30-Aug-2019

Robert Macial
ArcelorMittal USA LLC
Gary Plate Processing
One North Buchanan Street
Gary, IN 46402

Re: **Arcelor Mittal - Burns Harbor E.R.** Work Order: **19081989**

Dear Robert,

ALS Environmental received 25 samples on 28-Aug-2019 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 44.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

Amanda Grzybowski

Electronically approved by: Amanda Grzybowski

Amanda Grzybowski
Project Manager

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: **19081989**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19081989-01	15	Aqueous		8/28/2019 08:05	8/28/2019 15:20	☐
19081989-02	14	Aqueous		8/28/2019 08:12	8/28/2019 15:20	☐
19081989-03	7	Aqueous		8/28/2019 08:25	8/28/2019 15:20	☐
19081989-04	6	Aqueous		8/28/2019 08:33	8/28/2019 15:20	☐
19081989-05	5	Aqueous		8/28/2019 08:39	8/28/2019 15:20	☐
19081989-06	4	Aqueous		8/28/2019 08:46	8/28/2019 15:20	☐
19081989-07	3	Aqueous		8/28/2019 08:55	8/28/2019 15:20	☐
19081989-08	2	Aqueous		8/28/2019 09:05	8/28/2019 15:20	☐
19081989-09	1	Aqueous		8/28/2019 09:14	8/28/2019 15:20	☐
19081989-10	OF001	Aqueous		8/28/2019 09:38	8/28/2019 15:20	☐
19081989-11	8	Aqueous		8/28/2019 10:28	8/28/2019 15:20	☐
19081989-12	9	Aqueous		8/28/2019 10:36	8/28/2019 15:20	☐
19081989-13	10	Aqueous		8/28/2019 10:43	8/28/2019 15:20	☐
19081989-14	11	Aqueous		8/28/2019 10:52	8/28/2019 15:20	☐
19081989-15	12	Aqueous		8/28/2019 11:00	8/28/2019 15:20	☐
19081989-16	13	Aqueous		8/28/2019 11:12	8/28/2019 15:20	☐
19081989-17	SL-1	Aqueous		8/28/2019 11:36	8/28/2019 15:20	☐
19081989-18	SL-2	Aqueous		8/28/2019 12:08	8/28/2019 15:20	☐
19081989-19	SL-3	Aqueous		8/28/2019 12:30	8/28/2019 15:20	☐
19081989-20	SL-4	Aqueous		8/28/2019 12:42	8/28/2019 15:20	☐
19081989-21	SL-5	Aqueous		8/28/2019 12:50	8/28/2019 15:20	☐
19081989-22	SL-6	Aqueous		8/28/2019 13:15	8/28/2019 15:20	☐
19081989-23	SL-7	Aqueous		8/28/2019 13:32	8/28/2019 15:20	☐
19081989-24	SL-8	Aqueous		8/28/2019 13:58	8/28/2019 15:20	☐
19081989-25	000	Aqueous		8/28/2019 14:22	8/28/2019 15:20	☐

ALS Group, USA

Date: 30-Aug-19

Client:	ArcelorMittal USA LLC
Project:	Arcelor Mittal - Burns Harbor E.R.
Work Order:	19081989

Case Narrative

Samples in this Work Order were received and analyzed at the ALS Valparaiso facility at 2400 Cumberland Drive, Valparaiso, Indiana; under Florida NELAP certification ID# E871119.

Any Batch MS/MSD results that are flagged, but not addressed in this Case Narrative, are not related to this project's sample(s); therefore the data does not require qualification.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 15
Collection Date: 8/28/2019 08:05 AM

Work Order: 19081989
Lab ID: 19081989-01
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.70**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.69**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**22.2**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:02
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:16
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.136**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 15:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 14
Collection Date: 8/28/2019 08:12 AM

Work Order: 19081989
Lab ID: 19081989-02
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)		Method: **A4500-O G-11**					Analyst: **ALS**
Dissolved Oxygen (field)	**7.10**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.72**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**21.5**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL		Method: **A4500-CN E-11**			Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:06
WEAK ACID DISSOCIABLE CYANIDE		Method: **A4500-CN I-11**			Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:17
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.105**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:01

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 7
Collection Date: 8/28/2019 08:25 AM

Work Order: 19081989
Lab ID: 19081989-03
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**6.80**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.51**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**21.6**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:07
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:21
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0458**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 6
Collection Date: 8/28/2019 08:33 AM

Work Order: 19081989
Lab ID: 19081989-04
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.90**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.77**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**20.7**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:08
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:22
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0991**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:04

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 5
Collection Date: 8/28/2019 08:39 AM

Work Order: 19081989
Lab ID: 19081989-05
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.20**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.74**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**20.7**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:09
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:23
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0942**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 4
Collection Date: 8/28/2019 08:46 AM

Work Order: 19081989
Lab ID: 19081989-06
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.90**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.78**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**20.2**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:10
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:24
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.106**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 3
Collection Date: 8/28/2019 08:55 AM

Work Order: 19081989
Lab ID: 19081989-07
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**8.00**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.74**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**20.9**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:12
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:27
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.148**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 2
Collection Date: 8/28/2019 09:05 AM

Work Order: 19081989
Lab ID: 19081989-08
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.90**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.79**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**21.1**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:15
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:31
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.106**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:13

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 1
Collection Date: 8/28/2019 09:14 AM

Work Order: 19081989
Lab ID: 19081989-09
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)		Method: **A4500-O G-11**					Analyst: **ALS**
Dissolved Oxygen (field)	**7.70**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.73**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**21.5**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL		Method: **A4500-CN E-11**			Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:16
WEAK ACID DISSOCIABLE CYANIDE		Method: **A4500-CN I-11**			Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:32
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.164**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: OF001
Collection Date: 8/28/2019 09:38 AM

Work Order: 19081989
Lab ID: 19081989-10
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.10**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.78**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**22.2**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:19
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:33
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.252**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:16

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 8
Collection Date: 8/28/2019 10:28 AM

Work Order: 19081989
Lab ID: 19081989-11
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**5.60**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.73**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**23.8**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:21
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:34
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0602**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 9
Collection Date: 8/28/2019 10:36 AM

Work Order: 19081989
Lab ID: 19081989-12
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**5.90**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.73**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**23.3**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:22
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:35
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0501**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:23

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 10
Collection Date: 8/28/2019 10:43 AM

Work Order: 19081989
Lab ID: 19081989-13
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**6.40**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.74**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**23.0**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:23
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:36
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0462**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 11
Collection Date: 8/28/2019 10:52 AM

Work Order: 19081989
Lab ID: 19081989-14
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.20**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.85**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**22.4**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:24
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:38
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0146**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:28

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 12
Collection Date: 8/28/2019 11:00 AM

Work Order: 19081989
Lab ID: 19081989-15
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.20**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.78**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**21.2**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:25
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:41
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 16:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 13
Collection Date: 8/28/2019 11:12 AM

Work Order: 19081989
Lab ID: 19081989-16
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**7.00**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.77**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**20.6**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:28
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:42
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0184**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:30

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-1
Collection Date: 8/28/2019 11:36 AM

Work Order: 19081989
Lab ID: 19081989-17
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)		Method: **A4500-O G-11**					Analyst: **ALS**
Dissolved Oxygen (field)	**7.80**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**8.05**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**20.8**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL		Method: **A4500-CN E-11**			Prep: A4500-CN C-11 / 8/28/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:30
WEAK ACID DISSOCIABLE CYANIDE		Method: **A4500-CN I-11**			Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:43
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0304**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-2
Collection Date: 8/28/2019 12:08 PM

Work Order: 19081989
Lab ID: 19081989-18
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)		Method: **A4500-O G-11**					Analyst: **ALS**
Dissolved Oxygen (field)	**6.90**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.90**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**19.6**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL		Method: **A4500-CN E-11**			Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:37
WEAK ACID DISSOCIABLE CYANIDE		Method: **A4500-CN I-11**			Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:44
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0262**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-3
Collection Date: 8/28/2019 12:30 PM

Work Order: 19081989
Lab ID: 19081989-19
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**6.30**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**8.05**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**20.9**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:39
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:45
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0297**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-4
Collection Date: 8/28/2019 12:42 PM

Work Order: 19081989
Lab ID: 19081989-20
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**6.10**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**8.06**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**21.5**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:42
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:46
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0169**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-5
Collection Date: 8/28/2019 12:50 PM

Work Order: 19081989
Lab ID: 19081989-21
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)		Method: **A4500-O G-11**					Analyst: **ALS**
Dissolved Oxygen (field)	**7.30**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**8.02**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**23.4**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL		Method: **A4500-CN E-11**			Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:43
WEAK ACID DISSOCIABLE CYANIDE		Method: **A4500-CN I-11**			Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:50
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0523**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:41

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-6
Collection Date: 8/28/2019 01:15 PM

Work Order: 19081989
Lab ID: 19081989-22
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)		Method: **A4500-O G-11**					Analyst: **ALS**
Dissolved Oxygen (field)	**7.40**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**8.04**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**21.2**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL		Method: **A4500-CN E-11**			Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:46
WEAK ACID DISSOCIABLE CYANIDE		Method: **A4500-CN I-11**			Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:51
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.359**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:42

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-7
Collection Date: 8/28/2019 01:32 PM

Work Order: 19081989
Lab ID: 19081989-23
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**6.80**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**8.09**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**21.3**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:48
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:54
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0305**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-8
Collection Date: 8/28/2019 01:58 PM

Work Order: 19081989
Lab ID: 19081989-24
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**6.20**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.50**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**20.2**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:49
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:56
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0609**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:44

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group, USA

Date: *30-Aug-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 000
Collection Date: 8/28/2019 02:22 PM

Work Order: 19081989
Lab ID: 19081989-25
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)			Method: **A4500-O G-11**				Analyst: **ALS**
Dissolved Oxygen (field)	**6.80**		**0**		**mg/L**	1	8/28/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.82**		**0**		**s.u.**	1	8/28/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**21.8**		**0**		**°C**	1	8/28/2019
CYANIDE, TOTAL			Method: **A4500-CN E-11**		Prep: A4500-CN C-11 / 8/29/19		Analyst: **CD**
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/29/2019 10:50
WEAK ACID DISSOCIABLE CYANIDE			Method: **A4500-CN I-11**		Prep: A4500-CN I / 8/29/19		Analyst: **CD**
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 14:57
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0566**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	8/29/2019 16:46

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
WorkOrder: **19081989**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
**	Estimated Value
a	Analyte is non-accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
Hr	BOD/CBOD - Sample was reset outside Hold Time, value should be considered estimated.
J	Analyte is present at an estimated concentration between the MDL and Report Limit
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL
X	Analyte was detected in the Method Blank between the MDL and Reporting Limit, sample results may exhibit background or reagent contamination at the observed level.

Acronym	Description
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
TNTC	Too Numerous To Count
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

Units Reported	Description
°C	Degrees Celcius
mg NH3-N/L	Milligrams Ammonia-Nitrogen per Liter
mg/L	Milligrams per Liter
s.u.	Standard Units

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC

Work Order: 19081989

Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141654** Instrument ID **VAL-LACHAT** Method: **A4500-CN E-11**

MBLK Sample ID: **MBLK-141654-141654** Units: **mg/L** Analysis Date: **8/29/2019 09:55 AM**

Client ID: Run ID: **VAL-LACHAT_190829A** SeqNo: **5882241** Prep Date: **8/28/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	U	0.0050								

LCS Sample ID: **LCS-141654-141654** Units: **mg/L** Analysis Date: **8/29/2019 09:56 AM**

Client ID: Run ID: **VAL-LACHAT_190829A** SeqNo: **5882242** Prep Date: **8/28/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.1	0.0050	0.1	0	100	90-110	0			

MS Sample ID: **19081989-01B MS** Units: **mg/L** Analysis Date: **8/29/2019 10:04 AM**

Client ID: **15** Run ID: **VAL-LACHAT_190829A** SeqNo: **5882250** Prep Date: **8/28/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.103	0.0050	0.1	0.000595	102	70-130	0			

MS Sample ID: **19081989-09B MS** Units: **mg/L** Analysis Date: **8/29/2019 10:17 AM**

Client ID: **1** Run ID: **VAL-LACHAT_190829A** SeqNo: **5882263** Prep Date: **8/28/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.1035	0.0050	0.1	0.0015	102	70-130	0			

MSD Sample ID: **19081989-01B MSD** Units: **mg/L** Analysis Date: **8/29/2019 10:05 AM**

Client ID: **15** Run ID: **VAL-LACHAT_190829A** SeqNo: **5882252** Prep Date: **8/28/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.1	0.0050	0.1	0.000595	99.4	70-130	0.103	2.96	30	

MSD Sample ID: **19081989-09B MSD** Units: **mg/L** Analysis Date: **8/29/2019 10:18 AM**

Client ID: **1** Run ID: **VAL-LACHAT_190829A** SeqNo: **5882264** Prep Date: **8/28/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.0975	0.0050	0.1	0.0015	96	70-130	0.1035	5.97	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141654** Instrument ID **VAL-LACHAT** Method: **A4500-CN E-11**

The following samples were analyzed in this batch:

19081989-01B	19081989-02B	19081989-03B
19081989-04B	19081989-05B	19081989-06B
19081989-07B	19081989-08B	19081989-09B
19081989-10B	19081989-11B	19081989-12B
19081989-13B	19081989-14B	19081989-15B
19081989-16B	19081989-17B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141655** Instrument ID **VAL-LACHAT** Method: **A4500-CN E-11**

MBLK Sample ID: **MBLK-141655-141655** Units: **mg/L** Analysis Date: **8/29/2019 10:31 AM**
Client ID: Run ID: **VAL-LACHAT_190829A** SeqNo: **5882275** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	U	0.0050								

LCS Sample ID: **LCS-141655-141655** Units: **mg/L** Analysis Date: **8/29/2019 10:32 AM**
Client ID: Run ID: **VAL-LACHAT_190829A** SeqNo: **5882276** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.0975	0.0050	0.1	0	97.5	90-110	0			

MS Sample ID: **19081989-21B MS** Units: **mg/L** Analysis Date: **8/29/2019 10:44 AM**
Client ID: **SL-5** Run ID: **VAL-LACHAT_190829A** SeqNo: **5882289** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.098	0.0050	0.1	0.00062	97.4	70-130	0			

MSD Sample ID: **19081989-21B MSD** Units: **mg/L** Analysis Date: **8/29/2019 10:45 AM**
Client ID: **SL-5** Run ID: **VAL-LACHAT_190829A** SeqNo: **5882290** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.0955	0.0050	0.1	0.00062	94.9	70-130	0.098	2.58	30	

The following samples were analyzed in this batch:

19081989-18B	19081989-19B	19081989-20B
19081989-21B	19081989-22B	19081989-23B
19081989-24B	19081989-25B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141720** Instrument ID **VAL-LACHAT** Method: **A4500-CN I-11**

MBLK Sample ID: **MBLK-141720-141720** Units: **mg/L** Analysis Date: **8/30/2019 02:14 PM**
Client ID: Run ID: **VAL-LACHAT_190830B** SeqNo: **5886506** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	U	0.0050								

LCS Sample ID: **LCS-141720-141720** Units: **mg/L** Analysis Date: **8/30/2019 02:15 PM**
Client ID: Run ID: **VAL-LACHAT_190830B** SeqNo: **5886507** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.105	0.0050	0.1	0	105	80-120	0			

MS Sample ID: **19081989-02C MS** Units: **mg/L** Analysis Date: **8/30/2019 02:18 PM**
Client ID: **14** Run ID: **VAL-LACHAT_190830B** SeqNo: **5886510** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.0995	0.0050	0.1	0.00106	98.4	70-130	0			

MS Sample ID: **19081989-07C MS** Units: **mg/L** Analysis Date: **8/30/2019 02:28 PM**
Client ID: **3** Run ID: **VAL-LACHAT_190830B** SeqNo: **5886519** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.1045	0.0050	0.1	0.00083	104	70-130	0			

MSD Sample ID: **19081989-02C MSD** Units: **mg/L** Analysis Date: **8/30/2019 02:19 PM**
Client ID: **14** Run ID: **VAL-LACHAT_190830B** SeqNo: **5886511** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.096	0.0050	0.1	0.00106	94.9	70-130	0.0995	3.58	30	

MSD Sample ID: **19081989-07C MSD** Units: **mg/L** Analysis Date: **8/30/2019 02:30 PM**
Client ID: **3** Run ID: **VAL-LACHAT_190830B** SeqNo: **5886520** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.1025	0.0050	0.1	0.00083	102	70-130	0.1045	1.93	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141720** Instrument ID **VAL-LACHAT** Method: **A4500-CN I-11**

The following samples were analyzed in this batch:

19081989-01C	19081989-02C	19081989-03C
19081989-04C	19081989-05C	19081989-06C
19081989-07C	19081989-08C	19081989-09C
19081989-10C	19081989-11C	19081989-12C
19081989-13C	19081989-14C	19081989-15C
19081989-16C	19081989-17C	19081989-18C
19081989-19C	19081989-20C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141721** Instrument ID **VAL-LACHAT** Method: **A4500-CN I-11**

MBLK Sample ID: **MBLK-141721-141721** Units: **mg/L** Analysis Date: **8/30/2019 02:48 PM**
Client ID: Run ID: **VAL-LACHAT_190830B** SeqNo: **5886536** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	U	0.0050								

LCS Sample ID: **LCS-141721-141721** Units: **mg/L** Analysis Date: **8/30/2019 02:49 PM**
Client ID: Run ID: **VAL-LACHAT_190830B** SeqNo: **5886537** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.108	0.0050	0.1	0	108	80-120	0			

MS Sample ID: **19082008-28C MS** Units: **mg/L** Analysis Date: **8/30/2019 02:59 PM**
Client ID: Run ID: **VAL-LACHAT_190830B** SeqNo: **5886546** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.1075	0.0050	0.1	0.00347	104	70-130	0			

MSD Sample ID: **19082008-28C MSD** Units: **mg/L** Analysis Date: **8/30/2019 03:00 PM**
Client ID: Run ID: **VAL-LACHAT_190830B** SeqNo: **5886547** Prep Date: **8/29/2019** DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Weak Acid Dissociable Cyanide	0.1005	0.0050	0.1	0.00347	97	70-130	0.1075	6.73	30	

The following samples were analyzed in this batch:

19081989-21C	19081989-22C	19081989-23C
19081989-24C	19081989-25C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

QC BATCH REPORT

Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MBLK Sample ID: **MBLK-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 03:41 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883685** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	U	0.032								

MBLK Sample ID: **MBLK-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:17 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883715** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	U	0.032								

MBLK Sample ID: **MBLK-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:55 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883747** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	U	0.032								

MBLK Sample ID: **MBLK-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 05:31 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883777** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	U	0.032								

LCS Sample ID: **LCS-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 03:42 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883686** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.426	0.032	0.4	0	106	90-110	0			

LCS Sample ID: **LCS-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:18 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883716** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.425	0.032	0.4	0	106	90-110	0			

LCS Sample ID: **LCS-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:57 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883748** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.428	0.032	0.4	0	107	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

LCS Sample ID: **LCS-R269487** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 05:35 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883780** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.433	0.032	0.4	0	108	90-110	0			

MS Sample ID: **19081989-01A MS** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 03:59 PM**
Client ID: **15** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883700** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.301	0.032	0.2	0.136	82.5	90-110	0			S

MS Sample ID: **19081989-06A MS** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:10 PM**
Client ID: **4** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883709** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.318	0.032	0.2	0.106	106	90-110	0			

MS Sample ID: **19081989-12A MS** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:24 PM**
Client ID: **9** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883721** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.283	0.032	0.2	0.0501	116	90-110	0			S

MS Sample ID: **19081989-20A MS** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:38 PM**
Client ID: **SL-4** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883733** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.214	0.032	0.2	0.0169	98.6	90-110	0			

MS Sample ID: **19082044-06A MS** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:59 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883750** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.51	0.032	0.2	0.294	108	90-110	0			

MS Sample ID: **19082044-10A MS** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 05:09 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883758** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.683	0.032	0.2	0.476	104	90-110	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MS Sample ID: **19082054-04B MS** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 05:44 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883787** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	24	0.64	4	19.86	104	90-110	0			O

MSD Sample ID: **19081989-01A MSD** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:00 PM**
Client ID: **15** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883701** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.296	0.032	0.2	0.136	80	90-110	0.301	1.68	20	S

MSD Sample ID: **19081989-06A MSD** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:11 PM**
Client ID: **4** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883710** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.316	0.032	0.2	0.106	105	90-110	0.318	0.631	20	

MSD Sample ID: **19081989-12A MSD** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:25 PM**
Client ID: **9** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883722** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.271	0.032	0.2	0.0501	110	90-110	0.283	4.33	20	S

MSD Sample ID: **19081989-20A MSD** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 04:40 PM**
Client ID: **SL-4** Run ID: **VAL-LACHAT_190829B** SeqNo: **5883734** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.207	0.032	0.2	0.0169	95	90-110	0.214	3.33	20	

MSD Sample ID: **19082044-06A MSD** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 05:00 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883751** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.512	0.032	0.2	0.294	109	90-110	0.51	0.391	20	

MSD Sample ID: **19082044-10A MSD** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 05:10 PM**
Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883759** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.681	0.032	0.2	0.476	102	90-110	0.683	0.293	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
Work Order: 19081989
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MSD Sample ID: **19082054-04B MSD** Units: **mg NH3-N/L** Analysis Date: **8/29/2019 05:45 PM**

Client ID: Run ID: **VAL-LACHAT_190829B** SeqNo: **5883788** Prep Date: DF: **20**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	24	0.64	4	19.86	104	90-110	24	0	20	O

The following samples were analyzed in this batch:

19081989-01A	19081989-02A	19081989-03A
19081989-04A	19081989-05A	19081989-06A
19081989-07A	19081989-08A	19081989-09A
19081989-10A	19081989-11A	19081989-12A
19081989-13A	19081989-14A	19081989-15A
19081989-16A	19081989-17A	19081989-18A
19081989-19A	19081989-20A	19081989-21A
19081989-22A	19081989-23A	19081989-24A
19081989-25A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Cincinnati, OH +1 513 733 5336
Everett, WA +1 425 356 2600
Fort Collins, CO +1 970 490 1511
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Middletown, PA +1 717 944 5541
Spring City, PA +1 610 948 4903
Salt Lake City, UT +1 801 266 7700
South Charleston, WV +1 304 356 3168
York, PA +1 717 505 5280

Chain of Custody Form

COC ID: 41864

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Receiving Water Monitoring	A	NH4
Work Order		Project Number		B	Cn (total)
Company Name	AMBH	Bill To Company		C	FREE Cn
Send Report To		Invoice Attn		D	
Address		Address		E	PH (field tested)
				F	
City/State/Zip		City/State/Zip		G	Temp ° (field tested)
Phone		Phone		H	
Fax		Fax		I	D.O. (field tested)
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	PH E	PH F	TEMP G	TEMP H	D.O. I	J	Hold
1	15	8/28/19	805	AQ	4,3,V	3	X	X	X		7.69		22.2		7.7		
2	14		812								7.72		21.5		7.1		
3	7		825								7.51		21.6		6.8		
4	6		833								7.77		20.7		7.9		
5	5		839								7.74		20.7		7.2		
6	4		846								7.78		20.2		7.9		
7	3		855								7.74		20.9		8.0		
8	2		905								7.79		21.1		7.9		
9	1		914								7.73		21.5		7.7		
10	OF001		938								7.78		22.2		7.1		

Sampler(s) Please Print & Sign | Shipment Method | Turnaround Time in Business Days (BD) ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other | Results Due Date:

Relinquished by:	Date: 8/28/19	Time: 1444	Received by:	Notes:	
Relinquished by:	Date: 8/28/19	Time: 1520	Received by (Laboratory):	Cooler ID	Cooler Temp: 1.6°C
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

COC ID: 41863

ALS Project Manager: | ALS Work Order #:

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Receiving Water Monitoring	A	NH4
Work Order		Project Number		B	Cn (total)
Company Name	AMBH	Bill To Company		C	FREE Cn
Send Report To		Invoice Attn		D	
Address		Address		E	PH (field tested)
				F	
City/State/Zip		City/State/Zip		G	Temp c° (field tested)
Phone		Phone		H	
Fax		Fax		I	D.O. (field tested)
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	PH E	PH F	TEMP G	TEMP H	D.O. I	D.O. J	Hold
1	8	8-28-19	1028	AQ	4,3,V	3	X	X	X		7.73		23.8		5.8		
2	9		1036								7.73		23.3		5.9		
3	10		1043								7.74		23.0		6.4		
4	11		1052								7.85		22.4		7.2		
5	12		1100								7.78		21.2		7.2		
6	13		1112								7.77		20.6		7.0		
7	SL-1		1136								8.05		20.8		7.8		
8	SL-2		1208								7.9		19.6		6.9		
9	SL-3		1230								8.05		20.9		6.3		
10	SL-4		1242								8.06		21.5		6.1		

Sampler(s) Please Print & Sign:

Shipment Method:

Turnaround Time in Business Days (BD): ☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other _____

Results Due Date:

Relinquished by:	Date: 8/28/19	Time: 1444	Received by:	
Relinquished by:	Date: 8/28/19	Time: 1520	Received by (Laboratory):	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	

Notes:

Cooler ID	Cooler Temp
	1.9 °C

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

Cincinnati, OH +1 513 733 5336
Fort Collins, CO +1 970 490 1511
Everett, WA +1 425 356 2600
Holland, MI +1 616 399 6070
Houston, TX +1 281 530 5656
Spring City, PA +1 610 948 4903
South Charleston, WV +1 304 356 3168
Middletown, PA +1 717 944 5541
Salt Lake City, UT +1 801 266 7700
York, PA +1 717 505 5280

Chain of Custody Form

COC ID: 41588

ALS Project Manager:		ALS Work Order #:	

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name		A	NH4
Work Order		Project Number		B	Cn (total)
Company Name	AM BH	Bill To Company		C	FREE Cn
Send Report To		Invoice Attn		D	
Address		Address		E	PH (field tested)
				F	
City/State/Zip		City/State/Zip		G	Temp c° (field tested)
Phone		Phone		H	
Fax		Fax		I	D.O. (field tested)
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	PH E	F	TEMP G	H	D.O. I	J	Hold
1	SL-5	8/28/19	1250	AQ	4,3,V	3	X	X	X		8.02		23.4		7.3		
2	SL-6	↓	115	↓	↓	↓	↓	↓	↓		8.04		21.2		7.4		
3	SL-7		132								8.09		21.3		6.8		
4	SL-8		158								7.5		20.2		6.2		
5	000		222								7.82		21.8		6.8		
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign	Shipment Method	Turnaround Time in Business Days (BD)	Results Due Date:
		☐ 10 BD ☐ 5 BD ☐ 3 BD ☐ 2 BD ☐ 1 BD ☐ Other _____	

Relinquished by:	Date: 8/28/19	Time: 1444	Received by:	Notes:	
Relinquished by:	Date: 8/28/19	Time: 1520	Received by (Laboratory):	Cooler ID	Cooler Temp
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):		1.6°C

QC Package: (Check One Box Below)
☐ Level II Std QC ☐ TRRP Checklist
☐ Level III Std QC/Raw Date ☐ TRRP Level IV
☐ Level IV SW846/CLP
☐ Other _____

Preservative Key: 1-HCl 2-HNO_3 3-H_2SO_4 4-NaOH 5-$Na_2S_2O_3$ 6-$NaHSO_4$ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

ALS Group, USA

Sample Receipt Checklist

Client Name: **ARCELORMITTAL-BURNSHARBO** Date/Time Received: **28-Aug-19 00:00**

Work Order: **19081989** Received by: **JH**

Checklist completed by Amanda Grzybowski (eSignature) 28-Aug-19 (Date) Reviewed by: Amanda Grzybowski (eSignature) 28-Aug-19 (Date)

Matrices: Aqueous
Carrier name: ALSHN

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Sample(s) received on ice?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):	1.6		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	8/28/19 15:20		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: