16-Sep-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: **19090825**

Dear Robert,

ALS Environmental received 25 samples on 12-Sep-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: 16-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: **19090825**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19090825-01	15	Aqueous		9/12/2019 08:58	9/12/2019	☐
19090825-01	15	Aqueous		9/12/2019 08:58	9/13/2019 13:30	☐
19090825-02	14	Aqueous		9/12/2019 09:12	9/12/2019	☐
19090825-02	14	Aqueous		9/12/2019 09:12	9/13/2019 13:30	☐
19090825-03	7	Aqueous		9/12/2019 09:23	9/12/2019	☐
19090825-03	7	Aqueous		9/12/2019 09:23	9/13/2019 13:30	☐
19090825-04	6	Aqueous		9/12/2019 09:32	9/12/2019	☐
19090825-04	6	Aqueous		9/12/2019 09:32	9/13/2019 13:30	☐
19090825-05	5	Aqueous		9/12/2019 09:45	9/12/2019	☐
19090825-05	5	Aqueous		9/12/2019 09:45	9/13/2019 13:30	☐
19090825-06	4	Aqueous		9/12/2019 09:58	9/12/2019	☐
19090825-06	4	Aqueous		9/12/2019 09:58	9/13/2019 13:30	☐
19090825-07	3	Aqueous		9/12/2019 10:11	9/12/2019	☐
19090825-07	3	Aqueous		9/12/2019 10:11	9/13/2019 13:30	☐
19090825-08	2	Aqueous		9/12/2019 10:22	9/12/2019	☐
19090825-08	2	Aqueous		9/12/2019 10:22	9/13/2019 13:30	☐
19090825-09	1	Aqueous		9/12/2019 10:35	9/12/2019	☐
19090825-09	1	Aqueous		9/12/2019 10:35	9/13/2019 13:30	☐
19090825-10	OF001	Aqueous		9/12/2019 10:51	9/12/2019	☐
19090825-10	OF001	Aqueous		9/12/2019 10:51	9/13/2019 13:30	☐
19090825-11	8	Aqueous		9/12/2019 11:21	9/12/2019	☐
19090825-11	8	Aqueous		9/12/2019 11:21	9/13/2019 13:30	☐
19090825-12	9	Aqueous		9/12/2019 11:32	9/12/2019	☐
19090825-12	9	Aqueous		9/12/2019 11:32	9/13/2019 13:30	☐
19090825-13	10	Aqueous		9/12/2019 11:42	9/12/2019	☐
19090825-13	10	Aqueous		9/12/2019 11:42	9/13/2019 13:30	☐
19090825-14	11	Aqueous		9/12/2019 11:56	9/12/2019	☐
19090825-14	11	Aqueous		9/12/2019 11:56	9/13/2019 13:30	☐
19090825-15	12	Aqueous		9/12/2019 12:12	9/12/2019	☐
19090825-15	12	Aqueous		9/12/2019 12:12	9/13/2019 13:30	☐
19090825-16	13	Aqueous		9/12/2019 12:23	9/12/2019	☐
19090825-16	13	Aqueous		9/12/2019 12:23	9/13/2019 13:30	☐
19090825-17	SL-1	Aqueous		9/12/2019 12:58	9/12/2019	☐
19090825-17	SL-1	Aqueous		9/12/2019 12:58	9/13/2019 13:30	☐
19090825-18	SL-2	Aqueous		9/12/2019 13:15	9/12/2019	☐
19090825-18	SL-2	Aqueous		9/12/2019 13:15	9/13/2019 13:30	☐
19090825-19	SL-3	Aqueous		9/12/2019 13:29	9/12/2019	☐
19090825-19	SL-3	Aqueous		9/12/2019 13:29	9/13/2019 13:30	☐
19090825-20	SL-4	Aqueous		9/12/2019 13:43	9/12/2019	☐

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: **19090825**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
19090825-20	SL-4	Aqueous		9/12/2019 13:43	9/13/2019 13:30	☐
19090825-21	SL-5	Aqueous		9/12/2019 13:57	9/12/2019	☐
19090825-21	SL-5	Aqueous		9/12/2019 13:57	9/13/2019 13:30	☐
19090825-22	SL-6	Aqueous		9/12/2019 14:18	9/12/2019	☐
19090825-22	SL-6	Aqueous		9/12/2019 14:18	9/13/2019 13:30	☐
19090825-23	SL-7	Aqueous		9/12/2019 14:41	9/12/2019	☐
19090825-23	SL-7	Aqueous		9/12/2019 14:41	9/13/2019 13:30	☐
19090825-24	SL-8	Aqueous		9/12/2019 15:12	9/12/2019	☐
19090825-24	SL-8	Aqueous		9/12/2019 15:12	9/13/2019 13:30	☐
19090825-25	000	Aqueous		9/12/2019	9/12/2019	☐
19090825-25	000	Aqueous		9/12/2019	9/13/2019 13:30	☐

ALS Group, USA

Date: 16-Sep-19

Client:	ArcelorMittal USA LLC
Project:	Arcelor Mittal - Burns Harbor E.R.
Work Order:	19090825

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: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 15
Collection Date: 9/12/2019 08:58 AM

Work Order: 19090825
Lab ID: 19090825-01
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)	**9.20**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.68**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**23.0**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0633**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:21

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 14
Collection Date: 9/12/2019 09:12 AM

Work Order: 19090825
Lab ID: 19090825-02
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)	**10.8**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.81**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.8**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0303**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:23

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 7
Collection Date: 9/12/2019 09:23 AM

Work Order: 19090825
Lab ID: 19090825-03
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)	**8.60**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.48**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**23.2**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.115**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:24

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 6
Collection Date: 9/12/2019 09:32 AM

Work Order: 19090825
Lab ID: 19090825-04
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)	**8.90**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.69**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**22.4**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL			Method: **KELADA-01**				Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE			Method: **KELADA-01**				Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.140**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:25

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 5
Collection Date: 9/12/2019 09:45 AM

Work Order: 19090825
Lab ID: 19090825-05
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)	**9.10**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.66**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**21.9**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.134**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:26

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 4
Collection Date: 9/12/2019 09:58 AM

Work Order: 19090825
Lab ID: 19090825-06
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)	**8.70**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.53**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.3**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.199**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:28

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 3
Collection Date: 9/12/2019 10:11 AM

Work Order: 19090825
Lab ID: 19090825-07
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)	**9.00**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.60**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**23.1**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL			Method: **KELADA-01**				Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE			Method: **KELADA-01**				Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.186**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:29

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 2
Collection Date: 9/12/2019 10:22 AM

Work Order: 19090825
Lab ID: 19090825-08
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)	**9.10**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.67**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**22.7**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL			Method: **KELADA-01**				Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE			Method: **KELADA-01**				Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.180**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:32

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 1
Collection Date: 9/12/2019 10:35 AM

Work Order: 19090825
Lab ID: 19090825-09
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)	**9.30**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.69**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.9**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	**0.0013**	J	**0.0012**	**0.0050**	**mg/L**	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.249**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:34

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: OF001
Collection Date: 9/12/2019 10:51 AM

Work Order: 19090825
Lab ID: 19090825-10
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)	**9.10**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.71**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**24.7**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL			Method: **KELADA-01**				Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE			Method: **KELADA-01**				Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.279**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:35

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 8
Collection Date: 9/12/2019 11:21 AM

Work Order: 19090825
Lab ID: 19090825-11
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)	**8.90**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.74**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**23.0**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.121**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:36

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 9
Collection Date: 9/12/2019 11:32 AM

Work Order: 19090825
Lab ID: 19090825-12
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)	**8.20**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.76**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**23.8**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.105**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:37

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 10
Collection Date: 9/12/2019 11:42 AM

Work Order: 19090825
Lab ID: 19090825-13
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)	**7.80**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.80**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.6**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0936**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:38

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 11
Collection Date: 9/12/2019 11:56 AM

Work Order: 19090825
Lab ID: 19090825-14
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)	**7.60**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.84**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**23.5**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL			Method: **KELADA-01**				Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE			Method: **KELADA-01**				Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0502**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:40

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 12
Collection Date: 9/12/2019 12:12 PM

Work Order: 19090825
Lab ID: 19090825-15
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)	**8.90**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.86**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**23.8**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0446**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:41

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 13
Collection Date: 9/12/2019 12:23 PM

Work Order: 19090825
Lab ID: 19090825-16
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)	**7.90**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.75**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**22.1**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL			Method: **KELADA-01**				Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE			Method: **KELADA-01**				Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0597**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:42

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-1
Collection Date: 9/12/2019 12:58 PM

Work Order: 19090825
Lab ID: 19090825-17
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	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.87**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.2**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0531**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:43

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-2
Collection Date: 9/12/2019 01:15 PM

Work Order: 19090825
Lab ID: 19090825-18
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)	**7.50**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.79**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**21.9**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0528**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:47

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-3
Collection Date: 9/12/2019 01:29 PM

Work Order: 19090825
Lab ID: 19090825-19
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)	**8.60**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)			Method: **A4500-H B-11**				Analyst: **ALS**
pH (field)	**7.91**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)			Method: **A2550 B-10**				Analyst: **ALS**
Temperature (field)	**22.1**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL			Method: **KELADA-01**				Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE			Method: **KELADA-01**				Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN			Method: **E350.1 R2.0**				Analyst: **CD**
Ammonia as Nitrogen	**0.0631**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:48

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-4
Collection Date: 9/12/2019 01:43 PM

Work Order: 19090825
Lab ID: 19090825-20
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)	**8.20**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.82**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**21.7**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0504**		**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 09:52

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-5
Collection Date: 9/12/2019 01:57 PM

Work Order: 19090825
Lab ID: 19090825-21
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)	**7.70**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**8.06**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.8**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/13/2019 09:58

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-6
Collection Date: 9/12/2019 02:18 PM

Work Order: 19090825
Lab ID: 19090825-22
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)	**7.10**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**8.12**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**24.6**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0122**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 10:01

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-7
Collection Date: 9/12/2019 02:41 PM

Work Order: 19090825
Lab ID: 19090825-23
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)	**8.20**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.95**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**23.8**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/13/2019 10:02

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-8
Collection Date: 9/12/2019 03:12 PM

Work Order: 19090825
Lab ID: 19090825-24
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)	**7.40**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**8.03**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.1**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0148**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 10:06

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

ALS Group, USA

Date: *16-Sep-19*

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 000
Collection Date: 9/12/2019

Work Order: 19090825
Lab ID: 19090825-25
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)	**7.90**		**0**		**mg/L**	1	9/12/2019
PH (FIELD)		Method: **A4500-H B-11**					Analyst: **ALS**
pH (field)	**7.84**		**0**		**s.u.**	1	9/12/2019
TEMPERATURE (FIELD)		Method: **A2550 B-10**					Analyst: **ALS**
Temperature (field)	**22.3**		**0**		**°C**	1	9/12/2019
CYANIDE, TOTAL		Method: **KELADA-01**					Analyst: **JB**
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
CYANIDE, WEAK ACID DISSOCIABLE		Method: **KELADA-01**					Analyst: **JB**
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
AMMONIA AS NITROGEN		Method: **E350.1 R2.0**					Analyst: **CD**
Ammonia as Nitrogen	**0.0291**	J	**0.00980**	**0.0320**	**mg NH3-N/L**	1	9/13/2019 10:07

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

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
WorkOrder: **19090825**

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

QC BATCH REPORT

Batch ID: **R270470e** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK	Sample ID: **MB-R270470-R270470e**				Units: **mg/L**			Analysis Date: **9/13/2019 12:01 PM**		
Client ID:	Run ID: **SKALAR1_190913A**			SeqNo: **5917142**		Prep Date:		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-R270470-R270470e**				Units: **mg/L**			Analysis Date: **9/13/2019 12:01 PM**		
Client ID:	Run ID: **SKALAR1_190913A**			SeqNo: **5917143**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.1038	0.0050	0.1	0	104	90-110	0			

MS	Sample ID: **19090825-01B MS**				Units: **mg/L**			Analysis Date: **9/13/2019 12:01 PM**		
Client ID: **15**	Run ID: **SKALAR1_190913A**			SeqNo: **5917145**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.0987	0.0050	0.1	0.00066	98	90-110	0			

MS	Sample ID: **19090825-10B MS**				Units: **mg/L**			Analysis Date: **9/13/2019 12:01 PM**		
Client ID: **OF001**	Run ID: **SKALAR1_190913A**			SeqNo: **5917158**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.09441	0.0050	0.1	0.00103	93.4	90-110	0			

MSD	Sample ID: **19090825-01B MSD**				Units: **mg/L**			Analysis Date: **9/13/2019 12:01 PM**		
Client ID: **15**	Run ID: **SKALAR1_190913A**			SeqNo: **5917146**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.09926	0.0050	0.1	0.00066	98.6	90-110	0.0987	0.566	20	

MSD	Sample ID: **19090825-10B MSD**				Units: **mg/L**			Analysis Date: **9/13/2019 12:01 PM**		
Client ID: **OF001**	Run ID: **SKALAR1_190913A**			SeqNo: **5917159**		Prep Date:		DF: **1**		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.1027	0.0050	0.1	0.00103	102	90-110	0.09441	8.45	20	

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

Client: ArcelorMittal USA LLC
Work Order: 19090825
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R270470e** Instrument ID **SKALAR1** Method: **Kelada-01**

The following samples were analyzed in this batch:

19090825-01B	19090825-02B	19090825-03B
19090825-04B	19090825-05B	19090825-06B
19090825-07B	19090825-08B	19090825-09B
19090825-10B	19090825-11B	19090825-12B
19090825-13B	19090825-14B	19090825-15B
19090825-16B	19090825-17B	19090825-18B
19090825-19B	19090825-20B	

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

Client: ArcelorMittal USA LLC
Work Order: 19090825
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R270470f** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK Sample ID: **MB-R270470-R270470f** Units: **mg/L** Analysis Date: **9/13/2019 12:01 PM**
Client ID: Run ID: **SKALAR1_190913A** SeqNo: **5917172** Prep Date: 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-R270470-R270470f** Units: **mg/L** Analysis Date: **9/13/2019 12:01 PM**
Client ID: Run ID: **SKALAR1_190913A** SeqNo: **5917173** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.1051	0.0050	0.1	0	105	90-110	0			

MS Sample ID: **19090825-21B MS** Units: **mg/L** Analysis Date: **9/13/2019 12:01 PM**
Client ID: **SL-5** Run ID: **SKALAR1_190913A** SeqNo: **5917177** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.09934	0.0050	0.1	-0.00074	100	90-110	0			

MSD Sample ID: **19090825-21B MSD** Units: **mg/L** Analysis Date: **9/13/2019 12:01 PM**
Client ID: **SL-5** Run ID: **SKALAR1_190913A** SeqNo: **5917178** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.1006	0.0050	0.1	-0.00074	101	90-110	0.09934	1.25	20	

The following samples were analyzed in this batch:

19090825-21B	19090825-22B	19090825-23B
19090825-24B	19090825-25B	

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

Client: ArcelorMittal USA LLC
Work Order: 19090825
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R270500b** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK Sample ID: **MB-R270500-R270500b** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: Run ID: **SKALAR1_190915A** SeqNo: **5917551** Prep Date: DF: **1**

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

LCS Sample ID: **LCS-R270500-R270500b** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: Run ID: **SKALAR1_190915A** SeqNo: **5917552** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1089	0.0050	0.1	0	109	90-110	0			

MS Sample ID: **19090825-01C MS** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: **15** Run ID: **SKALAR1_190915A** SeqNo: **5917554** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1033	0.0050	0.1	-0.00057	104	90-110	0			

MS Sample ID: **19090825-10C MS** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: **OF001** Run ID: **SKALAR1_190915A** SeqNo: **5917567** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.0947	0.0050	0.1	0.00015	94.6	90-110	0			

MSD Sample ID: **19090825-01C MSD** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: **15** Run ID: **SKALAR1_190915A** SeqNo: **5917555** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1064	0.0050	0.1	-0.00057	107	90-110	0.1033	2.89	20	

MSD Sample ID: **19090825-10C MSD** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: **OF001** Run ID: **SKALAR1_190915A** SeqNo: **5917568** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1069	0.0050	0.1	0.00015	107	90-110	0.0947	12.1	20	

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

Client: ArcelorMittal USA LLC
Work Order: 19090825
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R270500b** Instrument ID **SKALAR1** Method: **Kelada-01**

The following samples were analyzed in this batch:

19090825-01C	19090825-02C	19090825-03C
19090825-04C	19090825-05C	19090825-06C
19090825-07C	19090825-08C	19090825-09C
19090825-10C	19090825-11C	19090825-12C
19090825-13C	19090825-14C	19090825-15C
19090825-16C	19090825-17C	19090825-18C
19090825-19C	19090825-20C	

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

Client: ArcelorMittal USA LLC
Work Order: 19090825
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R270500c** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK Sample ID: **MB-R270500-R270500c** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: Run ID: **SKALAR1_190915A** SeqNo: **5917620** Prep Date: DF: **1**

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

LCS Sample ID: **LCS-R270500-R270500c** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: Run ID: **SKALAR1_190915A** SeqNo: **5917621** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.105	0.0050	0.1	0	105	90-110	0			

MS Sample ID: **19090951-01C MS** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: Run ID: **SKALAR1_190915A** SeqNo: **5917577** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1036	0.0050	0.1	-0.00092	104	90-110	0			

MS Sample ID: **19090825-21C MS** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: **SL-5** Run ID: **SKALAR1_190915A** SeqNo: **5917646** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1055	0.0050	0.1	-0.00088	106	90-110	0			

MSD Sample ID: **19090951-01C MSD** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: Run ID: **SKALAR1_190915A** SeqNo: **5917578** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1045	0.0050	0.1	-0.00092	105	90-110	0.1036	0.894	20	

MSD Sample ID: **19090825-21C MSD** Units: **mg/L** Analysis Date: **9/15/2019 03:09 PM**
Client ID: **SL-5** Run ID: **SKALAR1_190915A** SeqNo: **5917647** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, WAD	0.1072	0.0050	0.1	-0.00088	108	90-110	0.1055	1.65	20	

The following samples were analyzed in this batch:

19090825-21C	19090825-22C	19090825-23C
19090825-24C	19090825-25C	

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

Client: ArcelorMittal USA LLC
Work Order: 19090825
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R270423** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MBLK Sample ID: **MBLK-R270423** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:19 AM**
Client ID: Run ID: **VAL-LACHAT_190913A** SeqNo: **5915597** 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-R270423** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:55 AM**
Client ID: Run ID: **VAL-LACHAT_190913A** SeqNo: **5915627** 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-R270423** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:20 AM**
Client ID: Run ID: **VAL-LACHAT_190913A** SeqNo: **5915598** 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	0.431	0.032	0.4	0	108	90-110	0			

LCS Sample ID: **LCS-R270423** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:56 AM**
Client ID: Run ID: **VAL-LACHAT_190913A** SeqNo: **5915628** 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	0.437	0.032	0.4	0	109	90-110	0			

MS Sample ID: **19090825-19A MS** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:49 AM**
Client ID: **SL-3** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915622** 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	0.215	0.032	0.2	0.0631	76	90-110	0			S

MS Sample ID: **19090825-20A MS** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:53 AM**
Client ID: **SL-4** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915625** 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	0.213	0.032	0.2	0.0504	81.3	90-110	0			S

MS Sample ID: **19090825-23A MS** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 10:04 AM**
Client ID: **SL-7** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915634** 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	0.198	0.032	0.2	0.0036	97.2	90-110	0			

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

Client: ArcelorMittal USA LLC
Work Order: 19090825
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R270423** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MS Sample ID: **19090825-25A MS** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 10:08 AM**
Client ID: **000** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915638** 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	0.218	0.032	0.2	0.0291	94.4	90-110	0			

MSD Sample ID: **19090825-19A MSD** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:50 AM**
Client ID: **SL-3** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915623** 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	0.221	0.032	0.2	0.0631	79	90-110	0.215	2.75	20	S

MSD Sample ID: **19090825-20A MSD** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 09:54 AM**
Client ID: **SL-4** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915626** 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	0.211	0.032	0.2	0.0504	80.3	90-110	0.213	0.943	20	S

MSD Sample ID: **19090825-23A MSD** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 10:05 AM**
Client ID: **SL-7** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915635** 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	0.202	0.032	0.2	0.0036	99.2	90-110	0.198	2	20	

MSD Sample ID: **19090825-25A MSD** Units: **mg NH3-N/L** Analysis Date: **9/13/2019 10:10 AM**
Client ID: **000** Run ID: **VAL-LACHAT_190913A** SeqNo: **5915639** 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	0.221	0.032	0.2	0.0291	96	90-110	0.218	1.37	20	

The following samples were analyzed in this batch:

19090825-01A	19090825-02A	19090825-03A
19090825-04A	19090825-05A	19090825-06A
19090825-07A	19090825-08A	19090825-09A
19090825-10A	19090825-11A	19090825-12A
19090825-13A	19090825-14A	19090825-15A
19090825-16A	19090825-17A	19090825-18A
19090825-19A	19090825-20A	19090825-21A
19090825-22A	19090825-23A	19090825-24A
19090825-25A		

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

QC BATCH REPORT

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

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424

(Tel) 616.399.6070
(Fax) 616.399.6185

Chain of Custody Form

ALS Project Manager: Amanda Gryzbowski | ALS Work Order #: 1909825

Client Information		Project Information	
Purchase Order		Project Name	Receiving Water Monitoring
Work Order		Project Number	
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)
Send Report To		Invoice Attn.	Accounts Payable
Address	250 US 12	Address	250 US 12
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304
Phone	(219) 787-2120	Phone	(219) 787-2120
Fax		Fax	
e-Mail Address			

Parameter/Method Request for Analysis

A	Ammonia
B	Total Cyanide
C	Free Cyanide
D	pH (Field)
E	Temperature (Field)
F	Dissolved Oxygen (Field)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
1	15	9/12/19	8:58	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.68	23.0	9.2
2	14		9:12	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.81	22.8	10.8
3	7		9:23	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.48	23.2	8.6
4	6		9:32	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.69	22.4	8.9
5	5		9:45	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.66	21.9	9.1
6	4		9:58	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.53	22.3	8.7
7	3		10:11	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.66	23.1	9.0
8	2		10:22	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.67	22.7	9.1
9	1		10:35	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.69	22.9	9.3
10	OF001		10:51	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.71	24.7	9.1

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: ☐ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other _____

Results Due Date:

Relinquished by:	Date:	Time:	Received by:	Notes:
	9/12/19	15:56		
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler Temp.
	9/12/19	1700		2.4°C
Logged by (Laboratory): AMANDA G.	Date: 9/13/19	Time:	Checked by (Laboratory):	

QC Package: (Check Box Below)

Level II: Standard QC	X
Level III: Standard QC + Raw Data	
Level IV: SW846 Methods/CLP	
Other: _____	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424

(Tel) 616.399.6070
(Fax) 616.399.6185

Chain of Custody Form

ALS Project Manager: Amanda Gryzbowski | ALS Work Order #: 19090825

Client Information		Project Information	
Purchase Order		Project Name	Receiving Water Monitoring
Work Order		Project Number	
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)
Send Report To		Invoice Attn.	Accounts Payable
Address	250 US 12	Address	250 US 12
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304
Phone	(219) 787-2120	Phone	(219) 787-2120
Fax		Fax	
e-Mail Address			

Parameter/Method Request for Analysis

A	**Ammonia**
B	**Total Cyanide**
C	**Free Cyanide**
D	**pH** (Field)
E	**Temperature** (Field)
F	**Dissolved Oxygen** (Field)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
11	8	9/12/19	11 21	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.74	23.6	8.9
12	9		11 32	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.76	23.8	8.2
13	10		11 42	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.80	22.6	7.8
14	11		11 56	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.84	23.5	7.6
15	12		12 12	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.86	23.8	8.9
16	13		12 23	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.75	22.1	7.9
17	SL-1		12 58	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.87	22.2	7.8
18	SL-2		1 15	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.79	21.9	7.5
19	SL-3		1 29	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.91	22.1	8.6
20	SL-4		1 43	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.82	21.7	8.2

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: ☐Other ____ ☐STD 10 Wk Days ☐5 Wk Days ☐2 Wk Days ☐24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	9/12/19	15:56	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	9/12/19	1700	
Logged by (Laboratory): AMANDA G.	Date:	Time:	Checked by (Laboratory):
	9/12/19		

Notes:

Cooler Temp. 2.4°C

QC Package: (Check Box Below)

Level II: Standard QC	X
Level III: Standard QC + Raw Data	
Level IV: SW846 Methods/CLP	
Other: ____	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424

(Tel) 616.399.6070
(Fax) 616.399.6185

Chain of Custody Form

ALS Project Manager:	Amanda Gryzbowski	ALS Work Order #:	1909825

Client Information		Project Information	
Purchase Order		Project Name	Receiving Water Monitoring
Work Order		Project Number	
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)
Send Report To		Invoice Attn.	Accounts Payable
Address	250 US 12	Address	250 US 12
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304
Phone	(219) 787-2120	Phone	(219) 787-2120
Fax		Fax	
e-Mail Address			

Parameter/Method Request for Analysis

A	**Ammonia**
B	**Total Cyanide**
C	**Free Cyanide**
D	**pH** (Field)
E	**Temperature** (Field)
F	**Dissolved Oxygen** (Field)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
21	SL-5	9/12/19	157	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	8.06	22.8	7.7
22	SL-6	↓	218	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	8.12	24.6	7.1
23	SL-7		241	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.95	23.8	8.2
24	SL-8		312	Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	8.03	22.1	7.4
25	OOO	↓		Water	H_2SO_4, NaOH	2	X	X	X	X	X	X	7.84	22.3	7.9
26				Water	H_2SO_4, NaOH	2	X	X	X	X	X	X			
27				Water	H_2SO_4, NaOH	2	X	X	X	X	X	X			
28				Water	H_2SO_4, NaOH	2	X	X	X	X	X	X			
29				Water	H_2SO_4, NaOH	2	X	X	X	X	X	X			
30				Water	H_2SO_4, NaOH	2	X	X	X	X	X	X			

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time: ☐Other _____
☐STD 10 Wk Days ☐5 Wk Days ☐2 Wk Days ☐24 Hour

Results Due Date:

Relinquished by:	Date:	Time:	Received by:
	9/12/19	15:56	
Relinquished by:	Date:	Time:	Received by (Laboratory):
	9/12/19	17:00	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):
AMANDA G.	9/12/19		

Notes:

Cooler Temp. 2.4°C

QC Package: (Check Box Below)

Level II: Standard QC	X
Level III: Standard QC + Raw Data	
Level IV: SW846 Methods/CLP	
Other: _____	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

ALS Group, USA

Sample Receipt Checklist

Client Name: **ARCELORMITTAL-BURNSHARBO** Date/Time Received: **12-Sep-19 00:00**

Work Order: **19090825** Received by: **CD**

Checklist completed by Pete Wesson (eSignature) 13-Sep-19 (Date) Reviewed by: Amanda Grzybowski (eSignature) 13-Sep-19 (Date)

Matrices: Aqueous
Carrier name: Courier

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):	2.4°C	IR	
Cooler(s)/Kit(s):	1		
Date/Time sample(s) sent to storage:	2.4°C		
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: Holland - 2.2/2.2 c SR2

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: