Work Order No.: 1910418



September 9, 2019

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

Re: Daily

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 22 sample(s) on 9/9/2019 11:00:00AM for the analyses presented in the following report as Work Order 19I0418.

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.

Carry Hadgala

Carey Gadzala Project Manager



Monday, September 9, 2019

Date:

WORK ORDER SAMPLE SUMMARY

Client: Arcelor Mittal USA, Inc.

Project: Daily Lab Order: 1910418

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
1910418-01	011-Composite	011	09/08/2019 06:00	9/9/2019 11:00:00AM
1910418-02	011-Grab	011	09/08/2019 06:00	9/9/2019 11:00:00AM
1910418-04	001-Composite	001	09/08/2019 06:20	9/9/2019 11:00:00AM
1910418-05	001-Grab	001	09/08/2019 06:20	9/9/2019 11:00:00AM
1910418-06	031-Grab	031	09/09/2019 06:38	9/9/2019 11:00:00AM
1910418-07	Mixed Liquor-Grab	Mixed Liquor	09/09/2019 06:42	9/9/2019 11:00:00AM
1910418-08	J-Box-Grab	J-Box	09/09/2019 06:36	9/9/2019 11:00:00AM
1910418-09	WWII-Grab	WWII	09/09/2019 07:19	9/9/2019 11:00:00AM
1910418-10	Coldwell-Grab	Coldwell	09/09/2019 07:33	9/9/2019 11:00:00AM
1910418-11	RSB FT Overflow-Grab	RSB FT Overflow	09/09/2019 07:58	9/9/2019 11:00:00AM
1910418-12	RSB FT Influent-Grab	RSB FT Influent	09/09/2019 07:39	9/9/2019 11:00:00AM
1910418-13	BFTD-Grab	BFTD	09/09/2019 07:57	9/9/2019 11:00:00AM
1910418-14	999-Grab	999	09/09/2019 07:45	9/9/2019 11:00:00AM
1910418-15	BFTC-Grab	BFTC	09/09/2019 08:05	9/9/2019 11:00:00AM
1910418-16	002-Grab	002	09/08/2019 08:09	9/9/2019 11:00:00AM
1910418-17	WAL-Grab	WAL	09/08/2019 08:19	9/9/2019 11:00:00AM
1910418-18	CM1-Grab	CM1	09/09/2019 00:00	9/9/2019 11:00:00AM
1910418-19	CM2-Grab	CM2	09/09/2019 00:00	9/9/2019 11:00:00AM
1910418-20	CM6-Grab	CM6	09/09/2019 00:00	9/9/2019 11:00:00AM
1910418-21	HM2-Grab	HM2	09/09/2019 00:00	9/9/2019 11:00:00AM
1910418-22	HM3-Grab	HM3	09/09/2019 00:00	9/9/2019 11:00:00AM



Field Results		Date: Monday,	September 9, 2019
Client: Client Project:	Arcelor Mittal USA, Inc. Daily	Work Order:	1910418
Client Sample ID:	011-Grab	Work Order/ID:	1910418-02
Sample Description:	011	Sampled:	09/08/2019 06:00
Matrix:	Aqueous	Received:	09/09/2019 11:00
Analyses		Result	Units
FLD_CL_TITR		0.00	mg/L
рН		7.71	pH Units
Client Sample ID:	001-Grab	Work Order/ID:	1910418-05
Sample Description:	001	Sampled:	09/08/2019 06:20
Matrix:	Aqueous	Received:	09/09/2019 11:00
Analyses		Result	Units
FLD_CL_TITR		0.00	mg/L
рН		7.8	pH Units
Client Sample ID:	J-Box-Grab	Work Order/ID:	1910418-08
Sample Description:	J-Box	Sampled:	09/09/2019 06:36
Matrix:	Aqueous	Received:	09/09/2019 11:00
Analyses		Result	Units
рН		8.4	pH Units
Client Sample ID:	RSB FT Overflow-Grab	Work Order/ID:	1910418-11
Sample Description:	RSB FT Overflow	Sampled:	09/09/2019 07:58
Matrix:	Aqueous	Received:	09/09/2019 11:00
Analyses		Result	Units
рН		8.5	pH Units
Client Sample ID:	999-Grab	Work Order/ID:	1910418-14
Sample Description:	999	Sampled:	09/09/2019 07:45
Matrix:	Aqueous	Received:	09/09/2019 11:00
Analyses		Result	Units
рН		7.7	pH Units
Client Sample ID:	002-Grab	Work Order/ID:	1910418-16
Sample Description:	002	Sampled:	09/08/2019 08:09
Matrix:	Aqueous	Received:	09/09/2019 11:00
Analyses		Result	Units
рН		8.0	pH Units
Client Sample ID:	WAL-Grab	Work Order/ID:	1910418-17
Sample Description:	WAL	Sampled:	09/08/2019 08:19
Matrix:	Aqueous	Received:	09/09/2019 11:00
Analyses		Result	Units
рН		9.0	pH Units



Partial 9/9/2019

Field Results

Date: Monday, September 9, 2019



CASE NARRATIVE Date: Monday, September 9, 2019

Client: Arcelor Mittal USA, Inc.

Project: Daily Lab Order: 1910418

The Matrix Spike and Matrix Spike Duplicate performed on the following sample failed the accuracy criteria for free cyanide with a low bias. The precision criteria were met. This data is indicative of a bias related to sample

matrix.

<u>Laboratory ID</u> <u>Sample Name</u> 1910418-01 <u>Sample Name</u> 011-Composite



Arcelor Mittal USA, Inc. Client:

Client Project: Daily

011-Composite 1910418-01 Client Sample ID: Work Order/ID:

Sample Description: 011							Sampl	ed:	09/08/2019 6:00
Matrix: Aqueous							Receiv	red:	09/09/2019 11:00
Analyses	Certs	ΑT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EF	PA 200.7 Re	v 4.4			An	alyst: RPL
Total Recoverable Metals by ICP								Prep Date/	Time:09/09/2019 12:22
Lead	eij	Α	ND	0.0033	0.0075	U	mg/L	1	09/09/2019 14:49
Zinc	eij	Α	0.017	0.0073	0.020		mg/L	1	09/09/2019 14:49
			Method: SN	/ 4500-CN	C/E-1999			An	alyst: ABG
Total Cyanide								Prep Date/	Time:09/09/2019 12:35
Cyanide, Total	eij	Α	ND	0.0020	0.0050	U	mg/L	1	09/09/2019 15:48
			Method: SV	V-846 9014				An	alyst: ABG
Free Cyanide								Prep Date/	Time:09/09/2019 15:28
Free Cyanide		Α	ND		0.0062		mg/L	1	09/09/2019 16:05
			Method: EF	PA 350.1 Re	v 2.0			An	alyst: ABG
Nitrogen, Ammonia as N								Prep Date/	Time:09/09/2019 13:27
Nitrogen, Ammonia (As N)	ei	Α	0.28	0.054	0.10		mg/L	1	09/09/2019 16:35
			Method: EF	PA 420.4 Re	v 1.0			An	alyst: ABG
Total Phenolics								Prep Date/	Time:09/09/2019 13:04
Phenolics, Total Recoverable	eij	Α	ND	0.0060	0.010	U	mg/L	1	09/09/2019 17:31
			Method: SN	/I 2540 D-19	997			An	alyst: KMT
Total Suspended Solids								Prep Date/	Time:09/09/2019 10:40
Total Suspended Solids	eij	Α	1.6	1.0	1.0		mg/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 011-Grab
 Work Order/ID:
 1910418-02

 Sample Description:
 011
 Sampled:
 09/08/2019
 6:00

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: E	PA 1664B				An	alyst: KMT
Oil & Grease (HEM) by SPE								Prep Date/	Time: 09/09/2019 07:27
Oil & Grease (HEM)	eij	А	ND	1.4	5.0	U	mg/L	1	09/09/2019 14:42



Analytical Results Monday, September 9, 2019 Date:

Arcelor Mittal USA, Inc. Client:

Client Project: Daily

001-Composite Client Sample ID: Work Order/ID: 1910418-04

Sample Description: 001							Samp	led:	09/08/2019 6:20
Matrix: Aqueous							Recei	ved:	09/09/2019 11:00
Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EI	PA 200.7 Re	v 4.4			Ar	alyst: RPL
Total Recoverable Metals by ICP								Prep Date/	Time:09/09/2019 12:22
Copper	eij	Α	ND	0.0013	0.010		mg/L	1	09/09/2019 14:54
Lead	eij	Α	ND	0.0033	0.0075	U	mg/L	1	09/09/2019 14:54
Zinc	eij	Α	ND	0.0073	0.020		mg/L	1	09/09/2019 14:54
			Method: SI	M 4500-CN	C/E-1999			Ar	alyst: ABG
Total Cyanide								Prep Date/	Time: 09/09/2019 12:35
Cyanide, Total	eij	Α	ND	0.0020	0.0050	U	mg/L	1	09/09/2019 15:49
			Method: S\	N-846 9014				Ar	alyst: ABG
Free Cyanide									Time: 09/09/2019 15:28
Free Cyanide		А	ND		0.0062		mg/L	1	09/09/2019 16:10
			Method: EI	PA 350.1 Re	v 2.0			Ar	alyst: ABG
Nitrogen, Ammonia as N								Prep Date/	Time:09/09/2019 13:27
Nitrogen, Ammonia (As N)	ei	Α	0.34	0.054	0.10		mg/L	1	09/09/2019 16:42
			Method: EI	PA 420.4 Re	v 1.0			Ar	alyst: ABG
Total Phenolics								Prep Date/	Time:09/09/2019 13:04
Phenolics, Total Recoverable	eij	А	ND	0.0060	0.010	U	mg/L	1	09/09/2019 17:33
			Method: SI	M 2540 D-19	997			Ar	alyst: KMT
Total Suspended Solids								Prep Date/	Time:09/09/2019 10:40
Total Suspended Solids	eij	Α	1.7	1.0	1.0		mg/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 001-Grab
 Work Order/ID:
 1910418-05

 Sample Description:
 001
 Sampled:
 09/08/2019 6:20

 Matrix:
 Aqueous
 Received:
 09/09/2019 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: E	PA 1664B				Ar	alyst: KMT
Oil & Grease (HEM) by SPE								Prep Date/	Time: 09/09/2019 07:27
Oil & Grease (HEM)	eij	Α	ND	1.4	5.0	U	mg/L	1	09/09/2019 14:42



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 031-Grab
 Work Order/ID:
 1910418-06

 Sample Description:
 031
 Sampled:
 09/09/2019
 6:38

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed		
	Method: SM 2540 D-1997								Analyst: KMT		
Total Suspended Solids								Prep Date/Ti	me: 09/09/2019 10:40		
Total Suspended Solids	eij	Α ;	3.1	1.0	1.0	m	ng/L	1	09/09/2019 13:50		



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 Mixed Liquor-Grab
 Work Order/ID:
 1910418-07

 Sample Description:
 Mixed Liquor
 Sampled:
 09/09/2019
 6:42

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual U	Inits	DF	Analyzed
			Method: S	M 2540 F-19	97			Ana	lyst: DAT
Settleable Solids								Prep Date/T	ime:09/09/2019 12:32
Settleable Solids	i	Α	160	1.0	1.0	ml/L		1	09/09/2019 12:32
			Method: S	M 2540 D-19	97			Ana	alyst: KMT
Total Suspended Solids								Prep Date/T	ime:09/09/2019 10:40
Total Suspended Solids	eij	Α	1600	1.0	1.0	mg/L		1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 J-Box-Grab
 Work Order/ID:
 1910418-08

 Sample Description:
 J-Box
 Sampled:
 09/09/2019
 6:36

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Matrix:	Aqueous							Recei	ved:	09/09/2019 11:00
Analyses	C	erts	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
				Method: E	PA 350.1 Re	v 2.0			An	alyst: ABG
Nitrogen, Ammonia as N									Prep Date/	Time: 09/09/2019 13:27
Nitrogen, Ammonia (As N)	ei	Α	0.47	0.054	0.10	n	ng/L	1	09/09/2019 16:45
				Method: E	PA 420.4 Re	v 1.0			An	alyst: ABG
Total Phenolics									Prep Date/	Time: 09/09/2019 13:04
Phenolics, Total Recovera	able	eij	Α	ND	0.0060	0.010	U n	ng/L	1	09/09/2019 17:38
				Method: S	M 2540 D-19	97			An	alyst: KMT
Total Suspended Solids									Prep Date/	Time: 09/09/2019 10:40
Total Suspended Solids		eij	Α	16	1.0	1.0	n	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 WWII-Grab
 Work Order/ID:
 1910418-09

 Sample Description:
 WWII
 Sampled:
 09/09/2019
 7:19

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
		Method: SM 4500-CN C/E-1999							lyst: ABG
Total Cyanide								Prep Date/Ti	me:09/09/2019 12:35
Cyanide, Total	eij	Α	0.022	0.0020	0.0050	mg/l	L	1	09/09/2019 15:51



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 Coldwell-Grab
 Work Order/ID:
 1910418-10

 Sample Description:
 Coldwell
 Sampled:
 09/09/2019
 7:33

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Matrix: Aqueous							Receiv	/ed:	09/09/2019 11:00
Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: S	M 4500-CN	C/E-1999			An	alyst: ABG
Total Cyanide								Prep Date/	Time: 09/09/2019 12:35
Cyanide, Total	eij	Α	0.024	0.0020	0.0050	n	ng/L	1	09/09/2019 15:53
			Method: E	PA 350.1 Re	ev 2.0			An	alyst: ABG
Nitrogen, Ammonia as N								Prep Date/	Time: 09/09/2019 13:27
Nitrogen, Ammonia (As N)	ei	Α	52	0.54	1.0	n	ng/L	1	09/09/2019 16:47
			Method: S	SM 2540 D-19	997			An	alyst: KMT
Total Suspended Solids								Prep Date/	Time: 09/09/2019 10:40
Total Suspended Solids	eij	Α	87	1.0	1.0	n	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 RSB FT Overflow-Grab
 Work Order/ID:
 19I0418-11

 Sample Description:
 RSB FT Overflow
 Sampled:
 09/09/2019
 7:58

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: E	PA 350.1 Re	v 2.0			Ana	alyst: ABG
Nitrogen, Ammonia as N								Prep Date/	Time: 09/09/2019 13:27
Nitrogen, Ammonia (As N)	ei	Α	7.3	0.054	0.10	mg/	L	1	09/09/2019 16:49
			Method: S	SM 2540 D-19	997			Ana	alyst: KMT
Total Suspended Solids								Prep Date/	Time: 09/09/2019 10:40
Total Suspended Solids	eij	А	10	1.0	1.0	mg/	L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 RSB FT Influent-Grab
 Work Order/ID:
 1910418-12

 Sample Description:
 RSB FT Influent
 Sampled:
 09/09/2019
 7:39

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	Analyst: KMT					
Total Suspended Solids								Prep Date/Ti	me:09/09/2019 10:40
Total Suspended Solids	eij	A	1200	1.0	1.0	r	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 BFTD-Grab
 Work Order/ID:
 1910418-13

 Sample Description:
 BFTD
 Sampled:
 09/09/2019
 7:57

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Analyst: KMT						
Total Suspended Solids								Prep Date/Ti	me:09/09/2019 10:40
Total Suspended Solids	eij	A	44	1.0	1.0	m	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 999-Grab
 1910418-14

 Sample Description:
 999
 Sampled:
 09/09/2019
 7:45

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	Analyst: KMT					
Total Suspended Solids								Prep Date/Ti	me: 09/09/2019 10:40
Total Suspended Solids	eij	Α ;	3.1	1.0	1.0	m	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 BFTC-Grab
 Work Order/ID:
 1910418-15

 Sample Description:
 BFTC
 Sampled:
 09/09/2019
 8:05

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	Analyst: KMT					
Total Suspended Solids								Prep Date/Ti	me: 09/09/2019 10:40
Total Suspended Solids	eij	A	48	1.0	1.0	m	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 WAL-Grab
 Work Order/ID:
 1910418-17

 Sample Description:
 WAL
 Sampled:
 09/08/2019
 8:19

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	Analyst: KMT					
Total Suspended Solids								Prep Date/Ti	me:09/09/2019 10:40
Total Suspended Solids	eij	Α	6.2	1.0	1.0	n	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 CM1-Grab
 Work Order/ID:
 1910418-18

 Sample Description:
 CM1
 Sampled:
 09/09/2019
 0:00

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Analyst: KMT						
Total Suspended Solids								Prep Date/Ti	me:09/09/2019 10:40
Total Suspended Solids	eij	Α :	11	1.0	1.0	m	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 CM2-Grab
 Work Order/ID:
 1910418-19

 Sample Description:
 CM2
 Sampled:
 09/09/2019
 0:00

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	Analyst: KMT					
Total Suspended Solids								Prep Date/Ti	me:09/09/2019 10:40
Total Suspended Solids	eij	Α	16	1.0	1.0	m	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 CM6-Grab
 Work Order/ID:
 1910418-20

 Sample Description:
 CM6
 Sampled:
 09/09/2019
 0:00

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: §	Analyst: KMT					
Total Suspended Solids								Prep Date/Ti	me:09/09/2019 10:40
Total Suspended Solids	eij	A	11	1.0	1.0	m	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 HM2-Grab
 Work Order/ID:
 1910418-21

 Sample Description:
 HM2
 Sampled:
 09/09/2019
 0:00

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Analyst: KMT						
Total Suspended Solids								Prep Date/Ti	me:09/09/2019 10:40
Total Suspended Solids	eij	Α :	13	1.0	1.0	m	ng/L	1	09/09/2019 13:50



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 HM3-Grab
 Work Order/ID:
 1910418-22

 Sample Description:
 HM3
 Sampled:
 09/09/2019
 0:00

 Matrix:
 Aqueous
 Received:
 09/09/2019
 11:00

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	Analyst: KMT					
Total Suspended Solids								Prep Date/Ti	me: 09/09/2019 10:40
Total Suspended Solids	eij	Α .	17	1.0	1.0	n	ng/L	1	09/09/2019 13:50

ANALYTE TYPES: (AT)

A,B = Target Analyte I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



9/9/2019

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

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

QCS = Quality Control Standard **CERTIFICATIONS (Certs)**

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

- d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)
- i Kansas Dept Health & Env. NELAP (#E-10397)
- J Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

MDL: Minimum Detection Limit

Reporting Limit RL:

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.

Partial

Cooler ID: Default Cooler



9/9/2019

Cooler Inspection Checklist		9/9/2019
Ice Present or not required?	Yes	
Shipping containers sealed or not required?	Yes	
Custody seals intact or not required?	Yes	
Chain of Custody (COC) Present?	Yes	
COC includes customer information?	Yes	
Relinquished and received signature on COC?	Yes	
Sample collector identified on COC?	Yes	
Sample type identified on COC?	Yes	
Correct type of Containers Received	Yes	
Correct number of containers listed on COC?	Yes	
Containers Intact?	Yes	
COC includes requested analyses?	Yes	
Enough sample volume for indicated tests received?	Yes	
Sample labels match COC (Name, Date & Time?)	Yes	
Samples arrived within hold time?	Yes	
Correct preservatives on COC or not required?	Yes	
Chemical preservations checked or not required?	Yes	
Preservation checks meet method requirements?	Yes	
VOA vials have zero headspace, or not recd.?	Yes	



Chain of Custody

ArcelorMittal Burns Harbor/Microbac Labs

Monday

Lab Work No: 1970418

* Date Obtained ** Sample Date:

Location	Time	Sampler	Туре	Preserved	Cooled	Containers			Doministra	
		00			Oddied	Туре	Qty	Vol. (ml)	Parameters	Comments
04444	Oh-		Comp	No	Yes	Glass	1	4000	NH3, TSS, Zn, Pb	01
011 **	100		Grab	No	No	Plastic	1	500	pH. Tot Res CI	02
	<u> </u>		Grab	Yes	No	Glass	2	1000	FOG (prepreserved)	V 03
001 **	00:20		Comp	No	Yes	Glass	1	4000	NH3	04
	10.20		Grab	No	No	Plastic	1	125	рН	05
031 *	11.20		Grab	No	Yes	Plastic	1	, 1000	TSS	06
	00.30		Grab	No	No	Plastic	1	1000	BOD	*
Mixed Liquor *	06:42		Grab	No	No	Plastic	1	2000	TSS, Settling	07
J-Box *	06:36		Grab	No	No	Glass	2	1000	NH3, Phenol, TSS, pH	රුදු
DIW-131 *	NA.		Grab	No	No	Plastic	1	125	pΗ	
WWII *	07:19		Grab	No	No	Plastic	1	1000	Cn	09
Coldwell *	07:33		Grab	No	No	Plastic	2	2000	NH3, CN, Pb, Zn, TSS	10
RSB FT Overflow *	07:58		Grab	No	No	Plastic	2	1000	NH3, pH, TSS, Pb, Zn	
RSB FT Influent *	07:34		Grab	No	No	Plastic	1	500	TSS	11
BFTD*	07:57		Grab	No	No	Plastic	1	500	TSS	/2
999 *	07:45		Grab	No	No	Plastic	1	500	TSS, pH	(4
BFTC*	08:05		Grab	No	No	Plastic	1 1	500	TSS	
002 **	08:09		Grab	No	No	Plastic	1	125	Ha	72
WAL 1 **	08:19		Grab	No I	No	Glass	1	1000		16
WAL 2 **	5-0		Grab	No	No	Glass	1 1	1000	TSS, pH	17
WAL 3 **	08:19		Grab	. No	No	Glass	1 1	1000	TSS, pH	25
SWTP*	50	***	Grab	No	No	Plastic			TSS, pH	<u> </u>
					110	าเลอแบ	45	1000	TSS	18 - 22

**** Sample collected by Water Process personnel

NO CM 3 HO HMI

Relinquished by:

Received by:

Time: 08:25

Time: 🗢& > S

Env 1x Rev. 14 07/01/16 (TEK)

Carey Gadzala ArcelorMittal - Burns Harbor, IN Daily 09/09/2019



Microbac Laboratories, Inc. - Chicagoland Division

Total Residual Chlorine - Amperometric Titration - SM Method 4500-CI E - 2000

for Arcelor Mittal - Burns Harbor

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

revision: a_01_2016

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Dup Dnb

Outfall 003 Outfall 011

Outfall 002 Outfall 001

SS

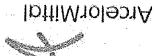
Outfall 💋 Outfall 011

0.00

Microbac Laboratories - Chicagoland Division PH - METHOD 9045D Arcelor Mittal /Burns Harbor NPDES

SizylsnA fo emiT\eftasis	taylsnA	Hq		Gl əlqms2
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0680 61 b/b	310		0100	Meter ID: Calibration
		28.1	01/(2)/ \$	ICA
		699		eqol2
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		8L'L		Location 001
		10.8		Location 002
		12.73		Location 011
		79.8		. ↓ JAW
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				CCA
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				RSB
·				DIM 131
				XOB-L 9TWS
·				S JAW
				MAL 1
				Location 011
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				Location 001
				Гяке 888
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				Meter ID:
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sisylsnA to əmiT\ətsU	łsylsnA -	Hq		Gl əlqms2



Chain of Custody

ArcelorMittal Burns Harbor/Microbac Labs

Daily During Zebra Muscle Treatment

Lab Work No:

80.0	total residual chlorine	009	. l	plastic	οN	ON	Grab		1	109 aud
00.0	total residual chlorine	909	l	plastic	οN	ON	Grab		94:20	600
00.0	total residual chlorine	009	ļ	plastic	οN	ON	Grab		60:80	
00.0	total residual chlorine	900	L L	plastic	οN	oN	Grab	12	22:00	. 100
Comments	Parameters	(lm) .loV	Gέγ	Sontainers eqvT	bəlooO	Preserved	Type	Sampler	əmiT	Location

** Sample Date:

* Date Obtained

* From composite sample bottle for that day

65 30 :emil Time: **35:25**

Relinquished by:

Env 66x Rev. 1 07/01/16(TEK)

Burns Harbor

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Contractor ti	Contractor timesheet									AIC	ArcelorMittal
Section 1 Date / / 9	Shift	Contractor company name		LABS	31	Contractor	Contractor ref #/job #	15	For	Form number	309695
ArcelorMittal Representative い) a じょん	Howal		PC	PO number					Requisition number 07 49 847	~ ~	
Department E	0-	Description of work	4 4 7 8	V	AMPLES						Percent job complete
Section 2 Badge no. Last name	Firs	First name	Craft	ST	Ь	<u>p</u>	Total	Billable equipmen	Billable equipment/subcontractors/material	Job notes] 81
188897 FACELS		DARKEN	TEC	١	1		_	Ω	Description		
4	20	The second second	(5)					Q£	Hours/amt total		
		10.7		200							
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אוווו ר אומו ר חוווה	×	Pre	Previous hours					ć		ls this job	Is this job capital work?
Shift end time		Total ho	Total hours to date	_			-	Oty	Hours/amt total	Yes	2
Section 3 Enter the t	Enter the total hours worked by each craft in the box to the right of each	craft in the box to th	ne right of ea	ch abbreviat	ion. See reve	erse side of f	orm for an exp	olanation o	abbreviation. See reverse side of form for an explanation of the abbreviations.		
38	i a	SNI SIN		A A		MW	I d		TST		
8	Z	M		CIC		OE.	. NS		TW		
Section 4 I the undersigned attest that	Section 4 I the undersigned attest that the hours recorded on the timesheet were actually worked by	timesheet were act	ually worked		Section 5 Work authorization	zation	Section 6	signed har	Section 6 I the undersigned have verified that contractor employees, hours, and date listed on the	employees, hours,	and date listed on the
Sontractor authorization signature	signature	Job title FLD SERVICE	11CE 7E	ŧ	# Jac		ArcelorMit	tal authori	ArcelorMittal authorization signature ArcelorMittal 2007 (2007)	Job title	rk location listed above.
2	TAREC	Date /4/19			3073	202	Printed name) }		Date	- I
. 1)	1			1		, ,			3	

307302 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.

20A7

Company name AICRABAC



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

ArcelorMittal representative

Yes N/A No Responsible Person å 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 N/A Yes 38) Energized electrical work 39) Excavation / drilling 15) Can we slip or trip on anything (including travel to and from the job)? 37) Confined space Date 18) Has equipment been inspected prior to use? (tools, PPE, mobile 40) Hot work Clinic pickup point_ 11) Could someone get hurt as a result of a fall from height? 41) Other Permits Controls 12) Can something fall and/or strike me or someone else? 5. PPE Could someone be caught in or between anything? Hierarchy of Controls 1. Elimination 2. Substitution 3. Engineering 4. Administrative 2 13) Is everyone properly trained for this job? 14) Are flags and derails in place if needed? 16) Have all affected people been notified? N/A 17) Can we strain or overexert ourselves? Yes Hazard# ArcelorMittal representative phone number_ 33) Asbestos 36) Sewers ArcelorMittal representative department 35) Lasers 34) Noise Responsible Person D. FARKIS equipment, etc.) Yes N/A No 29) Scaffold work Modera 8 ふとおかつつ 31) Barricades (30) Explosives 32) Radiation N/A Controls 3258 POL SAMPLES Yes Yes N/A No うまたの 9) Is someone working on or near energized electrical equipment (motor control 4) Are there adjacent work crews exposed (including ArcelorMittal employees)? 8) Is there a potential for exposure (chemical, radiation, laser, temperature)? 25) Production hazards 26) Material handling 27) Crane and rigging 28) Overhead work 24) Housekeeping Location and project/job description をNVIRS BLDら CARES GADZALA Hazard # 1 2) Is there a current and valid isolation (LOTO) procedure? 1) Are emergency evacuation areas identified and known? Other Hazards and Considerations for Discussion 5) Are there potential hazards or high risk job steps? 86857 Yes N/A No 3) Will everyone apply a personal safety lock? 6) Do we have the correct tools for the job? rooms, overhead power lines, etc.)? 19) Pneumatic air tools & lines 20) Vehicle / mob equip traffic 21) Gas hazards-CO, CO2, etc. 7) Is additional PPE required? 22) Hot process, metal, temp. 23) Pressurized / steam pipe Company contact/phone no Visiting worker name (print) HIRAC-Lite Section 2 Section 3

Replacement rep/phone ArcelorMittal representative tamp ArcelorMittal representative named below. Contractor or crew leader

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

Controlled by Maintenance Administration Dept. Arceिनिश्रिस्विनेधिति निर्मेण निर्मेश

2016-04-BH-DailyWorkAuthorization