



September 11, 2019

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

Work Order No.: 19H1944

Re: Daily

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 20 sample(s) on 8/30/2019 10:50:00AM for the analyses presented in the following report as Work Order 19H1944.

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)

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WORK ORDER SAMPLE SUMMARY

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Daily
Lab Order: 19H1944

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1944-01	011-Composite	011	08/29/2019 05:40	8/30/2019 10:50:00AM
19H1944-02	011-Grab	011	08/29/2019 05:40	8/30/2019 10:50:00AM
19H1944-03	001-Composite	001	08/29/2019 06:00	8/30/2019 10:50:00AM
19H1944-04	001-Grab	001	08/29/2019 06:00	8/30/2019 10:50:00AM
19H1944-05	031-Grab	031	08/30/2019 06:23	8/30/2019 10:50:00AM
19H1944-06	Mixed Liquor-Grab	Mixed Liquor	08/30/2019 06:25	8/30/2019 10:50:00AM
19H1944-07	J-Box-Grab	J-Box	08/30/2019 06:21	8/30/2019 10:50:00AM
19H1944-08	WWII-Grab	WWII	08/30/2019 06:58	8/30/2019 10:50:00AM
19H1944-09	Coldwell-Grab	Coldwell	08/30/2019 07:15	8/30/2019 10:50:00AM
19H1944-10	RSB FT Overflow-Grab	RSB FT Overflow	08/30/2019 07:19	8/30/2019 10:50:00AM
19H1944-11	RSB FT Influent-Grab	RSB FT Influent	08/30/2019 07:20	8/30/2019 10:50:00AM
19H1944-12	999-Grab	999	08/30/2019 07:29	8/30/2019 10:50:00AM
19H1944-13	BFTC-Grab	BFTC	08/30/2019 07:45	8/30/2019 10:50:00AM
19H1944-14	002-Grab	002	08/29/2019 07:50	8/30/2019 10:50:00AM
19H1944-15	WAL-Grab	WAL	08/29/2019 08:01	8/30/2019 10:50:00AM
19H1944-16	CM1-Grab	CM1	08/30/2019 00:00	8/30/2019 10:50:00AM
19H1944-17	CM2-Grab	CM2	08/30/2019 00:00	8/30/2019 10:50:00AM
19H1944-18	CM6-Grab	CM6	08/30/2019 00:00	8/30/2019 10:50:00AM
19H1944-19	HM2-Grab	HM2	08/30/2019 00:00	8/30/2019 10:50:00AM
19H1944-20	HM3-Grab	HM3	08/30/2019 00:00	8/30/2019 10:50:00AM

Field Results

Client:	Arcelor Mittal USA, Inc.	Work Order:	19H1944
Client Project:	Daily		
Client Sample ID:	011-Grab	Work Order/ID:	19H1944-02
Sample Description:	011	Sampled:	08/29/2019 05:40
Matrix:	Aqueous	Received:	08/30/2019 10:50

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.9	pH Units

Client Sample ID:	001-Grab	Work Order/ID:	19H1944-04
Sample Description:	001	Sampled:	08/29/2019 06:00
Matrix:	Aqueous	Received:	08/30/2019 10:50

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.9	pH Units

Client Sample ID:	J-Box-Grab	Work Order/ID:	19H1944-07
Sample Description:	J-Box	Sampled:	08/30/2019 06:21
Matrix:	Aqueous	Received:	08/30/2019 10:50

Analyses	Result	Units
pH	8.5	pH Units

Client Sample ID:	RSB FT Overflow-Grab	Work Order/ID:	19H1944-10
Sample Description:	RSB FT Overflow	Sampled:	08/30/2019 07:19
Matrix:	Aqueous	Received:	08/30/2019 10:50

Analyses	Result	Units
pH	8.9	pH Units

Client Sample ID:	999-Grab	Work Order/ID:	19H1944-12
Sample Description:	999	Sampled:	08/30/2019 07:29
Matrix:	Aqueous	Received:	08/30/2019 10:50

Analyses	Result	Units
pH	8.2	pH Units

Client Sample ID:	002-Grab	Work Order/ID:	19H1944-14
Sample Description:	002	Sampled:	08/29/2019 07:50
Matrix:	Aqueous	Received:	08/30/2019 10:50

Analyses	Result	Units
pH	8.3	pH Units

Client Sample ID:	WAL-Grab	Work Order/ID:	19H1944-15
Sample Description:	WAL	Sampled:	08/29/2019 08:01
Matrix:	Aqueous	Received:	08/30/2019 10:50

Analyses	Result	Units
pH	8.9	pH Units

Field Results

Date: *Wednesday, September 11, 2019*

CASE NARRATIVE**Date:** *Wednesday, September 11, 2019***Client:** Arcelor Mittal USA, Inc.**Project:** Daily**Lab Order:** 19H1944

The Laboratory Control Sample failed the acceptance criteria for Biochemical Oxygen Demand with a recovery of 139% compared with the acceptance criteria of 85 - 115% recovery. Insufficient hold time remained for sample reanalyses. The LCS failure is associated with the following sample.

<u>Laboratory ID</u>	<u>Sample Name</u>
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19H1944-05	031-Grab
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Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-01
Client Project:	Daily	Sampled:	08/29/2019 5:40
Client Sample ID:	011-Composite	Received:	08/30/2019 10:50
Sample Description:	011		
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: 08/30/2019 12:09									
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/30/2019 14:56
Zinc	ejj	A	ND	0.0073	0.020	U	mg/L	1	08/30/2019 14:56
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
Total Cyanide									
Prep Date/Time: 08/30/2019 12:38									
Cyanide, Total	ejj	A	0.0027	0.0020	0.0050		mg/L	1	08/30/2019 14:58
			Method: SW-846 9014			Analyst: ABG			
Free Cyanide									
Prep Date/Time: 08/30/2019 11:42									
Free Cyanide		A	ND		0.0062		mg/L	1	08/30/2019 14:33
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N									
Prep Date/Time: 08/30/2019 13:16									
Nitrogen, Ammonia (As N)	ei	A	0.25		0.10		mg/L	1	08/30/2019 14:41
			Method: EPA 420.4 Rev 1.0			Analyst: ABG			
Total Phenolics									
Prep Date/Time: 08/30/2019 13:11									
Phenolics, Total Recoverable	ejj	A	0.025	0.0060	0.010		mg/L	1	08/31/2019 15:50
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	1.9	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-02
Client Project:	Daily	Sampled:	08/29/2019 5:40
Client Sample ID:	011-Grab	Received:	08/30/2019 10:50
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									
Prep Date/Time: 08/30/2019 07:54									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/30/2019 13:49

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-03
Client Project:	Daily	Sampled:	08/29/2019 6:00
Client Sample ID:	001-Composite	Received:	08/30/2019 10:50
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: 08/30/2019 12:09									
Copper	ejj	A	0.0021	0.0013	0.010	J	mg/L	1	08/30/2019 15:01
Lead	ejj	A	ND	0.0033	0.0075	U	mg/L	1	08/30/2019 15:01
Zinc	ejj	A	ND	0.0073	0.020	U	mg/L	1	08/30/2019 15:01
			Method: EPA 200.8 Rev 5.4			Analyst: BTM			
Total Recoverable Metals by ICP/MS									
Prep Date/Time: 09/08/2019 12:49									
Silver	ejj	A	ND		0.0010		mg/L	1	09/09/2019 13:08
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
Total Cyanide									
Prep Date/Time: 08/30/2019 12:38									
Cyanide, Total	ejj	A	0.0036	0.0020	0.0050		mg/L	1	08/30/2019 15:00
			Method: SW-846 9014			Analyst: ABG			
Free Cyanide									
Prep Date/Time: 08/30/2019 11:42									
Free Cyanide		A	ND		0.0062		mg/L	1	08/30/2019 14:34
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N									
Prep Date/Time: 08/30/2019 13:16									
Nitrogen, Ammonia (As N)	ei	A	0.36		0.10		mg/L	1	08/30/2019 14:43
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	2.2	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-03RE3
Client Project:	Daily	Sampled:	08/29/2019 6:00
Client Sample ID:	001-Composite	Received:	08/30/2019 10:50
Sample Description:	001		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 420.4 Rev 1.0			Analyst: ABG			
Total Phenolics									
Prep Date/Time: 09/04/2019 12:14									
Phenolics, Total Recoverable	ejj	A	ND	0.0060	0.010	U	mg/L	1	09/04/2019 15:11

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-04
Client Project:	Daily	Sampled:	08/29/2019 6:00
Client Sample ID:	001-Grab	Received:	08/30/2019 10:50
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									
Prep Date/Time: 08/30/2019 07:54									
Oil & Grease (HEM)	ejj	A	ND	1.4	5.0	U	mg/L	1	08/30/2019 13:49

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-05
Client Project:	Daily	Sampled:	08/30/2019 6:23
Client Sample ID:	031-Grab	Received:	08/30/2019 10:50
Sample Description:	031		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 5210 B-2001				Analyst: EF		
			Prep Date/Time: 08/30/2019 15:47						
Biochemical Oxygen Demand									
Biochemical Oxygen Demand	ejj	A	8.1	2.0	2.0		mg/L	1	09/04/2019 20:02
			Method: SM 2540 D-1997				Analyst: KMT		
			Prep Date/Time: 08/30/2019 11:25						
Total Suspended Solids									
Total Suspended Solids	ejj	A	4.0	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-06
Client Project:	Daily	Sampled:	08/30/2019 6:25
Client Sample ID:	Mixed Liquor-Grab	Received:	08/30/2019 10:50
Sample Description:	Mixed Liquor		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 F-1997				Analyst: DAT		
			Prep Date/Time: 08/30/2019 11:25						
Settleable Solids									
Settleable Solids	i	A	210	1.0	1.0		ml/L	1	08/30/2019 11:25
			Method: SM 2540 D-1997				Analyst: KMT		
			Prep Date/Time: 08/30/2019 11:25						
Total Suspended Solids									
Total Suspended Solids	ejj	A	2200	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-07
Client Project:	Daily	Sampled:	08/30/2019 6:21
Client Sample ID:	J-Box-Grab	Received:	08/30/2019 10:50
Sample Description:	J-Box		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Prep Date/Time: 08/30/2019 13:16									
Nitrogen, Ammonia as N									
Nitrogen, Ammonia (As N)	ei	A	0.29		0.10		mg/L	1	08/30/2019 14:48
			Method: EPA 420.4 Rev 1.0			Analyst: ABG			
Prep Date/Time: 08/30/2019 13:11									
Total Phenolics									
Phenolics, Total Recoverable	ejj	A	0.060	0.0060	0.010		mg/L	1	08/31/2019 15:57
			Method: SM 2540 D-1997			Analyst: KMT			
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids									
Total Suspended Solids	ejj	A	12	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-08
Client Project:	Daily	Sampled:	08/30/2019 6:58
Client Sample ID:	WWII-Grab	Received:	08/30/2019 10:50
Sample Description:	WWII		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
Prep Date/Time: 08/30/2019 12:38									
Total Cyanide									
Cyanide, Total	ejj	A	0.032	0.0020	0.0050		mg/L	1	08/30/2019 15:05

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-09
Client Project:	Daily	Sampled:	08/30/2019 7:15
Client Sample ID:	Coldwell-Grab	Received:	08/30/2019 10:50
Sample Description:	Coldwell		
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: 09/03/2019 08:57			
Lead	ejj	A	0.058	0.0033	0.0075		mg/L	1	09/03/2019 12:17
Zinc	ejj	A	0.32	0.0073	0.020		mg/L	1	09/03/2019 12:17
			Method: SM 4500-CN C/E-1999			Analyst: ABG			
Total Cyanide						Prep Date/Time: 08/30/2019 12:38			
Cyanide, Total	ejj	A	0.16	0.0020	0.0050		mg/L	1	08/30/2019 15:06
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N						Prep Date/Time: 08/30/2019 13:16			
Nitrogen, Ammonia (As N)	ei	A	66		1.0		mg/L	1	08/30/2019 14:46
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids						Prep Date/Time: 08/30/2019 11:25			
Total Suspended Solids	ejj	A	48	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: Wednesday, September 11, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-10
Client Project:	Daily	Sampled:	08/30/2019 7:19
Client Sample ID:	RSB FT Overflow-Grab	Received:	08/30/2019 10:50
Sample Description:	RSB FT Overflow		
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: 09/03/2019 08:57									
Lead	ejj	A	0.013	0.0033	0.0075		mg/L	1	09/03/2019 12:22
Zinc	ejj	A	0.045	0.0073	0.020		mg/L	1	09/03/2019 12:22
			Method: EPA 350.1 Rev 2.0			Analyst: ABG			
Nitrogen, Ammonia as N									
Prep Date/Time: 08/30/2019 13:16									
Nitrogen, Ammonia (As N)	ei	A	7.4		0.10		mg/L	1	08/30/2019 14:51
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	12	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-11
Client Project:	Daily	Sampled:	08/30/2019 7:20
Client Sample ID:	RSB FT Influent-Grab	Received:	08/30/2019 10:50
Sample Description:	RSB FT Influent		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
			Prep Date/Time: 08/30/2019 11:25						
Total Suspended Solids									
Total Suspended Solids	ejj	A	1700	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-12
Client Project:	Daily	Sampled:	08/30/2019 7:29
Client Sample ID:	999-Grab	Received:	08/30/2019 10:50
Sample Description:	999		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed		
			Method: SM 2540 D-1997				Analyst: KMT				
										Prep Date/Time: 08/30/2019 11:25	
Total Suspended Solids											
Total Suspended Solids	ejj	A	2.0	1.0	1.0		mg/L	1	08/30/2019 13:10		

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-13
Client Project:	Daily	Sampled:	08/30/2019 7:45
Client Sample ID:	BFTC-Grab	Received:	08/30/2019 10:50
Sample Description:	BFTC		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
			Prep Date/Time: 08/30/2019 11:25						
Total Suspended Solids									
Total Suspended Solids	ejj	A	33	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-15
Client Project:	Daily	Sampled:	08/29/2019 8:01
Client Sample ID:	WAL-Grab	Received:	08/30/2019 10:50
Sample Description:	WAL		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	11	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-16
Client Project:	Daily	Sampled:	08/30/2019 0:00
Client Sample ID:	CM1-Grab	Received:	08/30/2019 10:50
Sample Description:	CM1		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	12	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-17
Client Project:	Daily	Sampled:	08/30/2019 0:00
Client Sample ID:	CM2-Grab	Received:	08/30/2019 10:50
Sample Description:	CM2		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	19	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-18
Client Project:	Daily	Sampled:	08/30/2019 0:00
Client Sample ID:	CM6-Grab	Received:	08/30/2019 10:50
Sample Description:	CM6		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	10	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-19
Client Project:	Daily	Sampled:	08/30/2019 0:00
Client Sample ID:	HM2-Grab	Received:	08/30/2019 10:50
Sample Description:	HM2		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	32	1.0	1.0		mg/L	1	08/30/2019 13:10

Analytical Results

Date: *Wednesday, September 11, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1944-20
Client Project:	Daily	Sampled:	08/30/2019 0:00
Client Sample ID:	HM3-Grab	Received:	08/30/2019 10:50
Sample Description:	HM3		
Matrix:	Aqueous		

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: SM 2540 D-1997			Analyst: KMT			
Total Suspended Solids									
Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	ejj	A	19	1.0	1.0		mg/L	1	08/30/2019 13:10

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)

J:	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
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: 2.8°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

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

Chain of Custody

ArcelorMittal Burns Harbor/Microbac Labs

Friday

Lab Work No: 19H1944

* Date Obtained: 8-30-19

** Sample Date: 8-29-19

Location	Time	Sampler	Type	Preserved	Cooled	Containers			Parameters	Comments
						Type	Qty	Vol. (ml)		
011 **	05:40	CP	Comp	No	Yes	Glass	1	4000		01
			Grab	No	No	Plastic	1	125	pH	02
001 **	06:00		Comp	No	Yes	Glass	1	4000	NH3	03
			Grab	No	No	Plastic	1	125	pH	04
031 *	06:23		Grab	No	No	Plastic	1	1000	TSS	05
			Grab	No	No	Plastic	1	1000	BOD	↓
Mixed Liquor *	06:25		Grab	No	No	Plastic	1	2000	TSS, Settling	06
J-Box *	06:21		Grab	No	No	Glass	2	1000	NH3, Phenol, TSS, pH	07
DIW-131 *	NA		Grab	No	No	Plastic	1	125	pH	X
WWII *	06:58		Grab	No	No	Plastic	1	1000	Cn	08
Coldwell	07:15		Grab	No	No	Plastic	2	2000	NH3, CN, Pb, Zn, TSS	09
RSB FT Overflow *	07:19		Grab	No	No	Plastic	2	1000	NH3, pH, TSS, Pb, Zn	10
RSB FT Influent *	07:20		Grab	No	No	Plastic	1	500	TSS	11
BFTD *	5:0		Grab	No	No	Plastic	1	500	TSS	X
999 *	07:29		Grab	No	No	Plastic	1	500	TSS, pH	12
BFTC *	07:45		Grab	No	No	Plastic	1	500	TSS	13
002 **	07:50		Grab	No	No	Plastic	1	125	pH	14
WAL 1 **	08:01		Grab	No	No	Glass	1	1000	TSS, pH	15
WAL 2 **	5:0		Grab	No	No	Glass	1	1000	TSS, pH	X
WAL 3 **	08:01		Grab	No	No	Glass	1	1000	TSS, pH	X
SWTP *		***	Grab	No	No	Plastic	TS	1000	TSS	16-20

*** WPL is for previous sample date

**** Sample collected by Water Process personnel

No HM 1 + CM3

3.1
-0.3

2.8 OL

Relinquished by: CP

Date: 8-30-19

Time: 08:10

Received by: M. OBO

Date: 8/30/19

Time: 0810

Env 5x Rev. 14 07/01/16 (TEK)

19H1944 Carey Gadzala
ArcelorMittal - Burns Harbor, IN
Daily
08/30/2019



Microbac Laboratories, Inc. - Chicagoland Division
Residual Chlorine - METHOD SM 4500-Cl I-2000
Arcelor Mittal /Burns Harbor NPDES

Meter ID: B17 Meter Residual Chlorine Standard: A 9074
 Iodine Reagent: _____ Acid Reagent: _____

Sample ID	Residual Chlorine	Analyst	Date/Time of Analysis
Cal Std 1	0.02 mg/L	BAO	8/30/19 0800
Cal Std 2	0.05 mg/L		
Cal Std 3	0.1 mg/L		
Slope Blank	0.00		
LCS 0.02 mg/L	0.05		
011	0.00		
011 DUP	0.00		
001	0.00		
002	0.00		
003	0.00		
DUP 003	0.00		

Meter ID: _____ Residual Chlorine Standard: _____
 Iodine Reagent: _____ Acid Reagent: _____

Sample ID	Residual Chlorine	Analyst	Date/Time of Analysis
Cal Std 1	0.02 mg/L		
Cal Std 2	0.05 mg/L		
Cal Std 3	0.1 mg/L		
Slope			
LCS 0.02 mg/L			
011			
011 DUP			
001			
002			
003			
DUP			

Meter ID: _____ Residual Chlorine Standard: _____
 Iodine Reagent: _____ Acid Reagent: _____

Sample ID	Residual Chlorine	Analyst	Date/Time of Analysis
Cal Std 1	0.02 mg/L		
Cal Std 2	0.05 mg/L		
Cal Std 3	0.1 mg/L		
Slope			
LCS 0.02 mg/L			
011			
011 DUP			
001			
002			
003			
DUP			

