



16-Sep-2019

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

Re: **Arcelor Mittal - Burns Harbor E.R.**

Work Order: **19090734**

Dear Robert,

ALS Environmental received 25 samples on 11-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 43.

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:** 19090734

**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>
19090734-01	15	Aqueous		9/11/2019 10:20	9/11/2019	<input type="checkbox"/>
19090734-01	15	Aqueous		9/11/2019 10:20	9/11/2019 13:30	<input type="checkbox"/>
19090734-02	14	Aqueous		9/11/2019 10:36	9/11/2019	<input type="checkbox"/>
19090734-02	14	Aqueous		9/11/2019 10:36	9/11/2019 13:30	<input type="checkbox"/>
19090734-03	7	Aqueous		9/11/2019 10:47	9/11/2019	<input type="checkbox"/>
19090734-03	7	Aqueous		9/11/2019 10:47	9/11/2019 13:30	<input type="checkbox"/>
19090734-04	6	Aqueous		9/11/2019 10:59	9/11/2019	<input type="checkbox"/>
19090734-04	6	Aqueous		9/11/2019 10:59	9/11/2019 13:30	<input type="checkbox"/>
19090734-05	5	Aqueous		9/11/2019 11:12	9/11/2019	<input type="checkbox"/>
19090734-05	5	Aqueous		9/11/2019 11:12	9/11/2019 13:30	<input type="checkbox"/>
19090734-06	4	Aqueous		9/11/2019 11:24	9/11/2019	<input type="checkbox"/>
19090734-06	4	Aqueous		9/11/2019 11:24	9/11/2019 13:30	<input type="checkbox"/>
19090734-07	3	Aqueous		9/11/2019 11:33	9/11/2019	<input type="checkbox"/>
19090734-07	3	Aqueous		9/11/2019 11:33	9/11/2019 13:30	<input type="checkbox"/>
19090734-08	2	Aqueous		9/11/2019 11:46	9/11/2019	<input type="checkbox"/>
19090734-08	2	Aqueous		9/11/2019 11:46	9/11/2019 13:30	<input type="checkbox"/>
19090734-09	1	Aqueous		9/11/2019 11:55	9/11/2019	<input type="checkbox"/>
19090734-09	1	Aqueous		9/11/2019 11:55	9/11/2019 13:30	<input type="checkbox"/>
19090734-10	OF001	Aqueous		9/11/2019 12:23	9/11/2019	<input type="checkbox"/>
19090734-10	OF001	Aqueous		9/11/2019 12:23	9/11/2019 13:30	<input type="checkbox"/>
19090734-11	8	Aqueous		9/11/2019 12:49	9/11/2019	<input type="checkbox"/>
19090734-11	8	Aqueous		9/11/2019 12:49	9/11/2019 13:30	<input type="checkbox"/>
19090734-12	9	Aqueous		9/11/2019 13:00	9/11/2019	<input type="checkbox"/>
19090734-12	9	Aqueous		9/11/2019 13:00	9/11/2019 13:30	<input type="checkbox"/>
19090734-13	10	Aqueous		9/11/2019 13:14	9/11/2019	<input type="checkbox"/>
19090734-13	10	Aqueous		9/11/2019 13:14	9/11/2019 13:30	<input type="checkbox"/>
19090734-14	11	Aqueous		9/11/2019 13:23	9/11/2019	<input type="checkbox"/>
19090734-14	11	Aqueous		9/11/2019 13:23	9/11/2019 13:30	<input type="checkbox"/>
19090734-15	12	Aqueous		9/11/2019 13:38	9/11/2019	<input type="checkbox"/>
19090734-15	12	Aqueous		9/11/2019 13:38	9/11/2019 13:30	<input type="checkbox"/>
19090734-16	13	Aqueous		9/11/2019 13:49	9/11/2019	<input type="checkbox"/>
19090734-16	13	Aqueous		9/11/2019 13:49	9/11/2019 13:30	<input type="checkbox"/>
19090734-17	SL-1	Aqueous		9/11/2019 13:59	9/11/2019	<input type="checkbox"/>
19090734-17	SL-1	Aqueous		9/11/2019 13:59	9/11/2019 13:30	<input type="checkbox"/>
19090734-18	SL-2	Aqueous		9/11/2019 14:18	9/11/2019	<input type="checkbox"/>
19090734-18	SL-2	Aqueous		9/11/2019 14:18	9/11/2019 13:30	<input type="checkbox"/>
19090734-19	SL-3	Aqueous		9/11/2019 14:30	9/11/2019	<input type="checkbox"/>
19090734-19	SL-3	Aqueous		9/11/2019 14:30	9/11/2019 13:30	<input type="checkbox"/>
19090734-20	SL-4	Aqueous		9/11/2019 14:43	9/11/2019	<input type="checkbox"/>

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**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090734

## 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>
19090734-20	SL-4	Aqueous		9/11/2019 14:43	9/11/2019 13:30	<input type="checkbox"/>
19090734-21	SL-5	Aqueous		9/11/2019 14:58	9/11/2019	<input type="checkbox"/>
19090734-21	SL-5	Aqueous		9/11/2019 14:58	9/11/2019 13:30	<input type="checkbox"/>
19090734-22	SL-6	Aqueous		9/11/2019 15:23	9/11/2019	<input type="checkbox"/>
19090734-22	SL-6	Aqueous		9/11/2019 15:23	9/11/2019 13:30	<input type="checkbox"/>
19090734-23	SL-7	Aqueous		9/11/2019 15:41	9/11/2019	<input type="checkbox"/>
19090734-23	SL-7	Aqueous		9/11/2019 15:41	9/11/2019 13:30	<input type="checkbox"/>
19090734-24	SL-8	Aqueous		9/11/2019 16:10	9/11/2019	<input type="checkbox"/>
19090734-24	SL-8	Aqueous		9/11/2019 16:10	9/11/2019 13:30	<input type="checkbox"/>
19090734-25	000	Aqueous		9/11/2019 17:35	9/11/2019	<input type="checkbox"/>
19090734-25	000	Aqueous		9/11/2019 17:35	9/11/2019 13:30	<input type="checkbox"/>

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**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090734

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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: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 15  
**Collection Date:** 9/11/2019 10:20 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-01  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.30		0		mg/L	1	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.86		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	25.6		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	0.0825		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:15
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 14  
**Collection Date:** 9/11/2019 10:36 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-02  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	9.30		0		mg/L	1	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.10		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.5		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	0.0139	J	0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:17
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 7  
**Collection Date:** 9/11/2019 10:47 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-03  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.63		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	24.1		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.0976		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:18

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 6  
**Collection Date:** 9/11/2019 10:59 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-04  
**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	9/11/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.80		0		s.u.	1	9/11/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.0		0		°C	1	9/11/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
			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	0.134		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:19
			Method: E350.1 R2.0				Analyst: CD

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



# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 5  
**Collection Date:** 9/11/2019 11:12 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-05  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.78		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.1		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.137		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:20

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 4  
**Collection Date:** 9/11/2019 11:24 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-06  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.3		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.134		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:22

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 3  
**Collection Date:** 9/11/2019 11:33 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-07  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.84		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.8		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.153		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:23

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 2  
**Collection Date:** 9/11/2019 11:46 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-08  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.60		0		mg/L	1	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.81		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	22.6		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.158		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:26

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 1  
**Collection Date:** 9/11/2019 11:55 AM

**Work Order:** 19090734  
**Lab ID:** 19090734-09  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.90		0		mg/L	1	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.2		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.183		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:28

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** OF001  
**Collection Date:** 9/11/2019 12:23 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-10  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.87		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.1		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.243		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:29

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 8  
**Collection Date:** 9/11/2019 12:49 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-11  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	6.00		0		mg/L	1	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.71		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.1		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	0.0908		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:30
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 9  
**Collection Date:** 9/11/2019 01:00 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-12  
**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	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.7		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	0.108		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:31
				Method: E350.1 R2.0			Analyst: CD

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



# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 10  
**Collection Date:** 9/11/2019 01:14 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-13  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.20		0		mg/L	1	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.3		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.0651		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:32

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 11  
**Collection Date:** 9/11/2019 01:23 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-14  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	8.00		0		mg/L	1	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.78		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	25.8		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.0667		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:34

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 12  
**Collection Date:** 9/11/2019 01:38 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-15  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.82		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.6		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.0587		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:35

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 13  
**Collection Date:** 9/11/2019 01:49 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-16  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.00		0		mg/L	1	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	7.88		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.5		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.0634		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:36

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-1  
**Collection Date:** 9/11/2019 01:59 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-17  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	8.08		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.4		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	U		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:37

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-2  
**Collection Date:** 9/11/2019 02:18 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-18  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	8.07		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.2		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	0.0618		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:41

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-3  
**Collection Date:** 9/11/2019 02:30 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-19  
**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	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.04		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.7		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	0.0116	J	0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:42
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-4  
**Collection Date:** 9/11/2019 02:43 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-20  
**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	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.09		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.9		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	9/12/2019 09:46
				Method: E350.1 R2.0			Analyst: CD

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



# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-5  
**Collection Date:** 9/11/2019 02:58 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-21  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	7.30		0		mg/L	1	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.07		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.8		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	9/12/2019 09:52
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-6  
**Collection Date:** 9/11/2019 03:23 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-22  
**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	9/11/2019
			Method: A4500-O G-11		Analyst: ALS		
<b>PH (FIELD)</b> pH (field)	8.08		0		s.u.	1	9/11/2019
			Method: A4500-H B-11		Analyst: ALS		
<b>TEMPERATURE (FIELD)</b> Temperature (field)	21.3		0		°C	1	9/11/2019
			Method: A2550 B-10		Analyst: ALS		
<b>CYANIDE, TOTAL</b> Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
			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	9/12/2019 09:55
			Method: E350.1 R2.0		Analyst: CD		

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-7  
**Collection Date:** 9/11/2019 03:41 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-23  
**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	9/11/2019
<b>PH (FIELD)</b>							
pH (field)	8.09		0		s.u.	1	9/11/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.7		0		°C	1	9/11/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
<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	U		0.00980	0.0320	mg NH3-N/L	1	9/12/2019 09:56

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-8  
**Collection Date:** 9/11/2019 04:10 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-24  
**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	9/11/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.13		0		s.u.	1	9/11/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.3		0		°C	1	9/11/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
			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	9/12/2019 10:00
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 16-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 000  
**Collection Date:** 9/11/2019 05:35 PM

**Work Order:** 19090734  
**Lab ID:** 19090734-25  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	9.20		0		mg/L	1	9/11/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.77		0		s.u.	1	9/11/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	23.1		0		°C	1	9/11/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/13/2019 12:01
				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	0.0206	J	0.00980	0.0320	mg NH3-N/L	1	9/12/2019 10:01
				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:** 19090734

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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: 19090734

Project: Arcelor Mittal - Burns Harbor E.R.

Batch ID: **R270470c** Instrument ID **SKALAR1** Method: **Kelada-01**

<b>MBLK</b>	Sample ID: <b>MB-R270470-R270470c</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>			
Client ID:	Run ID: <b>SKALAR1_190913A</b>			SeqNo: <b>5916729</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

<b>LCS</b>	Sample ID: <b>LCS-R270470-R270470c</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>			
Client ID:	Run ID: <b>SKALAR1_190913A</b>			SeqNo: <b>5916730</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 0.1033 0.0050 0.1 0 103 90-110 0

<b>MS</b>	Sample ID: <b>19090734-01B MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>			
Client ID: <b>15</b>	Run ID: <b>SKALAR1_190913A</b>			SeqNo: <b>5916732</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 0.1006 0.0050 0.1 0.00012 100 90-110 0

<b>MS</b>	Sample ID: <b>19090734-11B MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>			
Client ID: <b>8</b>	Run ID: <b>SKALAR1_190913A</b>			SeqNo: <b>5916784</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 0.1049 0.0050 0.1 -0.00012 105 90-110 0

<b>MSD</b>	Sample ID: <b>19090734-01B MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>			
Client ID: <b>15</b>	Run ID: <b>SKALAR1_190913A</b>			SeqNo: <b>5916733</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 0.09993 0.0050 0.1 0.00012 99.8 90-110 0.1006 0.619 20

<b>MSD</b>	Sample ID: <b>19090734-11B MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>			
Client ID: <b>8</b>	Run ID: <b>SKALAR1_190913A</b>			SeqNo: <b>5916785</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 -0.00012 103 90-110 0.1049 1.61 20

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



**Client:** ArcelorMittal USA LLC  
**Work Order:** 19090734  
**Project:** Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

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Batch ID: **R270470c**      Instrument ID **SKALAR1**      Method: **Kelada-01**

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

19090734-01B	19090734-02B	19090734-03B
19090734-04B	19090734-05B	19090734-06B
19090734-07B	19090734-08B	19090734-09B
19090734-10B	19090734-11B	19090734-12B
19090734-13B	19090734-14B	19090734-15B
19090734-16B	19090734-17B	19090734-18B
19090734-19B	19090734-20B	

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090734  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270470d** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK		Sample ID: <b>MB-R270470-R270470d</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>		
Client ID:		Run ID: <b>SKALAR1_190913A</b>				SeqNo: <b>5916825</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-R270470-R270470d</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>		
Client ID:		Run ID: <b>SKALAR1_190913A</b>				SeqNo: <b>5916826</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 0.1026 0.0050 0.1 0 103 90-110 0

MS		Sample ID: <b>19090734-21B MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>		
Client ID: <b>SL-5</b>		Run ID: <b>SKALAR1_190913A</b>				SeqNo: <b>5916828</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 0.1028 0.0050 0.1 -0.00053 103 90-110 0

MSD		Sample ID: <b>19090734-21B MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/13/2019 12:01 PM</b>		
Client ID: <b>SL-5</b>		Run ID: <b>SKALAR1_190913A</b>				SeqNo: <b>5916829</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 0.1003 0.0050 0.1 -0.00053 101 90-110 0.1028 2.48 20

The following samples were analyzed in this batch:

19090734-21B	19090734-22B	19090734-23B
19090734-24B	19090734-25B	

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090734  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270500a** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK		Sample ID: <b>MB-R270500-R270500a</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>5917519</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

LCS		Sample ID: <b>LCS-R270500-R270500a</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>5917520</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 0.108 0.0050 0.1 0 108 90-110 0

MS		Sample ID: <b>19090734-01C 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>5917522</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 0.1 0.0050 0.1 -0.00046 100 90-110 0

MS		Sample ID: <b>19090734-11C MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID: <b>8</b>		Run ID: <b>SKALAR1_190915A</b>				SeqNo: <b>5917538</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 0.1037 0.0050 0.1 -0.0007 104 90-110 0

MSD		Sample ID: <b>19090734-01C 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>5917523</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 0.09761 0.0050 0.1 -0.00046 98.1 90-110 0.1 2.44 20

MSD		Sample ID: <b>19090734-11C MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID: <b>8</b>		Run ID: <b>SKALAR1_190915A</b>				SeqNo: <b>5917539</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 0.1087 0.0050 0.1 -0.0007 109 90-110 0.1037 4.74 20

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

**Client:** ArcelorMittal USA LLC  
**Work Order:** 19090734  
**Project:** Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

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Batch ID: **R270500a**      Instrument ID **SKALAR1**      Method: **Kelada-01**

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

19090734-01C	19090734-02C	19090734-03C
19090734-04C	19090734-05C	19090734-06C
19090734-07C	19090734-08C	19090734-09C
19090734-10C	19090734-11C	19090734-12C
19090734-13C	19090734-14C	19090734-15C
19090734-16C	19090734-17C	19090734-18C
19090734-19C	19090734-20C	

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090734  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270500e** Instrument ID **SKALAR1** Method: **Kelada-01**

<b>MBLK</b>	Sample ID: <b>MB-R270500-R270500e</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>5917658</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-R270500e</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>5917659</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 0.1086 0.0050 0.1 0 109 90-110 0

<b>MS</b>	Sample ID: <b>19090734-21C MS</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID: <b>SL-5</b>	Run ID: <b>SKALAR1_190915A</b>			SeqNo: <b>5917661</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 0.1041 0.0050 0.1 -0.00064 105 90-110 0

<b>MSD</b>	Sample ID: <b>19090734-21C MSD</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/15/2019 03:09 PM</b>		
Client ID: <b>SL-5</b>	Run ID: <b>SKALAR1_190915A</b>			SeqNo: <b>5917662</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 0.1075 0.0050 0.1 -0.00064 108 90-110 0.1041 3.26 20

The following samples were analyzed in this batch:

19090734-21C	19090734-22C	19090734-23C
19090734-24C	19090734-25C	

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090734  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270331** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

<b>MBLK</b>	Sample ID: <b>MBLK-R270331</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/12/2019 09:13 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190912A</b>		SeqNo: <b>5912163</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-R270331</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/12/2019 09:49 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190912A</b>		SeqNo: <b>5912193</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-R270331</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/12/2019 09:14 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190912A</b>		SeqNo: <b>5912164</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 0.391 0.032 0.4 0 97.8 90-110 0

<b>LCS</b>	Sample ID: <b>LCS-R270331</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/12/2019 09:50 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190912A</b>		SeqNo: <b>5912194</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 0.401 0.032 0.4 0 100 90-110 0

<b>MS</b>	Sample ID: <b>19090734-19A MS</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/12/2019 09:43 AM</b>				
Client ID: <b>SL-3</b>	Run ID: <b>VAL-LACHAT_190912A</b>		SeqNo: <b>5912188</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 0.207 0.032 0.2 0.0116 97.7 90-110 0

<b>MS</b>	Sample ID: <b>19090734-20A MS</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/12/2019 09:47 AM</b>				
Client ID: <b>SL-4</b>	Run ID: <b>VAL-LACHAT_190912A</b>		SeqNo: <b>5912191</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 0.201 0.032 0.2 0.00135 99.8 90-110 0

<b>MS</b>	Sample ID: <b>19090734-23A MS</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/12/2019 09:58 AM</b>				
Client ID: <b>SL-7</b>	Run ID: <b>VAL-LACHAT_190912A</b>		SeqNo: <b>5912200</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 0.192 0.032 0.2 -0.00205 97 90-110 0

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090734  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: R270331 Instrument ID VAL-LACHAT Method: E350.1 R2.0

MSD		Sample ID: 19090734-19A MSD				Units: mg NH3-N/L		Analysis Date: 9/12/2019 09:44 AM		
Client ID: SL-3		Run ID: VAL-LACHAT_190912A				SeqNo: 5912189		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 0.205 0.032 0.2 0.0116 96.7 90-110 0.207 0.971 20

MSD		Sample ID: 19090734-20A MSD				Units: mg NH3-N/L		Analysis Date: 9/12/2019 09:48 AM		
Client ID: SL-4		Run ID: VAL-LACHAT_190912A				SeqNo: 5912192		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 0.195 0.032 0.2 0.00135 96.8 90-110 0.201 3.03 20

MSD		Sample ID: 19090734-23A MSD				Units: mg NH3-N/L		Analysis Date: 9/12/2019 09:59 AM		
Client ID: SL-7		Run ID: VAL-LACHAT_190912A				SeqNo: 5912201		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 0.192 0.032 0.2 -0.00205 97 90-110 0.192 0 20

The following samples were analyzed in this batch:

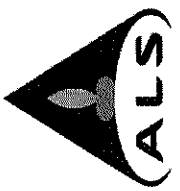
19090734-01A	19090734-02A	19090734-03A
19090734-04A	19090734-05A	19090734-06A
19090734-07A	19090734-08A	19090734-09A
19090734-10A	19090734-11A	19090734-12A
19090734-13A	19090734-14A	19090734-15A
19090734-16A	19090734-17A	19090734-18A
19090734-19A	19090734-20A	19090734-21A
19090734-22A	19090734-23A	19090734-24A
19090734-25A		

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



Client Information				Project Information				ALS Project Manager: Amanda Gryzbowski				ALS Work Order #: 19090734			
Project Name: Receiving Water Monitoring				Parameter/Method Request for Analysis				A Ammonia				B Total Cyanide			
Company Name: ArcelorMittal (Burns Harbor)				C Free Cyanide				D pH (Field)				E Temperature (Field)			
Invoice Attn: Accounts Payable				F Dissolved Oxygen (Field)											
Address: 250 US 12															
City/State/Zip: Burns Harbor, IN 46304															
Phone: (219) 787-2120															
Fax:															
e-Mail Address:															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
1		9/11/19	10:20	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.86	25.6	7.3
2			10:36	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.10	24.5	9.3
3			10:47	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.63	24.1	7.8
4			10:59	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.80	23.0	8.5
5			11:12	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.78	23.1	7.6
6			11:24	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	23.3	8.4
7			11:33	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.84	23.8	7.4
8			11:46	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.81	22.6	8.6
9			11:55	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	23.2	8.9
10	OFOO1		12:23	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.87	23.1	7.8

Sampler(s): Please Print & Sign

Shipment Method:  STD-10 Wk Days  5 Wk Days  2 Wk Days  24 Hour  Other

Required Turnaround Time: \_\_\_\_\_ Results Due Date: \_\_\_\_\_

Relinquished by: *[Signature]* Date: 9/11/19 Time: 1800

Relinquished by: *[Signature]* Date: 9/12/19 Time: 815

Logged by (Laboratory): *[Signature]* Date: 9/11/19

Received by: *[Signature]* Date: 9/11/19 Time: 1330

QC Package: (Check Box Below)  
 Level II: Standard QC   
 Level III: Standard QC + Raw Data   
 Level IV: SW846 Methods/CLP   
 Other: \_\_\_\_\_

Cooler Temp: 16°C

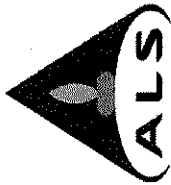
Notes: Recd 9/11/19 1330 *[Signature]*

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

Copyright 2007 by ALS Laboratory Group

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

# Chain of Custody Form

Page 2 of 3

Client Information		Project Information		ALS Project Manager:		ALS Work Order #:									
Purchase Order	Project Name	Receiving Water Monitoring	A	Ammonia	Amanda Gryzbowski	19090734	Parameter/Method Request for Analysis								
Work Order	Project Number		B	Total Cyanide											
Company Name	Company Name	ArcelorMittal (Burns Harbor)	C	Free Cyanide											
Send Report To	Invoice Attn.	Accounts Payable	D	pH (Field)											
Address	Address	250 US 12	E	Temperature (Field)											
City/State/Zip	City/State/Zip	Burns Harbor, IN 46304	F	Dissolved Oxygen (Field)											
Phone	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
11		9/16/19	12:49	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.71	23.1	6.0
12			1:00	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	23.7	6.9
13			1:14	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	23.3	7.2
14			1:23	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.78	25.8	8.0
15			1:38	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.82	23.6	6.9
16			1:49	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.88	23.5	7.0
17			1:59	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.08	21.4	8.5
18			2:18	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.07	21.2	8.4
19			2:30	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.04	20.7	8.8
20			2:43	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.09	20.9	8.3
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:	Time:	Received by:	Notes:											
<i>[Signature]</i>	9/11/19	1800	<i>[Signature]</i>	Rec'd 9/11/19 1330 270L											
Relinquished by:	Date:	Time:	Received by (Laboratory):	QC Package: (Check Box Below)											
<i>[Signature]</i>	9/12/19	815	<i>[Signature]</i>	<input type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Standard QC + Raw Data <input type="checkbox"/> Level IV: SW846 Methods/CLP Other:											
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	Cooler Temp.											
AMANDA G.	9/11/19			1.6°C											

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

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HN 2-6.c



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# Chain of Custody Form

Page 3 of 3

Client Information		Project Information		ALS Project Manager: Amanda Gryzbowski		ALS Work Order #: 19090734									
Purchase Order	Project Name	Receiving Water Monitoring		Parameter/Method Request for Analysis											
Work Order	Project Number	Company Name		A	B	C	D								
Company Name	Invoice Attn.	Accounts Payable		Ammonia	Total Cyanide	Free Cyanide									
Send Report To	Address	250 US 12		pH (Field)	Temperature (Field)	Dissolved Oxygen (Field)									
City/State/Zip	City/State/Zip	Burns Harbor, IN 46304													
Phone	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
21	SL-5	9/11/19	2:58	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.07	20.8	7.3
22	SL-6		3:23	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.08	21.3	8.1
23	SL-7		3:41	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.09	20.7	8.4
24	SL-8		4:10	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.13	20.3	8.7
25	OOO		5:35	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.77	23.1	9.2
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:	
				<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:	Date:	Time:	Received by:	Notes:			
<i>[Signature]</i>	9/11/19	1800	<i>[Signature]</i>	Rec'd 9/11/19 1330 222			
Relinquished by:	Date:	Time:	Requested by (Laboratory):	QC Package: (Check Box Below)			
<i>[Signature]</i>	9/12/19	815		<input type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Standard QC + Raw Data <input type="checkbox"/> Level IV: SW846 Methods/CLP Other:			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	Cooler Temp.			
AMANDA G.	9/11/19			1.6°C			

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

HW 260c

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Sample Receipt Checklist

Client Name: ARCELORMITTAL-BURNSHARBO

Date/Time Received: 11-Sep-19 00:00

Work Order: 19090734

Received by: PW

Checklist completed by *Diane Shaw* 12-Sep-19  
eSignature Date

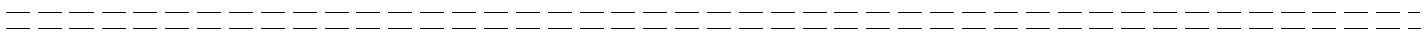
Reviewed by: *Amanda Przybowski* 12-Sep-19  
eSignature Date

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 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):	<input type="text"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<u>9/11/19 18:00</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:	<input type="text"/>		

Login Notes: Holland - 2.6/2.6 c SR2



Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: