



30-Aug-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: **19082044**

Dear Robert,

ALS Environmental received 25 samples on 29-Aug-2019 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental - Holland and for only the analyses requested.

Sample results are compliant with industry accepted practices and Quality Control results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 44.

If you have any questions regarding this report, please feel free to contact me:

ADDRESS: 3352 128th Avenue, Holland, MI, USA
PHONE: +1 (616) 399-6070 FAX: +1 (616) 399-6185

Sincerely,

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

Electronically approved by: Amanda Grzybowski

Amanda Grzybowski
Project Manager

Report of Laboratory Analysis

Certificate No: VL: E871119

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

Environmental 

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RIGHT SOLUTIONS RIGHT PARTNER

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: 19082044

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>
19082044-01	15	Aqueous		8/29/2019 05:31	8/29/2019 12:35	<input type="checkbox"/>
19082044-02	14	Aqueous		8/29/2019 05:45	8/29/2019 12:35	<input type="checkbox"/>
19082044-03	7	Aqueous		8/29/2019 06:00	8/29/2019 12:35	<input type="checkbox"/>
19082044-04	6	Aqueous		8/29/2019 06:12	8/29/2019 12:35	<input type="checkbox"/>
19082044-05	5	Aqueous		8/29/2019 06:22	8/29/2019 12:35	<input type="checkbox"/>
19082044-06	4	Aqueous		8/29/2019 06:30	8/29/2019 12:35	<input type="checkbox"/>
19082044-07	3	Aqueous		8/29/2019 06:37	8/29/2019 12:35	<input type="checkbox"/>
19082044-08	2	Aqueous		8/29/2019 06:42	8/29/2019 12:35	<input type="checkbox"/>
19082044-09	1	Aqueous		8/29/2019 06:51	8/29/2019 12:35	<input type="checkbox"/>
19082044-10	OF001	Aqueous		8/29/2019 07:02	8/29/2019 12:35	<input type="checkbox"/>
19082044-11	8	Aqueous		8/29/2019 07:30	8/29/2019 12:35	<input type="checkbox"/>
19082044-12	9	Aqueous		8/29/2019 07:38	8/29/2019 12:35	<input type="checkbox"/>
19082044-13	10	Aqueous		8/29/2019 07:46	8/29/2019 12:35	<input type="checkbox"/>
19082044-14	11	Aqueous		8/29/2019 07:51	8/29/2019 12:35	<input type="checkbox"/>
19082044-15	12	Aqueous		8/29/2019 07:59	8/29/2019 12:35	<input type="checkbox"/>
19082044-16	13	Aqueous		8/29/2019 08:09	8/29/2019 12:35	<input type="checkbox"/>
19082044-17	SL-1	Aqueous		8/29/2019 08:20	8/29/2019 12:35	<input type="checkbox"/>
19082044-18	SL-2	Aqueous		8/29/2019 09:25	8/29/2019 12:35	<input type="checkbox"/>
19082044-19	SL-3	Aqueous		8/29/2019 09:31	8/29/2019 12:35	<input type="checkbox"/>
19082044-20	SL-4	Aqueous		8/29/2019 09:40	8/29/2019 12:35	<input type="checkbox"/>
19082044-21	SL-5	Aqueous		8/29/2019 09:47	8/29/2019 12:35	<input type="checkbox"/>
19082044-22	SL-6	Aqueous		8/29/2019 10:00	8/29/2019 12:35	<input type="checkbox"/>
19082044-23	SL-7	Aqueous		8/29/2019 10:35	8/29/2019 12:35	<input type="checkbox"/>
19082044-24	SL-8	Aqueous		8/29/2019 11:05	8/29/2019 12:35	<input type="checkbox"/>
19082044-25	000	Aqueous		8/29/2019 11:50	8/29/2019 12:35	<input type="checkbox"/>

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Work Order: 19082044

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: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 15
Collection Date: 8/29/2019 05:31 AM

Work Order: 19082044
Lab ID: 19082044-01
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.00		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.38		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.6		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:09
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 15:55
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0859		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 16:47

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 14
Collection Date: 8/29/2019 05:45 AM

Work Order: 19082044
Lab ID: 19082044-02
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.20		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.40		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	20.8		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:12
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 15:56
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0916		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 16:48

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 7
Collection Date: 8/29/2019 06:00 AM

Work Order: 19082044
Lab ID: 19082044-03
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.90		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.42		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.1		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:14
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:02
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.165		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 16:52

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 6
Collection Date: 8/29/2019 06:12 AM

Work Order: 19082044
Lab ID: 19082044-04
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.10		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.20		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	21.8		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:15
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:05
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.207		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 16:53
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 5
Collection Date: 8/29/2019 06:22 AM

Work Order: 19082044
Lab ID: 19082044-05
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.90		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.53		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.7		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:16
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:07
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.256		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 16:54

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 4
Collection Date: 8/29/2019 06:30 AM

Work Order: 19082044
Lab ID: 19082044-06
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.00		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.56		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	22.0		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	0.00214	J	0.00200	0.00500	mg/L	1	8/30/2019 15:17
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide		U	0.0020	0.0050	mg/L	1	8/30/2019 16:08
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.294		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 16:58
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 3
Collection Date: 8/29/2019 06:37 AM

Work Order: 19082044
Lab ID: 19082044-07
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.30		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.54		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.3		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:18
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:09
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.268		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:01

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 2
Collection Date: 8/29/2019 06:42 AM

Work Order: 19082044
Lab ID: 19082044-08
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	6.50		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.58		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.2		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	0.00254	J	0.00200	0.00500	mg/L	1	8/30/2019 15:21
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide		U	0.0020	0.0050	mg/L	1	8/30/2019 16:10
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.295		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:03
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 1
Collection Date: 8/29/2019 06:51 AM

Work Order: 19082044
Lab ID: 19082044-09
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.80		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.30		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	22.1		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	0.00224	J	0.00200	0.00500	mg/L	1	8/30/2019 15:25
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide		U	0.0020	0.0050	mg/L	1	8/30/2019 16:11
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.392		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:06
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: OF001
Collection Date: 8/29/2019 07:02 AM

Work Order: 19082044
Lab ID: 19082044-10
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							Analyst: ALS
Dissolved Oxygen (field)	6.60		0		mg/L	1	8/29/2019
PH (FIELD)							Analyst: ALS
pH (field)	7.44		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							Analyst: ALS
Temperature (field)	23.2		0		°C	1	8/29/2019
CYANIDE, TOTAL							Analyst: CD
Cyanide, Total	0.00283	J	0.00200	0.00500	mg/L	1	8/30/2019 15:26
WEAK ACID DISSOCIABLE CYANIDE							Analyst: CD
Weak Acid Dissociable Cyanide	0.0021	J	0.0020	0.0050	mg/L	1	8/30/2019 16:12
AMMONIA AS NITROGEN							Analyst: CD
Ammonia as Nitrogen	0.476		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:07

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 8
Collection Date: 8/29/2019 07:30 AM

Work Order: 19082044
Lab ID: 19082044-11
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	8.10		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.57		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.4		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:27
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:16
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.140		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:11

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 9
Collection Date: 8/29/2019 07:38 AM

Work Order: 19082044
Lab ID: 19082044-12
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.40		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.60		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.2		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:28
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:17
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.106		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:12

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 10
Collection Date: 8/29/2019 07:46 AM

Work Order: 19082044
Lab ID: 19082044-13
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	6.50		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.81		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.8		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:29
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:18
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.130		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:13

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 11
Collection Date: 8/29/2019 07:51 AM

Work Order: 19082044
Lab ID: 19082044-14
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.30		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.73		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	23.2		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:30
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:19
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0545		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:15

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 12
Collection Date: 8/29/2019 07:59 AM

Work Order: 19082044
Lab ID: 19082044-15
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.10		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.98		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	21.6		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:32
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:20
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0753		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:16

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 13
Collection Date: 8/29/2019 08:09 AM

Work Order: 19082044
Lab ID: 19082044-16
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.00		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.79		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	19.9		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:35
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:21
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0443		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:17

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-1
Collection Date: 8/29/2019 08:20 AM

Work Order: 19082044
Lab ID: 19082044-17
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	6.90		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.97		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	18.9		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:36
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:22
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0731		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:21

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-2
Collection Date: 8/29/2019 09:25 AM

Work Order: 19082044
Lab ID: 19082044-18
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	7.10		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.98		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	19.0		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:37
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:23
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:22

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-3
Collection Date: 8/29/2019 09:31 AM

Work Order: 19082044
Lab ID: 19082044-19
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	6.40		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.99		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	19.8		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:41
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:25
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:23

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-4
Collection Date: 8/29/2019 09:40 AM

Work Order: 19082044
Lab ID: 19082044-20
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	6.10		0		mg/L	1	8/29/2019
PH (FIELD)							
pH (field)	7.50		0		s.u.	1	8/29/2019
TEMPERATURE (FIELD)							
Temperature (field)	19.2		0		°C	1	8/29/2019
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:42
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:26
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:24

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-5
Collection Date: 8/29/2019 09:47 AM

Work Order: 19082044
Lab ID: 19082044-21
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	5.60		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.99		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	19.7		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:43
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:31
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:25
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-6
Collection Date: 8/29/2019 10:00 AM

Work Order: 19082044
Lab ID: 19082044-22
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	6.50		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.98		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	19.1		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:49
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:33
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:27
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-7
Collection Date: 8/29/2019 10:35 AM

Work Order: 19082044
Lab ID: 19082044-23
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	5.20		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	8.04		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.1		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:50
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:36
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:28
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: SL-8
Collection Date: 8/29/2019 11:05 AM

Work Order: 19082044
Lab ID: 19082044-24
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	5.50		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.90		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	19.8		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:51
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:37
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	U		0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:29
				Method: E350.1 R2.0			Analyst: CD

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

ALS Group, USA

Date: 30-Aug-19

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
Sample ID: 000
Collection Date: 8/29/2019 11:50 AM

Work Order: 19082044
Lab ID: 19082044-25
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
DISSOLVED OXYGEN (FIELD)							
Dissolved Oxygen (field)	6.10		0		mg/L	1	8/29/2019
				Method: A4500-O G-11			Analyst: ALS
PH (FIELD)							
pH (field)	7.76		0		s.u.	1	8/29/2019
				Method: A4500-H B-11			Analyst: ALS
TEMPERATURE (FIELD)							
Temperature (field)	20.9		0		°C	1	8/29/2019
				Method: A2550 B-10			Analyst: ALS
CYANIDE, TOTAL							
Cyanide, Total	U		0.00200	0.00500	mg/L	1	8/30/2019 15:52
				Method: A4500-CN E-11		Prep: A4500-CN C-11 / 8/29/19	Analyst: CD
WEAK ACID DISSOCIABLE CYANIDE							
Weak Acid Dissociable Cyanide	U		0.0020	0.0050	mg/L	1	8/30/2019 16:38
				Method: A4500-CN I-11		Prep: A4500-CN I / 8/30/19	Analyst: CD
AMMONIA AS NITROGEN							
Ammonia as Nitrogen	0.0255	J	0.00980	0.0320	mg NH3-N/L	1	8/29/2019 17:30
				Method: E350.1 R2.0			Analyst: CD

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

Client: ArcelorMittal USA LLC
Project: Arcelor Mittal - Burns Harbor E.R.
WorkOrder: 19082044

**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
Work Order: 19082044
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141722** Instrument ID **VAL-LACHAT** Method: **A4500-CN E-11**

MBLK	Sample ID: MBLK-141722-141722				Units: mg/L		Analysis Date: 8/30/2019 03:02 PM			
Client ID:	Run ID: VAL-LACHAT_190830B			SeqNo: 5886549		Prep Date: 8/29/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total U 0.0050

LCS	Sample ID: LCS-141722-141722				Units: mg/L		Analysis Date: 8/30/2019 03:03 PM			
Client ID:	Run ID: VAL-LACHAT_190830B			SeqNo: 5886550		Prep Date: 8/29/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1035 0.0050 0.1 0 104 90-110 0

MS	Sample ID: 19082044-01B MS				Units: mg/L		Analysis Date: 8/30/2019 03:10 PM			
Client ID: 15	Run ID: VAL-LACHAT_190830B			SeqNo: 5886556		Prep Date: 8/29/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.105 0.0050 0.1 0.000515 104 70-130 0

MS	Sample ID: 19082044-08B MS				Units: mg/L		Analysis Date: 8/30/2019 03:23 PM			
Client ID: 2	Run ID: VAL-LACHAT_190830B			SeqNo: 5886567		Prep Date: 8/29/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.107 0.0050 0.1 0.002545 104 70-130 0

MSD	Sample ID: 19082044-01B MSD				Units: mg/L		Analysis Date: 8/30/2019 03:11 PM			
Client ID: 15	Run ID: VAL-LACHAT_190830B			SeqNo: 5886557		Prep Date: 8/29/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.098 0.0050 0.1 0.000515 97.5 70-130 0.105 6.9 30

MSD	Sample ID: 19082044-08B MSD				Units: mg/L		Analysis Date: 8/30/2019 03:24 PM			
Client ID: 2	Run ID: VAL-LACHAT_190830B			SeqNo: 5886568		Prep Date: 8/29/2019		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1065 0.0050 0.1 0.002545 104 70-130 0.107 0.468 30

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

Client: ArcelorMittal USA LLC
Work Order: 19082044
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141722** Instrument ID **VAL-LACHAT** Method: **A4500-CN E-11**

The following samples were analyzed in this batch:

19082044-01B	19082044-02B	19082044-03B
19082044-04B	19082044-05B	19082044-06B
19082044-07B	19082044-08B	19082044-09B
19082044-10B	19082044-11B	19082044-12B
19082044-13B	19082044-14B	19082044-15B
19082044-16B	19082044-17B	19082044-18B

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

Client: ArcelorMittal USA LLC
 Work Order: 19082044
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: 141724 Instrument ID VAL-LACHAT Method: A4500-CN E-11

MBLK	Sample ID: MBLK-141724-141724		Units: mg/L		Analysis Date: 8/30/2019 03:38 PM					
Client ID:	Run ID: VAL-LACHAT_190830B		SeqNo: 5886581		Prep Date: 8/29/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total U 0.0050

LCS	Sample ID: LCS-141724-141724		Units: mg/L		Analysis Date: 8/30/2019 03:40 PM					
Client ID:	Run ID: VAL-LACHAT_190830B		SeqNo: 5886582		Prep Date: 8/29/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.104 0.0050 0.1 0 104 90-110 0

MS	Sample ID: 19082044-21B MS		Units: mg/L		Analysis Date: 8/30/2019 03:44 PM					
Client ID: SL-5	Run ID: VAL-LACHAT_190830B		SeqNo: 5886586		Prep Date: 8/29/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.1025 0.0050 0.1 0.00055 102 70-130 0

MSD	Sample ID: 19082044-21B MSD		Units: mg/L		Analysis Date: 8/30/2019 03:45 PM					
Client ID: SL-5	Run ID: VAL-LACHAT_190830B		SeqNo: 5886587		Prep Date: 8/29/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Total 0.0965 0.0050 0.1 0.00055 96 70-130 0.1025 6.03 30

The following samples were analyzed in this batch:

19082044-19B	19082044-20B	19082044-21B
19082044-22B	19082044-23B	19082044-24B
19082044-25B		

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

Client: ArcelorMittal USA LLC
 Work Order: 19082044
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: 141725 Instrument ID VAL-LACHAT Method: A4500-CN I-11

MBLK		Sample ID: MBLK-141725-141725				Units: mg/L		Analysis Date: 8/30/2019 03:53 PM			
Client ID:		Run ID: VAL-LACHAT_190830B				SeqNo: 5886594		Prep Date: 8/30/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Weak Acid Dissociable Cyanide U 0.0050

LCS		Sample ID: LCS-141725-141725				Units: mg/L		Analysis Date: 8/30/2019 03:54 PM			
Client ID:		Run ID: VAL-LACHAT_190830B				SeqNo: 5886595		Prep Date: 8/30/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Weak Acid Dissociable Cyanide 0.105 0.0050 0.1 0 105 80-120 0

MS		Sample ID: 19082044-02C MS				Units: mg/L		Analysis Date: 8/30/2019 03:58 PM			
Client ID: 14		Run ID: VAL-LACHAT_190830B				SeqNo: 5886598		Prep Date: 8/30/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Weak Acid Dissociable Cyanide 0.101 0.0050 0.1 0.0008 100 70-130 0

MS		Sample ID: 19082044-03C MS				Units: mg/L		Analysis Date: 8/30/2019 04:03 PM			
Client ID: 7		Run ID: VAL-LACHAT_190830B				SeqNo: 5886603		Prep Date: 8/30/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Weak Acid Dissociable Cyanide 0.104 0.0050 0.1 0.001335 103 70-130 0

MSD		Sample ID: 19082044-02C MSD				Units: mg/L		Analysis Date: 8/30/2019 03:59 PM			
Client ID: 14		Run ID: VAL-LACHAT_190830B				SeqNo: 5886599		Prep Date: 8/30/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Weak Acid Dissociable Cyanide 0.1005 0.0050 0.1 0.0008 99.7 70-130 0.101 0.496 30

MSD		Sample ID: 19082044-03C MSD				Units: mg/L		Analysis Date: 8/30/2019 04:04 PM			
Client ID: 7		Run ID: VAL-LACHAT_190830B				SeqNo: 5886604		Prep Date: 8/30/2019		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Weak Acid Dissociable Cyanide 0.1015 0.0050 0.1 0.001335 100 70-130 0.104 2.43 30

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

Client: ArcelorMittal USA LLC
Work Order: 19082044
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **141725** Instrument ID **VAL-LACHAT** Method: **A4500-CN I-11**

The following samples were analyzed in this batch:

19082044-01C	19082044-02C	19082044-03C
19082044-04C	19082044-05C	19082044-06C
19082044-07C	19082044-08C	19082044-09C
19082044-10C	19082044-11C	19082044-12C
19082044-13C	19082044-14C	19082044-15C
19082044-16C	19082044-17C	19082044-18C
19082044-19C	19082044-20C	

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

Client: ArcelorMittal USA LLC
 Work Order: 19082044
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: 141737 Instrument ID VAL-LACHAT Method: A4500-CN I-11

MBLK	Sample ID: MBLK-141737-141737		Units: mg/L		Analysis Date: 8/30/2019 04:29 PM					
Client ID:	Run ID: VAL-LACHAT_190830B		SeqNo: 5886626		Prep Date: 8/30/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Weak Acid Dissociable Cyanide U 0.0050

LCS	Sample ID: LCS-141737-141737		Units: mg/L		Analysis Date: 8/30/2019 04:30 PM					
Client ID:	Run ID: VAL-LACHAT_190830B		SeqNo: 5886627		Prep Date: 8/30/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Weak Acid Dissociable Cyanide 0.103 0.0050 0.1 0 103 80-120 0

MS	Sample ID: 19082044-22C MS		Units: mg/L		Analysis Date: 8/30/2019 04:34 PM					
Client ID: SL-6	Run ID: VAL-LACHAT_190830B		SeqNo: 5886630		Prep Date: 8/30/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Weak Acid Dissociable Cyanide 0.098 0.0050 0.1 0.0000955 97.9 70-130 0

MSD	Sample ID: 19082044-22C MSD		Units: mg/L		Analysis Date: 8/30/2019 04:35 PM					
Client ID: SL-6	Run ID: VAL-LACHAT_190830B		SeqNo: 5886631		Prep Date: 8/30/2019 DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Weak Acid Dissociable Cyanide 0.0985 0.0050 0.1 0.0000955 98.4 70-130 0.098 0.509 30

The following samples were analyzed in this batch:

19082044-21C	19082044-22C	19082044-23C
19082044-24C	19082044-25C	

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

Client: ArcelorMittal USA LLC
 Work Order: 19082044
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MBLK	Sample ID: MBLK-R269487		Units: mg NH3-N/L		Analysis Date: 8/29/2019 03:41 PM					
Client ID:	Run ID: VAL-LACHAT_190829B		SeqNo: 5883685		Prep Date: DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen U 0.032

MBLK	Sample ID: MBLK-R269487		Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:17 PM					
Client ID:	Run ID: VAL-LACHAT_190829B		SeqNo: 5883715		Prep Date: DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen U 0.032

MBLK	Sample ID: MBLK-R269487		Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:55 PM					
Client ID:	Run ID: VAL-LACHAT_190829B		SeqNo: 5883747		Prep Date: DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen U 0.032

MBLK	Sample ID: MBLK-R269487		Units: mg NH3-N/L		Analysis Date: 8/29/2019 05:31 PM					
Client ID:	Run ID: VAL-LACHAT_190829B		SeqNo: 5883777		Prep Date: DF: 1					
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen U 0.032

LCS	Sample ID: LCS-R269487		Units: mg NH3-N/L		Analysis Date: 8/29/2019 03:42 PM					
Client ID:	Run ID: VAL-LACHAT_190829B		SeqNo: 5883686		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 0.426 0.032 0.4 0 106 90-110 0

LCS	Sample ID: LCS-R269487		Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:18 PM					
Client ID:	Run ID: VAL-LACHAT_190829B		SeqNo: 5883716		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 0.425 0.032 0.4 0 106 90-110 0

LCS	Sample ID: LCS-R269487		Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:57 PM					
Client ID:	Run ID: VAL-LACHAT_190829B		SeqNo: 5883748		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 0.428 0.032 0.4 0 107 90-110 0

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

Client: ArcelorMittal USA LLC
 Work Order: 19082044
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

LCS		Sample ID: LCS-R269487				Units: mg NH3-N/L		Analysis Date: 8/29/2019 05:35 PM		
Client ID:		Run ID: VAL-LACHAT_190829B		SeqNo: 5883780		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	0.433	0.032	0.4	0	108	90-110	0			
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MS		Sample ID: 19081989-01A MS				Units: mg NH3-N/L		Analysis Date: 8/29/2019 03:59 PM		
Client ID:		Run ID: VAL-LACHAT_190829B		SeqNo: 5883700		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	0.301	0.032	0.2	0.136	82.5	90-110	0			S
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MS		Sample ID: 19081989-06A MS				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:10 PM		
Client ID:		Run ID: VAL-LACHAT_190829B		SeqNo: 5883709		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	0.318	0.032	0.2	0.106	106	90-110	0			
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MS		Sample ID: 19081989-12A MS				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:24 PM		
Client ID:		Run ID: VAL-LACHAT_190829B		SeqNo: 5883721		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	0.283	0.032	0.2	0.0501	116	90-110	0			S
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MS		Sample ID: 19081989-20A MS				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:38 PM		
Client ID:		Run ID: VAL-LACHAT_190829B		SeqNo: 5883733		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	0.214	0.032	0.2	0.0169	98.6	90-110	0			
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MS		Sample ID: 19082044-06A MS				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:59 PM		
Client ID: 4		Run ID: VAL-LACHAT_190829B		SeqNo: 5883750		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	0.51	0.032	0.2	0.294	108	90-110	0			
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MS		Sample ID: 19082044-10A MS				Units: mg NH3-N/L		Analysis Date: 8/29/2019 05:09 PM		
Client ID: OF001		Run ID: VAL-LACHAT_190829B		SeqNo: 5883758		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	0.683	0.032	0.2	0.476	104	90-110	0			
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ArcelorMittal USA LLC
 Work Order: 19082044
 Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MS		Sample ID: 19082054-04B MS				Units: mg NH3-N/L		Analysis Date: 8/29/2019 05:44 PM		
Client ID:		Run ID: VAL-LACHAT_190829B				SeqNo: 5883787		Prep Date:		DF: 20
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 24 0.64 4 19.86 104 90-110 0 O

MSD		Sample ID: 19081989-01A MSD				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:00 PM		
Client ID:		Run ID: VAL-LACHAT_190829B				SeqNo: 5883701		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 0.296 0.032 0.2 0.136 80 90-110 0.301 1.68 20 S

MSD		Sample ID: 19081989-06A MSD				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:11 PM		
Client ID:		Run ID: VAL-LACHAT_190829B				SeqNo: 5883710		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 0.316 0.032 0.2 0.106 105 90-110 0.318 0.631 20

MSD		Sample ID: 19081989-12A MSD				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:25 PM		
Client ID:		Run ID: VAL-LACHAT_190829B				SeqNo: 5883722		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 0.271 0.032 0.2 0.0501 110 90-110 0.283 4.33 20 S

MSD		Sample ID: 19081989-20A MSD				Units: mg NH3-N/L		Analysis Date: 8/29/2019 04:40 PM		
Client ID:		Run ID: VAL-LACHAT_190829B				SeqNo: 5883734		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 0.207 0.032 0.2 0.0169 95 90-110 0.214 3.33 20

MSD		Sample ID: 19082044-06A MSD				Units: mg NH3-N/L		Analysis Date: 8/29/2019 05:00 PM		
Client ID: 4		Run ID: VAL-LACHAT_190829B				SeqNo: 5883751		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 0.512 0.032 0.2 0.294 109 90-110 0.51 0.391 20

MSD		Sample ID: 19082044-10A MSD				Units: mg NH3-N/L		Analysis Date: 8/29/2019 05:10 PM		
Client ID: OF001		Run ID: VAL-LACHAT_190829B				SeqNo: 5883759		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 0.681 0.032 0.2 0.476 102 90-110 0.683 0.293 20

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

Client: ArcelorMittal USA LLC
Work Order: 19082044
Project: Arcelor Mittal - Burns Harbor E.R.

QC BATCH REPORT

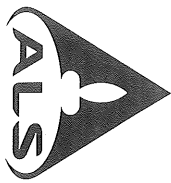
Batch ID: **R269487** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MSD		Sample ID: 19082054-04B MSD				Units: mg NH3-N/L		Analysis Date: 8/29/2019 05:45 PM			
Client ID:		Run ID: VAL-LACHAT_190829B				SeqNo: 5883788		Prep Date:		DF: 20	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Ammonia as Nitrogen	24	0.64	4	19.86	104	90-110	24	0	20	O	

The following samples were analyzed in this batch:

19082044-01A	19082044-02A	19082044-03A
19082044-04A	19082044-05A	19082044-06A
19082044-07A	19082044-08A	19082044-09A
19082044-10A	19082044-11A	19082044-12A
19082044-13A	19082044-14A	19082044-15A
19082044-16A	19082044-17A	19082044-18A
19082044-19A	19082044-20A	19082044-21A
19082044-22A	19082044-23A	19082044-24A
19082044-25A		

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



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Page 1 of 3
COC ID: 41589

Customer Information

Purchase Order
Work Order
Company Name: AMBH
Send Report To
Address
City/State/Zip
Phone
Fax
e-Mail Address

Project Information

Project Name: Receiving Water Monitoring
Project Number
Bill To Company
Invoice Attn
Address
City/State/Zip
Phone
Fax
e-Mail Address

ALS Project Manager:

Parameter/Method Request for Analysis
ALS Work Order #: PH
Temp C (field tested)
PH (field tested)
D.O. (field tested)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	15	8-29-19	530	AQ	4,3,v	3	X	X	X		7.38	21.6	8.0				
2	14		545								7.4	20.8	8.2				
3	7		600								7.42	21.1	7.9				
4	6		612								7.2	21.8	8.1				
5	5		622								7.53	21.7	7.9				
6	4		630								7.56	22.0	8.0				
7	3		637								7.54	21.3	8.3				
8	2		642								7.58	20.8	6.5				
9	1		651								7.3	22.0	7.8				
10	OF001		702								7.44	23.2	6.6				

Sampler(s) Please Print & Sign

Relinquished by: [Signature] Date: 8-29-19 Time: 200 Received by: [Signature] Date: 8-29-19 Time: 1235

Logged by (Laboratory): [Signature] Date: _____ Time: _____ Checked by (Laboratory): PH000

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NAOH 5-Na₂S₂O₃ 6-NAHSO₄ 7-Other 8-4°C 9-5035

Turnaround Time in Business Days (BD)
 10 BD 5 BD 3 BD Other _____
 2 BD 1 BD

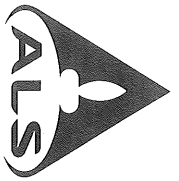
Notes: Cooler ID _____ Cooler Temp 09°C

QC Package: (Check One Box Below)
 Level II Std QC TRRP Checklist
 Level III Std QC/Raw Date TRRP Level IV
 Level IV SW846/CLP Other _____

Results Due Date: _____

Note: 1. Any changes must be made in writing on samples and COC Form have been submitted to ALS Environmental.
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+1 801 266 7700
York, PA
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Page 2 of 3

COC ID: 41591

Customer Information

Purchase Order
Work Order
Company Name: **AMBH**
Send Report To
Address
City/State/Zip
Phone
Fax
e-Mail Address

Project Information

Project Name: **Receiving Water Monitoring**
Project Number
Bill To Company
Invoice Attn
Address
City/State/Zip
Phone
Fax
e-Mail Address

ALS Project Manager:

ALS Work Order #: _____
Parameter/Method Request for Analysis: **NH4, Cn (total), Free Cn, PH (field tested), Temp c (field tested), D.O. (field tested), PH, Temp D.O.**

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	8	8/29/19	730	AQ	43V	3	X	X	X		7.57		21.4				8.1
2	9		738								7.6		21.2				7.4
3	10		746								7.81		21.8				6.5
4	11		751								7.73		23.2				7.3
5	12		759								7.98		21.6				7.1
6	13		809								7.79		19.9				7.0
7	SL-1		820								7.97		18.9				6.9
8	SL-2		820								7.98		19.0				7.1
9	SL-3		820								7.98		19.8				6.4
10	SL-4		940								7.5		19.2				6.1

Sampler(s) Please Print & Sign _____

Shipment Method: 10 BD 5 BD 2 BD 1 BD

Turnaround Time in Business Days (BD): 3 BD Other _____

Reinquisitioned by: _____ Date: 8-29-19 Time: 1200
Received by (Laboratory): _____
Checked by (Laboratory): _____

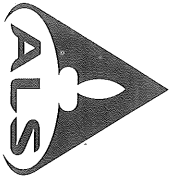
Logged by (Laboratory): _____ Date: 8-29-19 Time: 1235

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Notes: Cooler ID _____ Cooler Temp _____

QC Package: (Check One Box Below)
 Level II Std QC
 Level III Std QC/Raw Date
 Level IV SW846/CLP
 TRRP Checklist
 TRRP Level IV

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.



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+1 801 266 7700

South Charleston, WV
+1 304 356 3168
York, PA
+1 717 505 5280

Chain of Custody Form

Page 3 of 3

COC ID: 41592

Customer Information

Purchase Order
Work Order
Company Name: **AM BH**
Send Report To
Address
City/State/Zip
Phone
Fax
e-Mail Address

Project Information

Project Name: **Receiving water monitoring**
Project Number
Bill To Company
Invoice Attn
Address
City/State/Zip
Phone
Fax
e-Mail Address

ALS Project Manager:

ALS Work Order #: _____
Parameter/Method Request for Analysis: **PH (field tested)**
Temp c° (field tested)
DO (field tested)
PH (field tested)
Temp c° (field tested)

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	SL-5	8/29/19	947	AQ	4,3,U	3	X	X	X		7.99	19.7			5.6		
2	SL-6		1000				X	X	X		7.98	19.1			6.5		
3	SL-7		1035				X	X	X		8.04	20.1			5.2		
4	SL-8		1105				X	X	X		7.9	19.8			5.5		
5	000		1150				X	X	X		7.76	20.9			6.1		
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign _____ Shipment Method _____ Turnaround Time in Business Days (BD) 10 BD 5 BD 3 BD Other _____ 2 BD 1 BD Results Due Date: _____

Reinquisitioned by: _____ Date: 8/29/19 Time: 12:00 Received by (Laboratory): _____
 Logged by (Laboratory): _____ Date: 8/29/19 Time: 12:35 Checked by (Laboratory): _____

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Notes: _____ Cooler ID _____ Cooler Temp 0.9c

QC Package: (Check One Box Below)
 Level II Std QC TRRP Checklist
 Level III Std QC/Raw Date TRRP Level IV
 Level IV SW/846/CLP Other _____

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

Sample Receipt Checklist

Client Name: **ARCELORMITTAL-BURNSHARBO**

Date/Time Received: **29-Aug-19 00:00**

Work Order: **19082044**

Received by: **JH**

Checklist completed by Amanda Przybowski 30-Aug-19
eSignature Date

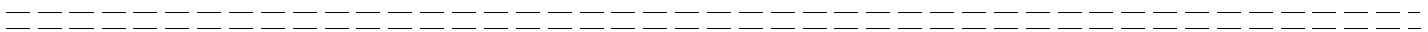
Reviewed by: Amanda Przybowski 30-Aug-19
eSignature Date

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" value="0.9"/>		
Cooler(s)/Kit(s):	<input type="text"/>		
Date/Time sample(s) sent to storage:	<input type="text" value="8/29/19 12:35"/>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
pH adjusted by:	<input type="text"/>		

Login Notes:



Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: