



16-Jun-2017

John Prusiecki
U.S. Steel - Gary Works
1 North Broadway
Mail Station 70
Gary, IN 46402

Re: **(USS-GARY) CAMU SPRAY 6.15.17**

Work Order: **1706777**

Dear John,

ALS Environmental received 4 samples on 14-Jun-2017 through 15-Jun-2017 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental 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 15.

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

Sincerely,

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

Electronically approved by: Amanda Grzybowski

Amanda Grzybowski
Project Manager

Certificate No: MN 998501

Report of Laboratory Analysis

ADDRESS 3352 128th Ave Holland, Michigan 49424 | PHONE (616) 399-6070 | FAX (616) 399-6185

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Client: U.S. Steel - Gary Works
Project: (USS-GARY) CAMU SPRAY 6.15.17
Work Order: 1706777

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>
1706777-01	CAMU Spray Influent - Grab	Aqueous		6/14/2017 07:25	6/14/2017 10:00	<input type="checkbox"/>
1706777-01	CAMU Spray Influent - Grab	Aqueous		6/14/2017 07:25	6/14/2017 12:30	<input type="checkbox"/>
1706777-02	CAMU Spray Middle - Grab	Aqueous		6/14/2017 07:26	6/14/2017 10:00	<input type="checkbox"/>
1706777-02	CAMU Spray Middle - Grab	Aqueous		6/14/2017 07:26	6/14/2017 12:30	<input type="checkbox"/>
1706777-03	CAMU Spray Effluent - Grab	Aqueous		6/14/2017 07:27	6/14/2017 10:00	<input type="checkbox"/>
1706777-03	CAMU Spray Effluent - Grab	Aqueous		6/14/2017 07:27	6/14/2017 12:30	<input type="checkbox"/>
1706777-04	CAMU Spray Trip Blank	Aqueous		6/14/2017 06:30	6/15/2017 09:30	<input type="checkbox"/>

Client: U.S. Steel - Gary Works
Project: (USS-GARY) CAMU SPRAY 6.15.17
Work Order: 1706777

Case Narrative

Batch R213933, Method VOC_8260_W, Sample 1706777-01A MS/MSD: The MS and MSD recoveries were outside of the control limit; however, the result in the parent sample is greater than 4x the spike amount. No qualification is required for this analyte: Benzene, Naphthalene.

ALS Environmental
2400 Cumberland Drive
Valparaiso, IN 46383
(219) 299-8127

The following parameters were received and analyzed at the ALS Valparaiso facility under Florida NELAP certification ID# E871119:

Ammonia by EPA 350.1 / SM4500-NH3 G

ALS Group, USA

Date: 16-Jun-17

Client: U.S. Steel - Gary Works
Project: (USS-GARY) CAMU SPRAY 6.15.17
Sample ID: CAMU Spray Influent - Grab
Collection Date: 6/14/2017 07:25 AM

Work Order: 1706777
Lab ID: 1706777-01
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
AMMONIA AS NITROGEN							
			Method: E350.1 R2.0				Analyst: CD
Ammonia as Nitrogen	14.8		0.0400	0.320	mg NH3-N/L	10	6/14/2017 13:06
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: WH
Benzene	2,600		30	100	µg/L	100	6/15/2017 02:56
Ethylbenzene	28		4.0	10	µg/L	10	6/15/2017 15:49
m,p-Xylene	39		9.8	20	µg/L	10	6/15/2017 15:49
Naphthalene	2,000		18	500	µg/L	100	6/15/2017 02:56
o-Xylene	21		3.5	10	µg/L	10	6/15/2017 15:49
Toluene	43		3.7	10	µg/L	10	6/15/2017 15:49
Xylenes, Total	60		13	30	µg/L	10	6/15/2017 15:49
Surr: 1,2-Dichloroethane-d4	92.8			75-120	%REC	100	6/15/2017 02:56
Surr: 1,2-Dichloroethane-d4	98.3			75-120	%REC	10	6/15/2017 15:49
Surr: 4-Bromofluorobenzene	98.4			80-110	%REC	100	6/15/2017 02:56
Surr: 4-Bromofluorobenzene	96.1			80-110	%REC	10	6/15/2017 15:49
Surr: Dibromofluoromethane	95.8			85-115	%REC	100	6/15/2017 02:56
Surr: Dibromofluoromethane	97.2			85-115	%REC	10	6/15/2017 15:49
Surr: Toluene-d8	102			85-110	%REC	100	6/15/2017 02:56
Surr: Toluene-d8	98.2			85-110	%REC	10	6/15/2017 15:49

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

ALS Group, USA

Date: 16-Jun-17

Client: U.S. Steel - Gary Works
Project: (USS-GARY) CAMU SPRAY 6.15.17
Sample ID: CAMU Spray Middle - Grab
Collection Date: 6/14/2017 07:26 AM

Work Order: 1706777
Lab ID: 1706777-02
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
AMMONIA AS NITROGEN							
			Method: E350.1 R2.0				Analyst: CD
Ammonia as Nitrogen	14.7		0.0400	0.320	mg NH3-N/L	10	6/14/2017 13:07
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: WH
Benzene	< 1.0		0.30	1.0	µg/L	1	6/15/2017 15:28
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	6/15/2017 15:28
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	6/15/2017 15:28
Naphthalene	< 5.0		0.18	5.0	µg/L	1	6/15/2017 15:28
o-Xylene	< 1.0		0.35	1.0	µg/L	1	6/15/2017 15:28
Toluene	< 1.0		0.37	1.0	µg/L	1	6/15/2017 15:28
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	6/15/2017 15:28
Surr: 1,2-Dichloroethane-d4	92.7			75-120	%REC	1	6/15/2017 15:28
Surr: 4-Bromofluorobenzene	94.5			80-110	%REC	1	6/15/2017 15:28
Surr: Dibromofluoromethane	93.8			85-115	%REC	1	6/15/2017 15:28
Surr: Toluene-d8	98.2			85-110	%REC	1	6/15/2017 15:28

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

ALS Group, USA

Date: 16-Jun-17

Client: U.S. Steel - Gary Works
Project: (USS-GARY) CAMU SPRAY 6.15.17
Sample ID: CAMU Spray Effluent - Grab
Collection Date: 6/14/2017 07:27 AM

Work Order: 1706777
Lab ID: 1706777-03
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
AMMONIA AS NITROGEN							
			Method: E350.1 R2.0				Analyst: CD
Ammonia as Nitrogen	14.8		0.0400	0.320	mg NH3-N/L	10	6/14/2017 13:08
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: WH
Benzene	< 1.0		0.30	1.0	µg/L	1	6/15/2017 02:14
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	6/15/2017 02:14
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	6/15/2017 02:14
Naphthalene	< 5.0		0.18	5.0	µg/L	1	6/15/2017 02:14
o-Xylene	< 1.0		0.35	1.0	µg/L	1	6/15/2017 02:14
Toluene	< 1.0		0.37	1.0	µg/L	1	6/15/2017 02:14
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	6/15/2017 02:14
Surr: 1,2-Dichloroethane-d4	94.2			75-120	%REC	1	6/15/2017 02:14
Surr: 4-Bromofluorobenzene	99.8			80-110	%REC	1	6/15/2017 02:14
Surr: Dibromofluoromethane	96.0			85-115	%REC	1	6/15/2017 02:14
Surr: Toluene-d8	101			85-110	%REC	1	6/15/2017 02:14

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

ALS Group, USA

Date: 16-Jun-17

Client: U.S. Steel - Gary Works
Project: (USS-GARY) CAMU SPRAY 6.15.17
Sample ID: CAMU Spray Trip Blank
Collection Date: 6/14/2017 06:30 AM

Work Order: 1706777
Lab ID: 1706777-04
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: WH	
Benzene	< 1.0		0.30	1.0	µg/L	1	6/15/2017 18:17
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	6/15/2017 18:17
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	6/15/2017 18:17
Naphthalene	< 5.0		0.18	5.0	µg/L	1	6/15/2017 18:17
o-Xylene	< 1.0		0.35	1.0	µg/L	1	6/15/2017 18:17
Toluene	< 1.0		0.37	1.0	µg/L	1	6/15/2017 18:17
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	6/15/2017 18:17
Surr: 1,2-Dichloroethane-d4	91.6			75-120	%REC	1	6/15/2017 18:17
Surr: 4-Bromofluorobenzene	95.9			80-110	%REC	1	6/15/2017 18:17
Surr: Dibromofluoromethane	93.9			85-115	%REC	1	6/15/2017 18:17
Surr: Toluene-d8	101			85-110	%REC	1	6/15/2017 18:17

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

Client: U.S. Steel - Gary Works
Project: (USS-GARY) CAMU SPRAY 6.15.17
WorkOrder: 1706777

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
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>
µg/L	Micrograms per Liter
mg NH3-N/L	Milligrams Ammonia-Nitrogen per Liter

Client: U.S. Steel - Gary Works

Work Order: 1706777

Project: (USS-GARY) CAMU SPRAY 6.15.17

QC BATCH REPORT

Batch ID: **R213860** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MBLK		Sample ID: MBLK-R213860				Units: mg NH3-N/L		Analysis Date: 6/14/2017 01:00 PM		
Client ID:		Run ID: VAL-LACHAT_170614B				SeqNo: 4479742		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-R213860				Units: mg NH3-N/L		Analysis Date: 6/14/2017 01:01 PM		
Client ID:		Run ID: VAL-LACHAT_170614B				SeqNo: 4479743		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 0.2001 0.032 0.2 0 100 90-110 0

MS		Sample ID: 1706710-40A MS				Units: mg NH3-N/L		Analysis Date: 6/14/2017 01:20 PM		
Client ID:		Run ID: VAL-LACHAT_170614B				SeqNo: 4479759		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 0.7681 0.032 0.2 0.5825 92.8 90-110 0

MS		Sample ID: 1706771-09B MS				Units: mg NH3-N/L		Analysis Date: 6/14/2017 01:30 PM		
Client ID:		Run ID: VAL-LACHAT_170614B				SeqNo: 4479767		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 0.2193 0.032 0.2 0.0351 92.1 90-110 0

MSD		Sample ID: 1706710-40A MSD				Units: mg NH3-N/L		Analysis Date: 6/14/2017 01:22 PM		
Client ID:		Run ID: VAL-LACHAT_170614B				SeqNo: 4479760		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 0.7736 0.032 0.2 0.5825 95.6 90-110 0.7681 0.713 20

MSD		Sample ID: 1706771-09B MSD				Units: mg NH3-N/L		Analysis Date: 6/14/2017 01:31 PM		
Client ID:		Run ID: VAL-LACHAT_170614B				SeqNo: 4479768		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 0.2147 0.032 0.2 0.0351 89.8 90-110 0.2193 2.12 20 S

The following samples were analyzed in this batch: 1706777-01B 1706777-02B 1706777-03B

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

Client: U.S. Steel - Gary Works
 Work Order: 1706777
 Project: (USS-GARY) CAMU SPRAY 6.15.17

QC BATCH REPORT

Batch ID: **R213897A** Instrument ID **VMS7** Method: **SW8260B**

MBLK		Sample ID: VLKW2-170614-R213897A				Units: µg/L		Analysis Date: 6/14/2017 07:44 PM		
Client ID:		Run ID: VMS7_170614A				SeqNo: 4481423		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Ethylbenzene	U	1.0								
m,p-Xylene	U	2.0								
Naphthalene	0.42	5.0								J
o-Xylene	U	1.0								
Toluene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 1,2-Dichloroethane-d4	19.3	0	20	0	96.5	75-120	0			
Surr: 4-Bromofluorobenzene	19.69	0	20	0	98.4	80-110	0			
Surr: Dibromofluoromethane	19.78	0	20	0	98.9	85-115	0			
Surr: Toluene-d8	19.95	0	20	0	99.8	85-110	0			

LCS		Sample ID: VLCSW1-170614-R213897A				Units: µg/L		Analysis Date: 6/14/2017 07:01 PM		
Client ID:		Run ID: VMS7_170614A				SeqNo: 4481422		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.36	1.0	20	0	96.8	85-125	0			
Ethylbenzene	18.93	1.0	20	0	94.6	85-125	0			
m,p-Xylene	37.23	2.0	40	0	93.1	75-130	0			
Naphthalene	18.28	5.0	20	0	91.4	55-160	0			
o-Xylene	19.13	1.0	20	0	95.6	80-125	0			
Toluene	19.12	1.0	20	0	95.6	85-125	0			
Xylenes, Total	56.36	3.0	60	0	93.9	80-126	0			
Surr: 1,2-Dichloroethane-d4	19.57	0	20	0	97.8	75-120	0			
Surr: 4-Bromofluorobenzene	20.15	0	20	0	101	80-110	0			
Surr: Dibromofluoromethane	19.99	0	20	0	100	85-115	0			
Surr: Toluene-d8	19.86	0	20	0	99.3	85-110	0			

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

Client: U.S. Steel - Gary Works
 Work Order: 1706777
 Project: (USS-GARY) CAMU SPRAY 6.15.17

QC BATCH REPORT

Batch ID: **R213897A** Instrument ID **VMS7** Method: **SW8260B**

MS				Sample ID: 1706777-02A MS			Units: µg/L		Analysis Date: 6/15/2017 03:17 AM	
Client ID: CAMU Spray Middle - Grab				Run ID: VMS7_170614A			SeqNo: 4481435		Prep Date:	
									DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	162.7	10	200	0	81.4	85-125	0			S
Ethylbenzene	159.3	10	200	0	79.6	85-125	0			S
m,p-Xylene	314	20	400	0	78.5	75-130	0			
Naphthalene	149.7	50	200	0	74.8	55-160	0			
o-Xylene	161	10	200	0	80.5	80-125	0			
Toluene	163.5	10	200	0	81.8	85-125	0			S
Xylenes, Total	475	30	600	0	79.2	80-126	0			S
Surr: 1,2-Dichloroethane-d4	190.2	0	200	0	95.1	75-120	0			
Surr: 4-Bromofluorobenzene	193.8	0	200	0	96.9	80-110	0			
Surr: Dibromofluoromethane	194.9	0	200	0	97.4	85-115	0			
Surr: Toluene-d8	198	0	200	0	99	85-110	0			

MSD				Sample ID: 1706777-02A MSD			Units: µg/L		Analysis Date: 6/15/2017 03:39 AM	
Client ID: CAMU Spray Middle - Grab				Run ID: VMS7_170614A			SeqNo: 4481436		Prep Date:	
									DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	185	10	200	0	92.5	85-125	162.7	12.8	30	
Ethylbenzene	182.2	10	200	0	91.1	85-125	159.3	13.4	30	
m,p-Xylene	357	20	400	0	89.2	75-130	314	12.8	30	
Naphthalene	157.2	50	200	0	78.6	55-160	149.7	4.89	30	
o-Xylene	183.8	10	200	0	91.9	80-125	161	13.2	30	
Toluene	184.2	10	200	0	92.1	85-125	163.5	11.9	30	
Xylenes, Total	540.8	30	600	0	90.1	80-126	475	13	30	
Surr: 1,2-Dichloroethane-d4	195.7	0	200	0	97.8	75-120	190.2	2.85	30	
Surr: 4-Bromofluorobenzene	199.9	0	200	0	100	80-110	193.8	3.1	30	
Surr: Dibromofluoromethane	199	0	200	0	99.5	85-115	194.9	2.08	30	
Surr: Toluene-d8	201.9	0	200	0	101	85-110	198	1.95	30	

The following samples were analyzed in this batch:

1706777-01A	1706777-02A	1706777-03A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: U.S. Steel - Gary Works
Work Order: 1706777
Project: (USS-GARY) CAMU SPRAY 6.15.17

QC BATCH REPORT

Batch ID: **R213933** Instrument ID **VMS7** Method: **SW8260B**

MBLK		Sample ID: VLKW1-170615-R213933				Units: µg/L		Analysis Date: 6/15/2017 12:18 PM		
Client ID:		Run ID: VMS7_170615A				SeqNo: 4483602		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	U	1.0								
Ethylbenzene	U	1.0								
m,p-Xylene	U	2.0								
Naphthalene	U	5.0								
o-Xylene	U	1.0								
Toluene	U	1.0								
Xylenes, Total	U	3.0								
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.48</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.4</i>	<i>75-120</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.17</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>95.8</i>	<i>80-110</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>19.58</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.9</i>	<i>85-115</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>19.44</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.2</i>	<i>85-110</i>	<i>0</i>			

LCS		Sample ID: VLCSW2-170615-R213933				Units: µg/L		Analysis Date: 6/15/2017 11:17 AM		
Client ID:		Run ID: VMS7_170615A				SeqNo: 4483601		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	19.15	1.0	20	0	95.8	85-125	0			
Ethylbenzene	18.93	1.0	20	0	94.6	85-125	0			
m,p-Xylene	37.74	2.0	40	0	94.4	75-130	0			
Naphthalene	17.59	5.0	20	0	88	55-160	0			
o-Xylene	19.34	1.0	20	0	96.7	80-125	0			
Toluene	19.24	1.0	20	0	96.2	85-125	0			
Xylenes, Total	57.08	3.0	60	0	95.1	80-126	0			
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.14</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>95.7</i>	<i>75-120</i>	<i>0</i>			
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.57</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.8</i>	<i>80-110</i>	<i>0</i>			
<i>Surr: Dibromofluoromethane</i>	<i>19.43</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.2</i>	<i>85-115</i>	<i>0</i>			
<i>Surr: Toluene-d8</i>	<i>19.51</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.6</i>	<i>85-110</i>	<i>0</i>			

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

Client: U.S. Steel - Gary Works
 Work Order: 1706777
 Project: (USS-GARY) CAMU SPRAY 6.15.17

QC BATCH REPORT

Batch ID: **R213933** Instrument ID **VMS7** Method: **SW8260B**

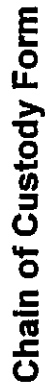
MS				Sample ID: 1706777-01A MS			Units: µg/L		Analysis Date: 6/15/2017 07:41 PM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS7_170615A			SeqNo: 4483618		Prep Date:	
									DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2743	10	200	2863	-59.8	85-125	0			SEO
Ethylbenzene	195.1	10	200	28.1	83.5	85-125	0			S
m,p-Xylene	375.5	20	400	38.9	84.2	75-130	0			
Naphthalene	2297	50	200	2393	-48.2	55-160	0			SEO
o-Xylene	188.5	10	200	21.3	83.6	80-125	0			
Toluene	214	10	200	42.6	85.7	85-125	0			
Xylenes, Total	564	30	600	60.2	84	80-126	0			
Surr: 1,2-Dichloroethane-d4	193.2	0	200	0	96.6	75-120	0			
Surr: 4-Bromofluorobenzene	189.6	0	200	0	94.8	80-110	0			
Surr: Dibromofluoromethane	195.7	0	200	0	97.8	85-115	0			
Surr: Toluene-d8	198.4	0	200	0	99.2	85-110	0			

MSD				Sample ID: 1706777-01A MSD			Units: µg/L		Analysis Date: 6/15/2017 08:02 PM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS7_170615A			SeqNo: 4483619		Prep Date:	
									DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	2879	10	200	2863	8.1	85-125	2743	4.83	30	SEO
Ethylbenzene	201.4	10	200	28.1	86.6	85-125	195.1	3.18	30	
m,p-Xylene	383.5	20	400	38.9	86.2	75-130	375.5	2.11	30	
Naphthalene	2497	50	200	2393	51.8	55-160	2297	8.34	30	SEO
o-Xylene	199.1	10	200	21.3	88.9	80-125	188.5	5.47	30	
Toluene	221.8	10	200	42.6	89.6	85-125	214	3.58	30	
Xylenes, Total	582.6	30	600	60.2	87.1	80-126	564	3.24	30	
Surr: 1,2-Dichloroethane-d4	192	0	200	0	96	75-120	193.2	0.623	30	
Surr: 4-Bromofluorobenzene	191.4	0	200	0	95.7	80-110	189.6	0.945	30	
Surr: Dibromofluoromethane	195.2	0	200	0	97.6	85-115	195.7	0.256	30	
Surr: Toluene-d8	194.9	0	200	0	97.4	85-110	198.4	1.78	30	

The following samples were analyzed in this batch:

1706777-01A	1706777-02A	1706777-04A
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.



ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
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Page 1 of 1

Customer Information				Project Information				ALS Project Manager: Amanda Graybois, ALS Work Order # 706777											
Purchase Order		Project Name		Project Number		Parameter/Method Request for Analysis													
Work Order		CAMU Sprays		CAMU Sprays		BTEX 8260B, Naphthalene 8260B													
Company Name		USS		Bill To Company		C													
Send Report To		John Prusiecki		Invoice Attn.		D													
Address		Address		City/State/Zip		E													
City/State/Zip		City/State/Zip		Phone		F													
Phone		Phone		Fax		G													
Fax		Fax		e-Mail Address		H													
e-Mail Address		e-Mail Address		e-Mail Address		I													
e-Mail Address		e-Mail Address		e-Mail Address		J													
No.	Sample Description	Date	Time	Matrix	Pres. Key Numbers	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	CAMU Spray Influent [Grab]	6/15/17	0725	AQ	1	3	X												
2	CAMU Spray Influent [Grab]	6/15/17	0725	AQ	3	1		X											
3																			
4	CAMU Spray Middle [Grab]	6/15/17	0726	AQ	1	3	X												
5	CAMU Spray Middle [Grab]	6/15/17	0726	AQ	3	1		X											
6																			
7	CAMU Spray Effluent [Grab]	6/15/17	0727	AQ	1	3	X												
8	CAMU Spray Effluent [Grab]	6/15/17	0727	AQ	3	1		X											
9																			
10	CAMU Spray Trip Blank	6/15/17	0630	AQ	1	1	X												
11																			
12																			
13																			
14																			
15																			

Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time: (Check Box)				Results Due Date:			
J. SKALIK / ALS				Received by: <i>[Signature]</i>				<input type="checkbox"/> 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 3 Wk Days <input type="checkbox"/> 2 Wk Days <input checked="" type="checkbox"/> 24 Hour				<input type="checkbox"/> 10 Wk Days <input type="checkbox"/> 5 Wk Days <input type="checkbox"/> 3 Wk Days <input type="checkbox"/> 2 Wk Days <input type="checkbox"/> 24 Hour			
Relinquished by: <i>[Signature]</i>				Time: 6/15/17				Date: 6/14/17 10:00				Notes:			
Relinquished by: <i>[Signature]</i>				Time: 6/15/17				Date: 6/14/17 12:30				QC Package: (Check Box Below)			
Relinquished by: <i>[Signature]</i>				Time: 6/15/17				Date: 6/14/17 12:30				<input checked="" type="checkbox"/> Level II: Standard QC <input type="checkbox"/> Level III: Raw Data <input type="checkbox"/> TRRP LRC <input type="checkbox"/> Level IV: SW846 Methods/CLP etc <input type="checkbox"/> Other:			
Logged by (Laboratory):				Time: 6/15/17				Date: 6/14/17 12:30				Cooler Temp: 31 ALS Cooler ID: HJ Level IV: SW846 Methods/CLP etc: 28			

Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₃ 7-Other												Note: Any changes must be made in writing once samples and COC											
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Sample Receipt Checklist

Client Name: USS-GARY

Date/Time Received: 14-Jun-17 00:00

Work Order: 1706777

Received by: JH

Checklist completed by Diane Shaw
eSignature

14-Jun-17
Date

Reviewed by: Amanda Przybowski
eSignature

14-Jun-17
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 type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sample(s) received on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Temperature(s)/Thermometer(s):	<u>3.1</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>6/14/17 10:00</u>		
Water - VOA vials have zero headspace?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input 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 - 2.8/2.8 c SR2

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: