



17-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: **19090951**

Dear Robert,

ALS Environmental received 25 samples on 13-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 ALS

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RIGHT SOLUTIONS RIGHT PARTNER

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090951

**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>
19090951-01	15	Aqueous		9/13/2019 12:06	9/14/2019 08:00	<input type="checkbox"/>
19090951-01	15	Aqueous		9/13/2019 12:06	9/14/2019 08:30	<input type="checkbox"/>
19090951-02	14	Aqueous		9/13/2019 12:15	9/14/2019 08:00	<input type="checkbox"/>
19090951-02	14	Aqueous		9/13/2019 12:15	9/14/2019 08:30	<input type="checkbox"/>
19090951-03	7	Aqueous		9/13/2019 12:24	9/14/2019 08:00	<input type="checkbox"/>
19090951-03	7	Aqueous		9/13/2019 12:24	9/14/2019 08:30	<input type="checkbox"/>
19090951-04	6	Aqueous		9/13/2019 12:35	9/14/2019 08:00	<input type="checkbox"/>
19090951-04	6	Aqueous		9/13/2019 12:35	9/14/2019 08:30	<input type="checkbox"/>
19090951-05	5	Aqueous		9/13/2019 12:43	9/14/2019 08:00	<input type="checkbox"/>
19090951-05	5	Aqueous		9/13/2019 12:43	9/14/2019 08:30	<input type="checkbox"/>
19090951-06	4	Aqueous		9/13/2019 12:56	9/14/2019 08:00	<input type="checkbox"/>
19090951-06	4	Aqueous		9/13/2019 12:56	9/14/2019 08:30	<input type="checkbox"/>
19090951-07	3	Aqueous		9/13/2019 13:05	9/14/2019 08:00	<input type="checkbox"/>
19090951-07	3	Aqueous		9/13/2019 13:05	9/14/2019 08:30	<input type="checkbox"/>
19090951-08	2	Aqueous		9/13/2019 13:18	9/14/2019 08:00	<input type="checkbox"/>
19090951-08	2	Aqueous		9/13/2019 13:18	9/14/2019 08:30	<input type="checkbox"/>
19090951-09	1	Aqueous		9/13/2019 13:25	9/14/2019 08:00	<input type="checkbox"/>
19090951-09	1	Aqueous		9/13/2019 13:25	9/14/2019 08:30	<input type="checkbox"/>
19090951-10	OF001	Aqueous		9/13/2019 13:39	9/14/2019 08:00	<input type="checkbox"/>
19090951-10	OF001	Aqueous		9/13/2019 13:39	9/14/2019 08:30	<input type="checkbox"/>
19090951-11	8	Aqueous		9/13/2019 13:58	9/14/2019 08:00	<input type="checkbox"/>
19090951-11	8	Aqueous		9/13/2019 13:58	9/14/2019 08:30	<input type="checkbox"/>
19090951-12	9	Aqueous		9/13/2019 14:12	9/14/2019 08:00	<input type="checkbox"/>
19090951-12	9	Aqueous		9/13/2019 14:12	9/14/2019 08:30	<input type="checkbox"/>
19090951-13	10	Aqueous		9/13/2019 14:23	9/14/2019 08:00	<input type="checkbox"/>
19090951-13	10	Aqueous		9/13/2019 14:23	9/14/2019 08:30	<input type="checkbox"/>
19090951-14	11	Aqueous		9/13/2019 14:35	9/14/2019 08:00	<input type="checkbox"/>
19090951-14	11	Aqueous		9/13/2019 14:35	9/14/2019 08:30	<input type="checkbox"/>
19090951-15	12	Aqueous		9/13/2019 14:42	9/14/2019 08:00	<input type="checkbox"/>
19090951-15	12	Aqueous		9/13/2019 14:42	9/14/2019 08:30	<input type="checkbox"/>
19090951-16	13	Aqueous		9/13/2019 14:59	9/14/2019 08:00	<input type="checkbox"/>
19090951-16	13	Aqueous		9/13/2019 14:59	9/14/2019 08:30	<input type="checkbox"/>
19090951-17	SL-1	Aqueous		9/13/2019 15:13	9/14/2019 08:00	<input type="checkbox"/>
19090951-17	SL-1	Aqueous		9/13/2019 15:13	9/14/2019 08:30	<input type="checkbox"/>
19090951-18	SL-2	Aqueous		9/13/2019 15:28	9/14/2019 08:00	<input type="checkbox"/>
19090951-18	SL-2	Aqueous		9/13/2019 15:28	9/14/2019 08:30	<input type="checkbox"/>
19090951-19	SL-3	Aqueous		9/13/2019 15:37	9/14/2019 08:00	<input type="checkbox"/>
19090951-19	SL-3	Aqueous		9/13/2019 15:37	9/14/2019 08:30	<input type="checkbox"/>
19090951-20	SL-4	Aqueous		9/13/2019 15:49	9/14/2019 08:00	<input type="checkbox"/>

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**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090951

## Work Order Sample Summary

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<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>
19090951-20	SL-4	Aqueous		9/13/2019 15:49	9/14/2019 08:30	<input type="checkbox"/>
19090951-21	SL-5	Aqueous		9/13/2019 15:58	9/14/2019 08:00	<input type="checkbox"/>
19090951-21	SL-5	Aqueous		9/13/2019 15:58	9/14/2019 08:30	<input type="checkbox"/>
19090951-22	SL-6	Aqueous		9/13/2019 16:11	9/14/2019 08:00	<input type="checkbox"/>
19090951-22	SL-6	Aqueous		9/13/2019 16:11	9/14/2019 08:30	<input type="checkbox"/>
19090951-23	SL-7	Aqueous		9/13/2019 16:35	9/14/2019 08:00	<input type="checkbox"/>
19090951-23	SL-7	Aqueous		9/13/2019 16:35	9/14/2019 08:30	<input type="checkbox"/>
19090951-24	SL-8	Aqueous		9/13/2019 16:53	9/14/2019 08:00	<input type="checkbox"/>
19090951-24	SL-8	Aqueous		9/13/2019 16:53	9/14/2019 08:30	<input type="checkbox"/>
19090951-25	000	Aqueous		9/13/2019 17:29	9/14/2019 08:00	<input type="checkbox"/>
19090951-25	000	Aqueous		9/13/2019 17:29	9/14/2019 08:30	<input type="checkbox"/>

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**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090951

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**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: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 15  
**Collection Date:** 9/13/2019 12:06 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-01  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.50		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.72		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.2		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0023	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.105		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:17
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 14  
**Collection Date:** 9/13/2019 12:15 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-02  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	9.70		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.17		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.5		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0019	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0112	J	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:19
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 7  
**Collection Date:** 9/13/2019 12:24 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-03  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.60		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.63		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.2		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0026	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.211		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:20
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 6  
**Collection Date:** 9/13/2019 12:35 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-04  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.80		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.68		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.1		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0024	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.289		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:21
				Method: E350.1 R2.0			Analyst: CD

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



# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 5  
**Collection Date:** 9/13/2019 12:43 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-05  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.80		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.66		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.0		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0023	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.258		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:22
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 4  
**Collection Date:** 9/13/2019 12:56 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-06  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	6.90		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.72		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.6		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0024	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.331		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:23
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 3  
**Collection Date:** 9/13/2019 01:05 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-07  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	6.70		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.70		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.4		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0022	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.292		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:25
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 2  
**Collection Date:** 9/13/2019 01:18 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-08  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.30		0		mg/L	1	9/13/2019
			Method: A4500-O G-11				Analyst: <b>ALS</b>
<b>PH (FIELD)</b>							
pH (field)	7.71		0		s.u.	1	9/13/2019
			Method: A4500-H B-11				Analyst: <b>ALS</b>
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.5		0		°C	1	9/13/2019
			Method: A2550 B-10				Analyst: <b>ALS</b>
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0029	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
			Method: KELADA-01				Analyst: <b>JB</b>
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
			Method: KELADA-01				Analyst: <b>JB</b>
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.377		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:28
			Method: E350.1 R2.0				Analyst: <b>CD</b>

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 1  
**Collection Date:** 9/13/2019 01:25 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-09  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.20		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.72		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.6		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0035	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.471		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:29
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** OF001  
**Collection Date:** 9/13/2019 01:39 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-10  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.50		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: <b>ALS</b>
<b>PH (FIELD)</b>							
pH (field)	7.74		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: <b>ALS</b>
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.7		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: <b>ALS</b>
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0037	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: <b>JB</b>
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: <b>JB</b>
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.548		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:31
				Method: E350.1 R2.0			Analyst: <b>CD</b>

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 8  
**Collection Date:** 9/13/2019 01:58 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-11  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	6.30		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.4		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0020	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.193		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:32
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 9  
**Collection Date:** 9/13/2019 02:12 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-12  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.10		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.67		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.5		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0023	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.151		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:33
				Method: E350.1 R2.0			Analyst: CD

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



# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 10  
**Collection Date:** 9/13/2019 02:23 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-13  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.60		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.70		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.6		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0020	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.107		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:34
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 11  
**Collection Date:** 9/13/2019 02:35 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-14  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.90		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.73		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.1		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0016	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.110		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:35
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 12  
**Collection Date:** 9/13/2019 02:42 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-15  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.10		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.75		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.7		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0018	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0975		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 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: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 13  
**Collection Date:** 9/13/2019 02:59 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-16  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.40		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.80		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.1		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0019	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.116		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 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: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-1  
**Collection Date:** 9/13/2019 03:13 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-17  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.80		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.95		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.1		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0020	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0715		0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:39
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-2  
**Collection Date:** 9/13/2019 03:28 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-18  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.40		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.08		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.9		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0014	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen		U	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 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: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-3  
**Collection Date:** 9/13/2019 03:37 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-19  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b> Dissolved Oxygen (field)	7.60		0		mg/L	1	9/13/2019
			Method: A4500-O G-11		Analyst: <b>ALS</b>		
<b>PH (FIELD)</b> pH (field)	8.07		0		s.u.	1	9/13/2019
			Method: A4500-H B-11		Analyst: <b>ALS</b>		
<b>TEMPERATURE (FIELD)</b> Temperature (field)	20.9		0		°C	1	9/13/2019
			Method: A2550 B-10		Analyst: <b>ALS</b>		
<b>CYANIDE, TOTAL</b> Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/17/2019 11:24
			Method: KELADA-01		Analyst: <b>JB</b>		
<b>CYANIDE, WEAK ACID DISSOCIABLE</b> Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
			Method: KELADA-01		Analyst: <b>JB</b>		
<b>AMMONIA AS NITROGEN</b> Ammonia as Nitrogen	0.0107	J	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:44
			Method: E350.1 R2.0		Analyst: <b>CD</b>		

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-4  
**Collection Date:** 9/13/2019 03:49 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-20  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b> Dissolved Oxygen (field)	7.40		0		mg/L	1	9/13/2019
			Method: A4500-O G-11		Analyst: <b>ALS</b>		
<b>PH (FIELD)</b> pH (field)	8.05		0		s.u.	1	9/13/2019
			Method: A4500-H B-11		Analyst: <b>ALS</b>		
<b>TEMPERATURE (FIELD)</b> Temperature (field)	20.8		0		°C	1	9/13/2019
			Method: A2550 B-10		Analyst: <b>ALS</b>		
<b>CYANIDE, TOTAL</b> Cyanide, Total	0.0012	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
			Method: KELADA-01		Analyst: <b>JB</b>		
<b>CYANIDE, WEAK ACID DISSOCIABLE</b> Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
			Method: KELADA-01		Analyst: <b>JB</b>		
<b>AMMONIA AS NITROGEN</b> Ammonia as Nitrogen	0.0186	J	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:47
			Method: E350.1 R2.0		Analyst: <b>CD</b>		

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



# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-5  
**Collection Date:** 9/13/2019 03:58 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-21  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.10		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.08		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.8		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0015	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0213	J	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:53
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-6  
**Collection Date:** 9/13/2019 04:11 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-22  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.50		0		mg/L	1	9/13/2019
<b>PH (FIELD)</b>							
pH (field)	8.04		0		s.u.	1	9/13/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.0		0		°C	1	9/13/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/17/2019 11:24
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/15/2019 15:09
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0121	J	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 10:59

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-7  
**Collection Date:** 9/13/2019 04:35 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-23  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	9.00		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.02		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.1		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0015	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0135	J	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 11:01
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-8  
**Collection Date:** 9/13/2019 04:53 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-24  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.10		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.93		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.7		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0015	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen		U	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 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: 17-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 000  
**Collection Date:** 9/13/2019 05:29 PM

**Work Order:** 19090951  
**Lab ID:** 19090951-25  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.70		0		mg/L	1	9/13/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.69		0		s.u.	1	9/13/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	22.6		0		°C	1	9/13/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	0.0013	J	0.0012	0.0050	mg/L	1	9/17/2019 11:24
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD		U	0.0011	0.0050	mg/L	1	9/15/2019 15:09
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0305	J	0.00980	0.0320	mg NH3-N/L	1	9/15/2019 11:06
				Method: E350.1 R2.0			Analyst: CD

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

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**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**WorkOrder:** 19090951

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**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: 19090951

Project: Arcelor Mittal - Burns Harbor E.R.

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

<b>MBLK</b>	Sample ID: <b>MB-R270500-R270500c</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/15/2019 03:09 PM</b>			
Client ID:	Run ID: <b>SKALAR1_190915A</b>			SeqNo: <b>5917620</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD U 0.0050

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

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

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

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

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

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



**Client:** ArcelorMittal USA LLC  
**Work Order:** 19090951  
**Project:** Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

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

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**The following samples were analyzed in this batch:**

19090951-01C	19090951-02C	19090951-03C
19090951-04C	19090951-05C	19090951-06C
19090951-07C	19090951-08C	19090951-09C
19090951-10C	19090951-11C	19090951-12C
19090951-13C	19090951-14C	19090951-15C

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090951  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270500d** Instrument ID **SKALAR1** Method: **Kelada-01**

<b>MBLK</b>	Sample ID: <b>MB-R270500-R270500d</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190915A</b>			SeqNo: <b>5917595</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD U 0.0050

<b>LCS</b>	Sample ID: <b>LCS-R270500-R270500d</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190915A</b>			SeqNo: <b>5917596</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1028 0.0050 0.1 0 103 90-110 0

<b>MS</b>	Sample ID: <b>19090951-16C MS</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID: <b>13</b>	Run ID: <b>SKALAR1_190915A</b>			SeqNo: <b>5917600</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1003 0.0050 0.1 -0.00111 101 90-110 0

<b>MSD</b>	Sample ID: <b>19090951-16C MSD</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID: <b>13</b>	Run ID: <b>SKALAR1_190915A</b>			SeqNo: <b>5917601</b>		Prep Date:		DF: <b>1</b>		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, WAD 0.1018 0.0050 0.1 -0.00111 103 90-110 0.1003 1.44 20

The following samples were analyzed in this batch:

19090951-16C	19090951-17C	19090951-18C
19090951-19C	19090951-20C	19090951-21C
19090951-22C	19090951-23C	19090951-24C
19090951-25C		

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090951  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270741a** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK		Sample ID: <b>MB-R270741-R270741a</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID:		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924507</b>		Prep Date:		DF: <b>1</b>
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: <b>LCS-R270741-R270741a</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID:		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924508</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1056 0.0050 0.1 0 106 90-110 0

MS		Sample ID: <b>19090951-01B MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID: <b>15</b>		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924510</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1054 0.0050 0.1 0.00226 103 90-110 0

MS		Sample ID: <b>19090951-16B MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID: <b>13</b>		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924536</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1023 0.0050 0.1 0.00187 100 90-110 0

MSD		Sample ID: <b>19090951-01B MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID: <b>15</b>		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924511</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1052 0.0050 0.1 0.00226 103 90-110 0.1054 0.237 20

MSD		Sample ID: <b>19090951-16B MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID: <b>13</b>		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924537</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1032 0.0050 0.1 0.00187 101 90-110 0.1023 0.856 20

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

**Client:** ArcelorMittal USA LLC  
**Work Order:** 19090951  
**Project:** Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

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Batch ID: **R270741a**      Instrument ID **SKALAR1**      Method: **Kelada-01**

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**The following samples were analyzed in this batch:**

19090951-01B	19090951-02B	19090951-03B
19090951-04B	19090951-05B	19090951-06B
19090951-07B	19090951-08B	19090951-09B
19090951-10B	19090951-11B	19090951-12B
19090951-13B	19090951-14B	19090951-15B
19090951-16B	19090951-17B	19090951-18B
19090951-19B	19090951-20B	

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090951  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270741b** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK		Sample ID: <b>MBLK-R270741b</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID:		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924546</b>		Prep Date:		DF: <b>1</b>
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: <b>LCS-R270741b</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID:		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924547</b>		Prep Date:		DF: <b>1</b>
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: <b>19090971-01B MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID:		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924556</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1048 0.0050 0.1 0.00192 103 90-110 0

MSD		Sample ID: <b>19090971-01B MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/17/2019 11:24 AM</b>		
Client ID:		Run ID: <b>SKALAR1_190917A</b>				SeqNo: <b>5924557</b>		Prep Date:		DF: <b>1</b>
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1061 0.0050 0.1 0.00192 104 90-110 0.1048 1.31 20

The following samples were analyzed in this batch:

19090951-21B	19090951-22B	19090951-23B
19090951-24B	19090951-25B	

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090951  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270495** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

<b>MBLK</b>	Sample ID: <b>MBLK-R270495</b>		Units: <b>mg NH3-N/L</b>		Analysis Date: <b>9/15/2019 10:15 AM</b>					
Client ID:	Run ID: <b>VAL-LACHAT_190915A</b>		SeqNo: <b>5917378</b>		Prep Date: DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen U 0.032

<b>MBLK</b>	Sample ID: <b>MBLK-R270495</b>		Units: <b>mg NH3-N/L</b>		Analysis Date: <b>9/15/2019 10:51 AM</b>					
Client ID:	Run ID: <b>VAL-LACHAT_190915A</b>		SeqNo: <b>5917415</b>		Prep Date: DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen U 0.032

<b>LCS</b>	Sample ID: <b>LCS-R270495</b>		Units: <b>mg NH3-N/L</b>		Analysis Date: <b>9/15/2019 10:16 AM</b>					
Client ID:	Run ID: <b>VAL-LACHAT_190915A</b>		SeqNo: <b>5917379</b>		Prep Date: DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 0.413 0.032 0.4 0 103 90-110 0

<b>LCS</b>	Sample ID: <b>LCS-R270495</b>		Units: <b>mg NH3-N/L</b>		Analysis Date: <b>9/15/2019 10:52 AM</b>					
Client ID:	Run ID: <b>VAL-LACHAT_190915A</b>		SeqNo: <b>5917416</b>		Prep Date: DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 0.414 0.032 0.4 0 104 90-110 0

<b>MS</b>	Sample ID: <b>19090951-19A MS</b>		Units: <b>mg NH3-N/L</b>		Analysis Date: <b>9/15/2019 10:45 AM</b>					
Client ID: <b>SL-3</b>	Run ID: <b>VAL-LACHAT_190915A</b>		SeqNo: <b>5917409</b>		Prep Date: DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 0.187 0.032 0.2 0.0107 88.2 90-110 0 S

<b>MS</b>	Sample ID: <b>19090951-20A MS</b>		Units: <b>mg NH3-N/L</b>		Analysis Date: <b>9/15/2019 10:49 AM</b>					
Client ID: <b>SL-4</b>	Run ID: <b>VAL-LACHAT_190915A</b>		SeqNo: <b>5917412</b>		Prep Date: DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 0.177 0.032 0.2 0.0186 79.2 90-110 0 S

<b>MS</b>	Sample ID: <b>19090951-21A MS</b>		Units: <b>mg NH3-N/L</b>		Analysis Date: <b>9/15/2019 10:57 AM</b>					
Client ID: <b>SL-5</b>	Run ID: <b>VAL-LACHAT_190915A</b>		SeqNo: <b>5917421</b>		Prep Date: DF: <b>1</b>					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 0.177 0.032 0.2 0.0213 77.8 90-110 0 S

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090951  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270495** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MS		Sample ID: 19090951-23A MS				Units: mg NH3-N/L		Analysis Date: 9/15/2019 11:02 AM		
Client ID: SL-7		Run ID: VAL-LACHAT_190915A				SeqNo: 5917426		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 0.188 0.032 0.2 0.0135 87.2 90-110 0 S

MSD		Sample ID: 19090951-19A MSD				Units: mg NH3-N/L		Analysis Date: 9/15/2019 10:46 AM		
Client ID: SL-3		Run ID: VAL-LACHAT_190915A				SeqNo: 5917410		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 0.184 0.032 0.2 0.0107 86.6 90-110 0.187 1.62 20 S

MSD		Sample ID: 19090951-20A MSD				Units: mg NH3-N/L		Analysis Date: 9/15/2019 10:50 AM		
Client ID: SL-4		Run ID: VAL-LACHAT_190915A				SeqNo: 5917414		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 0.177 0.032 0.2 0.0186 79.2 90-110 0.177 0 20 S

MSD		Sample ID: 19090951-21A MSD				Units: mg NH3-N/L		Analysis Date: 9/15/2019 10:58 AM		
Client ID: SL-5		Run ID: VAL-LACHAT_190915A				SeqNo: 5917422		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 0.176 0.032 0.2 0.0213 77.4 90-110 0.177 0.567 20 S

MSD		Sample ID: 19090951-23A MSD				Units: mg NH3-N/L		Analysis Date: 9/15/2019 11:03 AM		
Client ID: SL-7		Run ID: VAL-LACHAT_190915A				SeqNo: 5917427		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 0.189 0.032 0.2 0.0135 87.8 90-110 0.188 0.531 20 S

The following samples were analyzed in this batch:

19090951-01A	19090951-02A	19090951-03A
19090951-04A	19090951-05A	19090951-06A
19090951-07A	19090951-08A	19090951-09A
19090951-10A	19090951-11A	19090951-12A
19090951-13A	19090951-14A	19090951-15A
19090951-16A	19090951-17A	19090951-18A
19090951-19A	19090951-20A	19090951-21A
19090951-22A	19090951-23A	19090951-24A
19090951-25A		

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

**Client:** ArcelorMittal USA LLC  
**Work Order:** 19090951  
**Project:** Arcelor Mittal - Burns Harbor E.R.

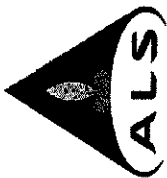
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## QC BATCH REPORT

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





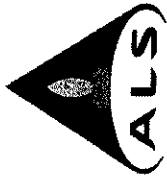
ALS Environmental  
3352 128th Avenue  
Holland, Michigan 49424  
(Tel) 616.399.6070  
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# Chain of Custody Form

Page 1 of 3

Client Information		Project Information		ALS Project Manager: Amanda Gryzbowski		ALS Work Order #: 19090951									
Purchase Order		Project Name	Receiving Water Monitoring	A	Ammonia	Parameter/Method Request for Analysis									
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
1		9/13/19	1206	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.72	24.2	7.5
2			1215	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.17	24.5	9.7
3			1224	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.63	24.2	7.6
4			1235	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.68	24.1	7.8
5			1243	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.66	24.0	8.8
6			1256	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.72	24.6	6.9
7			105	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.70	24.4	6.7
8			118	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.71	24.5	8.3
9			125	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.72	24.6	8.2
10	OFO01		139	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.74	24.7	8.5
Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:									
Relinquished by: <i>[Signature]</i>		Date: 9/13/19		Time: 1830		<input type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour <input type="checkbox"/> Other									
Relinquished by: <i>[Signature]</i>		Date: 9-14-19		Time: 0930		Notes: <i>[Signature]</i>									
Logged by (Laboratory): <i>[Signature]</i>		Date: 9/16/19		Time: 0915		QC Package: (Check Box Below)									
						Cooler Temp. 34°C									
						Level II: Standard QC									
						Level III: Standard QC + Raw Data									
						Level IV: SW846 Methods/CLP									
						Other: X									

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



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# Chain of Custody Form

Page 2 of 3

Client Information		Project Information		ALS Project Manager: Amanda Gryzbowski		ALS Work Order #: 19090951	
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		e-Mail Address					

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
11		9/13/19	158	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	24.4	6.3
12			212	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.67	24.5	7.1
13			223	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.70	23.6	7.6
14			235	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.73	24.1	7.9
15			242	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.75	23.7	8.1
16			259	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.80	23.1	8.4
17	SL-1		313	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.95	21.1	7.8
18	SL-2		328	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.08	20.9	7.4
19	SL-3		337	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.07	20.9	7.6
20	SL-4		349	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.05	20.8	7.4

Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:	
				<input type="checkbox"/> STD 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour <input type="checkbox"/> Other			
Relinquished by:	Date: 9/13/19	Time: 1830	Received by:	Notes: <i>[Signature]</i> 9/14/19 0830			
Relinquished by:	Date: 9-14-19	Time: 0830	Received by (Laboratory):	QC Package: (Check Box Below)			
Logged-by (Laboratory):	Date: 9/10/19	Time: 0915	Checked by (Laboratory):	Level II: Standard QC			
				Level III: Standard QC + Raw Data			
				Level IV: SW846 Methods/CLP			
				Other: X			

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# Chain of Custody Form

Page 3 of 3

Client Information		Project Information		ALS Project Manager:		ALS Work Order #:	
Purchase Order		Project Name	Receiving Water Monitoring	Amanda Gryzbowski	19090951	Parameter/Method Request for Analysis	
Work Order		Project Number					
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)	A Ammonia			
Send Report To		Invoice Attn.	Accounts Payable	B Total Cyanide			
Address	250 US 12	Address	250 US 12	C Free Cyanide			
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304	D pH (Field)			
Phone	(219) 787-2120	Phone	(219) 787-2120	E Temperature (Field)			
Fax		Fax		F Dissolved Oxygen (Field)			
e-Mail Address							

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
21	SL-5	9/13/19	358	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.08	20.8	7.1
22	SL-6		411	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.04	21.0	8.5
23	SL-7		435	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.62	21.1	9.0
24	SL-8		453	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.93	20.7	8.1
25	OOO		529	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.69	22.6	8.7
26				Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X			
27				Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X			
28				Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X			
29				Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X			
30				Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X			

Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:	
Relinquished by:	<i>[Signature]</i>	Time:	1830	<input type="checkbox"/> STD 10 Wk Days	<input type="checkbox"/> 5 Wk Days	<input type="checkbox"/> 2 Wk Days	<input type="checkbox"/> 24 Hour
Relinquished by:	<i>[Signature]</i>	Time:	0830	<input type="checkbox"/> Other			
Logged by (Laboratory):	<i>[Signature]</i>	Time:	0915	Notes: <i>[Handwritten notes]</i>			

QC Package (Check Box Below)	Cooler Temp.
Level II: Standard QC	
Level III: Standard QC + Raw Data	
Level IV: SW 846 Methods/CLP	
Other:	

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Sample Receipt Checklist

Client Name: **ARCELORMITTAL-BURNSHARBO**

Date/Time Received: **13-Sep-19 00:00**

Work Order: **19090951**

Received by: **KRW**

Checklist completed by Keith Warena 14-Sep-19  
eSignature Date

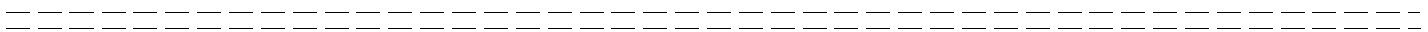
Reviewed by: Amanda Przybowski 15-Sep-19  
eSignature Date

Matrices: Water

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 checked="" type="checkbox"/>	No <input 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):	<u>3.4/3.4 C</u>		<u>SR2</u>
Cooler(s)/Kit(s):	<u></u>		
Date/Time sample(s) sent to storage:	<u>9/14/2019 9:29:59 AM</u>		
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 checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:	<u></u>		

Login Notes:



Client Contacted: \_\_\_\_\_ Date Contacted: \_\_\_\_\_ Person Contacted: \_\_\_\_\_

Contacted By: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments:

CorrectiveAction: