



05-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: **19090003**

Dear Robert,

ALS Environmental received 25 samples on 02-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,

A handwritten signature in black ink that reads "Amanda Grzybowski".

Electronically approved by: Amanda Grzybowski

Amanda Grzybowski
Project Manager

Report of Laboratory Analysis

Certificate No: IN: C-MI-08

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: 19090003

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
19090003-01	15	Aqueous		9/2/2019 08:00	9/2/2019 15:00	<input type="checkbox"/>
19090003-01	15	Aqueous		9/2/2019 08:00	9/3/2019 13:30	<input type="checkbox"/>
19090003-02	14	Aqueous		9/2/2019 08:15	9/2/2019 15:00	<input type="checkbox"/>
19090003-02	14	Aqueous		9/2/2019 08:15	9/3/2019 13:30	<input type="checkbox"/>
19090003-03	7	Aqueous		9/2/2019 08:22	9/2/2019 15:00	<input type="checkbox"/>
19090003-03	7	Aqueous		9/2/2019 08:22	9/3/2019 13:30	<input type="checkbox"/>
19090003-04	6	Aqueous		9/2/2019 08:31	9/2/2019 15:00	<input type="checkbox"/>
19090003-04	6	Aqueous		9/2/2019 08:31	9/3/2019 13:30	<input type="checkbox"/>
19090003-05	5	Aqueous		9/2/2019 08:46	9/2/2019 15:00	<input type="checkbox"/>
19090003-05	5	Aqueous		9/2/2019 08:46	9/3/2019 13:30	<input type="checkbox"/>
19090003-06	4	Aqueous		9/2/2019 09:00	9/2/2019 15:00	<input type="checkbox"/>
19090003-06	4	Aqueous		9/2/2019 09:00	9/3/2019 13:30	<input type="checkbox"/>
19090003-07	3	Aqueous		9/2/2019 09:13	9/2/2019 15:00	<input type="checkbox"/>
19090003-07	3	Aqueous		9/2/2019 09:13	9/3/2019 13:30	<input type="checkbox"/>
19090003-08	2	Aqueous		9/2/2019 09:21	9/2/2019 15:00	<input type="checkbox"/>
19090003-08	2	Aqueous		9/2/2019 09:21	9/3/2019 13:30	<input type="checkbox"/>
19090003-09	1	Aqueous		9/2/2019 09:36	9/2/2019 15:00	<input type="checkbox"/>
19090003-09	1	Aqueous		9/2/2019 09:36	9/3/2019 13:30	<input type="checkbox"/>
19090003-10	OF001	Aqueous		9/2/2019 09:43	9/2/2019 15:00	<input type="checkbox"/>
19090003-10	OF001	Aqueous		9/2/2019 09:43	9/3/2019 13:30	<input type="checkbox"/>
19090003-11	8	Aqueous		9/2/2019 10:16	9/2/2019 15:00	<input type="checkbox"/>
19090003-11	8	Aqueous		9/2/2019 10:16	9/3/2019 13:30	<input type="checkbox"/>
19090003-12	9	Aqueous		9/2/2019 10:21	9/2/2019 15:00	<input type="checkbox"/>
19090003-12	9	Aqueous		9/2/2019 10:21	9/3/2019 13:30	<input type="checkbox"/>
19090003-13	10	Aqueous		9/2/2019 10:29	9/2/2019 15:00	<input type="checkbox"/>
19090003-13	10	Aqueous		9/2/2019 10:29	9/3/2019 13:30	<input type="checkbox"/>
19090003-14	11	Aqueous		9/2/2019 10:41	9/2/2019 15:00	<input type="checkbox"/>
19090003-14	11	Aqueous		9/2/2019 10:41	9/3/2019 13:30	<input type="checkbox"/>
19090003-15	12	Aqueous		9/2/2019 10:55	9/2/2019 15:00	<input type="checkbox"/>
19090003-15	12	Aqueous		9/2/2019 10:55	9/3/2019 13:30	<input type="checkbox"/>
19090003-16	13	Aqueous		9/2/2019 11:09	9/2/2019 15:00	<input type="checkbox"/>
19090003-16	13	Aqueous		9/2/2019 11:09	9/3/2019 13:30	<input type="checkbox"/>
19090003-17	SL-1	Aqueous		9/2/2019 11:18	9/2/2019 15:00	<input type="checkbox"/>
19090003-17	SL-1	Aqueous		9/2/2019 11:18	9/3/2019 13:30	<input type="checkbox"/>
19090003-18	SL-2	Aqueous		9/2/2019 11:27	9/2/2019 15:00	<input type="checkbox"/>
19090003-18	SL-2	Aqueous		9/2/2019 11:27	9/3/2019 13:30	<input type="checkbox"/>
19090003-19	SL-3	Aqueous		9/2/2019 11:38	9/2/2019 15:00	<input type="checkbox"/>
19090003-19	SL-3	Aqueous		9/2/2019 11:38	9/3/2019 13:30	<input type="checkbox"/>
19090003-20	SL-4	Aqueous		9/2/2019 11:49	9/2/2019 15:00	<input type="checkbox"/>

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: 19090003

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
19090003-20	SL-4	Aqueous		9/2/2019 11:49	9/3/2019 13:30	<input type="checkbox"/>
19090003-21	SL-5	Aqueous		9/2/2019 11:58	9/2/2019 15:00	<input type="checkbox"/>
19090003-21	SL-5	Aqueous		9/2/2019 11:58	9/3/2019 13:30	<input type="checkbox"/>
19090003-22	SL-6	Aqueous		9/2/2019 12:15	9/2/2019 15:00	<input type="checkbox"/>
19090003-22	SL-6	Aqueous		9/2/2019 12:15	9/3/2019 13:30	<input type="checkbox"/>
19090003-23	SL-7	Aqueous		9/2/2019 12:33	9/2/2019 15:00	<input type="checkbox"/>
19090003-23	SL-7	Aqueous		9/2/2019 12:33	9/3/2019 13:30	<input type="checkbox"/>
19090003-24	SL-8	Aqueous		9/2/2019 12:59	9/2/2019 15:00	<input type="checkbox"/>
19090003-24	SL-8	Aqueous		9/2/2019 12:59	9/3/2019 13:30	<input type="checkbox"/>
19090003-25	000	Aqueous		9/2/2019 14:09	9/2/2019 15:00	<input type="checkbox"/>
19090003-25	000	Aqueous		9/2/2019 14:09	9/3/2019 13:30	<input type="checkbox"/>

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: 19090003

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: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 15
Collection Date: 9/2/2019 08:00 AM

Work Order: 19090003
Lab ID: 19090003-01
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							Analyst: ALS
Dissolved Oxygen (field)	7.10		0		mg/L	1	9/2/2019
PH (FIELD)							Analyst: ALS
pH (field)	7.71		0		s.u.	1	9/2/2019
TEMPERATURE (FIELD)							Analyst: ALS
Temperature (field)	22.3		0		°C	1	9/2/2019
CYANIDE, WEAK ACID DISSOCIABLE							Analyst: JB
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
CYANIDE, TOTAL							Analyst: CD
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:25
AMMONIA AS NITROGEN							Analyst: CD
Ammonia as Nitrogen	0.210		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:34

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 14
Collection Date: 9/2/2019 08:15 AM

Work Order: 19090003
Lab ID: 19090003-02
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							Analyst: ALS
Dissolved Oxygen (field)	8.60		0		mg/L	1	9/2/2019
PH (FIELD)							Analyst: ALS
pH (field)	7.89		0		s.u.	1	9/2/2019
TEMPERATURE (FIELD)							Analyst: ALS
Temperature (field)	22.6		0		°C	1	9/2/2019
CYANIDE, WEAK ACID DISSOCIABLE							Analyst: JB
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
CYANIDE, TOTAL							Analyst: CD
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:26
AMMONIA AS NITROGEN							Analyst: CD
Ammonia as Nitrogen	0.0650		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:35

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 7
Collection Date: 9/2/2019 08:22 AM

Work Order: 19090003
Lab ID: 19090003-03
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.20		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.66		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	21.7		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:27
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.117		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:37
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 6
Collection Date: 9/2/2019 08:31 AM

Work Order: 19090003
Lab ID: 19090003-04
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.10		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.85		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.8		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:28
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.170		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:38
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 5
Collection Date: 9/2/2019 08:46 AM

Work Order: 19090003
Lab ID: 19090003-05
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.20		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.82		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.9		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:31
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 9/3/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.188		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:41
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 4
Collection Date: 9/2/2019 09:00 AM

Work Order: 19090003
Lab ID: 19090003-06
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.90		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.96		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.9		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:33
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.109		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:43
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 3
Collection Date: 9/2/2019 09:13 AM

Work Order: 19090003
Lab ID: 19090003-07
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.20		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.85		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.7		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:34
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.109		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:44
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 2
Collection Date: 9/2/2019 09:21 AM

Work Order: 19090003
Lab ID: 19090003-08
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.30		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.76		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	21.5		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:35
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.109		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:45
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 1
Collection Date: 9/2/2019 09:36 AM

Work Order: 19090003
Lab ID: 19090003-09
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.10		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.89		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	21.4		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:36
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.152		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:46
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: OF001
Collection Date: 9/2/2019 09:43 AM

Work Order: 19090003
Lab ID: 19090003-10
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.00		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.78		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	22.2		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	0.00208	J	0.00200	0.00500	mg/L	1	9/4/2019 16:37
				Method: A4500-CN E-11			Prep: A4500-CN C-11 / 9/3/19 Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.230		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:50
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 8
Collection Date: 9/2/2019 10:16 AM

Work Order: 19090003
Lab ID: 19090003-11
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.60		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.78		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	22.2		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:38
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.105		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:51
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 9
Collection Date: 9/2/2019 10:21 AM

Work Order: 19090003
Lab ID: 19090003-12
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.90		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.81		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	22.4		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:39
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0502		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:52
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 10
Collection Date: 9/2/2019 10:29 AM

Work Order: 19090003
Lab ID: 19090003-13
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.90		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.85		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	21.3		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:40
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0534		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:56
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 11
Collection Date: 9/2/2019 10:41 AM

Work Order: 19090003
Lab ID: 19090003-14
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.50		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.82		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	22.6		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:42
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.120		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:57
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 12
Collection Date: 9/2/2019 10:55 AM

Work Order: 19090003
Lab ID: 19090003-15
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.70		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.85		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	22.9		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:45
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0978		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 10:58
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 13
Collection Date: 9/2/2019 11:09 AM

Work Order: 19090003
Lab ID: 19090003-16
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.00		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.96		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.7		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:46
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:02
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-1
Collection Date: 9/2/2019 11:18 AM

Work Order: 19090003
Lab ID: 19090003-17
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.20		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.08		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.8		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:47
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/3/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:21
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-2
Collection Date: 9/2/2019 11:27 AM

Work Order: 19090003
Lab ID: 19090003-18
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.00		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.16		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.1		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:54
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/4/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:04
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-3
Collection Date: 9/2/2019 11:38 AM

Work Order: 19090003
Lab ID: 19090003-19
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.20		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.18		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.8		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:55
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/4/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:06
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-4
Collection Date: 9/2/2019 11:49 AM

Work Order: 19090003
Lab ID: 19090003-20
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.90		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.12		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.6		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 16:59
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/4/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:07
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-5
Collection Date: 9/2/2019 11:58 AM

Work Order: 19090003
Lab ID: 19090003-21
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.80		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.15		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.4		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 17:00
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/4/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:10
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-6
Collection Date: 9/2/2019 12:15 PM

Work Order: 19090003
Lab ID: 19090003-22
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.60		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.18		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.8		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 17:01
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/4/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.202		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:12
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-7
Collection Date: 9/2/2019 12:33 PM

Work Order: 19090003
Lab ID: 19090003-23
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.00		0		mg/L	1	9/2/2019
							Analyst: ALS
							Method: A4500-O G-11
PH (FIELD)							
pH (field)	8.15		0		s.u.	1	9/2/2019
							Analyst: ALS
							Method: A4500-H B-11
TEMPERATURE (FIELD)							
Temperature (field)	20.6		0		°C	1	9/2/2019
							Analyst: ALS
							Method: A2550 B-10
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
							Analyst: JB
							Method: KELADA-01
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 17:02
							Analyst: CD
							Prep: A4500-CN C-11 / 9/4/19
							Method: A4500-CN E-11
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0179	J	0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:13
							Analyst: CD
							Method: E350.1 R2.0

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-8
Collection Date: 9/2/2019 12:59 PM

Work Order: 19090003
Lab ID: 19090003-24
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.90		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.13		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.8		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 17:03
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/4/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:16
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 05-Sep-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 000
Collection Date: 9/2/2019 02:09 PM

Work Order: 19090003
Lab ID: 19090003-25
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.30		0		mg/L	1	9/2/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.65		0		s.u.	1	9/2/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.8		0		°C	1	9/2/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, WEAK ACID DISSOCIABLE							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/4/2019 09:11
				Method: KELADA-01			Analyst: JB
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	9/4/2019 17:04
				Method: A4500-CN E-11	Prep: A4500-CN C-11 / 9/4/19		Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0484		0.00980	0.0320	mg NH3-N/L	1	9/3/2019 11:18
				Method: E350.1 R2.0			Analyst: CD

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

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
WorkOrder: 19090003

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	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.

<u>Acronym</u>	<u>Description</u>
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

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

Client: ArcelorMittal USA LLC

QC BATCH REPORT

Work Order: 19090003

Project: Arcelor Mittal - Burns Harbor E.R.

Batch ID: **R269763a** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK	Sample ID: MB-R269763-R269763a				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM			
Client ID:	Run ID: SKALAR1_190904A			SeqNo: 5892355		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-R269763-R269763a				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM			
Client ID:	Run ID: SKALAR1_190904A			SeqNo: 5892356		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1068 0.0050 0.1 0 107 90-110 0

MS	Sample ID: 19090003-01C MS				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM			
Client ID: 15	Run ID: SKALAR1_190904A			SeqNo: 5892358		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1027 0.0050 0.1 -0.00132 104 90-110 0

MS	Sample ID: 19090003-10C MS				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM			
Client ID: OF001	Run ID: SKALAR1_190904A			SeqNo: 5892371		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1068 0.0050 0.1 -0.00074 108 90-110 0

MSD	Sample ID: 19090003-01C MSD				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM			
Client ID: 15	Run ID: SKALAR1_190904A			SeqNo: 5892359		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1037 0.0050 0.1 -0.00132 105 90-110 0.1027 0.901 20

MSD	Sample ID: 19090003-10C MSD				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM			
Client ID: OF001	Run ID: SKALAR1_190904A			SeqNo: 5892372		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1087 0.0050 0.1 -0.00074 109 90-110 0.1068 1.78 20

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

Client: ArcelorMittal USA LLC
Work Order: 19090003
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269763a** Instrument ID **SKALAR1** Method: **Kelada-01**

The following samples were analyzed in this batch:

19090003-01C	19090003-02C	19090003-03C
19090003-04C	19090003-05C	19090003-06C
19090003-07C	19090003-08C	19090003-09C
19090003-10C	19090003-11C	19090003-12C
19090003-13C	19090003-14C	19090003-15C
19090003-16C	19090003-17C	19090003-18C
19090003-19C	19090003-20C	

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

Client: ArcelorMittal USA LLC
 Work Order: 19090003
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269763b** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK		Sample ID: MB-R269763-R269763b				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM		
Client ID:		Run ID: SKALAR1_190904A				SeqNo: 5892385		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-R269763-R269763b				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM		
Client ID:		Run ID: SKALAR1_190904A				SeqNo: 5892386		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.109 0.0050 0.1 0 109 90-110 0

MS		Sample ID: 19090003-21C MS				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM		
Client ID: SL-5		Run ID: SKALAR1_190904A				SeqNo: 5892388		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1044 0.0050 0.1 -0.00189 106 90-110 0

MSD		Sample ID: 19090003-21C MSD				Units: mg/L		Analysis Date: 9/4/2019 09:11 AM		
Client ID: SL-5		Run ID: SKALAR1_190904A				SeqNo: 5892389		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1043 0.0050 0.1 -0.00189 106 90-110 0.1044 0.153 20

The following samples were analyzed in this batch:

19090003-21C	19090003-22C	19090003-23C
19090003-24C	19090003-25C	

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

Client: ArcelorMittal USA LLC
 Work Order: 19090003
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: 141914 Instrument ID VAL-LACHAT Method: A4500-CN E-11

MBLK		Sample ID: MBLK-141914-141914				Units: mg/L		Analysis Date: 9/4/2019 04:18 PM		
Client ID:		Run ID: VAL-LACHAT_190904B				SeqNo: 5893953		Prep Date: 9/3/2019		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-141914-141914				Units: mg/L		Analysis Date: 9/4/2019 04:19 PM		
Client ID:		Run ID: VAL-LACHAT_190904B				SeqNo: 5893954		Prep Date: 9/3/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.101 0.0050 0.1 0 101 90-110 0

MS		Sample ID: 19082088-05B MS				Units: mg/L		Analysis Date: 9/4/2019 04:21 PM		
Client ID:		Run ID: VAL-LACHAT_190904B				SeqNo: 5893956		Prep Date: 9/3/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.0855 0.0050 0.1 0.000118 85.4 70-130 0

MS		Sample ID: 19090007-01B MS				Units: mg/L		Analysis Date: 9/4/2019 04:49 PM		
Client ID:		Run ID: VAL-LACHAT_190904B				SeqNo: 5893981		Prep Date: 9/3/2019		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 0.0003795 97.1 70-130 0

MSD		Sample ID: 19082088-05B MSD				Units: mg/L		Analysis Date: 9/4/2019 04:22 PM		
Client ID:		Run ID: VAL-LACHAT_190904B				SeqNo: 5893957		Prep Date: 9/3/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.0825 0.0050 0.1 0.000118 82.4 70-130 0.0855 3.57 30

MSD		Sample ID: 19090007-01B MSD				Units: mg/L		Analysis Date: 9/4/2019 04:51 PM		
Client ID:		Run ID: VAL-LACHAT_190904B				SeqNo: 5893982		Prep Date: 9/3/2019		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.0965 0.0050 0.1 0.0003795 96.1 70-130 0.0975 1.03 30

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

Client: ArcelorMittal USA LLC
Work Order: 19090003
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141914** Instrument ID **VAL-LACHAT** Method: **A4500-CN E-11**

The following samples were analyzed in this batch:

19090003-01B	19090003-02B	19090003-03B
19090003-04B	19090003-05B	19090003-06B
19090003-07B	19090003-08B	19090003-09B
19090003-10B	19090003-11B	19090003-12B
19090003-13B	19090003-14B	19090003-15B
19090003-16B	19090003-17B	

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

Client: ArcelorMittal USA LLC
 Work Order: 19090003
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: 141915 Instrument ID VAL-LACHAT Method: A4500-CN E-11

MBLK	Sample ID: MBLK-141915-141915		Units: mg/L		Analysis Date: 9/4/2019 04:52 PM					
Client ID:	Run ID: VAL-LACHAT_190904B		SeqNo: 5893983		Prep Date: 9/4/2019 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-141915-141915		Units: mg/L		Analysis Date: 9/4/2019 04:53 PM					
Client ID:	Run ID: VAL-LACHAT_190904B		SeqNo: 5893984		Prep Date: 9/4/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1025 0.0050 0.1 0 102 90-110 0

MS	Sample ID: 19090008-01B MS		Units: mg/L		Analysis Date: 9/4/2019 05:08 PM					
Client ID:	Run ID: VAL-LACHAT_190904B		SeqNo: 5893997		Prep Date: 9/4/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1015 0.0050 0.1 0.00805 93.4 70-130 0

MS	Sample ID: 19090010-05B MS		Units: mg/L		Analysis Date: 9/4/2019 05:14 PM					
Client ID:	Run ID: VAL-LACHAT_190904B		SeqNo: 5894003		Prep Date: 9/4/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1015 0.0050 0.1 0.000112 101 70-130 0

MSD	Sample ID: 19090008-01B MSD		Units: mg/L		Analysis Date: 9/4/2019 05:09 PM					
Client ID:	Run ID: VAL-LACHAT_190904B		SeqNo: 5893998		Prep Date: 9/4/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.099 0.0050 0.1 0.00805 91 70-130 0.1015 2.49 30

MSD	Sample ID: 19090010-05B MSD		Units: mg/L		Analysis Date: 9/4/2019 05:15 PM					
Client ID:	Run ID: VAL-LACHAT_190904B		SeqNo: 5894004		Prep Date: 9/4/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.094 0.0050 0.1 0.000112 93.9 70-130 0.1015 7.67 30

The following samples were analyzed in this batch:

19090003-18B	19090003-19B	19090003-20B
19090003-21B	19090003-22B	19090003-23B
19090003-24B	19090003-25B	

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

Client: ArcelorMittal USA LLC
 Work Order: 19090003
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269665** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MBLK	Sample ID: MBLK-R269665		Units: mg NH3-N/L		Analysis Date: 9/3/2019 09:45 AM					
Client ID:	Run ID: VAL-LACHAT_190903A		SeqNo: 5889842		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-R269665		Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:21 AM					
Client ID:	Run ID: VAL-LACHAT_190903A		SeqNo: 5889872		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-R269665		Units: mg NH3-N/L		Analysis Date: 9/3/2019 11:00 AM					
Client ID:	Run ID: VAL-LACHAT_190903A		SeqNo: 5889904		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-R269665		Units: mg NH3-N/L		Analysis Date: 9/3/2019 09:46 AM					
Client ID:	Run ID: VAL-LACHAT_190903A		SeqNo: 5889843		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 0.387 0.032 0.4 0 96.8 90-110 0

LCS	Sample ID: LCS-R269665		Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:22 AM					
Client ID:	Run ID: VAL-LACHAT_190903A		SeqNo: 5889873		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 0.382 0.032 0.4 0 95.5 90-110 0

LCS	Sample ID: LCS-R269665		Units: mg NH3-N/L		Analysis Date: 9/3/2019 11:01 AM					
Client ID:	Run ID: VAL-LACHAT_190903A		SeqNo: 5889905		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 0.383 0.032 0.4 0 95.8 90-110 0

MS	Sample ID: 19090002-05A MS		Units: mg NH3-N/L		Analysis Date: 9/3/2019 09:53 AM					
Client ID:	Run ID: VAL-LACHAT_190903A		SeqNo: 5889849		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 0.374 0.032 0.2 0.172 101 90-110 0

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

Client: ArcelorMittal USA LLC
 Work Order: 19090003
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269665** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MS		Sample ID: 19090002-09A MS				Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:03 AM		
Client ID:		Run ID: VAL-LACHAT_190903A		SeqNo: 5889857		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 0.458 0.032 0.2 0.28 89 90-110 0 S

MS		Sample ID: 19090002-22A MS				Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:28 AM		
Client ID:		Run ID: VAL-LACHAT_190903A		SeqNo: 5889878		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 0.193 0.032 0.2 0.00235 95.3 90-110 0

MS		Sample ID: 19090003-09A MS				Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:47 AM		
Client ID: 1		Run ID: VAL-LACHAT_190903A		SeqNo: 5889894		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 0.32 0.032 0.2 0.152 84 90-110 0 S

MS		Sample ID: 19090003-23A MS				Units: mg NH3-N/L		Analysis Date: 9/3/2019 11:14 AM		
Client ID: SL-7		Run ID: VAL-LACHAT_190903A		SeqNo: 5889916		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 0.197 0.032 0.2 0.0179 89.6 90-110 0 S

MSD		Sample ID: 19090002-05A MSD				Units: mg NH3-N/L		Analysis Date: 9/3/2019 09:54 AM		
Client ID:		Run ID: VAL-LACHAT_190903A		SeqNo: 5889850		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 0.37 0.032 0.2 0.172 99 90-110 0.374 1.08 20

MSD		Sample ID: 19090002-09A MSD				Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:04 AM		
Client ID:		Run ID: VAL-LACHAT_190903A		SeqNo: 5889858		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 0.457 0.032 0.2 0.28 88.5 90-110 0.458 0.219 20 S

MSD		Sample ID: 19090002-22A MSD				Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:29 AM		
Client ID:		Run ID: VAL-LACHAT_190903A		SeqNo: 5889879		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 0.19 0.032 0.2 0.00235 93.8 90-110 0.193 1.57 20

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

Client: ArcelorMittal USA LLC
 Work Order: 19090003
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269665** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

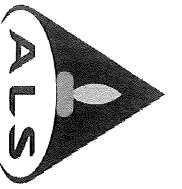
MSD		Sample ID: 19090003-09A MSD				Units: mg NH3-N/L		Analysis Date: 9/3/2019 10:49 AM			
Client ID: 1		Run ID: VAL-LACHAT_190903A				SeqNo: 5889895		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Ammonia as Nitrogen	0.319	0.032	0.2	0.152	83.5	90-110	0.32	0.313	20	S	

MSD		Sample ID: 19090003-23A MSD				Units: mg NH3-N/L		Analysis Date: 9/3/2019 11:15 AM			
Client ID: SL-7		Run ID: VAL-LACHAT_190903A				SeqNo: 5889917		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	0.196	0.032	0.2	0.0179	89	90-110	0.197	0.509	20	S	

The following samples were analyzed in this batch:

19090003-01A	19090003-02A	19090003-03A
19090003-04A	19090003-05A	19090003-06A
19090003-07A	19090003-08A	19090003-09A
19090003-10A	19090003-11A	19090003-12A
19090003-13A	19090003-14A	19090003-15A
19090003-16A	19090003-17A	19090003-18A
19090003-19A	19090003-20A	19090003-21A
19090003-22A	19090003-23A	19090003-24A
19090003-25A		

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

Page 1 of 3

ALS Project Manager:

Amanda Gryzbowski

ALS Work Order #:

Client Information

Project Information

Parameter/Method Request for Analysis

Purchase Order		Project Name	Receiving Water Monitoring	A	Ammonia
Work Order		Project Number		B	Total Cyanide
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)	C	Free Cyanide
Send Report To		Invoice Attn.	Accounts Payable	D	pH (Field)
Address	250 US 12	Address	250 US 12	E	Temperature (Field)
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304	F	Dissolved Oxygen (Field)
Phone	(219) 787-2120	Phone	(219) 787-2120		
Fax		Fax			
e-Mail Address					

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
15		9/12/19	8:00	Water		2	X	X	X				7.71	22.3	7.1
14			8:15										7.89	22.6	8.6
7			8:22										7.66	21.7	8.2
6			8:31										7.85	20.8	7.1
5			8:40										7.82	20.9	7.9
4			9:00										7.96	20.9	7.9
3			9:13										7.85	20.7	7.9
2			9:21										7.76	21.5	7.3
1			9:36										7.89	21.4	7.1
	OF 061		9:43										7.78	22.2	7.0

Sampler(s): Please Print & Sign

Shipment Method: STD 10 Wk Days 5 Wk Days 2 Wk Days Other _____

Required Turnaround Time: 10 Wk Days 5 Wk Days 2 Wk Days 24 Hour

Relinquished by: *[Signature]* Date: 9/12/19 Time: 1402 Received by: *[Signature]* Notes: _____

Relinquished by: *[Signature]* Date: 9-2-19 Time: 1500 Received by: *[Signature]* Notes: _____

Logged by (Laboratory): _____ Date: _____ Time: _____ Checked by (Laboratory): *[Signature]* Cooler Temp. 24°C

QC Package: (Check Box Below)

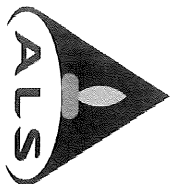
Level II: Standard QC

Level III: Standard QC + Raw Data

Level IV: SW 846 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

Page 2 of 3

ALS Project Manager: Amanda Gryzbowski

ALS Work Order #: _____

Client Information

Project Information

Parameter/Method Request for Analysis

Purchase Order		Project Name	Receiving Water Monitoring	A Ammonia
Work Order		Project Number		B Total Cyanide
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)	C Free Cyanide
Send Report To		Invoice Attn.	Accounts Payable	D pH (Field)
Address	250 US 12	Address	250 US 12	E Temperature (Field)
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304	F Dissolved Oxygen (Field)
Phone	(219) 787-2120	Phone	(219) 787-2120	
Fax		Fax		
e-Mail Address				

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
8		9/2/14	10:10	Water	H ₂ SO ₄ , NaOH	2	X	X					7.78	22.2	7.6
9		9/2/14	10:21										7.81	22.4	7.9
10			10:29										7.85	21.3	7.9
11			10:41										7.82	22.0	7.5
12			10:55										7.85	22.9	7.7
13			11:09										7.96	20.7	7.0
	SL-1		11:18										8.08	20.8	7.2
	SL-2		11:27										8.16	20.1	8.0
	SL-3		11:38										8.18	20.8	8.2
	SL-4		11:49										8.12	20.6	7.9

Sampler(s): Please Print & Sign _____

Shipment Method: _____

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

Results Due Date: _____

Relinquished by: _____ Date: 9/2/14 Time: 1422

Received by: _____ Date: 9-2-14 Time: 1500

QC Package: (Check Box Below)

Level II: Standard QC

Level III: Standard QC + Raw Data

Level IV: SW846 Methods/CLP

Other: _____

Checked by (Laboratory): _____

Cooler Temp. 24°C

QC Package: (Check Box Below)

Level II: Standard QC

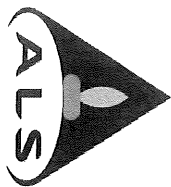
Level III: Standard QC + Raw Data

Level IV: SW846 Methods/CLP

Other: _____

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

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ALS Environmental
 3352 128th Avenue
 Holland, Michigan 49424
 (Tel) 616.399.6070
 (Fax) 616.399.6185

Chain of Custody Form

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ALS Project Manager: Amanda Gryzbowski ALS Work Order #:

Client Information

Purchase Order		Project Name	Receiving Water Monitoring	Parameter/Method Request for Analysis	
Work Order		Project Number		A Ammonia	
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)	B Total Cyanide	
Send Report To		Invoice Attn.	Accounts Payable	C Free Cyanide	
Address	250 US 12	Address	250 US 12	D pH (Field)	
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304	E Temperature (Field)	
Phone	(219) 787-2120	Phone	(219) 787-2120	F Dissolved Oxygen (Field)	
Fax		Fax			
e-Mail Address					

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
	SL-5	9/2/19	1158	Water	H ₂ SO ₄ , NaOH	2	X	X	X				8.15	20.4	7.9
	SL-6		1215				X	X	X				8.19	20.8	7.6
	SL-7		1233										8.15	20.6	8.0
	SL-8		1259										8.13	20.8	7.9
	000		209										7.65	20.8	7.3

Sampler(s): Please Print & Sign

Shipment Method: STD 10 Wk. Days 5 Wk. Days 2 Wk. Days 24 Hour

Required Turnaround Time: Other _____

Results Due Date: _____

Relinquished by: *[Signature]* Date: 9/2/19 Time: 1222 Received by: *[Signature]* Notes: _____

Relinquished by: *[Signature]* Date: 9-2-19 Time: 1508 Received by (Laboratory): *[Signature]*

Checked by (Laboratory): *[Signature]*

QC Package: (Check Box Below)

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

Logged by (Laboratory): _____ Date: _____ Time: _____

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

Sample Receipt Checklist

Client Name: **ARCELORMITTAL-BURNSHARBO**

Date/Time Received: **02-Sep-19 00:00**

Work Order: **19090003**

Received by: **JH**

Checklist completed by Amanda Przybowski 03-Sep-19
eSignature Date

Reviewed by: Amanda Przybowski 03-Sep-19
eSignature Date

Matrices: **Aqueous**

Carrier name: **ALSHN**

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Custody seals intact on sample bottles?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Present <input checked="" type="checkbox"/>
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature in compliance?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<input type="text" value="2.4"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<input type="text" value="9/2/19 15:00"/>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:	<input type="text"/>		

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: