MICROBAC®

September 23, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19I0808

Re: LLHg - 001

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 9/13/2019 10:30:00AM for the analyses presented in the following report as Work Order 19I0808.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.

Carey Gadzala
Project Manager

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WORK ORDER SAMPLE SUMMARY

Date: *Monday, September 23, 2019*

Client: Arcelor Mittal USA, Inc.
Project: LLHg - 001
Lab Order: 19I0808

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19I0808-01	Field Blank		09/13/2019 08:09	9/13/2019 10:30:00AM
19I0808-02	001-Grab	001	09/13/2019 08:12	9/13/2019 10:30:00AM
19I0808-03	001- DUP	001	09/13/2019 08:14	9/13/2019 10:30:00AM

CASE NARRATIVE

Date: *Monday, September 23, 2019*

Client: Arcelor Mittal USA, Inc.
Project: LLHg - 001
Lab Order: 19I0808

B - the Method Blank contained merury at a level above the reporting limit. This does not impact the data, as the concentration in the sample was below the reporting limit. This nonconformance is associated with the following sample:

Laboratory ID	Sample Name
19I0808-01	Field Blank

The average of the three Method Blanks contained mercury above the level required for the reference method. This nonconformance is associated with the following samples:

Laboratory ID	Sample Name
19I0808-02	001-Grab
19I0808-03	001- DUP

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Analytical Results

Date: *Monday, September 23, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: LLHg - 001
Client Sample ID: Field Blank
Sample Description:
Matrix: Aqueous

Work Order/ID: 19I0808-01
Sampled: 09/13/2019 8:09
Received: 09/13/2019 10:30

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **EPA 1631E**						Analyst: **BTM**
Total Mercury using CVAFS - Heated Preparation									Prep Date/Time: **09/18/2019 09:09**
Mercury	eijlm	A	***ND***	0.118	0.500	B	ng/L	1	09/19/2019 12:38

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Analytical Results

Date: *Monday, September 23, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: LLHg - 001
Client Sample ID: 001-Grab
Sample Description: 001
Matrix: Aqueous

Work Order/ID: 19I0808-02
Sampled: 09/13/2019 8:12
Received: 09/13/2019 10:30

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **EPA 1631E**						Analyst: **BTM**
Total Mercury using CVAFS - Heated Preparation									Prep Date/Time: **09/18/2019 09:09**
Mercury	eijlm	A	***0.882***	0.118	0.500	B	ng/L	1	09/19/2019 12:40

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Analytical Results

Date: *Monday, September 23, 2019*

Client: Arcelor Mittal USA, Inc.
Client Project: LLHg - 001
Client Sample ID: 001- DUP
Sample Description: 001
Matrix: Aqueous

Work Order/ID: 19I0808-03
Sampled: 09/13/2019 8:14
Received: 09/13/2019 10:30

Analyses	Certs	AT	Result	MDL	RL	Qual	Units	DF	Analyzed
			Method: **EPA 1631E**						Analyst: **BTM**
Total Mercury using CVAFS - Heated Preparation									Prep Date/Time: **09/18/2019 09:09**
Mercury	eijlm	A	***0.940***	0.118	0.500	B	ng/L	1	09/19/2019 12:42

ANALYTE TYPES: (AT)

A,B = Target Analyte
I = Internal Standard
M = Summation Analyte
S = Surrogate
T = Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

BLK = Method Blank
DUP = Method Duplicate
BS = Method Blank Spike
MS = Matrix Spike
ICB = Initial Calibration Blank
CCB = Continuing Calibration Blank
CRL = Client Required Reporting Limit
PDS = Post Digestion Spike
QCS = Quality Control Standard
ICSA = Interference Check Standard "A"
ICSAB = Interference Check Standard "AB"
BSD = Method Blank Spike Duplicate
MSD = Matrix Spike Duplicate
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
OPR = Ongoing Precision and Recovery Standard
SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

[d] Illinois EPA drinking water, wastewater and solid waste analysis (#200064)
[i] Kansas Dept Health & Env. NELAP (#E-10397)
[j] Kentucky Wastewater Laboratory Certification Program (#108202)
[l] North Carolina DENR NPDES effluent, surface water (#597)
[m] New York State Department of Health (#12006)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

B:	The target analyte was detected in the method blank at or above the reported quantitation limit.
MDL:	Minimum Detection Limit
RL:	Reporting Limit
RPD:	Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: °C

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Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	Yes
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

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CHAIN OF CUSTODY RECORD

Number 151898

Instructions on back

Lab Report Address

Client Name: AMBH

Address:

City, State, Zip:

Contact:

Telephone No.:

Invoice Address

Client Name:

Address:

City, State, Zip:

Contact:

Telephone No.:

Turnaround Time

☑ Routine (5 to 7 business days)
☐ RUSH* (notify lab)

(needed by)

Report Type

☒ Results Only ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ EDD

TO BE COMPLETED BY MICROBAC

Temperature Upon Receipt (°C)
Therm ID
Holding Time
Samples Received on Ice? ☐ Yes ☐ No ☒ N/A
Custody Seals Intact? ☐ Yes ☐ No ☒ N/A

Send Report via: ☐ Mail ☐ Fax ☐ e-mail (address)

Send Invoice via: ☐ Mail ☐ Fax ☐ e-mail (address)

Project:

Location:

PO No.:

Compliance Monitoring? ☐ Yes ☐ No
☐ Agency/Program

Sampled by (PRINT): B. Otto

Sampler Signature:

Sampler Phone No.: 769-8378

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

REQUESTED ANALYSIS

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	6417										Additional Notes
FB 177978	9/13/19	0809	1	AQ	G	U	X										01
001 179712	↓	0812	1	↓	↓	U	X										02
001 DUP 179140	↓	0814	1	↓	↓	U	X										03

19I0808
ArcelorMittal - Burns Harbor, IN
LLHg - 001
09/13/2019
Carey Gadzala

Possible Hazard Identification ☐ Hazardous ☐ Non-Hazardous ☐ Radioactive

Sample Disposition ☐ Dispose as appropriate ☐ Return ☐ Archive

Comments

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
	9/13/19 1030		
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
		Nicole Reinwater	9/13/19 1030

rev.12/26/2017