MICROBAC®

September 11, 2019

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

Work Order No.: 19H1101

Re: NPDES Parameters

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 8/17/2019 9:45:00AM for the analyses presented in the following report as Work Order 19H1101.

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

MICROBAC®

WORK ORDER SAMPLE SUMMARY

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19H1101

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1101-01	001-Composite	001	08/16/2019 00:00	8/17/2019 9:45:00AM
19H1101-02	011-Composite	011	08/16/2019 00:00	8/17/2019 9:45:00AM
19H1101-03	002-Composite	002	08/16/2019 00:00	8/17/2019 9:45:00AM

MICROBAC®

Field Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: NPDES Parameters
Work Order: 19H1101

Client Sample ID: 001-Composite
Sample Description: 001
Matrix: Aqueous
Work Order/ID: 19H1101-01
Sampled: 08/16/2019 00:00
Received: 08/17/2019 09:45

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.69	pH Units

Client Sample ID: 011-Composite
Sample Description: 011
Matrix: Aqueous
Work Order/ID: 19H1101-02
Sampled: 08/16/2019 00:00
Received: 08/17/2019 09:45

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.98	pH Units

Client Sample ID: 002-Composite
Sample Description: 002
Matrix: Aqueous
Work Order/ID: 19H1101-03
Sampled: 08/16/2019 00:00
Received: 08/17/2019 09:45

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L

CASE NARRATIVE

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Parameters
Lab Order: 19H1101

B - the Method Blank contained zinc at a level above the reporting limit. This does not impact the data, as the concentration in the sample was below the reporting limit. This nonconformance is associated with the following sample:

Laboratory ID	Sample Name
19H1101-01	Outfall 001

Samples in this work order are logged in per the COC submitted. The composite samples that were submitted NH4,TSS,Phenol, Cn, Pb and Zn should have a collection date of 8/16/19. The Grab samples Oil & Grease and Chlorine are the correct date listed 8/16/19. A Revised report has been issued to include this information.

Report has been revised to include Pb, Zn and Free Cn for Outfall 011 and Free Cn for 00. 8/28/19

Report has been revised at the clients request to include Cu and Ag for Outfall 001. 9/11/19

MICROBAC®

Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: NPDES Parameters
Client Sample ID: 001-Composite
Sample Description: 001
Matrix: Aqueous
Work Order/ID: 19H1101-01
Sampled: 08/16/2019 0:00
Received: 08/17/2019 9:45

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: **08/17/2019 11:31**
Copper	eij	A	***0.0030***	0.0013	0.010		mg/L	1	08/17/2019 14:05
Lead	eij	A	***ND***	0.0033	0.0075	U	mg/L	1	08/17/2019 14:05
Zinc	eij	A	***ND***	0.0073	0.020	BU	mg/L	1	08/17/2019 14:05
			Method: **EPA 200.8 Rev 5.4**						Analyst: **BTM**
Total Recoverable Metals by ICP/MS									Prep Date/Time: **09/08/2019 12:49**
Silver	eij	A	***ND***	0.000053	0.00060	U	mg/L	1	09/09/2019 11:33
			Method: **EPA 1664B**						Analyst: **KMT**
Oil & Grease (HEM) by SPE									Prep Date/Time: **08/17/2019 10:03**
Oil & Grease (HEM)	eij	A	***ND***	1.4	5.0	U	mg/L	1	08/17/2019 14:27
			Method: **SM 4500-CN C/E-1999**						Analyst: **ABG**
Total Cyanide									Prep Date/Time: **08/17/2019 12:30**
Cyanide, Total	eij	A	***0.019***	0.0020	0.0050		mg/L	1	08/17/2019 15:12
			Method: **SW-846 9014**						Analyst: **AJR**
Free Cyanide									Prep Date/Time: **08/27/2019 12:44**
Free Cyanide		A	***0.011***		0.0062		mg/L	1	08/27/2019 13:07
			Method: **EPA 350.1 Rev 2.0**						Analyst: **ABG**
Nitrogen, Ammonia as N									Prep Date/Time: **08/17/2019 12:39**
Nitrogen, Ammonia (As N)	ei	A	***0.49***	0.054	0.10		mg/L	1	08/17/2019 15:40
			Method: **EPA 420.4 Rev 1.0**						Analyst: **ABG**
Total Phenolics									Prep Date/Time: **08/17/2019 14:24**
Phenolics, Total Recoverable	eij	A	***ND***	0.0060	0.010	U	mg/L	1	08/17/2019 17:10
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/17/2019 10:52**
Total Suspended Solids	eij	A	***2.4***	1.0	1.0		mg/L	1	08/17/2019 13:15

MICROBAC®

Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: NPDES Parameters
Client Sample ID: 011-Composite
Sample Description: 011
Matrix: Aqueous
Work Order/ID: 19H1101-02
Sampled: 08/16/2019 0:00
Received: 08/17/2019 9:45

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: **08/20/2019 14:18**
Lead	eij	A	***ND***	0.0033	0.0075	U	mg/L	1	08/20/2019 22:53
Zinc	eij	A	***0.0096***	0.0073	0.020		mg/L	1	08/20/2019 22:53
			Method: **EPA 1664B**						Analyst: **KMT**
Oil & Grease (HEM) by SPE									Prep Date/Time: **08/17/2019 10:03**
Oil & Grease (HEM)	eij	A	***ND***	1.4	5.0	U	mg/L	1	08/17/2019 14:27
			Method: **SM 4500-CN C/E-1999**						Analyst: **ABG**
Total Cyanide									Prep Date/Time: **08/17/2019 12:30**
Cyanide, Total	eij	A	***0.053***	0.0020	0.0050		mg/L	1	08/17/2019 15:17
			Method: **SW-846 9014**						Analyst: **AJR**
Free Cyanide									Prep Date/Time: **08/27/2019 12:44**
Free Cyanide		A	***0.040***		0.0062		mg/L	1	08/27/2019 13:09
			Method: **EPA 350.1 Rev 2.0**						Analyst: **ABG**
Nitrogen, Ammonia as N									Prep Date/Time: **08/17/2019 12:39**
Nitrogen, Ammonia (As N)	ei	A	***0.54***	0.054	0.10		mg/L	1	08/17/2019 15:47
			Method: **EPA 420.4 Rev 1.0**						Analyst: **ABG**
Total Phenolics									Prep Date/Time: **08/17/2019 14:24**
Phenolics, Total Recoverable	eij	A	***0.011***	0.0060	0.010		mg/L	1	08/17/2019 17:15
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/17/2019 10:52**
Total Suspended Solids	eij	A	***2.4***	1.0	1.0		mg/L	1	08/17/2019 13:15

MICROBAC®

Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: NPDES Parameters
Client Sample ID: 002-Composite
Sample Description: 002
Matrix: Aqueous

Work Order/ID: 19H1101-03
Sampled: 08/16/2019 0:00
Received: 08/17/2019 9:45

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **EPA 1664B**						Analyst: **KMT**
Oil & Grease (HEM) by SPE									Prep Date/Time: **08/17/2019 10:03**
Oil & Grease (HEM)	eij	A	***ND***	1.4	5.0	U	mg/L	1	08/17/2019 14:27
			Method: **SM 4500-CN C/E-1999**						Analyst: **ABG**
Total Cyanide									Prep Date/Time: **08/17/2019 12:30**
Cyanide, Total	eij	A	***0.0026***	0.0020	0.0050		mg/L	1	08/17/2019 15:18

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)

B:	The target analyte was detected in the method blank at or above the reported quantitation limit.
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: 1.9°C

MICROBAC®

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?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	Yes
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

19H1101 Carey Gadzala
ArcelorMittal - Burns Harbor, IN
NPDES Parameters
08/17/2019

ROBAC®

CHAIN OF CUSTODY RECORD

Number 152329

Instructions on back

Address: Arcelor mittal	Invoice Address	Turnaround Time	*TO BE COMPLETED BY MICROBAC*
	Client Name:	☐ Routine (5 to 7 business days)	Temperature Upon Receipt (°C)
		☒ RUSH* (notify lab)	Therm ID
	Address:		Holding Time
, Zip: Terri Kirk	City, State, Zip:	(needed by)	Samples Received on Ice? ☒ Yes ☐ No ☐ N/A
	Contact:	Report Type	Custody Seals Intact? ☐ Yes ☐ No ☒ N/A
No.:	Telephone No.:	☐ Results Only ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ EDD	

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

Location: PO No.: Compliance Monitoring? ☐ Yes ☐ No ☐ Agency/Program

y (PRINT): Warren Howell 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

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Ammonia	TSS	Tot Phenol	Zn	CN	Pb	PA	Total Res Cl	FOG	O&G	Additional Notes
	001	8/17/19	DTF, 5	6		C/G		X	X	X	X	X	X	X	X	X		
	011	8/17/19	8/17/19 5	6		C/G		X	X	X	X	X	X	X	X	X		
	002	8/17/19		1								X					X	

RUSH!

Possible Hazard Identification ☐ Hazardous ☐ Non-Hazardous ☐ Radioactive Sample Disposition ☐ Dispose as appropriate ☐ Return ☐ Archive

Comments: 2.3 − 0.4 = 1.9°C

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
Warren Howell	8/17/19 0900	Darren Fouts	8/17/19 0900
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
Relinquished By (signature) Darren Fouts	Date/Time 8/17/19 1120	Received By (signature)	Date/Time

rev.12/26/2017