



August 16, 2019

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

Work Order No.: 19H0922

Re: Special SW Ditch

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 1 sample(s) on 8/14/2019 5:55:00PM for the analyses presented in the following report as Work Order 19H0922.

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.

A handwritten signature in black ink that reads "Carey Gadzala". The signature is written in a cursive, flowing style.

Carey Gadzala
Project Manager

[Microbac Laboratories, Inc.](http://www.microbac.com)

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WORK ORDER SAMPLE SUMMARY

Date: *Friday, August 16, 2019***Client:** Arcelor Mittal USA, Inc.**Project:** Special SW Ditch**Lab Order:** 19H0922

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H0922-01	SW Ditch @ South Shore		08/14/2019 17:20	8/14/2019 5:55:00PM

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Field Results

Date: *Friday, August 16, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order:	19H0922
Client Project:	Special SW Ditch		
Client Sample ID:	SW Ditch @ South Shore	Work Order/ID:	19H0922-01
Sample Description:		Sampled:	08/14/2019 17:20
Matrix:	Aqueous	Received:	08/14/2019 17:55
Analyses		Result	Units
pH		8.44	pH Units



Analytical Results

Date: Friday, August 16, 2019

Client: Arcelor Mittal USA, Inc.
 Client Project: Special SW Ditch
 Client Sample ID: SW Ditch @ South Shore
 Sample Description:
 Matrix: Aqueous

Work Order/ID: 19H0922-01
 Sampled: 08/14/2019 17:20
 Received: 08/14/2019 17:55

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analized
			Method: SW-846 8260B			Analyst: jln		
Volatile Organic Compounds			Prep Method: NA	Prep Date/Time: 08/15/2019 07:24				
1,1,1,2-Tetrachloroethane	di	A	ND	10		µg/L	1	08/15/2019 14:48
1,1,1-Trichloroethane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
1,1,2,2-Tetrachloroethane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
1,1,2-Trichloroethane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
1,1-Dichloroethane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
1,1-Dichloroethene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
1,2-Dichloroethane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
1,2-Dichloropropane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
2-Butanone	di	A	ND	10		µg/L	1	08/15/2019 14:48
2-Hexanone	di	A	ND	10		µg/L	1	08/15/2019 14:48
4-Methyl-2-pentanone	di	A	ND	10		µg/L	1	08/15/2019 14:48
Acetone	di	A	ND	50		µg/L	1	08/15/2019 14:48
Acrolein	di	A	ND	100		µg/L	1	08/15/2019 14:48
Acrylonitrile	di	A	ND	100		µg/L	1	08/15/2019 14:48
Benzene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Bromodichloromethane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Bromoform	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Bromomethane	di	A	ND	10		µg/L	1	08/15/2019 14:48
Carbon Disulfide	di	A	ND	10		µg/L	1	08/15/2019 14:48
Carbon tetrachloride	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Chlorobenzene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Chloroethane	di	A	ND	10		µg/L	1	08/15/2019 14:48
Chloroform	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Chloromethane	di	A	ND	10		µg/L	1	08/15/2019 14:48
cis-1,2-Dichloroethene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
cis-1,3-Dichloropropene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Dibromochloromethane	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Ethylbenzene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
m,p-Xylene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Methylene chloride	di	A	ND	10		µg/L	1	08/15/2019 14:48
Methyl-t-Butyl Ether	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
o-Xylene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Styrene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Tetrachloroethene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Toluene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
trans-1,2-Dichloroethene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
trans-1,3-Dichloropropene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Trichloroethene	di	A	ND	5.0		µg/L	1	08/15/2019 14:48
Trichlorofluoromethane	di	A	ND	10		µg/L	1	08/15/2019 14:48
Vinyl Acetate	di	A	ND	10		µg/L	1	08/15/2019 14:48

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Analytical Results

Date: Friday, August 16, 2019

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H0922-01
Client Project:	Special SW Ditch	Sampled:	08/14/2019 17:20
Client Sample ID:	SW Ditch @ South Shore	Received:	08/14/2019 17:55
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
Method: SW-846 8260B Analyst: jln Prep Method: NA Prep Date/Time: 08/15/2019 07:24								
Volatile Organic Compounds								
Vinyl chloride	di	A	ND	1.0		µg/L	1	08/15/2019 14:48
Total 1,2-Dichloroethene		M	ND	5.0		µg/L	1	08/15/2019 14:48
Total Xylenes	di	M	ND	5.0		µg/L	1	08/15/2019 14:48
Surr: 1,2-Dichloroethane-d4		S	106	74.5-132		%REC	1	08/15/2019 14:48
Surr: 4-Bromofluorobenzene		S	102	80-120		%REC	1	08/15/2019 14:48
Surr: Dibromofluoromethane		S	105	80-120		%REC	1	08/15/2019 14:48
Surr: Toluene-d8		S	105	80-120		%REC	1	08/15/2019 14:48
Method: SM 4500-CN C/E-1999 Analyst: ABG Prep Method: NA Prep Date/Time: 08/15/2019 09:35								
Total Cyanide								
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/15/2019 16:13
Method: SM 4500-O C-2001 Analyst: DAT Prep Method: SM 4500-O C-2001 Prep Date/Time: 08/15/2019 10:21								
Dissolved Oxygen								
Oxygen, Dissolved	di	A	9.3	0.20	H	mg/L	1	08/15/2019 10:21
Method: EPA 350.1 Rev 2.0 Analyst: EF Prep Method: EPA 350.1 Rev 2.0 Prep Date/Time: 08/15/2019 18:10								
Nitrogen, Ammonia as N								
Nitrogen, Ammonia (As N)	di	A	0.14	0.10		mg/L	1	08/15/2019 19:51

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)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**H:** Sample was analyzed past holding time.**RL:** Reporting Limit**RPD:** Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 5.7°C
 MICROBAC®

Comments

CN container split off and preserved at lab

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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CHICAGOLAND DIVISION - FIELD SAMPLING FORM

Date: 8/14/19 Client: AMBH	Field Tech (initials): BAO Time IN: 1200
Facility Location: Burns Harbor Client Contact:	Time Out: 1755
Weather Conditions (if sampling outside) Sunny, raining, partly cloudy	
Summary of Sampling Performed: pulled samples for Ammonia, Cyanide, Dissolved Oxygen and took a PH for each site	
Field Equipment Used: PH Meter	
Include Field Measurements Here (if not included on COC)	
Comments:	

Field Tech Signature: B. O. BAO Date: 8/14/19

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