



01-Sep-2017

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

Re: **USS-GARY CAMU SPRAY 8.30.17**

Work Order: **17081901**

Dear John,

ALS Environmental received 4 samples on 30-Aug-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

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

Environmental 

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Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.30.17
Work Order: 17081901

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>
17081901-01	CAMU Spray Influent - Grab	Aqueous		8/30/2017 09:16	8/31/2017 08:30	<input type="checkbox"/>
17081901-01	CAMU Spray Influent - Grab	Aqueous		8/30/2017 09:16	8/31/2017 09:55	<input type="checkbox"/>
17081901-02	CAMU Spray Middle - Grab	Aqueous		8/30/2017 09:26	8/31/2017 08:30	<input type="checkbox"/>
17081901-02	CAMU Spray Middle - Grab	Aqueous		8/30/2017 09:26	8/31/2017 09:55	<input type="checkbox"/>
17081901-03	CAMU Spray Effluent - Grab	Aqueous		8/30/2017 09:36	8/31/2017 08:30	<input type="checkbox"/>
17081901-03	CAMU Spray Effluent - Grab	Aqueous		8/30/2017 09:36	8/31/2017 09:55	<input type="checkbox"/>
17081901-04	CAMU Spray Trip Blank	Aqueous		8/30/2017 08:30	8/31/2017 08:30	<input type="checkbox"/>

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.30.17
Work Order: 17081901

Case Narrative

Batch R219096a, Method VOC_8260_W, Sample 17081901-01A: The reporting limit is elevated due to dilution for high concentrations of non-target analytes.

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: 01-Sep-17

Client: U.S. Steel - Gary Works
 Project: USS-GARY CAMU SPRAY 8.30.17
 Sample ID: CAMU Spray Influent - Grab
 Collection Date: 8/30/2017 09:16 AM

Work Order: 17081901
 Lab ID: 17081901-01
 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	9.23		0.0980	0.320	mg NH3-N/L	10	8/31/2017 13:12
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: BG
Benzene	1,800		30	100	µg/L	100	9/1/2017 01:20
Ethylbenzene	31		4.0	10	µg/L	10	9/1/2017 01:45
m,p-Xylene	54		9.8	20	µg/L	10	9/1/2017 01:45
Naphthalene	2,600		18	500	µg/L	100	9/1/2017 01:20
o-Xylene	27		3.5	10	µg/L	10	9/1/2017 01:45
Toluene	47		3.7	10	µg/L	10	9/1/2017 01:45
Xylenes, Total	80		13	30	µg/L	10	9/1/2017 01:45
Surr: 1,2-Dichloroethane-d4	89.8			75-120	%REC	100	9/1/2017 01:20
Surr: 1,2-Dichloroethane-d4	87.0			75-120	%REC	10	9/1/2017 01:45
Surr: 4-Bromofluorobenzene	99.3			80-110	%REC	100	9/1/2017 01:20
Surr: 4-Bromofluorobenzene	99.9			80-110	%REC	10	9/1/2017 01:45
Surr: Dibromofluoromethane	97.4			85-115	%REC	100	9/1/2017 01:20
Surr: Dibromofluoromethane	93.4			85-115	%REC	10	9/1/2017 01:45
Surr: Toluene-d8	95.4			85-110	%REC	100	9/1/2017 01:20
Surr: Toluene-d8	94.8			85-110	%REC	10	9/1/2017 01:45

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

ALS Group, USA

Date: 01-Sep-17

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.30.17
Sample ID: CAMU Spray Middle - Grab
Collection Date: 8/30/2017 09:26 AM

Work Order: 17081901
Lab ID: 17081901-02
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	8.96		0.0980	0.320	mg NH3-N/L	10	8/31/2017 13:13
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: EMR
Benzene	< 1.0		0.42	1.0	µg/L	1	9/1/2017 08:40
Ethylbenzene	< 1.0		0.29	1.0	µg/L	1	9/1/2017 08:40
m,p-Xylene	< 2.0		0.53	2.0	µg/L	1	9/1/2017 08:40
Naphthalene	< 5.0		0.14	5.0	µg/L	1	9/1/2017 08:40
o-Xylene	< 1.0		0.19	1.0	µg/L	1	9/1/2017 08:40
Toluene	< 1.0		0.32	1.0	µg/L	1	9/1/2017 08:40
Xylenes, Total	< 3.0		0.74	3.0	µg/L	1	9/1/2017 08:40
Surr: 1,2-Dichloroethane-d4	110			75-120	%REC	1	9/1/2017 08:40
Surr: 4-Bromofluorobenzene	88.6			80-110	%REC	1	9/1/2017 08:40
Surr: Dibromofluoromethane	110			85-115	%REC	1	9/1/2017 08:40
Surr: Toluene-d8	98.5			85-110	%REC	1	9/1/2017 08:40

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

ALS Group, USA

Date: 01-Sep-17

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.30.17
Sample ID: CAMU Spray Effluent - Grab
Collection Date: 8/30/2017 09:36 AM

Work Order: 17081901
Lab ID: 17081901-03
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	9.03		0.0980	0.320	mg NH3-N/L	10	8/31/2017 13:14
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: BG
Benzene	0.38	J	0.30	1.0	µg/L	1	8/31/2017 19:42
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	8/31/2017 19:42
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	8/31/2017 19:42
Naphthalene	< 5.0		0.18	5.0	µg/L	1	8/31/2017 19:42
o-Xylene	< 1.0		0.35	1.0	µg/L	1	8/31/2017 19:42
Toluene	< 1.0		0.37	1.0	µg/L	1	8/31/2017 19:42
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	8/31/2017 19:42
Surr: 1,2-Dichloroethane-d4	88.2			75-120	%REC	1	8/31/2017 19:42
Surr: 4-Bromofluorobenzene	99.8			80-110	%REC	1	8/31/2017 19:42
Surr: Dibromofluoromethane	97.0			85-115	%REC	1	8/31/2017 19:42
Surr: Toluene-d8	96.0			85-110	%REC	1	8/31/2017 19:42

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

ALS Group, USA

Date: 01-Sep-17

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.30.17
Sample ID: CAMU Spray Trip Blank
Collection Date: 8/30/2017 08:30 AM

Work Order: 17081901
Lab ID: 17081901-04
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: BG	
Benzene	< 1.0		0.30	1.0	µg/L	1	8/31/2017 19:16
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	8/31/2017 19:16
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	8/31/2017 19:16
Naphthalene	< 5.0		0.18	5.0	µg/L	1	8/31/2017 19:16
o-Xylene	< 1.0		0.35	1.0	µg/L	1	8/31/2017 19:16
Toluene	< 1.0		0.37	1.0	µg/L	1	8/31/2017 19:16
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	8/31/2017 19:16
Surr: 1,2-Dichloroethane-d4	86.6			75-120	%REC	1	8/31/2017 19:16
Surr: 4-Bromofluorobenzene	96.4			80-110	%REC	1	8/31/2017 19:16
Surr: Dibromofluoromethane	96.1			85-115	%REC	1	8/31/2017 19:16
Surr: Toluene-d8	92.6			85-110	%REC	1	8/31/2017 19:16

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

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.30.17
WorkOrder: 17081901

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 NH ₃ -N/L	Milligrams Ammonia-Nitrogen per Liter

Client: U.S. Steel - Gary Works

Work Order: 17081901

Project: USS-GARY CAMU SPRAY 8.30.17

QC BATCH REPORT

Batch ID: **R219147** Instrument ID **VAL-LACHAT** Method: **E350.1 R2.0**

MBLK		Sample ID: MBLK-R219147				Units: mg NH3-N/L		Analysis Date: 8/31/2017 01:08 PM		
Client ID:		Run ID: VAL-LACHAT_170831A				SeqNo: 4618177		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-R219147				Units: mg NH3-N/L		Analysis Date: 8/31/2017 01:09 PM		
Client ID:		Run ID: VAL-LACHAT_170831A				SeqNo: 4618178		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 0.193 0.032 0.2 0 96.5 90-110 0

MS		Sample ID: 17081942-02A MS				Units: mg NH3-N/L		Analysis Date: 8/31/2017 01:25 PM		
Client ID:		Run ID: VAL-LACHAT_170831A				SeqNo: 4618191		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 28.02 1.6 10 18.21 98.2 90-110 0

MS		Sample ID: 17081944-02B MS				Units: mg NH3-N/L		Analysis Date: 8/31/2017 01:29 PM		
Client ID:		Run ID: VAL-LACHAT_170831A				SeqNo: 4618194		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 24.89 1.6 10 14.73 102 90-110 0

MSD		Sample ID: 17081942-02A MSD				Units: mg NH3-N/L		Analysis Date: 8/31/2017 01:26 PM		
Client ID:		Run ID: VAL-LACHAT_170831A				SeqNo: 4618192		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 27.92 1.6 10 18.21 97.2 90-110 28.02 0.357 20

MSD		Sample ID: 17081944-02B MSD				Units: mg NH3-N/L		Analysis Date: 8/31/2017 01:30 PM		
Client ID:		Run ID: VAL-LACHAT_170831A				SeqNo: 4618195		Prep Date:		DF: 50
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 24.58 1.6 10 14.73 98.4 90-110 24.89 1.27 20

The following samples were analyzed in this batch:

17081901-01B	17081901-02B	17081901-03B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: U.S. Steel - Gary Works
 Work Order: 17081901
 Project: USS-GARY CAMU SPRAY 8.30.17

QC BATCH REPORT

Batch ID: **R219096a** Instrument ID **VMS5** Method: **SW8260B**

MBLK		Sample ID: VLKW1-170831-R219096a				Units: µg/L		Analysis Date: 8/31/2017 05:59 PM		
Client ID:		Run ID: VMS5_170831A				SeqNo: 4616886		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								
Surr: 1,2-Dichloroethane-d4	17.05	0	20	0	85.2	75-120	0			
Surr: 4-Bromofluorobenzene	19.71	0	20	0	98.6	80-110	0			
Surr: Dibromofluoromethane	19.09	0	20	0	95.4	85-115	0			
Surr: Toluene-d8	18.59	0	20	0	93	85-110	0			

LCS		Sample ID: VLCSW1-170831-R219096a				Units: µg/L		Analysis Date: 8/31/2017 04:41 PM		
Client ID:		Run ID: VMS5_170831A				SeqNo: 4616885		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	21.08	1.0	20	0	105	85-125	0			
Ethylbenzene	18.07	1.0	20	0	90.4	85-125	0			
m,p-Xylene	36.17	2.0	40	0	90.4	75-130	0			
Naphthalene	17.39	5.0	20	0	87	55-160	0			
o-Xylene	18.39	1.0	20	0	92	80-125	0			
Toluene	18.56	1.0	20	0	92.8	85-125	0			
Xylenes, Total	54.56	3.0	60	0	90.9	80-126	0			
Surr: 1,2-Dichloroethane-d4	17.43	0	20	0	87.2	75-120	0			
Surr: 4-Bromofluorobenzene	19.52	0	20	0	97.6	80-110	0			
Surr: Dibromofluoromethane	19.75	0	20	0	98.8	85-115	0			
Surr: Toluene-d8	18.89	0	20	0	94.4	85-110	0			

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

Client: U.S. Steel - Gary Works
 Work Order: 17081901
 Project: USS-GARY CAMU SPRAY 8.30.17

QC BATCH REPORT

Batch ID: **R219096a** Instrument ID **VMS5** Method: **SW8260B**

MS				Sample ID: 17081901-01A MS			Units: µg/L		Analysis Date: 9/1/2017 02:37 AM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS5_170831A			SeqNo: 4616892		Prep Date:	
									DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	4137	100	2000	1786	118	85-125	0			
Ethylbenzene	1943	100	2000	35	95.4	85-125	0			
m,p-Xylene	3930	200	4000	68	96.6	75-130	0			
Naphthalene	4221	500	2000	2638	79.2	55-160	0			
o-Xylene	1955	100	2000	35	96	80-125	0			
Toluene	2043	100	2000	98	97.2	85-125	0			
Xylenes, Total	5885	300	6000	0	98.1	80-126	0			
Surr: 1,2-Dichloroethane-d4	1771	0	2000	0	88.6	75-120	0			
Surr: 4-Bromofluorobenzene	2003	0	2000	0	100	80-110	0			
Surr: Dibromofluoromethane	1987	0	2000	0	99.4	85-115	0			
Surr: Toluene-d8	1907	0	2000	0	95.4	85-110	0			

MSD				Sample ID: 17081901-01A MSD			Units: µg/L		Analysis Date: 9/1/2017 03:03 AM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS5_170831A			SeqNo: 4616893		Prep Date:	
									DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	4233	100	2000	1786	122	85-125	4137	2.29	30	
Ethylbenzene	1996	100	2000	35	98	85-125	1943	2.69	30	
m,p-Xylene	4019	200	4000	68	98.8	75-130	3930	2.24	30	
Naphthalene	4448	500	2000	2638	90.5	55-160	4221	5.24	30	
o-Xylene	2029	100	2000	35	99.7	80-125	1955	3.71	30	
Toluene	2107	100	2000	98	100	85-125	2043	3.08	30	
Xylenes, Total	6048	300	6000	0	101	80-126	5885	2.73	30	
Surr: 1,2-Dichloroethane-d4	1787	0	2000	0	89.4	75-120	1771	0.899	30	
Surr: 4-Bromofluorobenzene	2062	0	2000	0	103	80-110	2003	2.9	30	
Surr: Dibromofluoromethane	1964	0	2000	0	98.2	85-115	1987	1.16	30	
Surr: Toluene-d8	1936	0	2000	0	96.8	85-110	1907	1.51	30	

The following samples were analyzed in this batch:

17081901-01A	17081901-02A	17081901-03A
17081901-04A		

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

Client: U.S. Steel - Gary Works
Work Order: 17081901
Project: USS-GARY CAMU SPRAY 8.30.17

QC BATCH REPORT

Batch ID: **R219129** Instrument ID **VMS10** Method: **SW8260B**

MBLK				Sample ID: VBLKW3-170831-R219129				Units: µg/L			Analysis Date: 9/1/2017 02:33 AM		
Client ID:			Run ID: VMS10_170831B				SeqNo: 4618247			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											
Surr: 1,2-Dichloroethane-d4	20.3	0	20	0	102	75-120		0					
Surr: 4-Bromofluorobenzene	18.23	0	20	0	91.2	80-110		0					
Surr: Dibromofluoromethane	20.17	0	20	0	101	85-115		0					
Surr: Toluene-d8	19.43	0	20	0	97.2	85-110		0					

LCS				Sample ID: VLCSW2-170831-R219129				Units: µg/L		Analysis Date: 9/1/2017 02:02 AM	
Client ID:			Run ID: VMS10_170831B			SeqNo: 4618246		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	19.34	1.0	20	0	96.7	85-125	0				
Ethylbenzene	19.76	1.0	20	0	98.8	85-125	0				
m,p-Xylene	40.04	2.0	40	0	100	75-130	0				
Naphthalene	16.24	5.0	20	0	81.2	55-160	0				
o-Xylene	20.23	1.0	20	0	101	80-125	0				
Toluene	18.99	1.0	20	0	95	85-125	0				
Xylenes, Total	60.27	3.0	60	0	100	80-126	0				
Surr: 1,2-Dichloroethane-d4	18.66	0	20	0	93.3	75-120	0				
Surr: 4-Bromofluorobenzene	20.7	0	20	0	104	80-110	0				
Surr: Dibromofluoromethane	19.05	0	20	0	95.2	85-115	0				
Surr: Toluene-d8	20.64	0	20	0	103	85-110	0				

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

Client: U.S. Steel - Gary Works
 Work Order: 17081901
 Project: USS-GARY CAMU SPRAY 8.30.17

QC BATCH REPORT

Batch ID: **R219129** Instrument ID **VMS10** Method: **SW8260B**

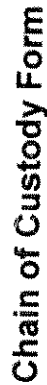
MS				Sample ID: 17081630-01A MS			Units: µg/L		Analysis Date: 9/1/2017 08:08 AM		
Client ID:			Run ID: VMS10_170831B			SeqNo: 4618268		Prep Date:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	216.6	10	200	0	108	85-125	0				
Ethylbenzene	200.6	10	200	0	100	85-125	0				
m,p-Xylene	414.3	20	400	0	104	75-130	0				
Naphthalene	144.6	50	200	0	72.3	55-160	0				
o-Xylene	203.4	10	200	0	102	80-125	0				
Toluene	202.6	10	200	0	101	85-125	0				
Xylenes, Total	617.7	30	600	0	103	80-126	0				
Surr: 1,2-Dichloroethane-d4	213	0	200	0	106	75-120	0				
Surr: 4-Bromofluorobenzene	210.1	0	200	0	105	80-110	0				
Surr: Dibromofluoromethane	219.2	0	200	0	110	85-115	0				
Surr: Toluene-d8	206.2	0	200	0	103	85-110	0				

MSD				Sample ID: 17081630-01A MSD				Units: µg/L		Analysis Date: 9/1/2017 08:24 AM	
Client ID:			Run ID: VMS10_170831B			SeqNo: 4618269		Prep Date:		DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Benzene	220.4	10	200	0	110	85-125	216.6	1.74	30		
Ethylbenzene	207.4	10	200	0	104	85-125	200.6	3.33	30		
m,p-Xylene	429.7	20	400	0	107	75-130	414.3	3.65	30		
Naphthalene	148.8	50	200	0	74.4	55-160	144.6	2.86	30		
o-Xylene	211	10	200	0	106	80-125	203.4	3.67	30		
Toluene	205.8	10	200	0	103	85-125	202.6	1.57	30		
Xylenes, Total	640.7	30	600	0	107	80-126	617.7	3.66	30		
Surr: 1,2-Dichloroethane-d4	203	0	200	0	102	75-120	213	4.81	30		
Surr: 4-Bromofluorobenzene	204.6	0	200	0	102	80-110	210.1	2.65	30		
Surr: Dibromofluoromethane	205.5	0	200	0	103	85-115	219.2	6.45	30		
Surr: Toluene-d8	201.5	0	200	0	101	85-110	206.2	2.31	30		

The following samples were analyzed in this batch:

17081901-02A

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



Page 1 of 1

ALS Environmental
3352 128th Avenue
Holland, Michigan 49424
(Tel) 616.399.6070
(Fax) 616.399.6185

Customer Information						Project Information				ALS Project Manager:		ALS Work Order #:					
Purchase Order	Work Order	Company Name	Send Report To	Address	City/State/Zip	Project Name	Project Number	Bill To Company	Invoice Attn.	Address	City/State/Zip	Phone	Fax				
		USS	John Prusiecki			CAMU Sprays		USS									
						Parameter/Method Request for Analysis											
						A BTEX 8260B, Naphthalene 8260B											
						B Ammonia 350.1											
						C											
						D											
						E											
						F											
						G											
						H											
						I											
						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]	8/30/17	0916	AQ	1	3	X										
2	CAMU Spray Influent [Grab]	8/30/17	0916	AQ	3	1		X									
3																	
4	CAMU Spray Middle [Grab]	8/30/17	0926	AQ	1	3	X										
5	CAMU Spray Middle [Grab]	8/30/17	0926	AQ	3	1		X									
6																	
7	CAMU Spray Effluent [Grab]	8/30/17	0936	AQ	1	3	X										
8	CAMU Spray Effluent [Grab]	8/30/17	0936	AQ	3	1		X									
9																	
10	CAMU Spray Trip Blank	8/30/17	0830	AQ	1	1	X										
11																	
12																	
13																	
14																	
15																	

Shipments Method:				Required Turnaround Time: (Check Box)				Results Due Date:			
Date: Time:				Date: Time:				Date: Time:			
Received by:				Received by:				Received by:			
Fred Kinsey / ALS				8/30/17				8/30/17 0830			
Relinquished by:				Relinquished by:				Relinquished by:			
Relinquished by:				Relinquished by:				Relinquished by:			
Logged by (Laboratory):				Logged by (Laboratory):				Logged by (Laboratory):			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na-SO ₄ 6-NaHSO ₄ 7-Other				QC Package: (Check Box Below)				QC Package: (Check Box Below)			
				Level II: Standard QC				Level III: Raw Data			
				Level IV: SW846 Methods/CPL like				Level IV: SW846 Methods/CPL like			
				Other:				Other:			

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Sample Receipt Checklist

Client Name: USS-GARY

Date/Time Received: 30-Aug-17 00:00

Work Order: 17081901

Received by: CD

Checklist completed by Amanda Przybowski 01-Sep-17
eSignature Date

Reviewed by: Amanda Przybowski 01-Sep-17
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):	<u>1.2</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>8/31/17 09:55</u>		
Water - VOA vials have zero headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input 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:			

Login Notes: Holland - 2.2/2.2 c SR2

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: