



10-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: **19090376**

Dear Robert,

ALS Environmental received 25 samples on 06-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 42.

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

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090376

**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>
19090376-01	15	Aqueous		9/6/2019 13:35	9/7/2019 08:00	<input type="checkbox"/>
19090376-01	15	Aqueous		9/6/2019 13:35	9/7/2019 08:15	<input type="checkbox"/>
19090376-02	14	Aqueous		9/6/2019 13:46	9/7/2019 08:00	<input type="checkbox"/>
19090376-02	14	Aqueous		9/6/2019 13:46	9/7/2019 08:15	<input type="checkbox"/>
19090376-03	7	Aqueous		9/6/2019 13:57	9/7/2019 08:00	<input type="checkbox"/>
19090376-03	7	Aqueous		9/6/2019 13:57	9/7/2019 08:15	<input type="checkbox"/>
19090376-04	6	Aqueous		9/6/2019 14:06	9/7/2019 08:00	<input type="checkbox"/>
19090376-04	6	Aqueous		9/6/2019 14:06	9/7/2019 08:15	<input type="checkbox"/>
19090376-05	5	Aqueous		9/6/2019 14:13	9/7/2019 08:00	<input type="checkbox"/>
19090376-05	5	Aqueous		9/6/2019 14:13	9/7/2019 08:15	<input type="checkbox"/>
19090376-06	4	Aqueous		9/6/2019 14:22	9/7/2019 08:00	<input type="checkbox"/>
19090376-06	4	Aqueous		9/6/2019 14:22	9/7/2019 08:15	<input type="checkbox"/>
19090376-07	3	Aqueous		9/6/2019 14:36	9/7/2019 08:00	<input type="checkbox"/>
19090376-07	3	Aqueous		9/6/2019 14:36	9/7/2019 08:15	<input type="checkbox"/>
19090376-08	2	Aqueous		9/6/2019 14:45	9/7/2019 08:00	<input type="checkbox"/>
19090376-08	2	Aqueous		9/6/2019 14:45	9/7/2019 08:15	<input type="checkbox"/>
19090376-09	1	Aqueous		9/6/2019 15:01	9/7/2019 08:00	<input type="checkbox"/>
19090376-09	1	Aqueous		9/6/2019 15:01	9/7/2019 08:15	<input type="checkbox"/>
19090376-10	OF001	Aqueous		9/6/2019 15:15	9/7/2019 08:00	<input type="checkbox"/>
19090376-10	OF001	Aqueous		9/6/2019 15:15	9/7/2019 08:15	<input type="checkbox"/>
19090376-11	8	Aqueous		9/6/2019 15:43	9/7/2019 08:00	<input type="checkbox"/>
19090376-11	8	Aqueous		9/6/2019 15:43	9/7/2019 08:15	<input type="checkbox"/>
19090376-12	9	Aqueous		9/6/2019 15:51	9/7/2019 08:00	<input type="checkbox"/>
19090376-12	9	Aqueous		9/6/2019 15:51	9/7/2019 08:15	<input type="checkbox"/>
19090376-13	10	Aqueous		9/6/2019 16:04	9/7/2019 08:00	<input type="checkbox"/>
19090376-13	10	Aqueous		9/6/2019 16:04	9/7/2019 08:15	<input type="checkbox"/>
19090376-14	11	Aqueous		9/6/2019 16:13	9/7/2019 08:00	<input type="checkbox"/>
19090376-14	11	Aqueous		9/6/2019 16:13	9/7/2019 08:15	<input type="checkbox"/>
19090376-15	12	Aqueous		9/6/2019 16:25	9/7/2019 08:00	<input type="checkbox"/>
19090376-15	12	Aqueous		9/6/2019 16:25	9/7/2019 08:15	<input type="checkbox"/>
19090376-16	13	Aqueous		9/6/2019 16:33	9/7/2019 08:00	<input type="checkbox"/>
19090376-16	13	Aqueous		9/6/2019 16:33	9/7/2019 08:15	<input type="checkbox"/>
19090376-17	SL-1	Aqueous		9/6/2019 16:45	9/7/2019 08:00	<input type="checkbox"/>
19090376-17	SL-1	Aqueous		9/6/2019 16:45	9/7/2019 08:15	<input type="checkbox"/>
19090376-18	SL-2	Aqueous		9/6/2019 17:01	9/7/2019 08:00	<input type="checkbox"/>
19090376-18	SL-2	Aqueous		9/6/2019 17:01	9/7/2019 08:15	<input type="checkbox"/>
19090376-19	SL-3	Aqueous		9/6/2019 17:18	9/7/2019 08:00	<input type="checkbox"/>
19090376-19	SL-3	Aqueous		9/6/2019 17:18	9/7/2019 08:15	<input type="checkbox"/>
19090376-20	SL-4	Aqueous		9/6/2019 17:30	9/7/2019 08:00	<input type="checkbox"/>

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**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090376

## 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>
19090376-20	SL-4	Aqueous		9/6/2019 17:30	9/7/2019 08:15	<input type="checkbox"/>
19090376-21	SL-5	Aqueous		9/6/2019 17:45	9/7/2019 08:00	<input type="checkbox"/>
19090376-21	SL-5	Aqueous		9/6/2019 17:45	9/7/2019 08:15	<input type="checkbox"/>
19090376-22	SL-6	Aqueous		9/6/2019 18:01	9/7/2019 08:00	<input type="checkbox"/>
19090376-22	SL-6	Aqueous		9/6/2019 18:01	9/7/2019 08:15	<input type="checkbox"/>
19090376-23	SL-7	Aqueous		9/6/2019 18:24	9/7/2019 08:00	<input type="checkbox"/>
19090376-23	SL-7	Aqueous		9/6/2019 18:24	9/7/2019 08:15	<input type="checkbox"/>
19090376-24	SL-8	Aqueous		9/6/2019 18:58	9/7/2019 08:00	<input type="checkbox"/>
19090376-24	SL-8	Aqueous		9/6/2019 18:58	9/7/2019 08:15	<input type="checkbox"/>
19090376-25	000	Aqueous		9/6/2019 19:30	9/7/2019 08:00	<input type="checkbox"/>
19090376-25	000	Aqueous		9/6/2019 19:30	9/7/2019 08:15	<input type="checkbox"/>

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**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Work Order:** 19090376

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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: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 15  
**Collection Date:** 9/6/2019 01:35 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-01  
**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	9/6/2019
<b>PH (FIELD)</b>							
pH (field)	7.62		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	22.1		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.148		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:38

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

**ALS Group, USA**

Date: 10-Sep-19

Client: ArcelorMittal USA LLC  
 Project: Arcelor Mittal - Burns Harbor E.R.  
 Sample ID: 14  
 Collection Date: 9/6/2019 01:46 PM

Work Order: 19090376  
 Lab ID: 19090376-02  
 Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							Analyst: <b>ALS</b>
Dissolved Oxygen (field)	7.40		0		mg/L	1	9/6/2019
<b>PH (FIELD)</b>							Analyst: <b>ALS</b>
pH (field)	7.80		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							Analyst: <b>ALS</b>
Temperature (field)	22.3		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							Analyst: <b>JB</b>
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							Analyst: <b>JB</b>
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							Analyst: <b>CD</b>
Ammonia as Nitrogen	0.0744		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:39

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

**ALS Group, USA**

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 7  
**Collection Date:** 9/6/2019 01:57 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-03  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							Analyst: <b>ALS</b>
Dissolved Oxygen (field)	7.00		0		mg/L	1	9/6/2019
<b>PH (FIELD)</b>							Analyst: <b>ALS</b>
pH (field)	7.75		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							Analyst: <b>ALS</b>
Temperature (field)	22.0		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							Analyst: <b>JB</b>
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							Analyst: <b>JB</b>
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							Analyst: <b>CD</b>
Ammonia as Nitrogen	0.164		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:40

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 6  
**Collection Date:** 9/6/2019 02:06 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-04  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.8		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.180		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:41
				Method: E350.1 R2.0			Analyst: CD

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



# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 5  
**Collection Date:** 9/6/2019 02:13 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-05  
**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	9/6/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.80		0		s.u.	1	9/6/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.9		0		°C	1	9/6/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
			Method: KELADA-01				Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
			Method: KELADA-01				Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.177		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:45
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 4  
**Collection Date:** 9/6/2019 02:22 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-06  
**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	9/6/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.83		0		s.u.	1	9/6/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	22.0		0		°C	1	9/6/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
			Method: KELADA-01				Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
			Method: KELADA-01				Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.185		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:49
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 3  
**Collection Date:** 9/6/2019 02:36 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-07  
**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	9/6/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.81		0		s.u.	1	9/6/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	22.3		0		°C	1	9/6/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
			Method: KELADA-01				Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
			Method: KELADA-01				Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.188		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:50
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 2  
**Collection Date:** 9/6/2019 02:45 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-08  
**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	9/6/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/6/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	22.2		0		°C	1	9/6/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
			Method: KELADA-01				Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
			Method: KELADA-01				Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.193		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:51
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 1  
**Collection Date:** 9/6/2019 03:01 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-09  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.73		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	22.3		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.247		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:52
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** OF001  
**Collection Date:** 9/6/2019 03:15 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-10  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							Analyst: <b>ALS</b>
Dissolved Oxygen (field)	7.10		0		mg/L	1	9/6/2019
<b>PH (FIELD)</b>							Analyst: <b>ALS</b>
pH (field)	7.70		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							Analyst: <b>ALS</b>
Temperature (field)	22.3		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							Analyst: <b>JB</b>
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							Analyst: <b>JB</b>
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							Analyst: <b>CD</b>
Ammonia as Nitrogen	0.230		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:54

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 8  
**Collection Date:** 9/6/2019 03:43 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-11  
**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	9/6/2019
<b>PH (FIELD)</b>							
pH (field)	7.71		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.4		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.145		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:57

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 9  
**Collection Date:** 9/6/2019 03:51 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-12  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.70		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.0		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.139		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 10:58
				Method: E350.1 R2.0			Analyst: CD

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



# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 10  
**Collection Date:** 9/6/2019 04:04 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-13  
**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	9/6/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.72		0		s.u.	1	9/6/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.3		0		°C	1	9/6/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
			Method: KELADA-01				Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
			Method: KELADA-01				Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.122		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:00
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

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

**Work Order:** 19090376  
**Lab ID:** 19090376-14  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.4		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.127		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:03
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 12  
**Collection Date:** 9/6/2019 04:25 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-15  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.76		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.5		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0849		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 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: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 13  
**Collection Date:** 9/6/2019 04:33 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-16  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							
Dissolved Oxygen (field)	6.80		0		mg/L	1	9/6/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.58		0		s.u.	1	9/6/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	21.3		0		°C	1	9/6/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
			Method: KELADA-01				Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
			Method: KELADA-01				Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.102		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:06
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-1  
**Collection Date:** 9/6/2019 04:45 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-17  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							Analyst: <b>ALS</b>
Dissolved Oxygen (field)	6.90		0		mg/L	1	9/6/2019
<b>PH (FIELD)</b>							Analyst: <b>ALS</b>
pH (field)	7.77		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							Analyst: <b>ALS</b>
Temperature (field)	19.4		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							Analyst: <b>JB</b>
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							Analyst: <b>JB</b>
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							Analyst: <b>CD</b>
Ammonia as Nitrogen	0.0716		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:07

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-2  
**Collection Date:** 9/6/2019 05:01 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-18  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.16		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	18.9		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0183	J	0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:08
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-3  
**Collection Date:** 9/6/2019 05:18 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-19  
**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	9/6/2019
			Method: A4500-O G-11				Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.05		0		s.u.	1	9/6/2019
			Method: A4500-H B-11				Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	18.5		0		°C	1	9/6/2019
			Method: A2550 B-10				Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
			Method: KELADA-01				Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
			Method: KELADA-01				Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0232	J	0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:09
			Method: E350.1 R2.0				Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-4  
**Collection Date:** 9/6/2019 05:30 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-20  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.13		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	19.0		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:10
				Method: E350.1 R2.0			Analyst: CD

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



# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-5  
**Collection Date:** 9/6/2019 05:45 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-21  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							Analyst: <b>ALS</b>
Dissolved Oxygen (field)	6.60		0		mg/L	1	9/6/2019
<b>PH (FIELD)</b>							Analyst: <b>ALS</b>
pH (field)	8.09		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							Analyst: <b>ALS</b>
Temperature (field)	18.7		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							Analyst: <b>JB</b>
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							Analyst: <b>JB</b>
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							Analyst: <b>CD</b>
Ammonia as Nitrogen	0.0248	J	0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:14

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-6  
**Collection Date:** 9/6/2019 06:01 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-22  
**Matrix:** AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<b>DISSOLVED OXYGEN (FIELD)</b>							Analyst: <b>ALS</b>
Dissolved Oxygen (field)	7.00		0		mg/L	1	9/6/2019
<b>PH (FIELD)</b>							Analyst: <b>ALS</b>
pH (field)	8.13		0		s.u.	1	9/6/2019
<b>TEMPERATURE (FIELD)</b>							Analyst: <b>ALS</b>
Temperature (field)	18.9		0		°C	1	9/6/2019
<b>CYANIDE, TOTAL</b>							Analyst: <b>JB</b>
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							Analyst: <b>JB</b>
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
<b>AMMONIA AS NITROGEN</b>							Analyst: <b>CD</b>
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:18

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-7  
**Collection Date:** 9/6/2019 06:24 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-23  
**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	9/6/2019
							Analyst: <b>ALS</b>
<b>PH (FIELD)</b>							
pH (field)	7.93		0		s.u.	1	9/6/2019
							Analyst: <b>ALS</b>
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	18.5		0		°C	1	9/6/2019
							Analyst: <b>ALS</b>
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
							Analyst: <b>JB</b>
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
							Analyst: <b>JB</b>
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:21
							Analyst: <b>CD</b>

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** SL-8  
**Collection Date:** 9/6/2019 06:58 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-24  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	8.01		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	19.1		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:22
				Method: E350.1 R2.0			Analyst: CD

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

# ALS Group, USA

Date: 10-Sep-19

**Client:** ArcelorMittal USA LLC  
**Project:** Arcelor Mittal - Burns Harbor E.R.  
**Sample ID:** 000  
**Collection Date:** 9/6/2019 07:30 PM

**Work Order:** 19090376  
**Lab ID:** 19090376-25  
**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	9/6/2019
				Method: A4500-O G-11			Analyst: ALS
<b>PH (FIELD)</b>							
pH (field)	7.72		0		s.u.	1	9/6/2019
				Method: A4500-H B-11			Analyst: ALS
<b>TEMPERATURE (FIELD)</b>							
Temperature (field)	20.6		0		°C	1	9/6/2019
				Method: A2550 B-10			Analyst: ALS
<b>CYANIDE, TOTAL</b>							
Cyanide, Total	U		0.0012	0.0050	mg/L	1	9/9/2019 12:16
				Method: KELADA-01			Analyst: JB
<b>CYANIDE, WEAK ACID DISSOCIABLE</b>							
Cyanide, WAD	U		0.0011	0.0050	mg/L	1	9/8/2019 14:14
				Method: KELADA-01			Analyst: JB
<b>AMMONIA AS NITROGEN</b>							
Ammonia as Nitrogen	0.0250	J	0.00980	0.0320	mg NH3-N/L	1	9/7/2019 11:24
				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:** 19090376

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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: 19090376

Project: Arcelor Mittal - Burns Harbor E.R.

Batch ID: **R270022b** Instrument ID **SKALAR1** Method: **Kelada-01**

<b>MBLK</b>	Sample ID: <b>MB-R270022-R270022b</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901474</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-R270022-R270022b</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901475</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 0.1027 0.0050 0.1 0 103 90-110 0

<b>MS</b>	Sample ID: <b>19090289-21C MS</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901477</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 0.1023 0.0050 0.1 -0.00134 104 90-110 0

<b>MS</b>	Sample ID: <b>19090376-05C MS</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID: <b>5</b>	Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901490</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 0.1016 0.0050 0.1 -0.00092 103 90-110 0

<b>MSD</b>	Sample ID: <b>19090289-21C MSD</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901478</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 0.1047 0.0050 0.1 -0.00134 106 90-110 0.1023 2.28 20

<b>MSD</b>	Sample ID: <b>19090376-05C MSD</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID: <b>5</b>	Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901491</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 0.1024 0.0050 0.1 -0.00092 103 90-110 0.1016 0.716 20

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



**Client:** ArcelorMittal USA LLC  
**Work Order:** 19090376  
**Project:** Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

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Batch ID: **R270022b**      Instrument ID **SKALAR1**      Method: **Kelada-01**

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

19090376-01C	19090376-02C	19090376-03C
19090376-04C	19090376-05C	19090376-06C
19090376-07C	19090376-08C	19090376-09C
19090376-10C	19090376-11C	19090376-12C
19090376-13C	19090376-14C	19090376-15C

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090376  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270022c** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK		Sample ID: <b>MB-R270022-R270022c</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID:		Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901504</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-R270022-R270022c</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID:		Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901505</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 0.1024 0.0050 0.1 0 102 90-110 0

MS		Sample ID: <b>19090376-17C MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID: <b>SL-1</b>		Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901510</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 0.1033 0.0050 0.1 -0.00105 104 90-110 0

MSD		Sample ID: <b>19090376-17C MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/8/2019 02:14 PM</b>		
Client ID: <b>SL-1</b>		Run ID: <b>SKALAR1_190908A</b>				SeqNo: <b>5901511</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 0.1032 0.0050 0.1 -0.00105 104 90-110 0.1033 0.136 20

The following samples were analyzed in this batch:

19090376-16C	19090376-17C	19090376-18C
19090376-19C	19090376-20C	19090376-21C
19090376-22C	19090376-23C	19090376-24C
19090376-25C		

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090376  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270121b** Instrument ID **SKALAR1** Method: **Kelada-01**

<b>MBLK</b>	Sample ID: <b>MB-R270121-R270121b</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190909A</b>			SeqNo: <b>5905006</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-R270121-R270121b</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID:	Run ID: <b>SKALAR1_190909A</b>			SeqNo: <b>5905007</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 0.09777 0.0050 0.1 0 97.8 90-110 0

<b>MS</b>	Sample ID: <b>19090376-05B MS</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID: <b>5</b>	Run ID: <b>SKALAR1_190909A</b>			SeqNo: <b>5905073</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 0.1018 0.0050 0.1 -0.00001 102 90-110 0

<b>MSD</b>	Sample ID: <b>19090376-05B MSD</b>				Units: <b>mg/L</b>			Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID: <b>5</b>	Run ID: <b>SKALAR1_190909A</b>			SeqNo: <b>5905074</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 0.1005 0.0050 0.1 -0.00001 100 90-110 0.1018 1.32 20

The following samples were analyzed in this batch:

19090376-01B	19090376-02B	19090376-03B
19090376-04B	19090376-05B	19090376-06B
19090376-07B	19090376-08B	19090376-09B
19090376-10B	19090376-11B	19090376-12B
19090376-13B	19090376-14B	19090376-15B

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090376  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R270121c** Instrument ID **SKALAR1** Method: **Kelada-01**

MBLK		Sample ID: <b>MB-R270121-R270121c</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID:		Run ID: <b>SKALAR1_190909A</b>				SeqNo: <b>5905127</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-R270121-R270121c</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID:		Run ID: <b>SKALAR1_190909A</b>				SeqNo: <b>5905128</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 0.09069 0.0050 0.1 0 90.7 90-110 0

MS		Sample ID: <b>19090376-17B MS</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID: <b>SL-1</b>		Run ID: <b>SKALAR1_190909A</b>				SeqNo: <b>5905133</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 0.1043 0.0050 0.1 -0.00085 105 90-110 0

MSD		Sample ID: <b>19090376-17B MSD</b>				Units: <b>mg/L</b>		Analysis Date: <b>9/9/2019 12:16 PM</b>		
Client ID: <b>SL-1</b>		Run ID: <b>SKALAR1_190909A</b>				SeqNo: <b>5905134</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 -0.00085 106 90-110 0.1043 0.45 20

The following samples were analyzed in this batch:

19090376-16B	19090376-17B	19090376-18B
19090376-19B	19090376-20B	19090376-21B
19090376-22B	19090376-23B	19090376-24B
19090376-25B		

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090376  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R269993** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

<b>MBLK</b>	Sample ID: <b>MBLK-R269993</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/7/2019 10:35 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190907A</b>		SeqNo: <b>5900543</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-R269993</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/7/2019 11:12 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190907A</b>		SeqNo: <b>5900573</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-R269993</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/7/2019 10:37 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190907A</b>		SeqNo: <b>5900544</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 0.395 0.032 0.4 0 98.8 90-110 0

<b>LCS</b>	Sample ID: <b>LCS-R269993</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/7/2019 11:13 AM</b>				
Client ID:	Run ID: <b>VAL-LACHAT_190907A</b>		SeqNo: <b>5900574</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 0.393 0.032 0.4 0 98.2 90-110 0

<b>MS</b>	Sample ID: <b>19090376-04A MS</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/7/2019 10:43 AM</b>				
Client ID: <b>6</b>	Run ID: <b>VAL-LACHAT_190907A</b>		SeqNo: <b>5900549</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 0.369 0.032 0.2 0.18 94.5 90-110 0

<b>MS</b>	Sample ID: <b>19090376-10A MS</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/7/2019 10:55 AM</b>				
Client ID: <b>OF001</b>	Run ID: <b>VAL-LACHAT_190907A</b>		SeqNo: <b>5900559</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 0.423 0.032 0.2 0.23 96.5 90-110 0

<b>MS</b>	Sample ID: <b>19090376-22A MS</b>		Units: <b>mg NH3-N/L</b>			Analysis Date: <b>9/7/2019 11:19 AM</b>				
Client ID: <b>SL-6</b>	Run ID: <b>VAL-LACHAT_190907A</b>		SeqNo: <b>5900579</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 -0.0188 103 90-110 0

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

Client: ArcelorMittal USA LLC  
 Work Order: 19090376  
 Project: Arcelor Mittal - Burns Harbor E.R.

# QC BATCH REPORT

Batch ID: **R269993** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MSD		Sample ID: 19090376-04A MSD				Units: mg NH3-N/L		Analysis Date: 9/7/2019 10:44 AM		
Client ID: 6		Run ID: VAL-LACHAT_190907A				SeqNo: 5900550		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	0.365	0.032	0.2	0.18	92.5	90-110	0.369	1.09	20	

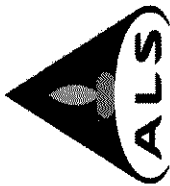
MSD		Sample ID: 19090376-10A MSD				Units: mg NH3-N/L		Analysis Date: 9/7/2019 10:56 AM		
Client ID: OF001		Run ID: VAL-LACHAT_190907A				SeqNo: 5900560		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Ammonia as Nitrogen	0.423	0.032	0.2	0.23	96.5	90-110	0.423	0	20	

MSD		Sample ID: 19090376-22A MSD				Units: mg NH3-N/L		Analysis Date: 9/7/2019 11:20 AM		
Client ID: SL-6		Run ID: VAL-LACHAT_190907A				SeqNo: 5900580		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	0.173	0.032	0.2	-0.0188	95.9	90-110	0.187	7.78	20	

The following samples were analyzed in this batch:

19090376-01A	19090376-02A	19090376-03A
19090376-04A	19090376-05A	19090376-06A
19090376-07A	19090376-08A	19090376-09A
19090376-10A	19090376-11A	19090376-12A
19090376-13A	19090376-14A	19090376-15A
19090376-16A	19090376-17A	19090376-18A
19090376-19A	19090376-20A	19090376-21A
19090376-22A	19090376-23A	19090376-24A
19090376-25A		

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



ALS Environmental  
 3352 128th Avenue  
 Holland, Michigan 49424  
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# Chain of Custody Form

Page 1 of 3

Client Information		Project Information		ALS Project Manager:		ALS Work Order #:		Parameter/Method Request for Analysis							
Purchase Order		Project Name	Receiving Water Monitoring	Amanda Gryzbowski		19090376									
Work Order		Project Number													
Company Name	ArcelorMittal (Burns Harbor)	Company Name	ArcelorMittal (Burns Harbor)												
Send Report To		Invoice Attn.	Accounts Payable												
Address	250 US 12	Address	250 US 12												
City/State/Zip	Burns Harbor, IN 46304	City/State/Zip	Burns Harbor, IN 46304												
Phone	(219) 787-2120	Phone	(219) 787-2120												
Fax		Fax													
e-Mail Address															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO
1		9/6/19	135	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.62	22.1	7.1
2			146	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.80	22.3	7.4
3			157	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.75	22.0	7.0
4			206	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	21.8	6.9
5			213	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.80	21.9	7.2
6			222	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.83	22.0	7.0
7			236	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.81	22.3	7.3
8			245	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	22.2	7.1
9			301	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.73	22.3	7.0
10	OFO01		315	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.70	22.3	7.1
Sampler(s); Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:									
Relinquished by: <i>[Signature]</i>		Received by: <i>[Signature]</i>		<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									
Date: 9/6/19 2000		Time: 2000													
Relinquished by: <i>[Signature]</i>		Received by (Laboratory): <i>[Signature]</i>													
Date: 9-7-19		Time:													
Logged by (Laboratory):		Checked by (Laboratory):													
Date:		Time:													
Cooler Temp.		34													
QC Package: (Check Box Below)															
Level II: Standard QC															
Level III: Standard QC + Raw Data															
Level IV: SW846 Methods/CLP															
Other:															
Notes: Rec'd 9/17/19 0815 QD QL															

ALS Environmental  
 3352 128th Avenue  
 Holland, Michigan 49424  
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# Chain of Custody Form

Page 2 of 3



ALS Project Manager: Amanda Gryzbowski		ALS Work Order #: 19090376																																																																																																																																																																																	
<b>Parameter/Method Request for Analysis</b>																																																																																																																																																																																			
<b>Client Information</b>		<b>Project Information</b>																																																																																																																																																																																	
Purchase Order	Project Name	Receiving Water Monitoring																																																																																																																																																																																	
Work Order	Project Number																																																																																																																																																																																		
Company Name	Company Name	ArcelorMittal (Burns Harbor)																																																																																																																																																																																	
Send Report To	Invoice Attn.	Accounts Payable																																																																																																																																																																																	
Address	Address	250 US 12																																																																																																																																																																																	
City/State/Zip	City/State/Zip	Burns Harbor, IN 46304																																																																																																																																																																																	
Phone	Phone	(219) 787-2120																																																																																																																																																																																	
Fax	Fax																																																																																																																																																																																		
e-Mail Address																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th>No.</th> <th>Sample Description</th> <th>Date</th> <th>Time</th> <th>Matrix</th> <th>Pres.</th> <th># Bottles</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>F</th> <th>pH</th> <th>Temp. °C</th> <th>DO</th> </tr> </thead> <tbody> <tr> <td>11</td> <td></td> <td>9/6/19</td> <td>343</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>7.71</td> <td>21.4</td> <td>7.1</td> </tr> <tr> <td>12</td> <td></td> <td></td> <td>351</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>7.70</td> <td>21.0</td> <td>7.3</td> </tr> <tr> <td>13</td> <td></td> <td></td> <td>404</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>7.72</td> <td>21.3</td> <td>7.1</td> </tr> <tr> <td>14</td> <td></td> <td></td> <td>413</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>7.76</td> <td>21.4</td> <td>6.9</td> </tr> <tr> <td>15</td> <td></td> <td></td> <td>425</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>7.76</td> <td>21.5</td> <td>7.1</td> </tr> <tr> <td>16</td> <td></td> <td></td> <td>433</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>7.58</td> <td>21.3</td> <td>6.8</td> </tr> <tr> <td>17</td> <td></td> <td></td> <td>445</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>7.17</td> <td>19.9</td> <td>6.9</td> </tr> <tr> <td>18</td> <td></td> <td></td> <td>501</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>8.16</td> <td>18.9</td> <td>7.1</td> </tr> <tr> <td>19</td> <td></td> <td></td> <td>518</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>8.05</td> <td>18.5</td> <td>6.7</td> </tr> <tr> <td>20</td> <td></td> <td></td> <td>530</td> <td>Water</td> <td>H<sub>2</sub>SO<sub>4</sub>, NaOH</td> <td>2</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>8.13</td> <td>19.0</td> <td>7.3</td> </tr> </tbody> </table>				No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	pH	Temp. °C	DO	11		9/6/19	343	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.71	21.4	7.1	12			351	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.70	21.0	7.3	13			404	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.72	21.3	7.1	14			413	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	21.4	6.9	15			425	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.76	21.5	7.1	16			433	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.58	21.3	6.8	17			445	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	7.17	19.9	6.9	18			501	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.16	18.9	7.1	19			518	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.05	18.5	6.7	20			530	Water	H <sub>2</sub> SO <sub>4</sub> , NaOH	2	X	X	X	X	X	X	8.13	19.0	7.3
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Sampler(s): Please Print & Sign		Shipment Method:																																																																																																																																																																																	
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Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS

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f1w 4.2-c





Sample Receipt Checklist

Client Name: **ARCELORMITTAL-BURNSHARBO**

Date/Time Received: **06-Sep-19 00:00**

Work Order: **19090376**

Received by: **JH**

Checklist completed by Amanda Przybowski 07-Sep-19  
eSignature Date

Reviewed by: Amanda Przybowski 07-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):	<u>3.4</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>9/7/19 08:00</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:			

Login Notes: Holland - 4.2/4.2 c SR2

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

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

Comments:

CorrectiveAction: