

August 22, 2019

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

Work Order No.: 19H1314

Re: NPDES Excursion

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 23 sample(s) on 8/21/2019 12:35:00AM for the analyses presented in the following report as Work Order 19H1314.

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:** *Thursday, August 22, 2019*

**Client:** Arcelor Mittal USA, Inc.  
**Project:** NPDES Excursion  
**Lab Order:** 19H1314

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1314-01	#8		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-02	#9		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-03	#10		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-04	#11		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-05	#12		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-06	#13		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-07	SL-8		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-08	SL-7		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-09	SL-6		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-10	SL-5		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-11	1		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-12	001		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-13	000		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-14	SL-4		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-15	SL-3		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-16	SL-2		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-17	SL-1		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-18	#7		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-19	#6		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-20	#5		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-21	#4		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-22	#3		08/20/2019 00:35	8/21/2019 12:35:00AM
19H1314-23	#2		08/20/2019 00:35	8/21/2019 12:35:00AM

## Field Results

Date: *Thursday, August 22, 2019*

<b>Client:</b> Arcelor Mittal USA, Inc.	<b>Work Order:</b> 19H1314
<b>Client Project:</b> NPDES Excursion	
<b>Client Sample ID:</b> #8	<b>Work Order/ID:</b> 19H1314-01
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.24	pH Units
Temperature	25.8	Deg C

<b>Client Sample ID:</b> #9	<b>Work Order/ID:</b> 19H1314-02
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.30	pH Units
Temperature	25.8	Deg C

<b>Client Sample ID:</b> #10	<b>Work Order/ID:</b> 19H1314-03
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.35	pH Units
Temperature	26	Deg C

<b>Client Sample ID:</b> #11	<b>Work Order/ID:</b> 19H1314-04
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.28	pH Units
Temperature	26.3	Deg C

<b>Client Sample ID:</b> #12	<b>Work Order/ID:</b> 19H1314-05
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.43	pH Units
Temperature	26.4	Deg C

<b>Client Sample ID:</b> #13	<b>Work Order/ID:</b> 19H1314-06
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.70	pH Units
Temperature	24.9	Deg C

## Field Results

Date: *Thursday, August 22, 2019*

<b>Client Sample ID:</b> SL-8	<b>Work Order/ID:</b> 19H1314-07
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	8.09	pH Units
Temperature	24.2	Deg C

<b>Client Sample ID:</b> SL-7	<b>Work Order/ID:</b> 19H1314-08
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.98	pH Units
Temperature	23.9	Deg C

<b>Client Sample ID:</b> SL-6	<b>Work Order/ID:</b> 19H1314-09
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	8.04	pH Units
Temperature	24.1	Deg C

<b>Client Sample ID:</b> SL-5	<b>Work Order/ID:</b> 19H1314-10
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	8.01	pH Units
Temperature	24	Deg C

<b>Client Sample ID:</b> 1	<b>Work Order/ID:</b> 19H1314-11
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.66	pH Units
Temperature	26.1	Deg C

<b>Client Sample ID:</b> 001	<b>Work Order/ID:</b> 19H1314-12
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	6.72	pH Units
Temperature	27.1	Deg C

<b>Client Sample ID:</b> 000	<b>Work Order/ID:</b> 19H1314-13
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.64	pH Units

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

**Field Results**

Date: *Thursday, August 22, 2019*

Temperature	21.6	Deg C
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<b>Client Sample ID:</b> SL-4	<b>Work Order/ID:</b> 19H1314-14
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	8.01	pH Units
Temperature	24.1	Deg C

<b>Client Sample ID:</b> SL-3	<b>Work Order/ID:</b> 19H1314-15
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	8.0	pH Units
Temperature	24	Deg C

<b>Client Sample ID:</b> SL-2	<b>Work Order/ID:</b> 19H1314-16
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.97	pH Units
Temperature	24.2	Deg C

<b>Client Sample ID:</b> SL-1	<b>Work Order/ID:</b> 19H1314-17
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.99	pH Units
Temperature	24.2	Deg C

<b>Client Sample ID:</b> #7	<b>Work Order/ID:</b> 19H1314-18
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.50	pH Units
Temperature	25.3	Deg C

<b>Client Sample ID:</b> #6	<b>Work Order/ID:</b> 19H1314-19
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.61	pH Units
Temperature	25.4	Deg C

## Field Results

Date: *Thursday, August 22, 2019*

<b>Client Sample ID:</b> #5	<b>Work Order/ID:</b> 19H1314-20
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.71	pH Units
Temperature	25.4	Deg C

<b>Client Sample ID:</b> #4	<b>Work Order/ID:</b> 19H1314-21
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.68	pH Units
Temperature	25.4	Deg C

<b>Client Sample ID:</b> #3	<b>Work Order/ID:</b> 19H1314-22
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.68	pH Units
Temperature	25.3	Deg C

<b>Client Sample ID:</b> #2	<b>Work Order/ID:</b> 19H1314-23
<b>Sample Description:</b>	<b>Sampled:</b> 08/20/2019 00:35
<b>Matrix:</b> Aqueous	<b>Received:</b> 08/21/2019 00:35

Analyses	Result	Units
pH	7.69	pH Units
Temperature	25.9	Deg C

**CASE NARRATIVE**

**Date:** Thursday, August 22, 2019

**Client:** Arcelor Mittal USA, Inc.  
**Project:** NPDES Excursion  
**Lab Order:** 19H1314

The Matrix Spike and Matrix Spike Duplicate failed the accuracy criteria for cyanide 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>
19H1314-03	#10
19H1314-11	1

The Matrix Spike and Matrix Spike Duplicate failed the accuracy criteria for cyanide with a high 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>
19H1314-23	#2

This report was revised on 8/22/19 to include corrected results for Total cyanide in the following samples.

<u>Laboratory ID</u>	<u>Sample Name</u>
19H1314-16	SL-2
19H1314-17	SL-1

The Free CN results in the following samples were revised to report the reanalyses from 8/22/2019.

<u>Laboratory ID</u>	<u>Sample Name</u>
19H1314-01	#8
19H1314-02	#9
19H1314-03	#10
19H1314-04	#11
19H1314-05	#12
19H1314-06	#13
19H1314-11	1
19H1314-12	001
19H1314-13	000
19H1314-18	#7
19H1314-19	#6
19H1314-20	#5
19H1314-22	#3
19H1314-23	#2

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-01
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#8	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: <b>SM 4500-CN C/E-1999</b>					Analyst: <b>ABG</b>	
<b>Total Cyanide</b>		Prep Method: <b>NA</b>					Prep Date/Time: <b>08/21/2019 10:45</b>	
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 14:07
		Method: <b>SW-846 9014</b>					Analyst: <b>ABG</b>	
<b>Free Cyanide</b>		Prep Method: <b>SW-846 9014</b>					Prep Date/Time: <b>08/21/2019 15:22</b>	
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 12:43
		Method: <b>SM 4500-O C-2001</b>					Analyst: <b>DAT</b>	
<b>Dissolved Oxygen</b>		Prep Method: <b>SM 4500-O C-2001</b>					Prep Date/Time: <b>08/21/2019 11:33</b>	
Oxygen, Dissolved	di	A	<b>5.4</b>	0.20	H	mg/L	1	08/21/2019 11:33
		Method: <b>EPA 350.1 Rev 2.0</b>					Analyst: <b>ABG</b>	
<b>Nitrogen, Ammonia as N</b>		Prep Method: <b>EPA 350.1 Rev 2.0</b>					Prep Date/Time: <b>08/21/2019 11:49</b>	
Nitrogen, Ammonia (As N)	di	A	<b>0.28</b>	0.10		mg/L	1	08/21/2019 13:32



## Analytical Results

Date: Thursday, August 22, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-02
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#9	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
<b>Total Cyanide</b>		Method: <b>SM 4500-CN C/E-1999</b>		Analyst: <b>EF</b>		Prep Date/Time: <b>08/21/2019 13:12</b>		
		Prep Method: <b>NA</b>						
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/21/2019 18:03
<b>Free Cyanide</b>		Method: <b>SW-846 9014</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 15:22</b>		
		Prep Method: <b>SW-846 9014</b>						
Free Cyanide		A	ND	0.0062		mg/L	1	08/22/2019 12:45
<b>Dissolved Oxygen</b>		Method: <b>SM 4500-O C-2001</b>		Analyst: <b>DAT</b>		Prep Date/Time: <b>08/21/2019 11:33</b>		
		Prep Method: <b>SM 4500-O C-2001</b>						
Oxygen, Dissolved	di	A	5.3	0.20	H	mg/L	1	08/21/2019 11:33
<b>Nitrogen, Ammonia as N</b>		Method: <b>EPA 350.1 Rev 2.0</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 11:49</b>		
		Prep Method: <b>EPA 350.1 Rev 2.0</b>						
Nitrogen, Ammonia (As N)	di	A	0.24	0.10		mg/L	1	08/21/2019 13:35

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-03
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#10	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
<b>Total Cyanide</b>		Method: <b>SM 4500-CN C/E-1999</b>				Analyst: <b>ABG</b>		
		Prep Method: <b>NA</b>				Prep Date/Time: <b>08/21/2019 13:12</b>		
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 17:02
<b>Free Cyanide</b>		Method: <b>SW-846 9014</b>				Analyst: <b>ABG</b>		
		Prep Method: <b>SW-846 9014</b>				Prep Date/Time: <b>08/21/2019 15:22</b>		
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 12:46
<b>Dissolved Oxygen</b>		Method: <b>SM 4500-O C-2001</b>				Analyst: <b>DAT</b>		
		Prep Method: <b>SM 4500-O C-2001</b>				Prep Date/Time: <b>08/21/2019 11:33</b>		
Oxygen, Dissolved	di	A	<b>5.2</b>	0.20	H	mg/L	1	08/21/2019 11:33
<b>Nitrogen, Ammonia as N</b>		Method: <b>EPA 350.1 Rev 2.0</b>				Analyst: <b>ABG</b>		
		Prep Method: <b>EPA 350.1 Rev 2.0</b>				Prep Date/Time: <b>08/21/2019 11:49</b>		
Nitrogen, Ammonia (As N)	di	A	<b>0.25</b>	0.10		mg/L	1	08/21/2019 13:37

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-04
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#11	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>ABG</b>		
<b>Total Cyanide</b>			Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 13:12</b>		
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 17:07
			Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>		
<b>Free Cyanide</b>			Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>		
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 12:48
			Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>		
<b>Dissolved Oxygen</b>			Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>		
Oxygen, Dissolved	di	A	<b>5.5</b>	0.20	H	mg/L	1	08/21/2019 11:33
			Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>		
<b>Nitrogen, Ammonia as N</b>			Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 11:49</b>		
Nitrogen, Ammonia (As N)	di	A	<b>0.21</b>	0.10		mg/L	1	08/21/2019 13:59

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-05
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#12	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>ABG</b>		
<b>Total Cyanide</b>			Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 13:12</b>		
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 17:09
			Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>		
<b>Free Cyanide</b>			Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>		
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 12:50
			Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>		
<b>Dissolved Oxygen</b>			Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>		
Oxygen, Dissolved	di	A	<b>4.3</b>	0.20	H	mg/L	1	08/21/2019 11:33
			Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>		
<b>Nitrogen, Ammonia as N</b>			Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 11:49</b>		
Nitrogen, Ammonia (As N)	di	A	<b>0.18</b>	0.10		mg/L	1	08/21/2019 14:01

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-06
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#13	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: <b>SM 4500-CN C/E-1999</b>					Analyst: <b>ABG</b>	
<b>Total Cyanide</b>		Prep Method: <b>NA</b>					Prep Date/Time: <b>08/21/2019 13:12</b>	
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 17:11
		Method: <b>SW-846 9014</b>					Analyst: <b>ABG</b>	
<b>Free Cyanide</b>		Prep Method: <b>SW-846 9014</b>					Prep Date/Time: <b>08/21/2019 15:22</b>	
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 12:51
		Method: <b>SM 4500-O C-2001</b>					Analyst: <b>DAT</b>	
<b>Dissolved Oxygen</b>		Prep Method: <b>SM 4500-O C-2001</b>					Prep Date/Time: <b>08/21/2019 11:33</b>	
Oxygen, Dissolved	di	A	<b>7.1</b>	0.20	H	mg/L	1	08/21/2019 11:33
		Method: <b>EPA 350.1 Rev 2.0</b>					Analyst: <b>ABG</b>	
<b>Nitrogen, Ammonia as N</b>		Prep Method: <b>EPA 350.1 Rev 2.0</b>					Prep Date/Time: <b>08/21/2019 11:49</b>	
Nitrogen, Ammonia (As N)	di	A	<b>0.13</b>	0.10		mg/L	1	08/21/2019 14:03

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-07
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-8	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>ABG</b>		
<b>Total Cyanide</b>			Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 13:12</b>		
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 17:12
			Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>		
<b>Free Cyanide</b>			Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>		
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/21/2019 17:12
			Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>		
<b>Dissolved Oxygen</b>			Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>		
Oxygen, Dissolved	di	A	<b>8.5</b>	0.20	H	mg/L	1	08/21/2019 11:33
			Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>		
<b>Nitrogen, Ammonia as N</b>			Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 11:49</b>		
Nitrogen, Ammonia (As N)	di	A	<b>ND</b>	0.10		mg/L	1	08/21/2019 14:06

## Analytical Results

Date: Thursday, August 22, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-08
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-7	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: <b>SM 4500-CN C/E-1999</b>				Analyst: <b>ABG</b>	
<b>Total Cyanide</b>			Prep Method: <b>NA</b>				Prep Date/Time: <b>08/21/2019 13:12</b>	
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/21/2019 17:14
			Method: <b>SW-846 9014</b>				Analyst: <b>ABG</b>	
<b>Free Cyanide</b>			Prep Method: <b>SW-846 9014</b>				Prep Date/Time: <b>08/21/2019 15:22</b>	
Free Cyanide		A	ND	0.0062		mg/L	1	08/21/2019 17:14
			Method: <b>SM 4500-O C-2001</b>				Analyst: <b>DAT</b>	
<b>Dissolved Oxygen</b>			Prep Method: <b>SM 4500-O C-2001</b>				Prep Date/Time: <b>08/21/2019 11:33</b>	
Oxygen, Dissolved	di	A	8.6	0.20	H	mg/L	1	08/21/2019 11:33
			Method: <b>EPA 350.1 Rev 2.0</b>				Analyst: <b>ABG</b>	
<b>Nitrogen, Ammonia as N</b>			Prep Method: <b>EPA 350.1 Rev 2.0</b>				Prep Date/Time: <b>08/21/2019 11:49</b>	
Nitrogen, Ammonia (As N)	di	A	0.11	0.10		mg/L	1	08/21/2019 14:08

## Analytical Results

Date: Thursday, August 22, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-09
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-6	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
<b>Total Cyanide</b>		Method: <b>SM 4500-CN C/E-1999</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 13:12</b>		
		Prep Method: <b>NA</b>						
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/21/2019 17:19
<b>Free Cyanide</b>		Method: <b>SW-846 9014</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 15:22</b>		
		Prep Method: <b>SW-846 9014</b>						
Free Cyanide		A	ND	0.0062		mg/L	1	08/21/2019 17:19
<b>Dissolved Oxygen</b>		Method: <b>SM 4500-O C-2001</b>		Analyst: <b>DAT</b>		Prep Date/Time: <b>08/21/2019 11:33</b>		
		Prep Method: <b>SM 4500-O C-2001</b>						
Oxygen, Dissolved	di	A	8.6	0.20	H	mg/L	1	08/21/2019 11:33
<b>Nitrogen, Ammonia as N</b>		Method: <b>EPA 350.1 Rev 2.0</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 11:49</b>		
		Prep Method: <b>EPA 350.1 Rev 2.0</b>						
Nitrogen, Ammonia (As N)	di	A	0.15	0.10		mg/L	1	08/21/2019 14:11



## Analytical Results

Date: Thursday, August 22, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-10
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-5	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: <b>SM 4500-CN C/E-1999</b> Analyst: <b>ABG</b>								
Prep Method: <b>NA</b> Prep Date/Time: <b>08/21/2019 13:12</b>								
<b>Total Cyanide</b>								
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/21/2019 17:21
Method: <b>SW-846 9014</b> Analyst: <b>ABG</b>								
Prep Method: <b>SW-846 9014</b> Prep Date/Time: <b>08/21/2019 15:22</b>								
<b>Free Cyanide</b>								
Free Cyanide		A	ND	0.0062		mg/L	1	08/21/2019 17:21
Method: <b>SM 4500-O C-2001</b> Analyst: <b>DAT</b>								
Prep Method: <b>SM 4500-O C-2001</b> Prep Date/Time: <b>08/21/2019 11:33</b>								
<b>Dissolved Oxygen</b>								
Oxygen, Dissolved	di	A	8.6	0.20	H	mg/L	1	08/21/2019 11:33
Method: <b>EPA 350.1 Rev 2.0</b> Analyst: <b>ABG</b>								
Prep Method: <b>EPA 350.1 Rev 2.0</b> Prep Date/Time: <b>08/21/2019 11:49</b>								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	0.11	0.10		mg/L	1	08/21/2019 14:13

## Analytical Results

Date: Thursday, August 22, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-11
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	1	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: <b>SM 4500-CN C/E-1999</b> Analyst: <b>lachat4</b>								
Prep Method: <b>NA</b> Prep Date/Time: <b>08/21/2019 13:12</b>								
<b>Total Cyanide</b>								
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/21/2019 15:37
Method: <b>SW-846 9014</b> Analyst: <b>ABG</b>								
Prep Method: <b>SW-846 9014</b> Prep Date/Time: <b>08/21/2019 15:22</b>								
<b>Free Cyanide</b>								
Free Cyanide		A	ND	0.0062		mg/L	1	08/22/2019 12:53
Method: <b>SM 4500-O C-2001</b> Analyst: <b>DAT</b>								
Prep Method: <b>SM 4500-O C-2001</b> Prep Date/Time: <b>08/21/2019 11:33</b>								
<b>Dissolved Oxygen</b>								
Oxygen, Dissolved	di	A	6.5	0.20	H	mg/L	1	08/21/2019 11:33
Method: <b>EPA 350.1 Rev 2.0</b> Analyst: <b>ABG</b>								
Prep Method: <b>EPA 350.1 Rev 2.0</b> Prep Date/Time: <b>08/21/2019 11:49</b>								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	0.25	0.10		mg/L	1	08/21/2019 14:15

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-12
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	001	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
<b>Total Cyanide</b>				Method: <b>SM 4500-CN C/E-1999</b>		Analyst: <b>lachat4</b>		
				Prep Method: <b>NA</b>		Prep Date/Time: <b>08/21/2019 13:12</b>		
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:43
<b>Free Cyanide</b>				Method: <b>SW-846 9014</b>		Analyst: <b>ABG</b>		
				Prep Method: <b>SW-846 9014</b>		Prep Date/Time: <b>08/21/2019 15:22</b>		
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 12:55
<b>Dissolved Oxygen</b>				Method: <b>SM 4500-O C-2001</b>		Analyst: <b>DAT</b>		
				Prep Method: <b>SM 4500-O C-2001</b>		Prep Date/Time: <b>08/21/2019 11:33</b>		
Oxygen, Dissolved	di	A	<b>6.4</b>	0.20	H	mg/L	1	08/21/2019 11:33
<b>Nitrogen, Ammonia as N</b>				Method: <b>EPA 350.1 Rev 2.0</b>		Analyst: <b>ABG</b>		
				Prep Method: <b>EPA 350.1 Rev 2.0</b>		Prep Date/Time: <b>08/21/2019 11:49</b>		
Nitrogen, Ammonia (As N)	di	A	<b>0.36</b>	0.10		mg/L	1	08/21/2019 14:18

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-13
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	000	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>lachat4</b>		
			Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 13:12</b>		
<b>Total Cyanide</b>								
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:44
			Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>		
			Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>		
<b>Free Cyanide</b>								
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 12:56
			Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>		
			Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>		
<b>Dissolved Oxygen</b>								
Oxygen, Dissolved	di	A	<b>7.5</b>	0.20	H	mg/L	1	08/21/2019 11:33
			Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>		
			Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 11:49</b>		
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	<b>0.17</b>	0.10		mg/L	1	08/21/2019 14:20

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-14
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-4	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: <b>SM 4500-CN C/E-1999</b>					Analyst: <b>lachat4</b>	
<b>Total Cyanide</b>		Prep Method: <b>NA</b>					Prep Date/Time: <b>08/21/2019 13:12</b>	
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:49
		Method: <b>SW-846 9014</b>					Analyst: <b>ABG</b>	
<b>Free Cyanide</b>		Prep Method: <b>SW-846 9014</b>					Prep Date/Time: <b>08/21/2019 15:22</b>	
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/21/2019 16:40
		Method: <b>SM 4500-O C-2001</b>					Analyst: <b>DAT</b>	
<b>Dissolved Oxygen</b>		Prep Method: <b>SM 4500-O C-2001</b>					Prep Date/Time: <b>08/21/2019 11:33</b>	
Oxygen, Dissolved	di	A	<b>8.4</b>	0.20	H	mg/L	1	08/21/2019 11:33
		Method: <b>EPA 350.1 Rev 2.0</b>					Analyst: <b>ABG</b>	
<b>Nitrogen, Ammonia as N</b>		Prep Method: <b>EPA 350.1 Rev 2.0</b>					Prep Date/Time: <b>08/21/2019 11:49</b>	
Nitrogen, Ammonia (As N)	di	A	<b>ND</b>	0.10		mg/L	1	08/21/2019 14:27

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-15
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-3	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>lachat4</b>			
<b>Total Cyanide</b>		Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 10:45</b>			
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:31
		Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>			
<b>Free Cyanide</b>		Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>			
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/21/2019 16:42
		Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>			
<b>Dissolved Oxygen</b>		Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>			
Oxygen, Dissolved	di	A	<b>8.6</b>	0.20	H	mg/L	1	08/21/2019 11:33
		Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>			
<b>Nitrogen, Ammonia as N</b>		Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 11:49</b>			
Nitrogen, Ammonia (As N)	di	A	<b>0.11</b>	0.10		mg/L	1	08/21/2019 14:30

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-16
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-2	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: <b>SM 4500-CN C/E-1999</b> Analyst: <b>lachat4</b>								
Prep Method: <b>NA</b> Prep Date/Time: <b>08/21/2019 10:45</b>								
<b>Total Cyanide</b>								
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:12
Method: <b>SW-846 9014</b> Analyst: <b>ABG</b>								
Prep Method: <b>SW-846 9014</b> Prep Date/Time: <b>08/21/2019 15:22</b>								
<b>Free Cyanide</b>								
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/21/2019 16:44
Method: <b>SM 4500-O C-2001</b> Analyst: <b>DAT</b>								
Prep Method: <b>SM 4500-O C-2001</b> Prep Date/Time: <b>08/21/2019 11:33</b>								
<b>Dissolved Oxygen</b>								
Oxygen, Dissolved	di	A	<b>8.2</b>	0.20	H	mg/L	1	08/21/2019 11:33
Method: <b>EPA 350.1 Rev 2.0</b> Analyst: <b>ABG</b>								
Prep Method: <b>EPA 350.1 Rev 2.0</b> Prep Date/Time: <b>08/21/2019 11:49</b>								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	<b>0.13</b>	0.10		mg/L	1	08/21/2019 14:34

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-17
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	SL-1	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>lachat4</b>			
<b>Total Cyanide</b>		Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 10:45</b>			
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:14
		Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>			
<b>Free Cyanide</b>		Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>			
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/21/2019 16:45
		Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>			
<b>Dissolved Oxygen</b>		Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>			
Oxygen, Dissolved	di	A	<b>8.2</b>	0.20	H	mg/L	1	08/21/2019 11:33
		Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>			
<b>Nitrogen, Ammonia as N</b>		Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 11:49</b>			
Nitrogen, Ammonia (As N)	di	A	<b>0.18</b>	0.10		mg/L	1	08/21/2019 14:37



## Analytical Results

Date: Thursday, August 22, 2019

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-18
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#7	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: <b>SM 4500-CN C/E-1999</b> Analyst: <b>lachat4</b>								
Prep Method: <b>NA</b> Prep Date/Time: <b>08/21/2019 10:45</b>								
<b>Total Cyanide</b>								
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/21/2019 15:16
Method: <b>SW-846 9014</b> Analyst: <b>ABG</b>								
Prep Method: <b>SW-846 9014</b> Prep Date/Time: <b>08/21/2019 15:22</b>								
<b>Free Cyanide</b>								
Free Cyanide		A	ND	0.0062		mg/L	1	08/22/2019 12:58
Method: <b>SM 4500-O C-2001</b> Analyst: <b>DAT</b>								
Prep Method: <b>SM 4500-O C-2001</b> Prep Date/Time: <b>08/21/2019 11:33</b>								
<b>Dissolved Oxygen</b>								
Oxygen, Dissolved	di	A	5.2	0.20	H	mg/L	1	08/21/2019 11:33
Method: <b>EPA 350.1 Rev 2.0</b> Analyst: <b>ABG</b>								
Prep Method: <b>EPA 350.1 Rev 2.0</b> Prep Date/Time: <b>08/21/2019 11:49</b>								
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	0.23	0.10		mg/L	1	08/21/2019 14:39

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-19
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#6	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
<b>Total Cyanide</b>		Method: <b>SM 4500-CN C/E-1999</b>		Analyst: <b>lachat4</b>		Prep Date/Time: <b>08/21/2019 10:45</b>		
		Prep Method: <b>NA</b>						
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:17
<b>Free Cyanide</b>		Method: <b>SW-846 9014</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 15:22</b>		
		Prep Method: <b>SW-846 9014</b>						
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 13:43
<b>Dissolved Oxygen</b>		Method: <b>SM 4500-O C-2001</b>		Analyst: <b>DAT</b>		Prep Date/Time: <b>08/21/2019 11:33</b>		
		Prep Method: <b>SM 4500-O C-2001</b>						
Oxygen, Dissolved	di	A	<b>6.0</b>	0.20	H	mg/L	1	08/21/2019 11:33
<b>Nitrogen, Ammonia as N</b>		Method: <b>EPA 350.1 Rev 2.0</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 11:49</b>		
		Prep Method: <b>EPA 350.1 Rev 2.0</b>						
Nitrogen, Ammonia (As N)	di	A	<b>0.24</b>	0.10		mg/L	1	08/21/2019 14:42

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-20
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#5	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
<b>Total Cyanide</b>		Method: <b>SM 4500-CN C/E-1999</b>		Analyst: <b>lachat4</b>				
		Prep Method: <b>NA</b>		Prep Date/Time: <b>08/21/2019 10:45</b>				
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:19
<b>Free Cyanide</b>		Method: <b>SW-846 9014</b>		Analyst: <b>ABG</b>				
		Prep Method: <b>SW-846 9014</b>		Prep Date/Time: <b>08/21/2019 15:22</b>				
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 13:45
<b>Dissolved Oxygen</b>		Method: <b>SM 4500-O C-2001</b>		Analyst: <b>DAT</b>				
		Prep Method: <b>SM 4500-O C-2001</b>		Prep Date/Time: <b>08/21/2019 11:33</b>				
Oxygen, Dissolved	di	A	<b>6.2</b>	0.20	H	mg/L	1	08/21/2019 11:33
<b>Nitrogen, Ammonia as N</b>		Method: <b>EPA 350.1 Rev 2.0</b>		Analyst: <b>ABG</b>				
		Prep Method: <b>EPA 350.1 Rev 2.0</b>		Prep Date/Time: <b>08/21/2019 14:37</b>				
Nitrogen, Ammonia (As N)	di	A	<b>0.25</b>	0.10		mg/L	1	08/21/2019 16:11

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-21
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#4	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
<b>Total Cyanide</b>		Method: <b>SM 4500-CN C/E-1999</b>		Analyst: <b>lachat4</b>		Prep Date/Time: <b>08/21/2019 10:45</b>		
		Prep Method: <b>NA</b>						
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:21
<b>Free Cyanide</b>		Method: <b>SW-846 9014</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 15:22</b>		
		Prep Method: <b>SW-846 9014</b>						
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/21/2019 16:52
<b>Dissolved Oxygen</b>		Method: <b>SM 4500-O C-2001</b>		Analyst: <b>DAT</b>		Prep Date/Time: <b>08/21/2019 11:33</b>		
		Prep Method: <b>SM 4500-O C-2001</b>						
Oxygen, Dissolved	di	A	<b>6.4</b>	0.20	H	mg/L	1	08/21/2019 11:33
<b>Nitrogen, Ammonia as N</b>		Method: <b>EPA 350.1 Rev 2.0</b>		Analyst: <b>ABG</b>		Prep Date/Time: <b>08/21/2019 14:37</b>		
		Prep Method: <b>EPA 350.1 Rev 2.0</b>						
Nitrogen, Ammonia (As N)	di	A	<b>0.21</b>	0.10		mg/L	1	08/21/2019 16:14

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-22
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#3	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>lachat4</b>		
			Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 10:45</b>		
<b>Total Cyanide</b>								
Cyanide, Total	dij	A	<b>ND</b>	0.0050		mg/L	1	08/21/2019 15:32
			Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>		
			Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>		
<b>Free Cyanide</b>								
Free Cyanide		A	<b>ND</b>	0.0062		mg/L	1	08/22/2019 13:47
			Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>		
			Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>		
<b>Dissolved Oxygen</b>								
Oxygen, Dissolved	di	A	<b>6.5</b>	0.20	H	mg/L	1	08/21/2019 11:33
			Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>		
			Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 14:37</b>		
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	<b>0.27</b>	0.10		mg/L	1	08/21/2019 16:16

## Analytical Results

Date: *Thursday, August 22, 2019*

<b>Client:</b>	Arcelor Mittal USA, Inc.	<b>Work Order/ID:</b>	19H1314-23
<b>Client Project:</b>	NPDES Excursion	<b>Sampled:</b>	08/20/2019 0:35
<b>Client Sample ID:</b>	#2	<b>Received:</b>	08/21/2019 0:35
<b>Sample Description:</b>			
<b>Matrix:</b>	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: <b>SM 4500-CN C/E-1999</b>			Analyst: <b>lachat4</b>		
			Prep Method: <b>NA</b>			Prep Date/Time: <b>08/21/2019 10:45</b>		
<b>Total Cyanide</b>								
Cyanide, Total	dij	A	0.0050	0.0050		mg/L	1	08/21/2019 15:22
			Method: <b>SW-846 9014</b>			Analyst: <b>ABG</b>		
			Prep Method: <b>SW-846 9014</b>			Prep Date/Time: <b>08/21/2019 15:22</b>		
<b>Free Cyanide</b>								
Free Cyanide		A	ND	0.0062		mg/L	1	08/22/2019 13:48
			Method: <b>SM 4500-O C-2001</b>			Analyst: <b>DAT</b>		
			Prep Method: <b>SM 4500-O C-2001</b>			Prep Date/Time: <b>08/21/2019 11:33</b>		
<b>Dissolved Oxygen</b>								
Oxygen, Dissolved	di	A	6.4	0.20	H	mg/L	1	08/21/2019 11:33
			Method: <b>EPA 350.1 Rev 2.0</b>			Analyst: <b>ABG</b>		
			Prep Method: <b>EPA 350.1 Rev 2.0</b>			Prep Date/Time: <b>08/21/2019 14:37</b>		
<b>Nitrogen, Ammonia as N</b>								
Nitrogen, Ammonia (As N)	di	A	0.28	0.10		mg/L	1	08/21/2019 16:19

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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**  
**8/22/2019**

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**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

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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 &amp; Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

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**FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)****H:** Sample was analyzed past holding time.**RL:** Reporting Limit**RPD:** Relative Percent Difference

**Cooler Receipt Log**

Cooler ID: Default Cooler



Revised  
8/22/2019

**Comments**

No dates or times on sample containers

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**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?	No
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?)	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!

CHAIN OF CUSTODY RECORD



Number **152351**

Instructions on back

Lab Report Address

Invoice Address

Turnaround Time

TO BE COMPLETED BY MICROBAC

Client Name:

Client Name:

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

Temperature Upon Receipt (°C) **7.20.13.24**

Address:

Address:

(needed by)

Holding Time

City, State, Zip:

City, State, Zip:

Report Type

Samples Received on Ice?  Yes  No  N/A

Contact:

Contact:

Results Only  Level 1  Level 2  Level 3  Level 4  EDD

Custody Seals Intact?  Yes  No  N/A

Telephone No.:

Telephone No.:

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

Compliance Monitoring?  Yes  No

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

Agency/Program

Project: **Receiving Water Monitoring**

Location:

Sampler Phone No.: **219-644-2525**

Sampled by (PRINT): **Patrick Tolman**

Sampler Signature: *Patrick Tolman*

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 **	DO	NH4	Free Ca	Temp	PH	Additional Notes
8-20-19	8-20-19	10:19A	4	AQ	G	U, 2, 1, 4	X	X	X	X	X	19H1314
9		10:22					X	X	X	X	X	Temp 7.24-01
10		10:25					X	X	X	X	X	Temp 7.30-02
11		10:28					X	X	X	X	X	Temp 7.32-03
12		10:31					X	X	X	X	X	Temp 7.28-04
13		10:34					X	X	X	X	X	Temp 7.43-05
5L-8		10:42					X	X	X	X	X	Temp 7.70-06
5L-7		10:47					X	X	X	X	X	Temp 8.09-07
5L-6		10:51					X	X	X	X	X	Temp 7.98-08
5L-5		10:54					X	X	X	X	X	Temp 8.04-09
							X	X	X	X	X	Temp 8.01-10

Possible Hazard Identification:  Hazardous  Non-Hazardous  Radioactive

Sample Disposition:  Dispose as appropriate  Return  Archive

Comments: **when collected**

Relinquished By (signature): *Patrick Tolman* Date/Time: **8-20-19 15:03**

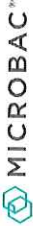
Received By (signature): *[Signature]* Date/Time: **8/21/19 0800**

Relinquished By (signature): *[Signature]* Date/Time: \_\_\_\_\_

Received By (signature): \_\_\_\_\_ Date/Time: \_\_\_\_\_

Relinquished By (signature): *[Signature]* Date/Time: \_\_\_\_\_

Received By (signature): \_\_\_\_\_ Date/Time: \_\_\_\_\_



CHAIN OF CUSTODY RECORD

Number **152350**

Instructions on back

Lab Report Address

Invoice Address

Turnaround Time

TO BE COMPLETED BY MICROBAC

Client Name:

Client Name:

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

Temperature Upon Receipt (°C)

Address:

Address:

Therm ID

City, State, Zip:

City, State, Zip:

(needed by)

Holding Time

Contact:

Contact:

Report Type

Samples Received on Ice?  Yes  No  N/A

Telephone No.:

Telephone No.:

Results Only  Level 1  Level 2  Level 3  Level 4  EDD

Custody Seals Intact?  Yes  No  N/A

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

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

Compliance Monitoring?  Yes  No

Agency/Program

Project: **Receiving Water Monitoring** Location:

PO No.:

Sampler Phone No.:

**219-644-7575**

Sampled by (PRINT): **Patrick Gulan**

Sampler Signature: *Patrick Gulan*

Sampler Phone No.:

**219-644-7575**

\* 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

Requested Analysis

Lab ID

Client Sample ID

Date Collected

Time Collected

No. of Containers

Matrix

Grab / Comp

Preservative Types \*\*

DO

NH4

Free Cn

Temp

19H1314

Temp

26.1

27.1

21.6

7.66

6.72

7.64

Additional Notes

IA

Temp

Temp

Possible Hazard Identification

Hazardous  Non-Hazardous  Radioactive

Sample Disposition

Dispose as appropriate  Return  Archive

Comments

when collected

Temp

pH

Reinquisitioned By (signature)

*Patrick Gulan*

Date/Time

8-20-19 15:03

Reinquisitioned By (signature)

*M. - Ocho*

Date/Time

8/21/19 0800

Reinquisitioned By (signature)

*M. - Ocho*

Date/Time

8/21/19 1000

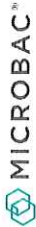
Reinquisitioned By (signature)

*M. - Ocho*

Date/Time

8/21/19 0800





CHAIN OF CUSTODY RECORD

Number **152365**  
Instructions on back

Lab Report Address: \_\_\_\_\_  
 Invoice Address: \_\_\_\_\_  
 Client Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City, State, Zip: \_\_\_\_\_  
 Contact: \_\_\_\_\_  
 Telephone No.: \_\_\_\_\_

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

Temperature Upon Receipt (°C)  
 Therm ID  
 Holding Time

Samples Received on Ice?  Yes  No  N/A  
 Custody Seals Intact?  Yes  No  N/A

Report Type  
 Results Only  Level 1  Level 2  Level 3  Level 4  EDD

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

Project: **Receiving Water Monitoring** Location: \_\_\_\_\_ PO No.: \_\_\_\_\_  
 Compliance Monitoring?  Yes  No  
 Agency/Program \_\_\_\_\_

Sampled by (PRINT): **Patrick Turner** Sampler Signature: *[Signature]* Sampler Phone No.: **219-644-7585**

\* 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 **	DP	NH2	Free Cu	Temp	Additional Notes
	SL-4	8-20-19	10:57	4	AQ	U, A, H					24.1	1911314 Temp
	SL-3		11:02								24.0	8.00-15 Temp
	SL-2		11:06								24.2	7.97-10 Temp
	SL-1		11:09								24.7	7.99 Temp
	#7		11:43								25.3	7.50-18 Temp
	6		11:49								25.4	7.61-19 Temp
	4		11:55								25.4	7.7-20 Temp
	5		12:00								25.4	7.68-21 Temp
	3		12:06								25.3	7.68-20 Temp
	2		12:14								25.9	7.69-22 Temp

Requested Analysis: \_\_\_\_\_

Possible Hazard Identification  
 Hazardous  Non-Hazardous  Radioactive

Sample Disposition  Dispose as appropriate  Return  Archive

Comments: **When Collected**  
**pH**  
**Temp**

Relinquished By (signature) *[Signature]* Date/Time **8-20-19 1503**  
 Received By (signature) *[Signature]* Date/Time **8/21/19 0800**