

August 28, 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](mailto:ron.misiunas@microbac.com).

Sincerely,  
Microbac Laboratories, Inc.



Carey Gadzala  
Project Manager

**WORK ORDER SAMPLE SUMMARY**

**Date:** *Wednesday, August 28, 2019*

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

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

## Field Results

Date: *Wednesday, August 28, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order:</b>	19H1101
<b>Client Project:</b>	NPDES Parameters		
<b>Client Sample ID:</b>	Outfall 001	<b>Work Order/ID:</b>	19H1101-01
<b>Sample Description:</b>		<b>Sampled:</b>	08/17/2019 00:00
<b>Matrix:</b>	Aqueous	<b>Received:</b>	08/17/2019 09:45

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

<b>Client Sample ID:</b>	Outfall 011	<b>Work Order/ID:</b>	19H1101-02
<b>Sample Description:</b>		<b>Sampled:</b>	08/17/2019 00:00
<b>Matrix:</b>	Aqueous	<b>Received:</b>	08/17/2019 09:45

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

<b>Client Sample ID:</b>	Outfall 002	<b>Work Order/ID:</b>	19H1101-03
<b>Sample Description:</b>		<b>Sampled:</b>	08/17/2019 00:00
<b>Matrix:</b>	Aqueous	<b>Received:</b>	08/17/2019 09:45

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L

**CASE NARRATIVE****Date:** *Wednesday, August 28, 2019*

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

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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:

<u>Laboratory ID</u>	<u>Sample Name</u>
19H1101-01	Outfall 001

Samples in this work order are logged in per the COC submitted. The composite samples that were submitted NH<sub>4</sub>, 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 8/17/19. 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

## Analytical Results

Date: Wednesday, August 28, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1101-01
<b>Client Project:</b>	NPDES Parameters	<b>Sampled:</b>	08/17/2019 0:00
<b>Client Sample ID:</b>	Outfall 001	<b>Received:</b>	08/17/2019 9:45
<b>Sample Description:</b>			
<b>Matrix:</b>	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: 08/17/2019 11:31									
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/17/2019 14:05
Zinc	ejj	A	ND	0.0073	0.020	BU	mg/L	1	08/17/2019 14:05
			Method: EPA 1664B			Analyst: KMT			
Oil & Grease (HEM) by SPE									
Prep Date/Time: 08/17/2019 10:03									
Oil & Grease (HEM)	ejj	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	ejj	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	ejj	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	ejj	A	2.4	1.0	1.0		mg/L	1	08/17/2019 13:15

## Analytical Results

Date: *Wednesday, August 28, 2019*

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

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: EPA 200.7 Rev 4.4				Analyst: RPL			
Prep Date/Time: 08/20/2019 14:18										
<b>Total Recoverable Metals by ICP</b>										
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/20/2019 22:53	
Zinc	ejj	A	0.0096	0.0073	0.020		mg/L	1	08/20/2019 22:53	
			Method: EPA 1664B				Analyst: KMT			
Prep Date/Time: 08/17/2019 10:03										
<b>Oil &amp; Grease (HEM) by SPE</b>										
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/17/2019 14:27	
			Method: SM 4500-CN C/E-1999				Analyst: ABG			
Prep Date/Time: 08/17/2019 12:30										
<b>Total Cyanide</b>										
Cyanide, Total	ejj	A	0.053	0.0020	0.0050		mg/L	1	08/17/2019 15:17	
			Method: SW-846 9014				Analyst: AJR			
Prep Date/Time: 08/27/2019 12:44										
<b>Free Cyanide</b>										
Free Cyanide		A	0.040		0.0062		mg/L	1	08/27/2019 13:09	
			Method: EPA 350.1 Rev 2.0				Analyst: ABG			
Prep Date/Time: 08/17/2019 12:39										
<b>Nitrogen, Ammonia as N</b>										
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			
Prep Date/Time: 08/17/2019 14:24										
<b>Total Phenolics</b>										
Phenolics, Total Recoverable	ejj	A	0.011	0.0060	0.010		mg/L	1	08/17/2019 17:15	
			Method: SM 2540 D-1997				Analyst: KMT			
Prep Date/Time: 08/17/2019 10:52										
<b>Total Suspended Solids</b>										
Total Suspended Solids	ejj	A	2.4	1.0	1.0		mg/L	1	08/17/2019 13:15	

## Analytical Results

Date: *Wednesday, August 28, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1101-03
<b>Client Project:</b>	NPDES Parameters	<b>Sampled:</b>	08/17/2019 0:00
<b>Client Sample ID:</b>	Outfall 002	<b>Received:</b>	08/17/2019 9:45
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

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

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**ANALYTE TYPES: (AT)**

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



Revised  
8/28/2019

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**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	

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**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)

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**FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**

<b>B:</b>	The target analyte was detected in the method blank at or above the reported quantitation limit.
<b>MDL:</b>	Minimum Detection Limit
<b>RL:</b>	Reporting Limit
<b>RPD:</b>	Relative Percent Difference
<b>U:</b>	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.

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Microbac Laboratories, Inc.

250 West 84<sup>th</sup> Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | [www.microbac.com](http://www.microbac.com)



**Cooler Receipt Log**

Cooler ID: Default Cooler



Revised

8/28/2019

**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

CHAIN OF CUSTODY RECORD

ROBAC\*

Number **152329**

Instructions on back

Invoice Address

Address: Arcelor Mittal

Client Name:

Address:

Zip:

Terri Kirk

City, State, Zip:

Contact:

No.: Telephone No.:

Mail Fax e-mail (address)

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

Location:

PO No.:

Sampler Signature: *W. Howard*

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

Lab ID	Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types**	Analysis	Sample Disposition	Date/Time	Relinquished By (signature)	Relinquished By (signature)	Relinquished By (signature)	Date/Time	Date/Time	Date/Time
	001	8/17/19	07:56	1	Ammonia	C/G		PH	Disposal as appropriate	8/17/19 0900	<i>W. Howard</i>	<i>W. Howard</i>	<i>W. Howard</i>	8/17/19 0900	8/17/19 0900	8/17/19 0900
	011	8/17/19	8/17/05	1	Ammonia	C/G		PH	Disposal as appropriate							
	002	8/17/19		1	Ammonia	C/G		PH	Disposal as appropriate							
<b>RUSH!</b>																
Possible Hazard Identification <input type="checkbox"/> Hazardous <input type="checkbox"/> Non-Hazardous <input type="checkbox"/> Radioactive <input type="checkbox"/> Dispose as appropriate <input type="checkbox"/> Return <input type="checkbox"/> Archive																
Comments 2.3 -0.4 1.90C																