

Work Order No.: 1910394

September 10, 2019

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

Re: LLHg - 001

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 3 sample(s) on 9/8/2019 10:30:00AM for the analyses presented in the following report as Work Order 19l0394.

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.

Carry Hadgala

Carey Gadzala Project Manager



WORK ORDER SAMPLE SUMMARY

Client: Arcelor Mittal USA, Inc.

Project: LLHg - 001 **Lab Order**: 1910394

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
1910394-01	Field Blank		09/08/2019 09:58	9/8/2019 10:30:00AM
1910394-02	001-Grab	001	09/08/2019 10:02	9/8/2019 10:30:00AM
1910394-03	001- DUP	001	09/08/2019 10:05	9/8/2019 10:30:00AM

Tuesday, September 10, 2019

Date:



Analytical Results

Date: Tuesday, September 10, 2019

Client: Arcelor Mittal USA, Inc.

Client Project: LLHg - 001

Client Sample ID: Field Blank Work Order/ID: 1910394-01

 Sample Description:
 Sampled:
 09/08/2019
 9:58

 Matrix:
 Aqueous
 Received:
 09/08/2019 10:30

 Analyses
 Certs AT Result MDL RL Qual Units DF Analyzed

Analyses

Certs AT Result MDL RL Qual Units DF Analyzed

Method: EPA 1631E

Analyst: BTM

Prep Date/Time: 09/08/2019 14:13

 Mercury
 eijlm
 A
 ND
 0.118
 0.500
 ng/L
 1
 09/10/2019
 13:18



Analytical Results

Date: Tuesday, September 10, 2019

Client: Arcelor Mittal USA, Inc.

Client Project: LLHg - 001

 Client Sample ID:
 001-Grab
 Work Order/ID:
 1910394-02

 Sample Description:
 001
 Sampled:
 09/08/2019
 10:02

 Matrix:
 Aqueous
 Received:
 09/08/2019
 10:30

ΑT Result MDL RL Units DF **Analyses** Certs Qual Analyzed Method: EPA 1631E Analyst: BTM **Total Mercury using CVAFS - Heated Preparation** Prep Date/Time: 09/08/2019 14:13 A 0.303 0.118 0.500 ng/L 09/10/2019 13:21



Analytical Results

Date: Tuesday, September 10, 2019

Client: Arcelor Mittal USA, Inc.

Client Project: LLHg - 001

 Client Sample ID:
 001- DUP
 Work Order/ID:
 1910394-03

 Sample Description:
 001
 Sampled:
 09/08/2019
 10:05

 Matrix:
 Aqueous
 Received:
 09/08/2019
 10:30

ΑT Result MDL RL Units DF **Analyses** Certs Qual Analyzed Method: EPA 1631E Analyst: BTM **Total Mercury using CVAFS - Heated Preparation** Prep Date/Time: 09/08/2019 14:13 A 0.142 0.118 0.500 ng/L 09/10/2019 13:23

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

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

PDS = Post Digestion Spike
QCS = Quality Control Standard

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)
- North Carolina DENR NPDES effluent, surface water (#597)
- m New York State Department of Health (#12006)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

MDL: Minimum Detection Limit

RL: Reporting Limit

RPD: Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler



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

e
C
4
m
0
0
U
-
Σ
0

Lab Report Address Client Name: Am B + Address: City, State, Zip: Contact: Telephone No.: Send Report via:	Invoice Address Client Name: Address: City, State, Zip: Contact: Telephone No.:	Turnaround Time	Number 15276 Instructions on back
t Address ne: ÆM B J+ s, Zip: s No.: ort via: □ Mail □ Fax □		Turnaround Time	
M O H		misure (5 to 7 busine	
e, Zip: r No.: ort via:		RUSH* (notify lab)	iss days) Temperature upon receipt ("C") Therm ID
☐ Mail □ Fax □			Holding Time
ne No.: bort via: Mail Fax		(needed by)	Samples Received on Ice? ☐ Yes ☐ No MN/A
☐ Mail ☐ Fax ☐		Report Type	Custody Seals Intact? ☐ Yes ☐ No ♥N/A
☐ Mail ☐ Fax ☐		Kesults Only Level 1	1
oject:			□ e-mail (address)
	Location:	PO No.: Con	Compliance Monitoring? ☐ Yes ☐ No ☐ Agency/Program
Sampled by (PRINT): B. Otto	Sampler Signature: 72	GE Sampler Phone No.: 769-837	9 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) HCI, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved	Wipe, Drinking Water (DW), Groundwater () HCl, (4) NaOH, (5) Zinc Acetate, (6) Meti	* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify) servative Types: (1) HNO3, (2) H2SO4, (3) HCI, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane	rther (specify) te, (9) Hexane, (U) Unpreserved
1	-	REQUESTED ANALYSIS	ANALYSIS
Client Sample ID Co	Collection of Containers Matrix Grab / Comp	Preservative LL H9 Types **	(920394) Additional Notes
Gadza 179/57 9/8/	117 0958 1 46C		
DOI DUP	500/	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	700
		X 3	
Possible Hazard Identification	□ Non-Hazardous □ Radioactive	Sample Disposition Dispose as appropriate	ppropriate Return Archive
	Relinquished By (signature)	19 1030	Received By (signature) Date/Time
	Relinquished By (signature)	Date/Time Received B	Received By (signature) Date/Time
	Relinquished By (signature)	Date/Time Received By	(Agnature)