

Work Order No.: 19H1944

September 11, 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 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.

Carry Hadgala

Carey Gadzala Project Manager



### **WORK ORDER SAMPLE SUMMARY**

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

Wednesday, September 11, 2019

Date:



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
рН		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
рН		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
рН		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
рН		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
рН		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



Date: Wednesday, September 11, 2019



Field Results



### 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> 19H1944-05 031-Grab



Arcelor Mittal USA, Inc. Client:

Daily **Client Project:** 

011-Composite Work Order/ID: 19H1944-01 **Client Sample ID:** 

Date:

Wednesday, September 11, 2019

**Sample Description:** 011 Sampled: 08/29/2019 5:40 N

Matrix: Aqueous							Recei	ved:	08/30/2019 10:50
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: 08/30/2019 12:09
Lead	eij	Α	ND	0.0033	0.0075	U	mg/L	1	08/30/2019 14:56
Zinc	eij	Α	ND	0.0073	0.020	U	mg/L	1	08/30/2019 14:56
			Method: SI	M 4500-CN	C/E-1999			Ana	alyst: ABG
Total Cyanide								Prep Date/	Time: 08/30/2019 12:38
Cyanide, Total	eij	Α	0.0027	0.0020	0.0050		mg/L	1	08/30/2019 14:58
			Method: S\	N-846 9014				Ana	alyst: ABG
Free Cyanide								Prep Date/	Time: 08/30/2019 11:42
Free Cyanide		Α	ND		0.0062		mg/L	1	08/30/2019 14:33
			Method: EF	PA 350.1 Re	v 2.0			Ana	alyst: ABG
Nitrogen, Ammonia as N								Prep Date/	Time: 08/30/2019 13:16
Nitrogen, Ammonia (As N)	ei	Α	0.25		0.10		mg/L	1	08/30/2019 14:41
			Method: EF	PA 420.4 Re	v 1.0			Ana	alyst: ABG
Total Phenolics								Prep Date/	Time: 08/30/2019 13:11
Phenolics, Total Recoverable	eij	Α	0.025	0.0060	0.010		mg/L	1	08/31/2019 15:50
			Method: SI	VI 2540 D-19	97			Ana	alyst: <b>KMT</b>
Total Suspended Solids								Prep Date/	Time: 08/30/2019 11:25
Total Suspended Solids	eij	Α	1.9	1.0	1.0		mg/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 011-Grab
 Work Order/ID:
 19H1944-02

 Sample Description:
 011
 Sampled:
 08/29/2019
 5:40

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
	Method: EPA 1664B							Anal	yst: <b>KMT</b>
Oil & Grease (HEM) by SPE								Prep Date/Ti	me:08/30/2019 07:54
Oil & Grease (HEM)	eij	Α	ND	1.4	5.0	U	mg/L	1	08/30/2019 13:49



Date: Wednesday, September 11, 2019

Arcelor Mittal USA, Inc. Client:

**Client Project:** Daily

001-Composite Work Order/ID: 19H1944-03 **Client Sample ID:** 001 08/29/2019 6:00 **Sample Description:** Sampled:

Δαιιροιις Doggivadi 08/30/2019 10:50

Matrix: Aqueous							Receiv	ved:	08/30/2019 10:50
Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: EI	PA 200.7 Re	ev 4.4			An	alyst: <b>RPL</b>
Total Recoverable Metals by ICP								Prep Date/	Time: 08/30/2019 12:09
Copper	eij	Α	0.0021	0.0013	0.010	J mọ	g/L	1	08/30/2019 15:01
Lead	eij	Α	ND	0.0033	0.0075	U mọ	g/L	1	08/30/2019 15:01
Zinc	eij	Α	ND	0.0073	0.020	U mọ	g/L	1	08/30/2019 15:01
			Method: El	PA 200.8 Re	ev 5.4			An	alyst: <b>BTM</b>
Total Recoverable Metals by ICP/MS	3							Prep Date/	Time: 09/08/2019 12:49
Silver	eij	Α	ND		0.0010	mg	g/L	1	09/09/2019 13:08
			Method: S	M 4500-CN	C/E-1999			An	alyst: ABG
Total Cyanide								Prep Date/	Time: 08/30/2019 12:38
Cyanide, Total	eij	Α	0.0036	0.0020	0.0050	mį	g/L	1	08/30/2019 15:00
			Method: S	W-846 9014				An	alyst: ABG
Free Cyanide								Prep Date/	Time: 08/30/2019 11:42
Free Cyanide		Α	ND		0.0062	mç	g/L	1	08/30/2019 14:34
			Method: E	PA 350.1 Re	ev 2.0			An	alyst: ABG
Nitrogen, Ammonia as N								Prep Date/	Time: 08/30/2019 13:16
Nitrogen, Ammonia (As N)	ei	Α	0.36		0.10	mę	g/L	1	08/30/2019 14:43
			Method: SI	M 2540 D-19	997			An	alyst: <b>KMT</b>
Total Suspended Solids								Prep Date/	Time: 08/30/2019 11:25
Total Suspended Solids	eij	А	2.2	1.0	1.0	mę	g/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 001-Composite
 Work Order/ID:
 19H1944-03RE3

 Sample Description:
 001
 Sampled:
 08/29/2019 6:00

 Matrix:
 Aqueous
 Received:
 08/30/2019 10:50

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



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 001-Grab
 Work Order/ID:
 19H1944-04

 Sample Description:
 001
 Sampled:
 08/29/2019
 6:00

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
	Method: EPA 1664B								lyst: <b>KMT</b>
Oil & Grease (HEM) by SPE								Prep Date/T	ime:08/30/2019 07:54
Oil & Grease (HEM)	eij	Α	ND	1.4	5.0	U	mg/L	1	08/30/2019 13:49



Date: Wednesday, September 11, 2019

Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 031-Grab
 Work Order/ID:
 19H1944-05

 Sample Description:
 031
 Sampled:
 08/30/2019
 6:23

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed	
			Method: S	M 5210 B-20	01			Ana	alyst: <b>EF</b>	
Biochemical Oxygen Demand Prep Date/Time: 08/30/2019 15:47										
Biochemical Oxygen Demand	eij	Α	8.1	2.0	2.0	n	ng/L	1	09/04/2019 20:02	
			Method: S	M 2540 D-19	97			Ana	alyst: <b>KMT</b>	
Total Suspended Solids Prep Date/Time: 08/30/2019 11:25										
Total Suspended Solids	eij	Α	4.0	1.0	1.0	n	ng/L	1	08/30/2019 13:10	



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 Mixed Liquor-Grab
 Work Order/ID:
 19H1944-06

 Sample Description:
 Mixed Liquor
 Sampled:
 08/30/2019
 6:25

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Date:

Wednesday, September 11, 2019

Analyses	Certs	AT	Result	MDL	RL	Qual Un	its DF	Analyzed	
			Method:	SM 2540 F-19	97		Д	nalyst: <b>DAT</b>	
Settleable Solids Prep Date/Time: 08/30/2019 11:25									
Settleable Solids	i	Α	210	1.0	1.0	ml/L	1	08/30/2019 11:25	
			Method:	SM 2540 D-19	97		Д	nalyst: <b>KMT</b>	
Fotal Suspended Solids Prep Date/Time: 08/30/2019 11:25									
Total Suspended Solids	eij	Α	2200	1.0	1.0	mg/L	1	08/30/2019 13:10	



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 J-Box-Grab
 Work Order/ID:
 19H1944-07

 Sample Description:
 J-Box
 Sampled:
 08/30/2019
 6:21

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Date:

Wednesday, September 11, 2019

Matrix: Aqueous						Rece	ivea:	06/30/2019 10.50
Analyses	Certs	ΑT	Result	MDL	RL	Qual Units	DF	Analyzed
			Method:	EPA 350.1 Re	ev 2.0		An	alyst: <b>ABG</b>
Nitrogen, Ammonia as N							Prep Date/	Time: 08/30/2019 13:16
Nitrogen, Ammonia (As N)	ei	Α	0.29		0.10	mg/L	1	08/30/2019 14:48
			Method:	EPA 420.4 Re	v 1.0		An	alyst: ABG
Total Phenolics							Prep Date/	Time: 08/30/2019 13:11
Phenolics, Total Recoverable	eij	Α	0.060	0.0060	0.010	mg/L	1	08/31/2019 15:57
			Method:	SM 2540 D-19	997		An	alyst: <b>KMT</b>
Total Suspended Solids							Prep Date/	Time: 08/30/2019 11:25
Total Suspended Solids	eij	Α	12	1.0	1.0	mg/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 WWII-Grab
 Work Order/ID:
 19H1944-08

 Sample Description:
 WWII
 Sampled:
 08/30/2019
 6:58

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed		
	Method: SM 4500-CN C/E-1999								Analyst: ABG		
Total Cyanide								Prep Date/Ti	me: <b>08/30/2019 12:38</b>		
Cyanide, Total	eij	Α	0.032	0.0020	0.0050	mg/l	L	1	08/30/2019 15:05		



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

Total Suspended Solids

 Client Sample ID:
 Coldwell-Grab
 Work Order/ID:
 19H1944-09

 Sample Description:
 Coldwell
 Sampled:
 08/30/2019
 7:15

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Date:

Wednesday, September 11, 2019

08/30/2019 13:10

Campic 2000mption								00.00.20.0
Matrix: Aqueous						Recei	ved:	08/30/2019 10:5
Analyses	Certs	AT	Result	MDL	RL	Qual Units	DF	Analyzed
			Method: I	EPA 200.7 Re	ev 4.4		Ar	nalyst: <b>RPL</b>
Total Recoverable Metals by ICP							Prep Date	Time: 09/03/2019 08:57
Lead	eij	Α	0.058	0.0033	0.0075	mg/L	1	09/03/2019 12:17
Zinc	eij	А	0.32	0.0073	0.020	mg/L	1	09/03/2019 12:17
			Method:	SM 4500-CN	C/E-1999		Ar	nalyst: ABG
Total Cyanide							Prep Date	Time: 08/30/2019 12:38
Cyanide, Total	eij	А	0.16	0.0020	0.0050	mg/L	1	08/30/2019 15:06
			Method:	EPA 350.1 Re	ev 2.0		Ar	nalyst: ABG
Nitrogen, Ammonia as N							Prep Date	Time: 08/30/2019 13:16
Nitrogen, Ammonia (As N)	ei	А	66		1.0	mg/L	1	08/30/2019 14:46
			Method:	SM 2540 D-19	997		Ar	nalyst: <b>KMT</b>
Total Suspended Solids							Prep Date	Time: 08/30/2019 11:25

1.0

1.0

mg/L

A 48

eij



Date: Wednesday, September 11, 2019

Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 RSB FT Overflow-Grab
 Work Order/ID:
 19H1944-10

 Sample Description:
 RSB FT Overflow
 Sampled:
 08/30/2019
 7:19

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

A	nalyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
				Method: E	PA 200.7 Re	v 4.4			An	alyst: <b>RPL</b>
Total Recoverable Metals by ICP Prep Date/Time:09/03/2019 08:57										
	Lead	eij	Α	0.013	0.0033	0.0075	r	ng/L	1	09/03/2019 12:22
	Zinc	eij	Α	0.045	0.0073	0.020	r	ng/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
 eij
 A
 12
 1.0
 1.0
 mg/L
 1
 08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

Client Sample ID:RSB FT Influent-GrabWork Order/ID:19H1944-11Sample Description:RSB FT InfluentSampled:08/30/20197:20Matrix:AqueousReceived:08/30/201910:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: §	SM 2540 D-1	997			Ana	alyst: <b>KMT</b>
Total Suspended Solids								Prep Date/1	īme: <b>08/30/2019 11:25</b>
Total Suspended Solids	eij	Α	1700	1.0	1.0	mg/	′L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 999-Grab
 19H1944-12

 Sample Description:
 999
 Sampled:
 08/30/2019
 7:29

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Anal	yst: <b>KMT</b>
Total Suspended Solids								Prep Date/Ti	me:08/30/2019 11:25
Total Suspended Solids	eij	A	2.0	1.0	1.0	n	ng/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 BFTC-Grab
 Work Order/ID:
 19H1944-13

 Sample Description:
 BFTC
 Sampled:
 08/30/2019
 7:45

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Ana	alyst: <b>KMT</b>
Total Suspended Solids								Prep Date/T	ime: 08/30/2019 11:25
Total Suspended Solids	eij	Α	33	1.0	1.0	mg/L	-	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 WAL-Grab
 Work Order/ID:
 19H1944-15

 Sample Description:
 WAL
 Sampled:
 08/29/2019
 8:01

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Anal	yst: <b>KMT</b>
Total Suspended Solids								Prep Date/Ti	me:08/30/2019 11:25
Total Suspended Solids	eij	Α :	11	1.0	1.0	n	ng/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 CM1-Grab
 Work Order/ID:
 19H1944-16

 Sample Description:
 CM1
 Sampled:
 08/30/2019
 0:00

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Anal	lyst: <b>KMT</b>
Total Suspended Solids								Prep Date/Ti	me:08/30/2019 11:25
Total Suspended Solids	eij	Α	12	1.0	1.0	n	ng/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 CM2-Grab
 Work Order/ID:
 19H1944-17

 Sample Description:
 CM2
 Sampled:
 08/30/2019
 0:00

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Anal	yst: <b>KMT</b>
Total Suspended Solids								Prep Date/Ti	me:08/30/2019 11:25
Total Suspended Solids	eij	Α	19	1.0	1.0	m	ng/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 CM6-Grab
 Work Order/ID:
 19H1944-18

 Sample Description:
 CM6
 Sampled:
 08/30/2019
 0:00

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Anal	yst: <b>KMT</b>
Total Suspended Solids								Prep Date/Ti	me:08/30/2019 11:25
Total Suspended Solids	eij	A	10	1.0	1.0	m	ng/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 HM2-Grab
 Work Order/ID:
 19H1944-19

 Sample Description:
 HM2
 Sampled:
 08/30/2019
 0:00

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	ΑT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Ar	nalyst: <b>KMT</b>
Total Suspended Solids								Prep Date	Time: 08/30/2019 11:25
Total Suspended Solids	eij	Α	32	1.0	1.0	m	g/L	1	08/30/2019 13:10



Client: Arcelor Mittal USA, Inc.

Client Project: Daily

 Client Sample ID:
 HM3-Grab
 Work Order/ID:
 19H1944-20

 Sample Description:
 HM3
 Sampled:
 08/30/2019
 0:00

 Matrix:
 Aqueous
 Received:
 08/30/2019
 10:50

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method:	SM 2540 D-1	997			Ar	nalyst: <b>KMT</b>
Total Suspended Solids								Prep Date	Time: 08/30/2019 11:25
Total Suspended Solids	eij	Α	19	1.0	1.0	m	g/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

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)

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



### **Cooler Inspection Checklist**

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



# **Chain of Custody**

ArcelorMittal Burns Harbor/Microbac Labs

Friday

Lab Work No: 19 H 19 44

\* Date Obtained 8-30-19 \*\* Sample Date: 8-29-19

Location	Time	Sampler	Type	Preserved	Cooled	Containers			D	
moodingii			1 ype	i reserveu	Cooleu	Туре	Qty	Vol. (ml)	Parameters	Comments
011 **	05:40	00	Comp	No	Yes	Glass	1	4000		01
V	010.40		Grab	No	No	Plastic	1	125	рН	02
001 **	06:00		Comp	No	Yes	Glass	1	4000	NH3	03
	00100		Grab	No I	No	Plastic	1	125	рН	04
031 *	06:23		Grab	No	No	Plastic	1	1000	TSS	05
			Grab	No	No	Plastic	1	1000	BOD	V
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 *	JA-		Gráb	No	No	Plastic	1	125	рН	<b>-</b>
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 *	5-10		Grab	No	No	Plastic	1	500	TSS	<b>S</b>
999 *	07:29		Grab	No	No	Plastic	1	500	TSS, pH	12
BFTC *	07:45		Grab	No	No	Plastic	1	500	TSS	13
002 **	02:50		Grab	No	No	Plastic	1	125	Ha	14
WAL 1 **	08:01		Grab	No	No	Glass	1	1000	TSS, pH	15
WAL 2 **	5-17		Grab	No	No	Glass	1	1000	TSS, pH	<del>-                                    </del>
WAL 3 **	08:01		Grab	No	No	Glass	1	1000	TSS, pH	-53
SWTP *		***	Grab	No	No	Plastic	15	1000	TSS	16-20

\*\*\* WPL is for previous sample date

\*\*\*\* Sample collected by Water Process personnel

No HM 1+CM3

-0.3 2.8 OL

Relinquished by:

Received by:

Date: 8-30-19

Date: 8/30/19

Time: 08:10

Time: 8810

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

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



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

Buffer ID:  Meter ID:	4: 185909	7: 10:0212	Analyst	I Date/ Time of Analysis
	1 1 3 9 172 7	1/:	10:	Date/Time of Analysis
Calibratian	107107	188312	10: 187680	
Calibration	(A)(7)/(a)	***	BAO	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
CV	4/17 10	7.00	1	8/29/19 0800
Slope			<del>                                      </del>	
ake 999		100.3		
ocation 001		7,73		
ocation 002		8.32		
ocation 011	· · · · · · · · · · · · · · · · · · ·	7,70		
VAL 1	<del></del>	1.70		
VAL 2			<del></del>	
WTP J-Box		8.59		
IW 131		1		
SB		9.03		
up- 00 Z				
CV	<u> </u>	8.33	-	
		7,01	<u> </u>	
	· Y-2			

Sample ID		рН		
Buffer ID:	4: 0.00	7.	Analyst	Date/Time of Analysis
Meter ID:	4. 185 909	188312	10: 187680	
Calibration	@10160	, ,	BAO	
CV	4/0/10	7.00	DHO	8/30/19 0800
Зюре				
ako 999		101.4		
ocation 001		7.92		
₌ocation 002		8.31		
ocation 011		7.93		
VAL 1		8.94		
VAL 2	<u> </u>	<u> </u>		
WTP J-Box		8.53		
DIW 131		0.77		
ISIa		O C.I		
Pup- 017		8.86		
ĈV .		7.93		·
WWW. Control Commencer Control		7.01	V	
SPECIAL CONTRACTOR CON				
(2005)49(1)				
#8000000000000000000000000000000000000			·	
Witness Control of the Control of th				

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

Meter ID: 1316	····	dual Chlorine Standard: A 90	74
lodine Reagent: _	Acid Acid	Reagent:	
Sample(D)	Residual Chlorine	Analyst 1	Date/Time of Analysis 2
Cal Std 1	0. <del>02 mg/L -</del>	BAO	8/30/19 0800
Gal Std 2	0.05 mg/L		
Cal Std 3	0.1 mg/L		
Stope Black	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	1 4	<u> </u>

Meter ID:	F	Residual Chlorine Standard:	
lodine Reagent:	Α	cid Reagent:	 
Sample ID	Residual Chlorine	Analyst	Date/Einerof Arralysis
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: _	
lodine Reagent:		Acid Reagent:	<del></del>
Sample ID.	Residual Chlorine	Alpalyst. a	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			

# Burns Harbor

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ArcelorMittal	ber 296649	27	Percent job complete	Job notes													Is this job capital work?	Yes					byees, hours, and date listed on the and plant work location listed above.	Job title	Date 8/36 1/9	0
	Form number	Requisition number	, v	Billable equipment/subcontractors/material	Description	Hours/amt total	Description		Hours/amt total	Description		Hours/amt total	ion of the abbreviations.	TET	TW L	1 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	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.	uthorization signature	1	Page of						
	Contractor ref #/job #			Billab   Total equip	<u> </u>	Oty	0	74-	Oty	Ω	Oth	Ω	Aşo Oçto	Ω	Oty.	0		Oty	form for an explanati	TA D	SU	Section 6	timesheet are ac	ArcelorMittal authorization	Printed name	
		×	ples	то		Į.	Fis												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.	MW/	OE	Section 5	permit #		307260	
	bac Labs	PO number	Sam	Craft ST.	TEC (											Total hours this sheet	Previous hours	Total hours to date	he right of each abbrevia	NG T	SI		worked by	Service Tech	67	orizer
	Contractor company name	al	Description of work	First name	Brian			The state of the s					101			Total hou	Pr	Total h	each craft in the box to t	INS	M	or the timesheet were ac	on on the date listed abov		Date 8/30/	Gold - AM Aut
timesheet	Shift	y Han			P														total hours worked by			at the hours recorded o	at the plant work locatio	ignature		Canary - Contractor Pink - AM Receiver
Burns Harbor Contractor timesheet	Date $\sqrt{3}/3$ / 19	ArcelorMittal Representative	Department F - 0	Section 2 Badge no. Last name	164042 OFF-								1			Shift start time	מווור מימו ר מוווים	Shift end time	Section 3 Enter the ABW		BM	Section 4  The understaned 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	Printed name OH.	'n

# 307260 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. The named contractor or work crew is cleared to perform the jab described herein:

74. Plc. Arcelor Mittal representative phone number

TAN'10

Company name M. crobac Labs

Company contact/phone no Location and project/job description\_

ArcelorMittal representative department\_

ArcelorMittal representative



ArcelorMittal

HIRAC-Lite	Yes N/A	A No		Sec. 1 - 44.6		Yes N	N/A No
1) Are emergency evacuation areas identified and known?		•	10) Could someon	10) Could someone be caught in or between anything?	n anything?	•	4
2) Is there a current and valid isolation (LOTO) procedure?			11) Could someon	11) Could someone get hurt as a result of a fall from height?	fall from height?	•	4
3) Will everyone apply a personal safety lock?			12) Can something	12) Can something fall and/or strike me or someone else?	someone else?	•	4
4) Are there adjacent work crews exposed (including ArcelorMittal employees)?	•		13) Is everyone pr	13) Is everyone properly trained for this job?	ئ	7	•
5) Are there potential hazards or high risk job steps?		le le	14) Are flags and o	14) Are flags and derails in place if needed?		<b>†</b>	
6) Do we have the correct tools for the job?		•	15) Can we slip or	trip on anything (includin	15) Can we slip or trip on anything (including travel to and from the job)?		
7) Is additional PPE required?	•	<b>\frac{1}{2}</b>	16) Have all affect	16) Have all affected people been notified?	111111111111111111111111111111111111111		
8) Is there a potential for exposure (chemical, radiation, laser, temperature)?	•		17) Can we strain	17) Can we strain or overexert ourselves?	THE THE THE STATE OF		
9) Is someone working on or near energized electrical equipment (motor control rooms, overhead power lines, etc.)?	U	1	18) Has equipmen equipment, etc.)	18) Has equipment been inspected prior to use? (tools, PPE, mobile equipment, etc.)	use? (tools, PPE, mobile	ų	•
Other Hazards and Considerations for Discussion	er ev			V.	Permits		ļ.,
Yes N/A No Yes N/A	No		Yes N/A No	Yes N/A	No	Yes	N/A No
	29) Sca	29) Scaffold work		33) Asbestos 🔵 🗀 💂	37) Confined space		
20) Vehicle / mob equip traffic 📂 🗀 🖶 25) Production hazards 🕒 🧀	30) Explosives	olosives	25	34) Noise	38) Energized electrical work	work	
21) Gas hazards-CO, CO2, etc.   🛑   🗀 🚰 26) Material handling   🛑 🛅	31) Barricades	ricades		35) Lasers	39) Excavation / drilling	•	
22) Hot process, metal, temp.   🌑   🗀 🎏 27) Crane and rigging   🌑   🗀	ag 32) Radiation	diation	36	36) Sewers	40) Hot work		
23) Pressurized / steam pipe   🛑   🥅   🍱   28) Overhead work   🔴   🛅					41) Other		
Section 3	Hierarchy	of Controls 1	Elimination 2. Substitu	Herarchy of Controls 1. Elimination 2. Substitution 3. Engineering 4. Administrative	trative 5. PPE		
Visiting worker name (print) Badge # Hazard #	Controls		Responsible Person <b>B. Otto</b>	on Hazard#	Controls	Responsi	Responsible Person
The state of the s	100						
						- 4	
19 BWare of	y unce	54 5	w-fack				
17 Passer (15)	fini d	J. Car	6.05		4 Sec. 1845	100	
20 Vchide	-000c	Tran					
the contraction of the state of							
						10 Table	
			100				
	r- To						
	12			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
My crew and I are familiar with the safety hazards/considerations for this job. We a	are prepared	to perform	the work in/a safe	"workmanship" like man	are prepared to perform the work in a safe "work manship" like manner. I have reviewed these considerations with the	siderations v	/ith the

2016-04-BH-DailyWorkAuthorization

Controlled by Maintenance Administration Dept. Arcel 时知母自多名的书名Aor

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

ArcelorMittal representative named below.

Contractor or crew leader

ArcelorMittal representative 7

Replacement rep/phone