

September 8, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19I0392

Re: NPDES Parameters

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 6 sample(s) on 9/8/2019 9:40:00AM for the analyses presented in the following report as Work Order 19I0392.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.



Carey Gadzala
Project Manager

WORK ORDER SAMPLE SUMMARY**Date:** Sunday, September 8, 2019**Client:** Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19I0392

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19I0392-01	001-Composite	001	09/07/2019 00:00	9/8/2019 9:40:00AM
19I0392-02	001-Grab	001	09/07/2019 00:00	9/8/2019 9:40:00AM
19I0392-03	011-Composite	011	09/07/2019 00:00	9/8/2019 9:40:00AM
19I0392-04	011-Grab	011	09/07/2019 00:00	9/8/2019 9:40:00AM
19I0392-05	002-Composite	002	09/07/2019 00:00	9/8/2019 9:40:00AM
19I0392-06	002-Grab	002	09/07/2019 00:00	9/8/2019 9:40:00AM

Field Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order:	19I0392
Client Project:	NPDES Parameters		
Client Sample ID:	001-Grab	Work Order/ID:	19I0392-02
Sample Description:	001	Sampled:	09/07/2019 00:00
Matrix:	Aqueous	Received:	09/08/2019 09:40

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.7	pH Units

Client Sample ID:	011-Grab	Work Order/ID:	19I0392-04
Sample Description:	011	Sampled:	09/07/2019 00:00
Matrix:	Aqueous	Received:	09/08/2019 09:40

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.7	pH Units

CASE NARRATIVE**Date:** Sunday, September 8, 2019

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19I0392

The Matrix Spike and Matrix Spike Duplicate performed on the following sample failed the accuracy criteria for Phenolics with a low bias. The precision criteria were met. A Post Digestion Spike was performed and the acceptance criteria met, indicating accurate measurement at the instrument. The following sample was spiked:

<u>Laboratory ID</u>	<u>Sample Name</u>
19I0392-01	001-Composite

Analytical Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-01
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	001-Composite	Received:	09/08/2019 9:40
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4						
						Analyst: BTM			
						Prep Date/Time: 09/08/2019 12:49			
Total Recoverable Metals by ICP									
Copper	ejj	A	ND		0.010		mg/L	1	09/08/2019 16:13
Lead	ejj	A	ND		0.0075	U	mg/L	1	09/08/2019 16:13
Zinc	ejj	A	ND		0.020		mg/L	1	09/08/2019 16:13
			Method: SM 4500-CN C/E-1999						
						Analyst: EF			
						Prep Date/Time: 09/08/2019 10:37			
Total Cyanide									
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	09/08/2019 13:19
			Method: EPA 350.1 Rev 2.0						
						Analyst: EF			
						Prep Date/Time: 09/08/2019 11:12			
Nitrogen, Ammonia as N									
Nitrogen, Ammonia (As N)	ei	A	0.31	0.054	0.10		mg/L	1	09/08/2019 13:45
			Method: EPA 420.4 Rev 1.0						
						Analyst: EF			
						Prep Date/Time: 09/08/2019 11:12			
Total Phenolics									
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	09/08/2019 13:56
			Method: SM 2540 D-1997						
						Analyst: JBS			
						Prep Date/Time: 09/08/2019 10:08			
Total Suspended Solids									
Total Suspended Solids	ejj	A	4.3	1.0	1.0		mg/L	1	09/08/2019 13:08

Analytical Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-01RE1
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	001-Composite	Received:	09/08/2019 9:40
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: SW-846 9014				Analyst: EF			
Prep Date/Time: 09/08/2019 11:36										
Free Cyanide										
Free Cyanide		A	ND		0.0062		mg/L	1	09/08/2019 13:31	

Analytical Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-02
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	001-Grab	Received:	09/08/2019 9:40
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 1664B				Analyst: JBS			
Oil & Grease (HEM) by SPE										
Prep Date/Time: 09/08/2019 09:58										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/08/2019 14:12	

Analytical Results

Date: Sunday, September 8, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-03
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	011-Composite	Received:	09/08/2019 9:40
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 200.7 Rev 4.4				Analyst: BTM			
Prep Date/Time: 09/08/2019 12:49										
Total Recoverable Metals by ICP										
Lead	ejj	A	ND		0.0075		mg/L	1	09/08/2019 16:27	
Zinc	ejj	A	0.021		0.020		mg/L	1	09/08/2019 16:27	
			Method: SM 4500-CN C/E-1999				Analyst: EF			
Prep Date/Time: 09/08/2019 10:37										
Total Cyanide										
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	09/08/2019 13:21	
			Method: EPA 350.1 Rev 2.0				Analyst: EF			
Prep Date/Time: 09/08/2019 11:12										
Nitrogen, Ammonia as N										
Nitrogen, Ammonia (As N)	ei	A	0.27	0.054	0.10		mg/L	1	09/08/2019 13:52	
			Method: EPA 420.4 Rev 1.0				Analyst: EF			
Prep Date/Time: 09/08/2019 11:12										
Total Phenolics										
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	09/08/2019 14:01	
			Method: SM 2540 D-1997				Analyst: JBS			
Prep Date/Time: 09/08/2019 10:08										
Total Suspended Solids										
Total Suspended Solids	ejj	A	2.0	1.0	1.0		mg/L	1	09/08/2019 13:08	

Analytical Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-03RE1
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	011-Composite	Received:	09/08/2019 9:40
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: SW-846 9014				Analyst: EF			
Prep Date/Time: 09/08/2019 11:36										
Free Cyanide										
Free Cyanide		A	ND		0.0062		mg/L	1	09/08/2019 13:32	

Analytical Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-04
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	011-Grab	Received:	09/08/2019 9:40
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 1664B				Analyst: JBS			
Oil & Grease (HEM) by SPE										
Prep Date/Time: 09/08/2019 09:58										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/08/2019 14:12	

Analytical Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-05
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	002-Composite	Received:	09/08/2019 9:40
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
				Method: SM 4500-CN C/E-1999			Analyst: EF		
Prep Date/Time: 09/08/2019 10:37									
Total Cyanide									
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	09/08/2019 13:23

Analytical Results

Date: *Sunday, September 8, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0392-06
Client Project:	NPDES Parameters	Sampled:	09/07/2019 0:00
Client Sample ID:	002-Grab	Received:	09/08/2019 9:40
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
				Method: EPA 1664B			Analyst: JBS			
Oil & Grease (HEM) by SPE										
Prep Date/Time: 09/08/2019 09:58										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/08/2019 14:12	

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)

**Partial**
9/8/2019

QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**MDL:** Minimum Detection Limit**RL:** Reporting Limit**RPD:** Relative Percent Difference**U:** The analyte was analyzed for but was not detected above the reported quantitation limit. The quantitation limit has been adjusted for any dilution or concentration of the sample.

Cooler Receipt Log

Cooler ID: Default Cooler



Partial
9/8/2019

Comments

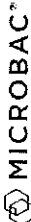
No time

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	No
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

PUS/1

CHAIN OF CUSTODY RECORD



Number **152265**

Instructions on back

Lab Report Address

Turnaround Time

TO BE COMPLETED BY MICROBAC

Client Name: **Amelia Miller BA**

Routine (5 to 7 business days)
 RUSH* (notify lab)

Temperature Upon Receipt (°C) **6-0-3-2-5-**
Therm ID

Address:

Holding Time

City, State, Zip:

(needed by)

Samples Received on Ice Yes No N/A

Contact: **Tami Kuk**

Report Type

Custody Seals Intact? Yes No N/A

Telephone No.:

Level 1 Level 2 Level 3 Level 4 EDD

Send Report via: Mail Fax e-mail (address)

Send Invoice via: Mail Fax e-mail (address)

Project:

PO No.:

Compliance Monitoring? Yes No
 Agency/Program

Sampled by (PRINT): **Whitney Howard**

Sampler Signature:

Sampler Phone No.:

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	VCH3	TSS	Plankt	BA	CN	FG	DSCA	DH	Additional Notes
001	9/7/19		1		U		X	X	X	X	X	X	X	X	1970392
001	9/7/19		3		U		X	X	X	X	X	X	X	X	01
001	9/7/19		3		U		X	X	X	X	X	X	X	X	02
001	9/7/19		3		U		X	X	X	X	X	X	X	X	03
002	9/7/19		1		U		X	X	X	X	X	X	X	X	04
002	9/7/19		2		U		X	X	X	X	X	X	X	X	05
002	9/7/19		1		U		X	X	X	X	X	X	X	X	06
011	9/8/19		1		U		X	X	X	X	X	X	X	X	0
011	9/8/19		1		U		X	X	X	X	X	X	X	X	

Possible Hazard Identification Hazardous Non-Hazardous Radioactive

Sample Disposition Dispose as appropriate Return Archive

Comments

PH 001 = 7.72
002 = 7.92
011 = 7.65

Relinquished By (signature)

Date/Time

0820

Received By (signature)

Date/Time

9/8/19

Relinquished By (signature)

Date/Time

0910

Received By (signature)

Date/Time

9/8/19

Relinquished By (signature)

Date/Time

0910

Received By (signature)

Date/Time

9/8/19