08:51	
Zinc	ug/L	<10.3	34.4	09/06/24 08:51	

LABORATORY CONTROL SAMPLE: 2767721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	9910	99	80-120	
Copper	ug/L	250	233	93	80-120	
Iron	ug/L	10000	10300	103	80-120	
Magnesium	ug/L	10000	10000	100	80-120	
Manganese	ug/L	250	242	97	80-120	
Potassium	ug/L	10000	10400	104	80-120	
Sodium	ug/L	10000	10100	101	80-120	
Total Hardness by 2340B	mg/L		66.1			
Zinc	ug/L	250	250	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2767722 2767723

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40283424001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Calcium	ug/L	2750	10000	10000	12600	12500	98	98	75-125	1	20
Copper	ug/L	14.0	250	250	251	243	95	91	75-125	3	20
Iron	ug/L	2610	10000	10000	12600	12600	100	100	75-125	0	20
Magnesium	ug/L	954	10000	10000	10800	10600	98	96	75-125	2	20
Manganese	ug/L	117	250	250	354	349	95	93	75-125	1	20
Potassium	ug/L	1250	10000	10000	11300	11100	101	98	75-125	2	20
Sodium	ug/L	6410	10000	10000	16400	15900	100	95	75-125	3	20
Total Hardness by 2340B	mg/L	10.8			75.7	74.9				1	20
Zinc	ug/L	13.6J	250	250	262	250	99	95	75-125	5	20

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483420	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3010A	Analysis Description:	6020B MET Dissolved
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40283424001, 40283424002, 40283424003, 40283424004, 40283424005, 40283424006, 40283424007, 40283424008, 40283424009, 40283424010, 40283424011		

METHOD BLANK:	2767716	Matrix:	Water
Associated Lab Samples:	40283424001, 40283424002, 40283424003, 40283424004, 40283424005, 40283424006, 40283424007, 40283424008, 40283424009, 40283424010, 40283424011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium, Dissolved	ug/L	<76.2	254	09/06/24 08:01	
Copper, Dissolved	ug/L	<1.9	6.4	09/06/24 08:01	
Iron, Dissolved	ug/L	<58.0	250	09/06/24 08:01	
Magnesium, Dissolved	ug/L	<31.2	250	09/06/24 08:01	
Manganese, Dissolved	ug/L	<1.2	4.0	09/06/24 08:01	
Potassium, Dissolved	ug/L	<237	789	09/06/24 08:01	
Sodium, Dissolved	ug/L	<42.0	250	09/06/24 08:01	
Total Hardness by 2340B, Dissolved	mg/L	<0.32	1.7	09/06/24 08:01	
Zinc, Dissolved	ug/L	<10.3	34.4	09/06/24 08:01	

LABORATORY CONTROL SAMPLE: 2767717

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium, Dissolved	ug/L	10000	9790	98	80-120	
Copper, Dissolved	ug/L	250	232	93	80-120	
Iron, Dissolved	ug/L	10000	10100	101	80-120	
Magnesium, Dissolved	ug/L	10000	9880	99	80-120	
Manganese, Dissolved	ug/L	250	235	94	80-120	
Potassium, Dissolved	ug/L	10000	10100	101	80-120	
Sodium, Dissolved	ug/L	10000	10100	101	80-120	
Total Hardness by 2340B, Dissolved	mg/L		65.1			
Zinc, Dissolved	ug/L	250	245	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2767718 2767719

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40283424001 Result	Spike Conc.	Spike Conc.	MS Result						
Calcium, Dissolved	ug/L	2630	10000	10000	12600	12400	99	98	75-125	1	20
Copper, Dissolved	ug/L	11.4	250	250	246	250	94	95	75-125	1	20
Iron, Dissolved	ug/L	1000	10000	10000	11300	11300	103	103	75-125	0	20
Magnesium, Dissolved	ug/L	859	10000	10000	10900	11200	100	103	75-125	3	20
Manganese, Dissolved	ug/L	99.6	250	250	340	341	96	97	75-125	0	20
Potassium, Dissolved	ug/L	1160	10000	10000	11500	11500	104	103	75-125	0	20
Sodium, Dissolved	ug/L	6530	10000	10000	16700	17100	102	106	75-125	2	20

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2767718 2767719															
Parameter	Units	40283424001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec							
Total Hardness by 2340B, Dissolved	mg/L	10.1			76.2	76.9							1	20	
Zinc, Dissolved	ug/L	13.2J	250	250	267	262	101	100	75-125	2	20				

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch: 483505

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40283424001

METHOD BLANK: 2767917

Matrix: Water

Associated Lab Samples: 40283424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	09/04/24 09:03	

LABORATORY CONTROL SAMPLE: 2767918

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	100	100	80-120	

SAMPLE DUPLICATE: 2767919

Parameter	Units	40283377001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	21.6	18.8	14	10	R1

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483560	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283424002, 40283424003, 40283424004

METHOD BLANK: 2768249 Matrix: Water
 Associated Lab Samples: 40283424002, 40283424003, 40283424004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	09/04/24 13:35	

LABORATORY CONTROL SAMPLE: 2768250

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	104	104	80-120	

SAMPLE DUPLICATE: 2768251

Parameter	Units	40283449001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	13.0	12.0	8	10	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483727	Analysis Method:	SM 4500-S F (2000)
QC Batch Method:	SM 4500-S F (2000)	Analysis Description:	4500S2F Sulfide, Dissolved Iodometric
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

METHOD BLANK: 2769206 Matrix: Water
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	09/06/24 12:44	

LABORATORY CONTROL SAMPLE: 2769207

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	41.6	45.2	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2769208 2769209

Parameter	Units	2769208		2769209		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40283424001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Sulfide	mg/L	<1.2	41.6	41.6	41.6	40.4	100	97	80-120	3	10

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483726	Analysis Method:	SM 4500-S F (2000)
QC Batch Method:	SM 4500-S F (2000)	Analysis Description:	4500S2F Sulfide, Iodometric
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

METHOD BLANK: 2769201 Matrix: Water
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfide	mg/L	<1.2	4.0	09/06/24 14:21	

LABORATORY CONTROL SAMPLE: 2769202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfide	mg/L	41.6	40.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2769203 2769204

Parameter	Units	2769203		2769204		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Sulfide	mg/L	<1.2	41.6	40.4	42.4	97	101	80-120	5	10	

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch: 483584 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions,Dissolved
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

METHOD BLANK: 2768341 Matrix: Water
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	09/05/24 11:16	
Sulfate	mg/L	<0.44	2.0	09/05/24 11:16	

LABORATORY CONTROL SAMPLE: 2768342

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.7	98	90-110	
Sulfate	mg/L	20	19.8	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2768343 2768344

Parameter	Units	40283424001		2768344		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	5.1	20	20	27.5	26.5	112	107	90-110	4	15 M0
Sulfate	mg/L	1.3J	20	20	23.6	22.3	111	105	90-110	6	15 M0

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483760	Analysis Method:	EPA 300.0
QC Batch Method:	EPA 300.0	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

METHOD BLANK: 2769780 Matrix: Water
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.59	2.0	09/10/24 18:16	
Sulfate	mg/L	<0.44	2.0	09/10/24 18:16	

LABORATORY CONTROL SAMPLE: 2769781

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.1	106	90-110	
Sulfate	mg/L	20	21.1	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2769782 2769783

Parameter	Units	40283424001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.2	20	20	26.8	26.8	108	108	90-110	0	15	
Sulfate	mg/L	1.4J	20	20	22.6	22.5	106	106	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2769784 2769785

Parameter	Units	40283503001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	203	100	100	297	294	94	91	90-110	1	15	
Sulfate	mg/L	<2.2	100	100	115	115	115	115	90-110	0	15 M0	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483455	Analysis Method:	EPA 310.2
QC Batch Method:	EPA 310.2	Analysis Description:	310.2 Alkalinity
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40283424001, 40283424002, 40283424003, 40283424004		

METHOD BLANK: 2767773 Matrix: Water
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<7.4	25.0	09/03/24 14:53	

LABORATORY CONTROL SAMPLE: 2767774

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	100	103	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2767775 2767776

Parameter	Units	40283339001		2767775		2767776		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Alkalinity, Total as CaCO3	mg/L	173	100	100	100	272	275	99	102	90-110	1	20

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2767777 2767778

Parameter	Units	40283441003		2767777		2767778		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Alkalinity, Total as CaCO3	mg/L	350	100	100	100	442	444	92	94	90-110	0	20

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch: 483456 Analysis Method: EPA 310.2
 QC Batch Method: EPA 310.2 Analysis Description: 310.2 Alkalinity, Dissolved
 Laboratory: Pace Analytical Services - Green Bay
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

METHOD BLANK: 2767779 Matrix: Water
 Associated Lab Samples: 40283424001, 40283424002, 40283424003, 40283424004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	<7.4	25.0	09/03/24 15:24	

LABORATORY CONTROL SAMPLE: 2767780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	100	102	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2767781 2767782

Parameter	Units	40283424001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃ , Dissolved	mg/L	12.0J	100	100	113	116	101	104	90-110	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

QC Batch:	483700	Analysis Method:	SM 5310C
QC Batch Method:	SM 5310C	Analysis Description:	5310C Dissolved Organic Carbon
		Laboratory:	Pace Analytical Services - Green Bay
Associated Lab Samples:	40283424001, 40283424002, 40283424003, 40283424004, 40283424005, 40283424006, 40283424007, 40283424008, 40283424009, 40283424010, 40283424011		

METHOD BLANK:	2769076	Matrix:	Water
Associated Lab Samples:	40283424001, 40283424002, 40283424003, 40283424004, 40283424005, 40283424006, 40283424007, 40283424008, 40283424009, 40283424010, 40283424011		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dissolved Organic Carbon	mg/L	0.21J	0.50	09/06/24 01:30	

LABORATORY CONTROL SAMPLE: 2769077

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dissolved Organic Carbon	mg/L	12.5	12.2	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2769078 2769079

Parameter	Units	40283384001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result						
Dissolved Organic Carbon	mg/L	2.7	6	6	8.4	8.5	94	96	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2769080 2769081

Parameter	Units	40283424001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result						
Dissolved Organic Carbon	mg/L	13.5	18	18	31.0	31.7	97	101	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

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

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40283424001	SW-C9_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424002	SW-C1_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424003	SW-STM_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424004	SW-C5_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424005	SW-EB_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424006	SW-NBOUT_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424007	SW-NB_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424008	SW-HWY27W_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424009	SW-HWY27E_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424010	CP-04_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424011	SW-HWY27W-DUP_20240830	EPA 3010A	483422	EPA 6020B	483490
40283424001	SW-C9_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424002	SW-C1_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424003	SW-STM_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424004	SW-C5_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424005	SW-EB_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424006	SW-NBOUT_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424007	SW-NB_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424008	SW-HWY27W_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424009	SW-HWY27E_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424010	CP-04_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424011	SW-HWY27W-DUP_20240830	EPA 3010A	483420	EPA 6020B	483488
40283424001	SW-C9_20240830	SM 2540D	483505		
40283424002	SW-C1_20240830	SM 2540D	483560		
40283424003	SW-STM_20240830	SM 2540D	483560		
40283424004	SW-C5_20240830	SM 2540D	483560		
40283424001	SW-C9_20240830	SM 4500-S F (2000)	483726		
40283424002	SW-C1_20240830	SM 4500-S F (2000)	483726		
40283424003	SW-STM_20240830	SM 4500-S F (2000)	483726		
40283424004	SW-C5_20240830	SM 4500-S F (2000)	483726		
40283424001	SW-C9_20240830	SM 4500-S F (2000)	483727		
40283424002	SW-C1_20240830	SM 4500-S F (2000)	483727		
40283424003	SW-STM_20240830	SM 4500-S F (2000)	483727		
40283424004	SW-C5_20240830	SM 4500-S F (2000)	483727		
40283424001	SW-C9_20240830	EPA 300.0	483760		
40283424002	SW-C1_20240830	EPA 300.0	483760		
40283424003	SW-STM_20240830	EPA 300.0	483760		
40283424004	SW-C5_20240830	EPA 300.0	483760		
40283424001	SW-C9_20240830	EPA 300.0	483584		
40283424002	SW-C1_20240830	EPA 300.0	483584		
40283424003	SW-STM_20240830	EPA 300.0	483584		
40283424004	SW-C5_20240830	EPA 300.0	483584		
40283424001	SW-C9_20240830	EPA 310.2	483455		
40283424002	SW-C1_20240830	EPA 310.2	483455		
40283424003	SW-STM_20240830	EPA 310.2	483455		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FMC-2024_Q4 FLAMBEAU MINE CO

Pace Project No.: 40283424

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40283424004	SW-C5_20240830	EPA 310.2	483455		
40283424001	SW-C9_20240830	EPA 310.2	483456		
40283424002	SW-C1_20240830	EPA 310.2	483456		
40283424003	SW-STM_20240830	EPA 310.2	483456		
40283424004	SW-C5_20240830	EPA 310.2	483456		
40283424001	SW-C9_20240830	SM 5310C	483700		
40283424002	SW-C1_20240830	SM 5310C	483700		
40283424003	SW-STM_20240830	SM 5310C	483700		
40283424004	SW-C5_20240830	SM 5310C	483700		
40283424005	SW-EB_20240830	SM 5310C	483700		
40283424006	SW-NBOUT_20240830	SM 5310C	483700		
40283424007	SW-NB_20240830	SM 5310C	483700		
40283424008	SW-HWY27W_20240830	SM 5310C	483700		
40283424009	SW-HWY27E_20240830	SM 5310C	483700		
40283424010	CP-04_20240830	SM 5310C	483700		
40283424011	SW-HWY27W-DUP_20240830	SM 5310C	483700		

REPORT OF LABORATORY ANALYSIS

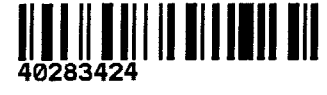
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Sample Condition Upon Receipt Form (SCUR)

Project #:

Client Name: Foth

WO#: 40283424



Courier: CS Logistics Fed Ex Speedee UPS Walto
 Client Pace Other: San Francisco Foth walk-in

Tracking #: N/A

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-140 Type of Ice: Wet Blue Dry None Meltwater Only

Cooler Temperature Uncorr: 2.0; 1.0 / Corr: 2.0; 1.0

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:
KKS 8/31/24
 Date: KKS / Initials: KKS
 Labeled By Initials: GF

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

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

Attachment 3
Field Forms – May 8, 2024



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMGI / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

TECHNICIAN(S) NAME (INITIALS), COMPANY

Jin Engelhardt / Merjent

SUMMARY OF SAMPLING ACTIVITIES

Sample Date(s): 5/8/2024

Activities:

Collected field parameter measurements, and water quality samples for laboratory analysis by Pace Analytical.
 Collected field quality control samples for laboratory analysis by Pace Analytical

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

Stream C Samples: Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
 Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
 Total Alkalinity (EPA310.2), Cl, Sulfate
 Dissolved Alkalinity (EPA310.2), Cl, Sulfate
 DOC
 TSS
 Total Sulfide
 Dissolved Sulfide

Velocity Measurements (collected at US end of culverts and at SW-STM near confluence of Flambeau River):

Location:	Velocity (ft/sec)	Depth (ft)
HWY 27 Culvert	0.1	1.19
Copper Park Lane Culvert	2.7	0.37
SW-STM Confluence	1.3	0.68

FIELD REPORT ATTACHMENTS

- Summary of Field Parameters
- Summary of Field Quality Control Samples
- Field Forms

COMMENTS

The data collected during this event was conducted under the "Stream C Evaluation Work Plan" dated March 10, 2023.



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

SUMMARY OF FIELD PARAMETERS

Location	Sample Date	Sample Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	ORP (mV)	DO (mg/l)	Odor (visual)	Turbidity (visual)	Color (visual)
SW-C9	5/8/2024	1027	6.31	0.036	11.94	174.0	4.90	None	Moderate	Stained lt. Brown
SW-C1	5/8/2024	1337	6.57	0.066	15.88	178.4	6.76	None	Slight	Stained lt. Brown
SW-STM	5/8/2024	1501	7.16	0.074	17.60	191.1	8.76	None	Slight	Stained lt. Brown
SW-C5	5/8/2024	1234	6.54	0.056	15.26	232.3	6.14	None	None	Stained lt. Brown
SW-EB	5/8/2024	1220	7.15	0.121	14.86	228.4	7.69	Slt. Organic	Slight	Stained lt. Brown
SW-NB	5/8/2024	1104	6.21	0.159	13.91	130.3	5.94	Slt. Organic	Slight	Stained lt. Brown
SW-NBOUT	5/8/2024	1158	6.75	0.102	13.58	224.9	6.17	Slt. Organic	Slight	Stained lt. Brown
SW-HWY27W	5/8/2024	1003	6.29	0.200	12.56	174.4	3.58	Slt. Organic	None	Stained lt. Brown
SW-HWY27E	5/8/2024	940	6.38	0.025	11.60	177.0	3.43	Slt. Organic	Moderate	Stained lt. Brown
CP-04	5/8/2024	1300	6.99	0.736	15.80	168.7	1.78	None	Slight	Stained lt. Brown

Note:
 ORP = Oxidation Reduction Potential
 µmhos/cm = micromhos/centimeter
 SU = Standard Unit
 mV = Millivolts
 °C = Degrees Celsius
 NA = not applicable



Client: Flambeau Mining Co Project ID: 17F777.24
Project: Flambeau Stream C - Spring Event
Prepared by: Jim Engelhardt/Merjent Date: 05/08/24
Checked by: NMG1 / Foth Date: 07/29/24

SUMMARY OF FIELD QUALITY CONTROL SAMPLES

Sample ID	Sample Date	Description
SW-C1-DUP_20240508	5/8/2024	Duplicate Taken at SW-C1 sampling location



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMGI / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-C9
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1027	6.31	0.036	11.94	174.00	4.90	None	Moderate	Stained lt. Brown



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-C1
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1337	6.57	0.066	15.88	178.40	6.76	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-STM
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1501	7.16	0.074	17.60	191.10	8.76	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-C5
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1234	6.54	0.056	15.26	232.30	6.14	None	None	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-EB
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1220	7.15	0.121	14.86	228.40	7.69	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-NBOUT
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1104	6.21	0.159	13.91	130.30	5.94	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-NB
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1158	6.75	0.102	13.58	224.90	6.17	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-HWY27W
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1003	6.29	0.200	12.56	174.40	3.58	Slt. Organic	None	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-HWY27E
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
940	6.38	0.025	11.60	177.00	3.43	Slt. Organic	Moderate	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/08/24
 Date: 07/29/24

FIELD NOTES

Site ID: CP-04
 Date: 5/8/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: 64 degrees Fahrenheit, Clear, 10-12 mph Southwest Wind. 0.88-inches of rain occurred over the last 24 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1300	6.99	0.736	15.80	168.70	1.78	None	Slight	Stained lt. Brown

Note:

Attachment 4
Field Forms – May 23, 2024



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMGI / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

TECHNICIAN(S) NAME (INITIALS), COMPANY

Jin Engelhardt / Merjent

SUMMARY OF SAMPLING ACTIVITIES

Sample Date(s): 5/23/2024

Activities:

Collected field parameter measurements, and water quality samples for laboratory analysis by Pace Analytical.
 Collected field quality control samples for laboratory analysis by Pace Analytical

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Se

LABORATORY ANALYTICAL PARAMETERS

Stream C Samples: Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
 Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
 Total Alkalinity (EPA310.2), Cl, Sulfate
 Dissolved Alkalinity (EPA310.2), Cl, Sulfate
 DOC
 TSS
 Total Sulfide
 Dissolved Sulfide

Velocity Measurements (collected at US end of culverts and at SW-STM near confluence of Flambeau River):

Location:	Velocity (ft/sec)	Depth (ft)
HWY 27 Culvert	0.3	1.22
Copper Park Lane Culvert	1.0	0.37
SW-STM Confluence	0.7	0.55

FIELD REPORT ATTACHMENTS

- Summary of Field Parameters
- Summary of Field Quality Control Samples
- Field Forms

COMMENTS

The data collected during this event was conducted under the "Stream C Evaluation Work Plan" dated March 10, 2023.



Client: Flambeau Mining Co
Project: Flambeau Stream C - Spring Event #2
Prepared by: Jim Engelhardt/Merjent
Checked by: NMG1 / Foth

Project ID: 17F777.24
Date: 05/23/24
Date: 07/29/24

SUMMARY OF FIELD PARAMETERS

Location	Sample Date	Sample Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	ORP (mV)	DO (mg/l)	Odor	Turbidity (visual)	Color (visual)
SW-C9	5/23/2024	1037	6.15	0.026	13.69	214.5	3.88	None	Moderate	Stained lt. Brown
SW-C1	5/23/2024	0944	6.41	0.048	13.29	174.4	3.93	None	Slight	Stained lt. Brown
SW-STM	5/23/2024	0707	6.83	0.052	12.80	157.6	2.99	None	Slight	Stained lt. Brown
SW-C5	5/23/2024	1005	6.17	0.039	13.52	183.4	3.37	None	None	Stained lt. Brown
SW-EB	5/23/2024	857	7.02	0.107	13.62	161.8	3.79	Slt. Organic	Slight	Stained lt. Brown
SW-NB	5/23/2024	0802	6.44	0.104	12.02	132.7	3.21	Slt. Organic	Slight	Stained lt. Brown
SW-NBOUT	5/23/2024	832	6.86	0.111	12.04	172.0	3.40	Slt. Organic	Slight	Stained lt. Brown
SW-HWY27W	5/23/2024	1135	6.28	0.120	14.56	152.0	2.24	Slt. Organic	Slight	Stained lt. Brown
SW-HWY27E	5/23/2024	1217	6.12	0.021	15.08	210.6	4.23	Slt. Organic	Moderate	Stained lt. Brown
CP-04	5/23/2024	922	7.28	0.462	13.02	178.7	2.28	None	Slight	Stained lt. Brown

Note:
ORP = Oxidation Reduction Potential
µmhos/cm = micromhos/centimeter
SU = Standard Unit
mV = Millivolts
°C = Degrees Celsius
NA = not applicable



Client: Flambeau Mining Co Project ID: 17F777.24
Project: Flambeau Stream C - Spring Event #2
Prepared by: Jim Engelhardt/Merjent Date: 05/23/24
Checked by: NMG1 / Foth Date: 07/29/24

SUMMARY OF FIELD QUALITY CONTROL SAMPLES

Sample ID	Sample Date	Description
SW-C1-DUP_20240508	5/8/2024	Duplicate Taken at SW-C1 sampling location



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMGI / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-C9
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1037	6.15	0.026	13.69	214.50	3.88	None	Moderate	Stained lt. Brown



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-C1
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0944	6.41	0.048	13.29	174.40	3.93	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-STM
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0707	6.83	0.052	12.80	157.60	2.99	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-C5
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1005	6.17	0.039	13.52	183.40	3.37	None	None	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-EB
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
857	7.02	0.107	13.62	161.80	3.79	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-NBOUT
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0802	6.44	0.104	12.02	132.70	3.21	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-NB
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
832	6.86	0.111	12.04	172.00	3.40	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-HWY27W
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1135	6.28	0.120	14.56	152.00	2.24	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: SW-HWY27E
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1217	6.12	0.021	15.08	210.60	4.23	Slt. Organic	Moderate	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 05/23/24
 Date: 07/29/24

FIELD NOTES

Site ID: CP-04
 Date: 5/23/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp:58 degrees Fahrenheit, partly cloudy, 0-5 mph South Southwest Wind. 2.79-inches of rain occurred over the last 48 hrs. per National Weather Service

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
922	7.28	0.462	13.02	178.70	2.28	None	Slight	Stained lt. Brown

Note:

Attachment 5
Field Forms – July 24, 2024



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMGI / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

TECHNICIAN(S) NAME (INITIALS), COMPANY

Jin Engelhardt / Merjent

SUMMARY OF SAMPLING ACTIVITIES

Sample Date(s): 7/24/2024

Activities:

Collected field parameter measurements, and water quality samples for laboratory analysis by Pace Analytical.
 Collected field quality control samples for laboratory analysis by Pace Analytical

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

Stream C Samples: Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
 Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
 Total Alkalinity (EPA310.2), Cl, Sulfate
 Dissolved Alkalinity (EPA310.2), Cl, Sulfate
 DOC
 TSS
 Total Sulfide
 Dissolved Sulfide

Velocity Measurements (collected at US end of culverts and at SW-STM near confluence of Flambeau River):

Location:	Velocity (ft/sec)	Depth (ft)
HWY 27 Culvert		
Copper Park Lane Culvert		
SW-STM Confluence		

FIELD REPORT ATTACHMENTS

Summary of Field Parameters
 Summary of Field Quality Control Samples
 Field Forms

COMMENTS

The data collected during this event was conducted under the "Stream C Evaluation Work Plan" dated March 10, 2023.



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

SUMMARY OF FIELD PARAMETERS

Location	Sample Date	Sample Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	ORP (mV)	DO (mg/l)	Odor	Turbidity (visual)	Color (visual)
SW-C9	7/24/2024	1248	6.29	0.170	18.97	89.7	3.16	Slt. Organic	Slight	Stained lt. Brown
SW-C1	7/24/2024	1643	6.64	0.159	17.33	160.7	2.68	None	Slight	Stained lt. Brown
SW-STM	7/24/2024	1727	7.21	0.185	18.23	161.5	4.39	None	Slight	Stained lt. Brown
SW-C5	7/24/2024	1610	6.31	0.084	17.60	88.0	1.15	None	None	Stained lt. Brown
SW-EB	7/24/2024	1436	6.48	0.214	21.16	49.2	1.21	Slt. Organic	Slight	Stained lt. Brown
SW-NB	7/24/2024	1349	6.50	0.237	28.02	147.7	4.76	Slt. Organic	Slight	Stained lt. Brown
SW-NBOUT	7/24/2024	1423	6.58	0.217	21.28	156.3	2.62	Slt. Organic	Slight	Stained lt. Brown
SW-HWY27W	7/24/2024	1302	5.78	0.154	21.21	176.1	3.36	Slt. Organic	Slight	Stained lt. Brown
SW-HWY27E	7/24/2024	1227	6.17	0.031	19.17	21.4	3.17	Slt. Organic	Slight	Stained lt. Brown
CP-04	7/24/2024	1510	7.19	0.376	19.76	163.6	1.63	None	Slight	Stained lt. Brown

Note:
 ORP = Oxidation Reduction Potential
 µmhos/cm = micromhos/centimeter
 SU = Standard Unit
 mV = Millivolts
 °C = Degrees Celsius
 NA = not applicable



Client: Flambeau Mining Co Project ID: 17F777.24
Project: Flambeau Stream C - Spring Event #2
Prepared by: Jim Engelhardt/Merjent Date: 07/24/24
Checked by: NMG1 / Foth Date: 10/30/24

SUMMARY OF FIELD QUALITY CONTROL SAMPLES

Sample ID	Sample Date	Description
SW-C5-DUP_20240724	7/24/2024	Duplicate Taken at SW-C5 sampling location



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMGI / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-C9
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1248	6.29	0.170	18.97	89.70	3.16	Slt. Organic	Slight	Stained lt. Brown



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-C1
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1643	6.64	0.159	17.33	160.70	2.68	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-STM
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1727	7.21	0.185	18.23	161.50	4.39	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-C5
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1610	6.31	0.084	17.60	88.00	1.15	None	None	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-EB
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1436	6.48	0.214	21.16	49.20	1.21	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-NBOUT
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1349	6.50	0.237	28.02	147.70	4.76	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-NB
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1423	6.58	0.217	21.28	156.30	2.62	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-HWY27W
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1302	5.78	0.154	21.21	176.10	3.36	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-HWY27E
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1227	6.17	0.031	19.17	21.40	3.17	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 07/24/24
 Date: 10/30/24

FIELD NOTES

Site ID: CP-04
 Date: 7/24/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 76 degrees Fahrenheit, Cloudy, 5-9 mph South East Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
1510	7.19	0.376	19.76	163.60	1.63	None	Slight	Stained lt. Brown

Note:

Attachment 6
Field Forms – August 30, 2024



Client: Flambeau Mining Co
Project: Flambeau Stream C - Spring Event #2
Prepared by: Jim Engelhardt/Merjent
Checked by: NMGI / Foth

Project ID: 17F777.24
Date: 08/30/24
Date: 10/30/24

TECHNICIAN(S) NAME (INITIALS), COMPANY

Jin Engelhardt / Merjent

SUMMARY OF SAMPLING ACTIVITIES

Sample Date(s): 8/30/2024

Activities:

Collected field parameter measurements, and water quality samples for laboratory analysis by Pace Analytical.
Collected field quality control samples for laboratory analysis by Pace Analytical

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

Stream C Samples: Total Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
Dissolved Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness
Total Alkalinity (EPA310.2), Cl, Sulfate
Dissolved Alkalinity (EPA310.2), Cl, Sulfate
DOC
TSS
Total Sulfide
Dissolved Sulfide

Velocity Measurements (collected at US end of culverts and at SW-STM near confluence of Flambeau River):

Location:	Velocity (ft/sec)	Depth (ft)
HWY 27 Culvert		
Copper Park Lane Culvert		
SW-STM Confluence		

FIELD REPORT ATTACHMENTS

Summary of Field Parameters
Summary of Field Quality Control Samples
Field Forms

COMMENTS

The data collected during this event was conducted under the "Stream C Evaluation Work Plan" dated March 10, 2023.



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

SUMMARY OF FIELD PARAMETERS

Location	Sample Date	Sample Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	ORP (mV)	DO (mg/l)	Odor	Turbidity (visual)	Color (visual)
SW-C9	8/30/2024	11:57	6.05	0.041	18.13	197.6	1.17	None	Slight	Stained lt. Brown
SW-C1	8/30/2024	9:35	6.72	0.140	18.04	101.2	1.25	None	Slight	Stained lt. Brown
SW-STM	8/30/2024	8:00	7.43	0.174	18.09	125.5	1.39	None	Slight	Stained lt. Brown
SW-C5	8/30/2024	9:55	6.36	0.119	18.11	32.2	1.18	None	None	Stained lt. Brown
SW-EB	8/30/2024	11:01	6.81	0.156	19.51	59.3	1.22	Slt. Organic	Slight	Stained lt. Brown
SW-NB	8/30/2024	10:21	6.27	0.273	18.20	82.5	0.95	Slt. Organic	Slight	Stained lt. Brown
SW-NBOUT	8/30/2024	10:42	6.81	0.218	19.05	109.1	1.48	Slt. Organic	Slight	Stained lt. Brown
SW-HWY27W	8/30/2024	11:33	5.74	0.304	19.18	107.5	1.12	Slt. Organic	Slight	Stained lt. Brown
SW-HWY27E	8/30/2024	11:16	6.03	0.025	17.86	176.6	1.22	Slt. Organic	Moderate	Stained lt. Brown
CP-04	8/30/2024	9:23	7.34	0.288	18.47	165.6	0.90	None	Slight	Stained lt. Brown

Note:
 ORP = Oxidation Reduction Potential
 µmhos/cm = micromhos/centimeter
 SU = Standard Unit
 mV = Millivolts
 °C = Degrees Celsius
 NA = not applicable



Client: Flambeau Mining Co Project ID: 17F777.24
Project: Flambeau Stream C - Spring Event #2
Prepared by: Jim Engelhardt/Merjent Date: 08/30/24
Checked by: NMG1 / Foth Date: 10/30/24

SUMMARY OF FIELD QUALITY CONTROL SAMPLES

Sample ID	Sample Date	Description
SW-HWY27W-DUP_202408:	8/30/2024	Duplicate Taken at SW-HWY27W sampling location



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMGI / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-C9
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0	6.05	0.041	18.13	197.60	1.17	None	Slight	Stained lt. Brown



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-C1
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
9:35	6.72	0.140	18.04	101.20	1.25	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-STM
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
8:00	7.43	0.174	18.09	125.50	1.39	None	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-C5
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0	6.36	0.119	18.11	32.20	1.18	None	None	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-EB
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0	6.81	0.156	19.51	59.30	1.22	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-NBOUT
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
10:21	6.27	0.273	18.20	82.50	0.95	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-NB
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0	6.81	0.218	19.05	109.10	1.48	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-HWY27W
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0	5.74	0.304	19.18	107.50	1.12	Slt. Organic	Slight	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: SW-HWY27E
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H ₂ SO ₄	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0	6.03	0.025	17.86	176.60	1.22	Slt. Organic	Moderate	Stained lt. Brown

Note:



Client: Flambeau Mining Co
 Project: Flambeau Stream C - Spring Event #2
 Prepared by: Jim Engelhardt/Merjent
 Checked by: NMG1 / Foth

Project ID: 17F777.24
 Date: 08/30/24
 Date: 10/30/24

FIELD NOTES

Site ID: CP-04
 Date: 8/30/2024
 Technician(s) Initials: Jim Engelhardt / Merjent

Equipment: GPS, Multi-parameter probe, Camera, Peristaltic pump, Disposable Filters, Battery

Weather, Stream Conditions and Comments:

Temp: High of 78 degrees Fahrenheit, Cloudy, 7-12 mph West Wind.

LABORATORY ANALYTICAL PARAMETERS

#Collected	Filtered (Y/N)	Bottle	Preservative	Parameter
1	N	Plastic 250 mL	HNO ₃	TOTAL (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	Y	Plastic 250 mL	HNO ₃	Dissolved (Ca, Cu, Fe, Mg, Mn, K, Na, Zn, Hardness)
1	N	Plastic 250 mL	None	Total Alkalinity, Chloride, Sulfate
1	Y	Plastic 250 mL	None	Dissolved Alkalinity, Chloride, Sulfate
1	N	Plastic 250 mL	None	TSS
1	Y	Amber 125 mL	H2SO4	DOC
1	N	Plastic 500 mL	Zinc Acetate & NaOH	Total Sulfide
1	Y	Plastic 500 mL	Zinc Acetate & NaOH	Dissolved Sulfide

FIELD PARAMETERS

Time	pH (SU)	Specific Conductance (mS/cm)	Temperature (°C)	Redox Potential (mV)	Dissolved Oxygen (mg/l)	Odor	Turbidity	Color
0	7.34	0.288	18.47	165.60	0.90	None	Slight	Stained lt. Brown

Note: