Flambeau Mining Company
4700 Daybreak Parkway
South Jordan, UT 84095
801-204-2526

January 11, 2017

Mr. Philip Fauble
Hydrogeologist
Wisconsin Department of Natural Resources
101 S. Webster Street – GEF2
P.O. Box 7921
Madison, WI 53707-7921

RE: Flambeau Mining Company
Results from the 2016 Fall Surface Water Sampling Events

Dear Phil:

Enclosed please find copies of the laboratory reports from the 2016 fall surface water sampling event collected pursuant to the *Flambeau Mining Company Surface Water Monitoring Plan* submitted to the Department on September 24, 2015.

There was one qualifying storm event after commencement of the monitoring plan. The fall surface water sampling event was completed on October 17 and 18, 2016. Results from this event are attached. Also attached are results from samples collected from the Flambeau River at established locations SW-1, SW-2, and SW-3. These samples were collected voluntarily and results are provided for your reference.

Two duplicate samples were collected during the spring event, one at SW-1 (SW-DUP-2016-10) and one at SW-C9 (SW-DUP-2016-10 dated October 17, 2016).

If you have any questions, please contact me at 801-204-2526 or Sharon Kozicki, of Foth Infrastructure & Environment, LLC, at 920-496-6737.

Sincerely,

Dave Cline
President – Flambeau Mining Company

Attachments

cc: Kyle McLaughlin, WDNR (*w/ enclosures*)
Zoe McManama, WDNR (*w/ enclosures*)
Al Christianson, City of Ladysmith (*w/ enclosures*)
Tom Riegel, Town of Grant (*w/ enclosures*)
Randy Tatur, Rusk County (*w/ enclosures*)
CeCe Tesky, Rusk Co. Zoning (*w/ enclosures*)
Sharon Kozicki, Foth (*w/ enclosures)*

Attachment 1

2016 Fall Surface Water Analytical Data

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

November 03, 2016

SHARON KOZICKI
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Dear SHARON KOZICKI:
Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
Project Manager

Enclosures

cc: Heather Hallett, Foth Infrastructure & Environment
Max Malmquist, Flambeau Mining Co

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

CERTIFICATIONS

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Green Bay Certification IDs

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
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40140540001	**SW-C1-2016-10**	Water	10/17/16 20:35	10/21/16 08:55
40140540002	**SW-C9-2016-10**	Water	10/17/16 21:05	10/21/16 08:55
40140540003	**SW-DUP-2016-10**	Water	10/17/16 00:00	10/21/16 08:55

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SAMPLE ANALYTE COUNT

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40140540001	**SW-C1-2016-10**	EPA 6020	DS1	3
		SM 2540D	DDY	1
40140540002	**SW-C9-2016-10**	EPA 6020	DS1	3
		SM 2540D	DDY	1
40140540003	**SW-DUP-2016-10**	EPA 6020	DS1	3
		SM 2540D	DDY	1

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PROJECT NARRATIVE

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Method: **EPA 6020**
Description: 6020 MET ICPMS
Client: FOTH INFRASTRUCTURE & ENVIRONMENT
Date: November 03, 2016

General Information:
3 samples were analyzed for EPA 6020. 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 3010 with any exceptions noted below.

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

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

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

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

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

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

Additional Comments:

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1241 Bellevue Street - Suite 9
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PROJECT NARRATIVE

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Method: **SM 2540D**
Description: 2540D Total Suspended Solids
Client: FOTH INFRASTRUCTURE & ENVIRONMENT
Date: November 03, 2016

General Information:
3 samples were analyzed for SM 2540D. 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: 238894

R1: RPD value was outside control limits.
- DUP (Lab ID: 1415294)
  - Total Suspended Solids
- DUP (Lab ID: 1415343)
  - Total Suspended Solids

Additional Comments:

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

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ANALYTICAL RESULTS

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Sample: SW-C1-2016-10 **Lab ID: 40140540001** Collected: 10/17/16 20:35 Received: 10/21/16 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Copper	**12.0**	ug/L	1.0	0.26	1	10/27/16 09:01	11/01/16 05:31	7440-50-8	
Total Hardness by 2340B	**18.8**	mg/L	5.0	0.15	1	10/27/16 09:01	11/01/16 05:31		
Zinc	**7.0J**	ug/L	10.0	3.1	1	10/27/16 09:01	11/01/16 05:31	7440-66-6	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**12.4**	mg/L	2.0	0.95	1		10/21/16 11:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Sample: SW-C9-2016-10 **Lab ID: 40140540002** Collected: 10/17/16 21:05 Received: 10/21/16 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Copper	**10.5**	ug/L	1.0	0.26	1	10/27/16 09:01	11/01/16 05:38	7440-50-8	
Total Hardness by 2340B	**12.9**	mg/L	5.0	0.15	1	10/27/16 09:01	11/01/16 05:38		
Zinc	**13.2**	ug/L	10.0	3.1	1	10/27/16 09:01	11/01/16 05:38	7440-66-6	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**13.2**	mg/L	2.0	0.95	1		10/21/16 11:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Sample: SW-DUP-2016-10 **Lab ID: 40140540003** Collected: 10/17/16 00:00 Received: 10/21/16 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Copper	**10.9**	ug/L	1.0	0.26	1	10/27/16 09:01	11/01/16 05:45	7440-50-8	
Total Hardness by 2340B	**12.7**	mg/L	5.0	0.15	1	10/27/16 09:01	11/01/16 05:45		
Zinc	**13.9**	ug/L	10.0	3.1	1	10/27/16 09:01	11/01/16 05:45	7440-66-6	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**14.2**	mg/L	2.0	0.95	1		10/21/16 11:38		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

QC Batch: 239485 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40140540001, 40140540002, 40140540003

METHOD BLANK: 1418707 Matrix: Water
Associated Lab Samples: 40140540001, 40140540002, 40140540003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	<0.26	1.0	11/01/16 02:50	
Total Hardness by 2340B	mg/L	<0.15	5.0	11/01/16 02:50	
Zinc	ug/L	<3.1	10.0	11/01/16 02:50	

LABORATORY CONTROL SAMPLE: 1418708

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	506	101	80-120	
Total Hardness by 2340B	mg/L		32.1			
Zinc	ug/L	500	507	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1418709 1418710

Parameter	Units	40140519002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	3.6	500	500	495	486	98	96	75-125	2	20	
Total Hardness by 2340B	mg/L	713			717	720				0	20	
Zinc	ug/L	<3.1	500	500	508	498	101	99	75-125	2	20	

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

QC Batch: 238894 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 40140540001, 40140540002, 40140540003

METHOD BLANK: 1415292 Matrix: Water
Associated Lab Samples: 40140540001, 40140540002, 40140540003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	10/21/16 11:36	

LABORATORY CONTROL SAMPLE: 1415293

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

SAMPLE DUPLICATE: 1415294

Parameter	Units	40140286001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	24.8	20.8	18	5	R1

SAMPLE DUPLICATE: 1415343

Parameter	Units	40140541001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3.2	3.0	6	5	R1

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

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALIFIERS

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

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 - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

R1 RPD value was outside control limits.

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FLAMBEAU 1ST FALL SW 2016
Pace Project No.: 40140540

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40140540001	**SW-C1-2016-10**	EPA 3010	239485	EPA 6020	239574
40140540002	**SW-C9-2016-10**	EPA 3010	239485	EPA 6020	239574
40140540003	**SW-DUP-2016-10**	EPA 3010	239485	EPA 6020	239574
40140540001	**SW-C1-2016-10**	SM 2540D	238894		
40140540002	**SW-C9-2016-10**	SM 2540D	238894		
40140540003	**SW-DUP-2016-10**	SM 2540D	238894		

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

401140540

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Flambeau Mining Company
Branch/Location:	Ladysmith, WI
Project Contact:	Sharon Kozicki
Phone:	(920) 496-6737
Project Number:	
Project Name:	1st Fall SW Event 2016
Project State:	Wisconsin
Sampled By (Print):	Max Malmquist
Sampled By (Sign):	Max Malmquist
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Sharon Kozicki
Mail To Company:	Foth
Mail To Address:	2121 Innovation Ct. DePere, WI 54115
Invoice To Contact:	Sharon Kozicki
Invoice To Company:	Foth
Invoice To Address:	Same as above
Invoice To Phone:	(920) 496-6737

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: TSS	Cu, Zn, Hardness	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter	N	N			
							A	D			
001	SW-C1-2016_10	10/17/16	20:35	SW			X	X	1-1Lp^A	1-250mlp^D	
002	SW-C9-2016_10	10/17	21:05	SW			X	X			
003	SW-DUP-2016_10	10/17	—	SW			X	X			
									☆ carier missed pick up on 10/19, came on 10/20/2016		

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Max Malmquist	10/19/2016 8:00 am	Courier (Walteo)	10/19/16 8:00 am
Walteo	10/21/16 0855	pace	10/21/16 0855

PACE Project No.: 401140540

Receipt Temp = ROI °C

Sample Receipt pH: (OK) / Adjusted

Cooler Custody Seal: (Present) / Not Present; (Intact) / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Project # **WO# : 40140540**

40140540

Client Name: Flambeau Mining Co.

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Walteo

Tracking #: 1189651-2

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 NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 10/21/16
Initials: BH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed BI / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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November 03, 2016

SHARON KOZICKI
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Dear SHARON KOZICKI:
Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
Project Manager

Enclosures

cc: Heather Hallett, Foth Infrastructure & Environment
Max Malmquist, Flambeau Mining Co

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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CERTIFICATIONS

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Green Bay Certification IDs

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
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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SAMPLE SUMMARY

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40140541001	**SW-1-2016-10**	Water	10/18/16 12:35	10/21/16 08:55
40140541002	**SW-2-2016-10**	Water	10/18/16 13:00	10/21/16 08:55
40140541003	**SW-3-2016-10**	Water	10/18/16 13:45	10/21/16 08:55
40140541004	**SW-DUP-2016-10**	Water	10/18/16 00:00	10/21/16 08:55

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SAMPLE ANALYTE COUNT

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40140541001	**SW-1-2016-10**	EPA 6020	DS1	3
		SM 2540D	DDY	1
40140541002	**SW-2-2016-10**	EPA 6020	DS1	3
		SM 2540D	DDY	1
40140541003	**SW-3-2016-10**	EPA 6020	DS1	3
		SM 2540D	DDY	1
40140541004	**SW-DUP-2016-10**	EPA 6020	DS1	3
		SM 2540D	DDY	1

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PROJECT NARRATIVE

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Method: **EPA 6020**
Description: 6020 MET ICPMS
Client: FOTH INFRASTRUCTURE & ENVIRONMENT
Date: November 03, 2016

General Information:
4 samples were analyzed for EPA 6020. 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 3010 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:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Method: **SM 2540D**
Description: 2540D Total Suspended Solids
Client: FOTH INFRASTRUCTURE & ENVIRONMENT
Date: November 03, 2016

General Information:
4 samples were analyzed for SM 2540D. 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: 238894

R1: RPD value was outside control limits.
- DUP (Lab ID: 1415294)
  - Total Suspended Solids
- DUP (Lab ID: 1415343)
  - Total Suspended Solids

Additional Comments:

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

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ANALYTICAL RESULTS

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Sample: SW-1-2016-10 **Lab ID: 40140541001** Collected: 10/18/16 12:35 Received: 10/21/16 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Copper	**0.80J**	ug/L	1.0	0.26	1	10/27/16 09:01	11/01/16 05:52	7440-50-8	
Total Hardness by 2340B	**43.9**	mg/L	5.0	0.15	1	10/27/16 09:01	11/01/16 05:52		
Zinc	**3.1J**	ug/L	10.0	3.1	1	10/27/16 09:01	11/01/16 05:52	7440-66-6	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**3.2**	mg/L	2.0	0.95	1		10/21/16 11:38		R1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Sample: SW-2-2016-10 **Lab ID: 40140541002** Collected: 10/18/16 13:00 Received: 10/21/16 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Copper	**1.0**	ug/L	1.0	0.26	1	10/27/16 09:01	11/01/16 05:58	7440-50-8	
Total Hardness by 2340B	**42.6**	mg/L	5.0	0.15	1	10/27/16 09:01	11/01/16 05:58		
Zinc	**3.1J**	ug/L	10.0	3.1	1	10/27/16 09:01	11/01/16 05:58	7440-66-6	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**3.4**	mg/L	2.0	0.95	1		10/21/16 11:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Sample: SW-3-2016-10 **Lab ID: 40140541003** Collected: 10/18/16 13:45 Received: 10/21/16 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Copper	**0.85J**	ug/L	1.0	0.26	1	10/27/16 09:01	11/01/16 06:05	7440-50-8	
Total Hardness by 2340B	**42.1**	mg/L	5.0	0.15	1	10/27/16 09:01	11/01/16 06:05		
Zinc	**4.1J**	ug/L	10.0	3.1	1	10/27/16 09:01	11/01/16 06:05	7440-66-6	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**3.0**	mg/L	2.0	0.95	1		10/21/16 11:38		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Sample: SW-DUP-2016-10 **Lab ID: 40140541004** Collected: 10/18/16 00:00 Received: 10/21/16 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Copper	**0.74J**	ug/L	1.0	0.26	1	10/27/16 09:01	11/01/16 06:12	7440-50-8	
Total Hardness by 2340B	**41.5**	mg/L	5.0	0.15	1	10/27/16 09:01	11/01/16 06:12		
Zinc	**<3.1**	ug/L	10.0	3.1	1	10/27/16 09:01	11/01/16 06:12	7440-66-6	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**3.4**	mg/L	2.0	0.95	1		10/21/16 11:38		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

QC Batch: 239485 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40140541001, 40140541002, 40140541003, 40140541004

METHOD BLANK: 1418707 Matrix: Water
Associated Lab Samples: 40140541001, 40140541002, 40140541003, 40140541004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Copper	ug/L	<0.26	1.0	11/01/16 02:50	
Total Hardness by 2340B	mg/L	<0.15	5.0	11/01/16 02:50	
Zinc	ug/L	<3.1	10.0	11/01/16 02:50	

LABORATORY CONTROL SAMPLE: 1418708

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Copper	ug/L	500	506	101	80-120	
Total Hardness by 2340B	mg/L		32.1			
Zinc	ug/L	500	507	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1418709 1418710

Parameter	Units	40140519002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Copper	ug/L	3.6	500	500	495	486	98	96	75-125	2	20	
Total Hardness by 2340B	mg/L	713			717	720				0	20	
Zinc	ug/L	<3.1	500	500	508	498	101	99	75-125	2	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

QC Batch: 238894 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 40140541001, 40140541002, 40140541003, 40140541004

METHOD BLANK: 1415292 Matrix: Water
Associated Lab Samples: 40140541001, 40140541002, 40140541003, 40140541004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	10/21/16 11:36	

LABORATORY CONTROL SAMPLE: 1415293

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

SAMPLE DUPLICATE: 1415294

Parameter	Units	40140286001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	24.8	20.8	18	5	R1

SAMPLE DUPLICATE: 1415343

Parameter	Units	40140541001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3.2	3.0	6	5	R1

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

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 - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

R1 RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: FLAMBEAU RIVER SW FALL 2016
Pace Project No.: 40140541

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40140541001	**SW-1-2016-10**	EPA 3010	239485	EPA 6020	239574
40140541002	**SW-2-2016-10**	EPA 3010	239485	EPA 6020	239574
40140541003	**SW-3-2016-10**	EPA 3010	239485	EPA 6020	239574
40140541004	**SW-DUP-2016-10**	EPA 3010	239485	EPA 6020	239574
40140541001	**SW-1-2016-10**	SM 2540D	238894		
40140541002	**SW-2-2016-10**	SM 2540D	238894		
40140541003	**SW-3-2016-10**	SM 2540D	238894		
40140541004	**SW-DUP-2016-10**	SM 2540D	238894		

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MN: 612-607-1700 WI: 920-469-2436

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Flambeau Mining Company
Branch/Location:	Ladysmith, WI
Project Contact:	Sharon Kozicki
Phone:	(920) 496-6737
Project Number:	
Project Name:	Flambeau River SW 2016 Fall
Project State:	Wisconsin
Sampled By (Print):	Max Malmquist
Sampled By (Sign):	Max Malmquist
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	Sharon Kozicki
Mail To Company:	Foth
Mail To Address:	2121 Innovation Ct. DePere, WI 54115
Invoice To Contact:	Sharon Kozicki
Invoice To Company:	Foth
Invoice To Address:	Same as above
Invoice To Phone:	(920) 496-6737

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

A = Air	W = Water
B = Biota	DW = Drinking Water
C = Charcoal	GW = Ground Water
O = Oil	SW = Surface Water
S = Soil	WW = Waste Water
SI = Sludge	WP = Wipe

FILTERED? (YES/NO)
PRESERVATION (CODE)*

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Y/N	Pick Letter	TSS	Cu, Zn Hardness	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	A	N	D			
001	SW-1-2016-10	10/18/16	12:35	SW			X	X		1-1LpH 1-250mlD	
002	SW-2-2016_10	10/18/16	13:00	SW			X	X			
003	SW-3-2016_10	10/18/16	13:45	SW			X	X			
004	SW-DUP-2016-10	10/18/16	—	SW			X	X			
									☆ Carrier missed pickup on 10/19 - came on 10/20.		

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Max Malmquist	10/18/16 8:00 am	Carrier (Walt Co)	10/19/16 8:00 am
Walt Co	102116 0855	[illegible]	102116 0855

PACE Project No.
40140541

Receipt Temp = R01 °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Client Name: Flambeau

Project # WO# : 40140541

40140541

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: Waltco

Tracking #: 1189651-1

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: na

Type of Ice: (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature: Uncorr: R01 /Corr:

Biological Tissue is Frozen: ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 10.21.16
Initials: mm

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:	W	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed: mm / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	