MICROBAC®

August 21, 2019

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

Work Order No.: 19H1315

Re: NPDES Excursion-CN

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 8/21/2019 10:00:00AM for the analyses presented in the following report as Work Order 19H1315.

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

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WORK ORDER SAMPLE SUMMARY

Date: *Wednesday, August 21, 2019*

Client: Arcelor Mittal USA, Inc.
Project: NPDES Excursion-CN
Lab Order: 19H1315

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1315-01	Lagoon Channel Inlet		08/21/2019 07:47	8/21/2019 10:00:00AM
19H1315-02	South Lagoon Inlet		08/21/2019 07:55	8/21/2019 10:00:00AM
19H1315-03	011		08/21/2019 08:00	8/21/2019 10:00:00AM

Analytical Results

Client:	Arcelor Mittal USA, Inc.
Client Project:	NPDES Excursion-CN

Client Sample ID:	Lagoon Channel Inlet	**Work Order/ID:**	19H1315-01
Sample Description:		**Sampled:**	08/21/2019 7:47
Matrix:	Aqueous	**Received:**	08/21/2019 10:00

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: **SM 4500-CN C/E-1999**				Analyst: **ABG**	
Total Cyanide			Prep Method: **NA**				Prep Date/Time: **08/21/2019 10:45**	
Cyanide, Total	dij	A	*0.012*	0.0050		mg/L	1	08/21/2019 14:09

Analytical Results

Client:	Arcelor Mittal USA, Inc.
Client Project:	NPDES Excursion-CN

Client Sample ID:	South Lagoon Inlet	**Work Order/ID:**	19H1315-02
Sample Description:		**Sampled:**	08/21/2019 7:55
Matrix:	Aqueous	**Received:**	08/21/2019 10:00

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: **SM 4500-CN C/E-1999**				Analyst: **ABG**	
Total Cyanide			Prep Method: **NA**				Prep Date/Time: **08/21/2019 10:45**	
Cyanide, Total	dij	A	*0.0097*	0.0050		mg/L	1	08/21/2019 14:10

Analytical Results

Date: *Wednesday, August 21, 2019*

Client:	Arcelor Mittal USA, Inc.
Client Project:	NPDES Excursion-CN

Client Sample ID:	011	**Work Order/ID:**	19H1315-03
Sample Description:		**Sampled:**	08/21/2019 8:00
Matrix:	Aqueous	**Received:**	08/21/2019 10:00

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: **SM 4500-CN C/E-1999**				Analyst: **ABG**	
Total Cyanide			Prep Method: **NA**				Prep Date/Time: **08/21/2019 10:45**	
Cyanide, Total	dij	A	*0.0064*	0.0050		mg/L	1	08/21/2019 14:12

ANALYTE TYPES: (AT)

A,B = Target Analyte
I = Internal Standard
M = Summation Analyte
S = Surrogate
T = Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

BLK = Method Blank	ICSA = Interference Check Standard "A"
DUP = Method Duplicate	ICSAB = Interference Check Standard "AB"
BS = Method Blank Spike	BSD = Method Blank Spike Duplicate
MS = Matrix Spike	MSD = Matrix Spike Duplicate
ICB = Initial Calibration Blank	ICV = Initial Calibration Verification
CCB = Continuing Calibration Blank	CCV = Continuing Calibration Verification
CRL = Client Required Reporting Limit	OPR = Ongoing Precision and Recovery Standard
PDS = Post Digestion Spike	SD = Serial Dilution
QCS = Quality Control Standard	

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)

RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler   Temp: 7.4°C

Comments

No times on sample containers

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?	No
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?)	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

RUSH!

Lab Report Address

Client Name: Arcelor mittal

Address:

City, State, Zip:

Contact: Terri Kurt

Telephone No.:

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

Project:

Sampled by (PRINT): Warren Howard

Sampler Signature: [signature]

Invoice Address

Client Name:

Address:

City, State, Zip:

Contact:

Telephone No.:

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

Location:

PO No.:

Sampler Phone No.: 219 787 4863

(needed by)

Report Type

☐ Results Only ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4

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

Compliance Monitoring? ☐ Yes ☐ No
☐ Agency/Program

TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C) 7 70.3-7.42
Therm ID

Holding Time

Samples Received on Ice? ☒ Yes ☐ No ☐ N/A

Custody Seals Intact? ☐ Yes ☐ No ☒ N/A ☐ EDD

REQUESTED ANALYSIS

Preservative Types **

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Zn	CN	Pb			Additional Notes
001	8/20/19		1		C	X	X	X			19H1315
Lagoon Channel Inlet	8/21/19	0747	1		G		X	X			Refer to Daily LOC No #3 83119
South lagoon Inlet	↓	0755	1		G		X	X			-01
Oil	↓	0800	1		G		X	X			02
											03

* 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

Possible Hazard Identification ☐ Non-Hazardous ☐ Hazardous ☐ Radioactive

Sample Disposition ☐ Dispose as appropriate ☐ Return ☐ Archive

Comments

Relinquished By (signature)	Date/Time 8/21/19 0832	Received By (signature) M. Otto	Date/Time 8/21/19 0832
Relinquished By (signature)	Date/Time 8/21/19 1000	Received By (signature)	Date/Time
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time 8/21/19 1000

19H1315   Carey Gadzala
ArcelorMittal - Burns Harbor, IN
Spill Samples-CN
08/21/2019