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September 11, 2019

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

Work Order No.: 19H1487

Re: Daily

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 22 sample(s) on 8/23/2019 10:00:00AM for the analyses presented in the following report as Work Order 19H1487.

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

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WORK ORDER SAMPLE SUMMARY

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Daily
Lab Order: 19H1487

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1487-01	011-Composite	011	08/22/2019 06:08	8/23/2019 10:00:00AM
19H1487-02	011-Grab	011	08/22/2019 06:08	8/23/2019 10:00:00AM
19H1487-03	001-Composite	001	08/22/2019 06:21	8/23/2019 10:00:00AM
19H1487-04	001-Grab	001	08/22/2019 06:21	8/23/2019 10:00:00AM
19H1487-05	031-Grab	031	08/23/2019 06:43	8/23/2019 10:00:00AM
19H1487-06	Mixed Liquor-Grab	Mixed Liquor	08/23/2019 06:45	8/23/2019 10:00:00AM
19H1487-07	J-Box-Grab	J-Box	08/23/2019 06:40	8/23/2019 10:00:00AM
19H1487-08	WWII-Grab	WWII	08/23/2019 07:00	8/23/2019 10:00:00AM
19H1487-09	Coldwell-Grab	Coldwell	08/23/2019 07:16	8/23/2019 10:00:00AM
19H1487-10	RSB FT Overflow-Grab	RSB FT Overflow	08/23/2019 07:21	8/23/2019 10:00:00AM
19H1487-11	RSB FT Influent-Grab	RSB FT Influent	08/23/2019 07:22	8/23/2019 10:00:00AM
19H1487-12	BFTD-Grab	BFTD	08/23/2019 07:44	8/23/2019 10:00:00AM
19H1487-13	999-Grab	999	08/23/2019 07:29	8/23/2019 10:00:00AM
19H1487-14	BFTC-Grab	BFTC	08/23/2019 07:48	8/23/2019 10:00:00AM
19H1487-15	002-Grab	002	08/22/2019 07:53	8/23/2019 10:00:00AM
19H1487-16	WAL-Grab	WAL	08/22/2019 08:04	8/23/2019 10:00:00AM
19H1487-17	CM1-Grab	CM1	08/23/2019 00:00	8/23/2019 10:00:00AM
19H1487-18	CM2-Grab	CM2	08/23/2019 00:00	8/23/2019 10:00:00AM
19H1487-19	CM6-Grab	CM6	08/23/2019 00:00	8/23/2019 10:00:00AM
19H1487-20	HM1-Grab	HM1	08/23/2019 00:00	8/23/2019 10:00:00AM
19H1487-21	HM2-Grab	HM2	08/23/2019 00:00	8/23/2019 10:00:00AM
19H1487-22	HM3-Grab	HM3	08/23/2019 00:00	8/23/2019 10:00:00AM

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Field Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Work Order: 19H1487

Client Sample ID: 011-Grab
Sample Description: 011
Matrix: Aqueous
Work Order/ID: 19H1487-02
Sampled: 08/22/2019 06:08
Received: 08/23/2019 10:00

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units

Client Sample ID: 001-Grab
Sample Description: 001
Matrix: Aqueous
Work Order/ID: 19H1487-04
Sampled: 08/22/2019 06:21
Received: 08/23/2019 10:00

Analyses	Result	Units
FLD_CL_TITR	0.00	mg/L
pH	7.8	pH Units

Client Sample ID: J-Box-Grab
Sample Description: J-Box
Matrix: Aqueous
Work Order/ID: 19H1487-07
Sampled: 08/23/2019 06:40
Received: 08/23/2019 10:00

Analyses	Result	Units
pH	8.5	pH Units

Client Sample ID: RSB FT Overflow-Grab
Sample Description: RSB FT Overflow
Matrix: Aqueous
Work Order/ID: 19H1487-10
Sampled: 08/23/2019 07:21
Received: 08/23/2019 10:00

Analyses	Result	Units
pH	9.0	pH Units

Client Sample ID: 999-Grab
Sample Description: 999
Matrix: Aqueous
Work Order/ID: 19H1487-13
Sampled: 08/23/2019 07:29
Received: 08/23/2019 10:00

Analyses	Result	Units
pH	8.1	pH Units

Client Sample ID: 002-Grab
Sample Description: 002
Matrix: Aqueous
Work Order/ID: 19H1487-15
Sampled: 08/22/2019 07:53
Received: 08/23/2019 10:00

Analyses	Result	Units
pH	8.3	pH Units

Client Sample ID: WAL-Grab
Sample Description: WAL
Matrix: Aqueous
Work Order/ID: 19H1487-16
Sampled: 08/22/2019 08:04
Received: 08/23/2019 10:00

Analyses	Result	Units
pH	9.1	pH Units

Field Results

Date: *Wednesday, September 11, 2019*

Microbac Laboratories, Inc.
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CASE NARRATIVE

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Daily
Lab Order: 19H1487

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

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: 011-Composite
Sample Description: 011
Matrix: Aqueous
Work Order/ID: 19H1487-01
Sampled: 08/22/2019 6:08
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **EPA 200.7 Rev 4.4**						Analyst: **BTM**
Total Recoverable Metals by ICP									Prep Date/Time: **08/23/2019 11:18**
Lead	eij	A	***0.0033***	0.0033	0.0075	J	mg/L	1	08/23/2019 13:46
Zinc	eij	A	***0.0096***	0.0073	0.020	J	mg/L	1	08/23/2019 13:46
			Method: **SM 4500-CN C/E-1999**						Analyst: **ABG**
Total Cyanide									Prep Date/Time: **08/23/2019 11:24**
Cyanide, Total	eij	A	***ND***	0.0020	0.0050	U	mg/L	1	08/23/2019 14:04
			Method: **SW-846 9014**						Analyst: **ABG**
Free Cyanide									Prep Date/Time: **08/23/2019 14:00**
Free Cyanide		A	***ND***		0.0062		mg/L	1	08/23/2019 16:04

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: 001-Composite
Sample Description: 001
Matrix: Aqueous
Work Order/ID: 19H1487-03
Sampled: 08/22/2019 6:21
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **EPA 200.7 Rev 4.4**						Analyst: **BTM**
Total Recoverable Metals by ICP									Prep Date/Time: **08/23/2019 11:18**
Copper	eij	A	***0.0043***	0.0013	0.010	J	mg/L	1	08/23/2019 13:51
Lead	eij	A	***ND***	0.0033	0.0075	U	mg/L	1	08/23/2019 13:51
Zinc	eij	A	***0.0073***	0.0073	0.020	J	mg/L	1	08/23/2019 13:51
			Method: **EPA 200.8 Rev 5.4**						Analyst: **BTM**
Total Recoverable Metals by ICP/MS									Prep Date/Time: **09/08/2019 12:49**
Silver	eij	A	***ND***		0.0010		mg/L	1	09/09/2019 12:18
			Method: **SM 4500-CN C/E-1999**						Analyst: **ABG**
Total Cyanide									Prep Date/Time: **08/23/2019 11:24**
Cyanide, Total	eij	A	***ND***	0.0020	0.0050	U	mg/L	1	08/23/2019 14:06
			Method: **SW-846 9014**						Analyst: **ABG**
Free Cyanide									Prep Date/Time: **08/23/2019 14:00**
Free Cyanide		A	***ND***		0.0062		mg/L	1	08/23/2019 15:54
			Method: **EPA 350.1 Rev 2.0**						Analyst: **ABG**
Nitrogen, Ammonia as N									Prep Date/Time: **08/23/2019 10:38**
Nitrogen, Ammonia (As N)	ei	A	***0.34***	0.054	0.10		mg/L	1	08/23/2019 13:28

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: 031-Grab
Sample Description: 031
Matrix: Aqueous
Work Order/ID: 19H1487-05
Sampled: 08/23/2019 6:43
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 5210 B-2001**						Analyst: **EF**
Biochemical Oxygen Demand									Prep Date/Time: **08/23/2019 16:27**
Biochemical Oxygen Demand	eij	A	***ND***	2.0	2.0	U	mg/L	1	08/28/2019 18:11
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***3.3***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: Mixed Liquor-Grab
Sample Description: Mixed Liquor
Matrix: Aqueous
Work Order/ID: 19H1487-06
Sampled: 08/23/2019 6:45
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 F-1997**						Analyst: **DAT**
Settleable Solids									Prep Date/Time: **08/23/2019 10:44**
Settleable Solids	i	A	***180***	1.0	1.0		ml/L	1	08/23/2019 10:44
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***1800***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: J-Box-Grab
Sample Description: J-Box
Matrix: Aqueous
Work Order/ID: 19H1487-07
Sampled: 08/23/2019 6:40
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **EPA 350.1 Rev 2.0**						Analyst: **ABG**
Nitrogen, Ammonia as N									Prep Date/Time: **08/23/2019 10:38**
Nitrogen, Ammonia (As N)	ei	A	***0.25***	0.054	0.10		mg/L	1	08/23/2019 13:40
			Method: **EPA 420.4 Rev 1.0**						Analyst: **ABG**
Total Phenolics									Prep Date/Time: **08/23/2019 11:30**
Phenolics, Total Recoverable	eij	A	***ND***	0.0060	0.010	U	mg/L	1	08/23/2019 14:26
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***14***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: WWII-Grab
Sample Description: WWII
Matrix: Aqueous
Work Order/ID: 19H1487-08
Sampled: 08/23/2019 7:00
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 4500-CN C/E-1999**						Analyst: **ABG**
Total Cyanide									Prep Date/Time: **08/23/2019 11:24**
Cyanide, Total	eij	A	***0.017***	0.0020	0.0050		mg/L	1	08/23/2019 14:08

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: Coldwell-Grab
Sample Description: Coldwell
Matrix: Aqueous
Work Order/ID: 19H1487-09
Sampled: 08/23/2019 7:16
Received: 08/23/2019 10:00

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: **08/26/2019 08:26**
Lead	eij	A	***0.10***	0.0033	0.0075		mg/L	1	08/27/2019 10:27
Zinc	eij	A	***0.63***	0.0073	0.020		mg/L	1	08/27/2019 10:27
			Method: **SM 4500-CN C/E-1999**						Analyst: **ABG**
Total Cyanide									Prep Date/Time: **08/23/2019 11:24**
Cyanide, Total	eij	A	***0.067***	0.0020	0.0050		mg/L	1	08/23/2019 14:09
			Method: **EPA 350.1 Rev 2.0**						Analyst: **ABG**
Nitrogen, Ammonia as N									Prep Date/Time: **08/23/2019 10:38**
Nitrogen, Ammonia (As N)	ei	A	***42***	0.54	1.0		mg/L	1	08/23/2019 13:43
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***63***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: RSB FT Overflow-Grab
Sample Description: RSB FT Overflow
Matrix: Aqueous
Work Order/ID: 19H1487-10
Sampled: 08/23/2019 7:21
Received: 08/23/2019 10:00

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: **08/26/2019 08:26**
Lead	eij	A	***0.044***	0.0033	0.0075		mg/L	1	08/27/2019 10:32
			Method: **EPA 350.1 Rev 2.0**						Analyst: **ABG**
Nitrogen, Ammonia as N									Prep Date/Time: **08/23/2019 10:38**
Nitrogen, Ammonia (As N)	ei	A	***6.3***	0.054	0.10		mg/L	1	08/23/2019 13:45
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***22***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: RSB FT Overflow-Grab
Sample Description: RSB FT Overflow
Matrix: Aqueous

Work Order/ID: 19H1487-10RE2
Sampled: 08/23/2019 7:21
Received: 08/23/2019 10:00

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: **08/26/2019 08:26**
Zinc	eij	A	***0.10***	0.0073	0.020		mg/L	1	08/28/2019 11:01

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: RSB FT Influent-Grab
Sample Description: RSB FT Influent
Matrix: Aqueous

Work Order/ID: 19H1487-11
Sampled: 08/23/2019 7:22
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***14000***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: BFTD-Grab
Sample Description: BFTD
Matrix: Aqueous

Work Order/ID: 19H1487-12
Sampled: 08/23/2019 7:44
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	**77**	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: 999-Grab
Sample Description: 999
Matrix: Aqueous
Work Order/ID: 19H1487-13
Sampled: 08/23/2019 7:29
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***3.7***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: BFTC-Grab
Sample Description: BFTC
Matrix: Aqueous

Work Order/ID: 19H1487-14
Sampled: 08/23/2019 7:48
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***32***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: WAL-Grab
Sample Description: WAL
Matrix: Aqueous

Work Order/ID: 19H1487-16
Sampled: 08/22/2019 8:04
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***10***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: CM1-Grab
Sample Description: CM1
Matrix: Aqueous
Work Order/ID: 19H1487-17
Sampled: 08/23/2019 0:00
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***14***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: CM2-Grab
Sample Description: CM2
Matrix: Aqueous

Work Order/ID: 19H1487-18
Sampled: 08/23/2019 0:00
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***11***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: CM6-Grab
Sample Description: CM6
Matrix: Aqueous

Work Order/ID: 19H1487-19
Sampled: 08/23/2019 0:00
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***10***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: HM1-Grab
Sample Description: HM1
Matrix: Aqueous
Work Order/ID: 19H1487-20
Sampled: 08/23/2019 0:00
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***16***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: HM2-Grab
Sample Description: HM2
Matrix: Aqueous

Work Order/ID: 19H1487-21
Sampled: 08/23/2019 0:00
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***14***	1.0	1.0		mg/L	1	08/23/2019 12:40

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Analytical Results

Date: *Wednesday, September 11, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: Daily
Client Sample ID: HM3-Grab
Sample Description: HM3
Matrix: Aqueous
Work Order/ID: 19H1487-22
Sampled: 08/23/2019 0:00
Received: 08/23/2019 10:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **SM 2540 D-1997**						Analyst: **KMT**
Total Suspended Solids									Prep Date/Time: **08/23/2019 11:23**
Total Suspended Solids	eij	A	***12***	1.0	1.0		mg/L	1	08/23/2019 12:40

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: °C

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

ArcelorMittal

Chain of Custody

ArcelorMittal Burns Harbor/Microbac Labs

Friday

Lab Work No: 19H1487

* Date Obtained 8-23-19
** Sample Date: 8-23-19

Location	Time	Sampler	Type	Preserved	Cooled	Containers			Parameters	Comments
						Type	Qty	Vol. (ml)		
011 **	06:08	CQ	Comp	No	Yes	Glass	1	4000		01
			Grab	No	No	Plastic	1	125	pH	02
001 **	06:21		Comp	No	Yes	Glass	1	4000	NH3	03
			Grab	No	No	Plastic	1	125	pH	04
031 *	06:43		Grab	No	No	Plastic	1	1000	TSS	05
			Grab	No	No	Plastic	1	1000	BOD	↓
Mixed Liquor *	06:45		Grab	No	No	Plastic	1	2000	TSS, Settling	06
J-Box *	06:49		Grab	No	No	Glass	2	1000	NH3, Phenol, TSS, pH	07
DIW-131 *			Grab	No	No	Plastic	1	125	pH	X
WWII *	07:00		Grab	No	No	Plastic	1	1000	Cn	08
Coldwell	07:16		Grab	No	No	Plastic	2	2000	NH3, CN, Pb, Zn, TSS	09
RSB FT Overflow *	07:21		Grab	No	No	Plastic	2	1000	NH3, pH, TSS, Pb, Zn	10
RSB FT Influent *	07:22		Grab	No	No	Plastic	1	500	TSS	11
BFTD *	07:44		Grab	No	No	Plastic	1	500	TSS	12
999 *	07:24		Grab	No	No	Plastic	1	500	TSS, pH	13
BFTC *	07:48		Grab	No	No	Plastic	1	500	TSS	14
002 **	07:53		Grab	No	No	Plastic	1	125	pH	15
WAL 1 **	08:04		Grab	No	No	Glass	1	1000	TSS, pH	16
WAL 2 **	5-D		Grab	No	No	Glass	1	1000	TSS, pH	X
WAL 3 **	08:04		Grab	No	No	Glass	1	1000	TSS, pH	X
SWTP *	6AM	****	Grab	No	No	Plastic	16	1000	TSS	17-22

*** WPL is for previous sample date
**** Sample collected by Water Process personnel

No CM 3

6.5

Relinquished by: C Quelin Date: 8-23-19 Time: 08:20

Received by: [illegible] Date: 8/23/19 Time: 0820

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

19H1487 Carey Gadzala
ArcelorMittal - Burns Harbor, IN
Daily
08/23/2019

Microbac Laboratories, Inc. - Chicagoland Division

Total Residual Chlorine - Amperometric Titration - SM Method 4500-Cl E - 2000
for Arcelor Mittal - Burns Harbor

Date/Time: 8/22/19 0750
Analyst: BAO
pH Paper Lot #: HJ626 Exp. Date 11/20
LCS ID: A9074

	STD ID / Lot #	Exp. Date
KI Solution:	146367	6/30/20
Acetate buffer:	146366	7/25/20
PAO Titrant:	145348	5/31/20

Sample ID	Sample Vol. (mL)	pH (pH Units)	Titrant Start (mL)	Titrant Stop (mL)	Titrant Vol. (mL)	Result (mg/L)
Blank	200	4.0	0.00	0.00	0.00	0.00
LCS		4.0		0.10	0.10	0.10
Outfall 001		4.0		0.00	0.00	0.00
Outfall 002		4.0		0.00	0.00	0.00
Outfall 003		4.0		0.00	0.00	0.00
Outfall 011		4.0		0.00	0.00	0.00
Outfall 011 Dup		4.0		0.00	0.00	0.00
Outfall 002 Dup	↓	4.0	↓	0.00	0.00	0.00

Date/Time: 8/23/19 0800
Analyst: BAO
pH Paper Lot #: HJ626 Exp. Date 11/20
LCS ID: A9074

	STD ID / Lot #	Exp. Date
KI Solution:	146367	6/30/20
Acetate buffer:	146366	7/25/20
PAO Titrant:	145348	5/31/20

Sample ID	Sample Vol. (ml)	pH (pH Units)	Titrant Start (ml)	Titrant Stop (ml)	Titrant Vol. (ml)	Result (mg/L)
Blank	200	4.0	0.00	0.00	0.00	0.00
LCS		4.0		0.07	0.07	0.07
Outfall 001		4.0		0.00	0.00	0.00
Outfall 002		4.0		0.00	0.00	0.00
Outfall 003		4.0		0.00	0.00	0.00
Outfall 011		4.0		0.00	0.00	0.00
Outfall 011 Dup		4.0		0.00	0.00	0.00
Outfall 003 Dup	↓	4.0	↓	0.00	0.00	0.00

revision: a_01_2016

Chlorine, mg/L = (Titrant Vol., mL) (200 mL) / (Sample Vol., mL)

Burns Harbor

Contractor timesheet

ArcelorMittal

Section 1

Date	Shift	Contractor company name	Contractor ref #/job #	Form number
8/23/19	Day	Microbac Labs		296627

ArcelorMittal Representative	PO number	Requisition number
Warren Howard		0799897

Department	Description of work	Percent job complete
E-D	Water Samples	

Section 2

Badge no.	Last name	First name	Craft	ST	OT	DT	Total
164042	Otto	Brian	TEC	1			1
			Total hours this sheet	1			1
			Previous hours				
			Total hours to date	1			1

Shift start time:

Shift end time:

Billable equipment/subcontractors/material

ID	Description
Qty	Hours/amt total
ID	Description
Qty	Hours/amt total
ID	Description
Qty	Hours/amt total
ID	Description
Qty	Hours/amt total
ID	Description
Qty	Hours/amt total
ID	Description
Qty	Hours/amt total

Job notes

Is this job capital work? Yes [ ] No [✓]

Section 3

Enter the total hours worked by each craft in the box to the right of each abbreviation. See reverse side of form for an explanation of the abbreviations.

ABW		CL		EL		GLZ		JAN		LTR		PF		TEC	1
BL		CO		EN		INS		LA		MW		PT		TST	
BM		CP		FN		IW		LIC		OE		SU		TM	

Section 4

I the undersigned attest that the hours recorded on the timesheet were actually worked by the contractor employee at the plant work location on the date listed above.

Contractor authorization signature	Job title
B. Otto (signature)	FLD Service Tech
Printed name	**Date**
B. Otto	8/23/19

Section 5

Work authorization permit #

307246

Section 6

I the undersigned have verified that contractor employees, hours, and date listed on the timesheet are accurate, complete/valid for the date and plant work location listed above.

ArcelorMittal authorization signature	Job title
Warren Howard (signature)	Supervisor
Printed name	**Date**
Warren Howard	8/23/19

White - Contractor Canary - Contractor Pink - AM Receiver Gold - AM Authorizer

Page ____ of ____

2013-08-BH-ContractorTimeSheet

307246

Daily work authorization form for all visiting workers

For each job, and before starting work at the job site, a contractor representative must meet face to face with the ArcelorMittal representative responsible for the work and discuss the work to be performed and any specific safety requirements.

ArcelorMittal

Section 1

Company name: Microbac Labs

Company contact/phone no: Carey Gadzala 769-8378

Location and project/job description: Enviro Bldg/ water Samples

The named contractor or work crew is cleared to perform the job described herein:

ArcelorMittal representative: Warren Howard

ArcelorMittal representative department: E-D

ArcelorMittal representative phone number: 4863

Date: 8/23/19

Cell:

Section 2

Clinic pickup point: 46

HIRAC-Lite	Yes	N/A	No		Yes	N/A	No
1) Are emergency evacuation areas identified and known?	✓			10) Could someone be caught in or between anything?			✓
2) Is there a current and valid isolation (LOTO) procedure?	✓			11) Could someone get hurt as a result of a fall from height?			✓
3) Will everyone apply a personal safety lock?	✓			12) Can something fall and/or strike me or someone else?			✓
4) Are there adjacent work crews exposed (including ArcelorMittal employees)?			✓	13) Is everyone properly trained for this job?	✓		
5) Are there potential hazards or high risk job steps?			✓	14) Are flags and derails in place if needed?	✓		
6) Do we have the correct tools for the job?	✓			15) Can we slip or trip on anything (including travel to and from the job)?			✓
7) Is additional PPE required?			✓	16) Have all affected people been notified?	✓		
8) Is there a potential for exposure (chemical, radiation, laser, temperature)?			✓	17) Can we strain or overexert ourselves?			✓
9) Is someone working on or near energized electrical equipment (motor control rooms, overhead power lines, etc.)?			✓	18) Has equipment been inspected prior to use? (tools, PPE, mobile equipment, etc.)	✓		

Other Hazards and Considerations for Discussion	Yes	N/A	No		Yes	N/A	No		Yes	N/A	No		Yes	N/A	No
19) Pneumatic air tools & lines			✓	24) Housekeeping			✓	29) Scaffold work			✓	33) Asbestos			✓
20) Vehicle / mob equip traffic	✓			25) Production hazards			✓	30) Explosives			✓	34) Noise			✓
21) Gas hazards-CO, CO2, etc.			✓	26) Material handling			✓	31) Barricades			✓	35) Lasers			✓
22) Hot process, metal, temp.			✓	27) Crane and rigging			✓	32) Radiation			✓	36) Sewers			✓
23) Pressurized / steam pipe			✓	28) Overhead work			✓								

Permits	Yes	N/A	No
37) Confined space			✓
38) Energized electrical work			✓
39) Excavation / drilling			✓
40) Hot work			✓
41) Other			

Section 3

Visiting worker name (print): B. Otto

Badge #: 164042

Hierarchy of Controls 1. Elimination 2. Substitution 3. Engineering 4. Administrative 5. PPE

Hazard #	Controls	Responsible Person	Hazard #	Controls	Responsible Person
		B. Otto			
15	Beware of uneven surfaces				
17	Proper lifting of cooler				
20	Vehicle movement				

My crew and I are familiar with the safety hazards/considerations for this job. We are prepared to perform the work in a safe "workmanship" like manner. I have reviewed these considerations with the ArcelorMittal representative named below.

Contractor or crew leader: B - Otto

ArcelorMittal representative: [signature]

Replacement rep/phone:

(Ensure form is fully completed prior to signing) Original to contractor, (1) copy to ArcelorMittal representative

Microbac Laboratories - Chicagoland Division

pH - METHOD 9045D

Arcelor Mittal /Burns Harbor NPDES

Sample ID		pH	Analyst	Date/Time of Analysis
Buffer ID: Meter ID:	4: 185909	7: 188312	10: 187680	
Calibration	(4) / (7) / (10)		BAO	8/23/19 0800
ICV	4 / (7) / 10	6.98		
Slope		98.2		
Lake 999		8.10		
Location 001		7.78		
Location 002		8.33		
Location 011		7.77		
WAL 1		9.08		
WAL 2	—	—		
SWTP J-Box		8.45		
DIW 131	—	—		
RSB		9.00		
Dup- JBox		8.43		
CCV		7.01		

Sample ID		pH	Analyst	Date/Time of Analysis
Buffer ID: Meter ID:	4:	7:	10:	
Calibration	4 / 7 / 10			
ICV	4 / 7 / 10			
Slope				
Lake 999				
Location 001				
Location 002				
Location 011				
WAL 1				
WAL 2				
SWTP J-Box				
DIW 131				
RSB				
Dup-				
CCV				