



September 7, 2019

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

Work Order No.: 19I0380

Re: NPDES Parameters

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 6 sample(s) on 9/7/2019 9:45:00AM for the analyses presented in the following report as Work Order 19I0380.

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.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com



WORK ORDER SAMPLE SUMMARY**Date:** *Saturday, September 7, 2019*

Client: Arcelor Mittal USA, Inc.**Project:** NPDES Parameters**Lab Order:** 19I0380

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19I0380-01	001-Composite	001	09/06/2019 00:00	9/7/2019 9:45:00AM
19I0380-02	001-Grab	001	09/06/2019 00:00	9/7/2019 9:45:00AM
19I0380-03	011-Composite	011	09/06/2019 00:00	9/7/2019 9:45:00AM
19I0380-04	011-Grab	011	09/06/2019 00:00	9/7/2019 9:45:00AM
19I0380-05	002-Composite	002	09/06/2019 00:00	9/7/2019 9:45:00AM
19I0380-06	002-Grab	002	09/06/2019 00:00	9/7/2019 9:45:00AM

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CASE NARRATIVE**Date:** Saturday, September 7, 2019

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19I0380

The Total Suspended Solids method residue requirement of 2.5 mg were not met for the following sample(s).
Due to insufficient sample volume remaining, re-analysis was not performed on the sample(s).

<u>Laboratory ID</u>	<u>Sample Name</u>
19I0380-01	001-Composite
19I0380-03	011-Composite

The Matrix Spike and Matrix Spike Duplicate performed on the following sample failed the accuracy criteria for Free cyanide with a low bias. The precision criteria were met. This data is indicative of a bias related to sample matrix.

<u>Laboratory ID</u>	<u>Sample Name</u>
19I0380-01	001-Composite

The Matrix Spike and Matrix Spike Duplicate failed the accuracy criteria for phenol with a low bias. The precision criteria were met. A Post Digestion Spike was performed and the acceptance criteria was not met, indicating sample matrix interference. The following sample was spiked:

<u>Laboratory ID</u>	<u>Sample Name</u>
19I0380-03	011-Composite

Analytical Results

Date: *Saturday, September 7, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0380-01
Client Project:	NPDES Parameters	Sampled:	09/06/2019 0:00
Client Sample ID:	001-Composite	Received:	09/07/2019 9:45
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4			Analyst: RPL			
Total Recoverable Metals by ICP			Prep Date/Time: 09/07/2019 10:30						
Copper	ejj	A	0.0029	0.0013	0.010		mg/L	1	09/07/2019 13:14
Lead	ejj	A	0.0039	0.0033	0.0075		mg/L	1	09/07/2019 13:14
Zinc	ejj	A	0.010	0.0073	0.020		mg/L	1	09/07/2019 13:14
			Method: SM 4500-CN C/E-1999			Analyst: AJR			
Total Cyanide			Prep Date/Time: 09/07/2019 10:33						
Cyanide, Total	ejj	A	0.0035	0.0020	0.0050		mg/L	1	09/07/2019 13:06
			Method: SW-846 9014			Analyst: AJR			
Free Cyanide			Prep Date/Time: 09/07/2019 11:00						
Free Cyanide		A	ND		0.0062		mg/L	1	09/07/2019 11:46
			Method: EPA 350.1 Rev 2.0			Analyst: AJR			
Nitrogen, Ammonia as N			Prep Date/Time: 09/07/2019 10:41						
Nitrogen, Ammonia (As N)	ei	A	0.33	0.054	0.10		mg/L	1	09/07/2019 12:00
			Method: EPA 420.4 Rev 1.0			Analyst: AJR			
Total Phenolics			Prep Date/Time: 09/07/2019 10:34						
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	09/07/2019 15:02
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids			Prep Date/Time: 09/07/2019 10:42						
Total Suspended Solids	ejj	A	2.2	1.0	1.0		mg/L	1	09/07/2019 12:39

Analytical Results

Date: Saturday, September 7, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0380-02
Client Project:	NPDES Parameters	Sampled:	09/06/2019 0:00
Client Sample ID:	001-Grab	Received:	09/07/2019 9:45
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: EPA 1664B					Analyst: KMT				
Oil & Grease (HEM) by SPE									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/07/2019 14:28

Analytical Results

Date: *Saturday, September 7, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0380-03
Client Project:	NPDES Parameters	Sampled:	09/06/2019 0:00
Client Sample ID:	011-Composite	Received:	09/07/2019 9:45
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 200.7 Rev 4.4						
						Analyst: RPL			
						Prep Date/Time: 09/07/2019 10:30			
Total Recoverable Metals by ICP									
Copper	ejj	A	0.0039	0.0013	0.010		mg/L	1	09/07/2019 13:19
Lead	ejj	A	0.0045	0.0033	0.0075		mg/L	1	09/07/2019 13:19
Zinc	ejj	A	0.017	0.0073	0.020		mg/L	1	09/07/2019 13:19
			Method: SM 4500-CN C/E-1999						
						Analyst: AJR			
						Prep Date/Time: 09/07/2019 10:33			
Total Cyanide									
Cyanide, Total	ejj	A	0.0052	0.0020	0.0050		mg/L	1	09/07/2019 13:11
			Method: SW-846 9014						
						Analyst: AJR			
						Prep Date/Time: 09/07/2019 11:00			
Free Cyanide									
Free Cyanide		A	ND		0.0062		mg/L	1	09/07/2019 11:51
			Method: EPA 350.1 Rev 2.0						
						Analyst: AJR			
						Prep Date/Time: 09/07/2019 10:41			
Nitrogen, Ammonia as N									
Nitrogen, Ammonia (As N)	ei	A	0.20	0.054	0.10		mg/L	1	09/07/2019 12:08
			Method: EPA 420.4 Rev 1.0						
						Analyst: AJR			
						Prep Date/Time: 09/07/2019 10:34			
Total Phenolics									
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	09/07/2019 15:04
			Method: SM 2540 D-1997						
						Analyst: KMT			
						Prep Date/Time: 09/07/2019 10:42			
Total Suspended Solids									
Total Suspended Solids	ejj	A	1.3	1.0	1.0		mg/L	1	09/07/2019 12:39

Analytical Results

Date: Saturday, September 7, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0380-04
Client Project:	NPDES Parameters	Sampled:	09/06/2019 0:00
Client Sample ID:	011-Grab	Received:	09/07/2019 9:45
Sample Description:	011		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
Method: EPA 1664B					Analyst: KMT				
Oil & Grease (HEM) by SPE									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/07/2019 14:28

Analytical Results

Date: *Saturday, September 7, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0380-05
Client Project:	NPDES Parameters	Sampled:	09/06/2019 0:00
Client Sample ID:	002-Composite	Received:	09/07/2019 9:45
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
				Method: SM 4500-CN C/E-1999			Analyst: AJR		
Prep Date/Time: 09/07/2019 10:33									
Total Cyanide									
Cyanide, Total	ejj	A	ND	0.0020	0.0050	U	mg/L	1	09/07/2019 13:12

Analytical Results

Date: Saturday, September 7, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19I0380-06
Client Project:	NPDES Parameters	Sampled:	09/06/2019 0:00
Client Sample ID:	002-Grab	Received:	09/07/2019 9:45
Sample Description:	002		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 1664B				Analyst: KMT			
Oil & Grease (HEM) by SPE										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	09/07/2019 14:28	

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



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

Temp: 5.8°C
 MICROBAC®

Comments

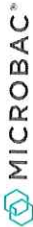
No time

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

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CHAIN OF CUSTODY RECORD

Number **152360**
Instructions on back

Lab Report Address

Client Name: *Arcelor withal Ad*

Address:

City, State, Zip:

Contact:

Telephone No.:

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

Project:

Location:

Sampled by (PRINT): *Warren Hard*

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

1910380 Carey Gadzala
ArcelorMittal - Burns Harbor, IN
NPDES Parameters
09/07/2019

REQUESTED ANALYSIS

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types**	MHB TSS	PH	FB	FA	FOG	RSCL	Additional Notes
001	9/6/19		1	C			X	X	X	X	X	X	9-7-19 MHB 6-IT 1910380
001	9/6/19		3	B			X	X	X	X	X	X	01
001	9/6/19		1	C			X	X	X	X	X	X	02
002	9/6/19		3	B			X	X	X	X	X	X	03
002	9/6/19		1	C			X	X	X	X	X	X	04
002	9/6/19		2	B			X	X	X	X	X	X	05
Legacy Channel Inlet	9/7/19	0745	1	B			X	X	X	X	X	X	06
South Lagoon Inlet	9/7/19	0750	1	B			X	X	X	X	X	X	
011	9/7/19	0755	1	B			X	X	X	X	X	X	

Possible Hazard Identification Hazardous Non-Hazardous Radioactive

Sample Disposition Dispose as appropriate Return Archive

Relinquished By (signature) *[Signature]*

Date/Time 9/7/19 0800

Received By (signature) *[Signature]*

Date/Time 9/7/19 0810

Relinquished By (signature) *[Signature]*

Date/Time 9/7/19 0815

Received By (signature) *[Signature]*

Date/Time 9-7-19/0945