



28-Aug-2017

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

Re: **USS-GARY CAMU SPRAY 8.23.17**

Work Order: **17081528**

Dear John,

ALS Environmental received 4 samples on 24-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 8.23.17
Work Order: 17081528

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>
17081528-01	CAMU Spray Influent - Grab	Aqueous		8/24/2017	8/24/2017 10:00	<input type="checkbox"/>
17081528-01	CAMU Spray Influent - Grab	Aqueous		8/24/2017	8/24/2017 13:00	<input type="checkbox"/>
17081528-02	CAMU Spray Middle - Grab	Aqueous		8/24/2017	8/24/2017 10:00	<input type="checkbox"/>
17081528-02	CAMU Spray Middle - Grab	Aqueous		8/24/2017	8/24/2017 13:00	<input type="checkbox"/>
17081528-03	CAMU Spray Effluent - Grab	Aqueous		8/24/2017	8/24/2017 10:00	<input type="checkbox"/>
17081528-03	CAMU Spray Effluent - Grab	Aqueous		8/24/2017	8/24/2017 13:00	<input type="checkbox"/>
17081528-04	CAMU Spray Trip Blank	Aqueous		8/24/2017	8/24/2017 13:00	<input type="checkbox"/>

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.23.17
Work Order: 17081528

Case Narrative

Batch R218557, Method VOC_8260_W, Sample 17081528-01A MS: The MS recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: Benzene and Naphthalene

Batch R218557, Method VOC_8260_W, Sample 17081528-01A MSD: The MSD recovery was above the upper control limit. The corresponding result in the parent sample was non-detect, therefore no qualification is necessary: Benzene and 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: 28-Aug-17

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.23.17
Sample ID: CAMU Spray Influent - Grab
Collection Date: 8/24/2017

Work Order: 17081528
Lab ID: 17081528-01
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	9.18		0.0980	0.320	mg NH3-N/L	10	8/24/2017 11:29
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: AK
Benzene	1,500		30	100	µg/L	100	8/24/2017 17:30
Ethylbenzene	25		2.9	10	µg/L	10	8/24/2017 22:42
m,p-Xylene	36		5.3	20	µg/L	10	8/24/2017 22:42
Naphthalene	2,200		18	500	µg/L	100	8/24/2017 17:30
o-Xylene	17		1.9	10	µg/L	10	8/24/2017 22:42
Toluene	29		3.2	10	µg/L	10	8/24/2017 22:42
Xylenes, Total	53		7.4	30	µg/L	10	8/24/2017 22:42
Surr: 1,2-Dichloroethane-d4	95.6			75-120	%REC	100	8/24/2017 17:30
Surr: 1,2-Dichloroethane-d4	102			75-120	%REC	10	8/24/2017 22:42
Surr: 4-Bromofluorobenzene	102			80-110	%REC	100	8/24/2017 17:30
Surr: 4-Bromofluorobenzene	96.4			80-110	%REC	10	8/24/2017 22:42
Surr: Dibromofluoromethane	100			85-115	%REC	100	8/24/2017 17:30
Surr: Dibromofluoromethane	101			85-115	%REC	10	8/24/2017 22:42
Surr: Toluene-d8	93.0			85-110	%REC	100	8/24/2017 17:30
Surr: Toluene-d8	98.6			85-110	%REC	10	8/24/2017 22:42

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

ALS Group, USA

Date: 28-Aug-17

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.23.17
Sample ID: CAMU Spray Middle - Grab
Collection Date: 8/24/2017

Work Order: 17081528
Lab ID: 17081528-02
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	9.16		0.0980	0.320	mg NH3-N/L	10	8/24/2017 11:30
VOLATILE ORGANIC COMPOUNDS							
			Method: SW8260B				Analyst: EMR
Benzene	40		0.30	1.0	µg/L	1	8/24/2017 22:26
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	8/24/2017 22:26
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	8/24/2017 22:26
Naphthalene	2.4	J	0.18	5.0	µg/L	1	8/24/2017 22:26
o-Xylene	< 1.0		0.35	1.0	µg/L	1	8/24/2017 22:26
Toluene	< 1.0		0.37	1.0	µg/L	1	8/24/2017 22:26
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	8/24/2017 22:26
Surr: 1,2-Dichloroethane-d4	102			75-120	%REC	1	8/24/2017 22:26
Surr: 4-Bromofluorobenzene	98.8			80-110	%REC	1	8/24/2017 22:26
Surr: Dibromofluoromethane	104			85-115	%REC	1	8/24/2017 22:26
Surr: Toluene-d8	98.6			85-110	%REC	1	8/24/2017 22:26

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

ALS Group, USA

Date: 28-Aug-17

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.23.17
Sample ID: CAMU Spray Effluent - Grab
Collection Date: 8/24/2017

Work Order: 17081528
Lab ID: 17081528-03
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<hr/>							
AMMONIA AS NITROGEN			Method: E350.1 R2.0				Analyst: CD
Ammonia as Nitrogen	8.94		0.0980	0.320	mg NH3-N/L	10	8/24/2017 11:32
<hr/>							
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B				Analyst: AK
Benzene	7.1		0.30	1.0	µg/L	1	8/24/2017 16:38
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	8/24/2017 16:38
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	8/24/2017 16:38
Naphthalene	0.34	J	0.18	5.0	µg/L	1	8/24/2017 16:38
o-Xylene	< 1.0		0.35	1.0	µg/L	1	8/24/2017 16:38
Toluene	< 1.0		0.37	1.0	µg/L	1	8/24/2017 16:38
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	8/24/2017 16:38
Surr: 1,2-Dichloroethane-d4	95.0			75-120	%REC	1	8/24/2017 16:38
Surr: 4-Bromofluorobenzene	98.2			80-110	%REC	1	8/24/2017 16:38
Surr: Dibromofluoromethane	101			85-115	%REC	1	8/24/2017 16:38
Surr: Toluene-d8	92.4			85-110	%REC	1	8/24/2017 16:38

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

ALS Group, USA

Date: 28-Aug-17

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.23.17
Sample ID: CAMU Spray Trip Blank
Collection Date: 8/24/2017

Work Order: 17081528
Lab ID: 17081528-04
Matrix: AQUEOUS

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			Method: SW8260B			Analyst: AK	
Benzene	< 1.0		0.30	1.0	µg/L	1	8/24/2017 16:12
Ethylbenzene	< 1.0		0.40	1.0	µg/L	1	8/24/2017 16:12
m,p-Xylene	< 2.0		0.98	2.0	µg/L	1	8/24/2017 16:12
Naphthalene	< 5.0		0.18	5.0	µg/L	1	8/24/2017 16:12
o-Xylene	< 1.0		0.35	1.0	µg/L	1	8/24/2017 16:12
Toluene	< 1.0		0.37	1.0	µg/L	1	8/24/2017 16:12
Xylenes, Total	< 3.0		1.3	3.0	µg/L	1	8/24/2017 16:12
Surr: 1,2-Dichloroethane-d4	96.0			75-120	%REC	1	8/24/2017 16:12
Surr: 4-Bromofluorobenzene	100			80-110	%REC	1	8/24/2017 16:12
Surr: Dibromofluoromethane	103			85-115	%REC	1	8/24/2017 16:12
Surr: Toluene-d8	97.4			85-110	%REC	1	8/24/2017 16:12

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

Client: U.S. Steel - Gary Works
Project: USS-GARY CAMU SPRAY 8.23.17
WorkOrder: 17081528

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: 17081528

Project: USS-GARY CAMU SPRAY 8.23.17

QC BATCH REPORT

Batch ID: R218521 Instrument ID VAL-LACHAT Method: E350.1 R2.0

MBLK	Sample ID: MBLK-R218521				Units: mg NH3-N/L		Analysis Date: 8/24/2017 11:27 AM			
Client ID:	Run ID: VAL-LACHAT_170824A				SeqNo: 4601308		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-R218521				Units: mg NH3-N/L		Analysis Date: 8/24/2017 11:28 AM			
Client ID:	Run ID: VAL-LACHAT_170824A				SeqNo: 4601309		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 0.195 0.032 0.2 0 97.5 90-110 0

MS	Sample ID: 17081523-01A MS				Units: mg NH3-N/L		Analysis Date: 8/24/2017 11:41 AM			
Client ID:	Run ID: VAL-LACHAT_170824A				SeqNo: 4601320		Prep Date:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 0.994 0.16 1 0.01946 97.5 90-110 0

MSD	Sample ID: 17081523-01A MSD				Units: mg NH3-N/L		Analysis Date: 8/24/2017 11:42 AM			
Client ID:	Run ID: VAL-LACHAT_170824A				SeqNo: 4601321		Prep Date:		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Ammonia as Nitrogen 1.015 0.16 1 0.01946 99.6 90-110 0.994 2.09 20

The following samples were analyzed in this batch:

17081528-01B	17081528-02B	17081528-03B
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Client: U.S. Steel - Gary Works
 Work Order: 17081528
 Project: USS-GARY CAMU SPRAY 8.23.17

QC BATCH REPORT

Batch ID: **R218477A** Instrument ID **VMS5** Method: **SW8260B**

MBLK		Sample ID: VLKW1-170824-R218477A				Units: µg/L		Analysis Date: 8/24/2017 09:16 AM		
Client ID:		Run ID: VMS5_170824A				SeqNo: 4603250		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	18.44	0	20	0	92.2	75-120	0			
Surr: 4-Bromofluorobenzene	20.13	0	20	0	101	80-110	0			
Surr: Dibromofluoromethane	20.43	0	20	0	102	85-115	0			
Surr: Toluene-d8	18.73	0	20	0	93.6	85-110	0			

LCS		Sample ID: VLCSW1-170824-R218477A				Units: µg/L		Analysis Date: 8/24/2017 08:24 AM		
Client ID:		Run ID: VMS5_170824A				SeqNo: 4603249		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.53	1.0	20	0	103	85-125	0			
Ethylbenzene	18.01	1.0	20	0	90	85-125	0			
m,p-Xylene	36.13	2.0	40	0	90.3	75-130	0			
Naphthalene	16.62	5.0	20	0	83.1	55-160	0			
o-Xylene	17.93	1.0	20	0	89.6	80-125	0			
Toluene	18.54	1.0	20	0	92.7	85-125	0			
Xylenes, Total	54.06	3.0	60	0	90.1	80-126	0			
Surr: 1,2-Dichloroethane-d4	18.31	0	20	0	91.6	75-120	0			
Surr: 4-Bromofluorobenzene	20.13	0	20	0	101	80-110	0			
Surr: Dibromofluoromethane	19.5	0	20	0	97.5	85-115	0			
Surr: Toluene-d8	19.07	0	20	0	95.4	85-110	0			

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

Client: U.S. Steel - Gary Works
 Work Order: 17081528
 Project: USS-GARY CAMU SPRAY 8.23.17

QC BATCH REPORT

Batch ID: **R218477A** Instrument ID **VMS5** Method: **SW8260B**

MS				Sample ID: 17081528-01A MS			Units: µg/L		Analysis Date: 8/24/2017 05:56 PM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS5_170824A			SeqNo: 4603255		Prep Date:	
									DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	3465	100	2000	1530	96.8	85-125	0			
Ethylbenzene	1757	100	2000	22	86.8	85-125	0			
m,p-Xylene	3510	200	4000	34	86.9	75-130	0			
Naphthalene	4047	500	2000	2187	93	55-160	0			
o-Xylene	1781	100	2000	16	88.2	80-125	0			
Toluene	1775	100	2000	27	87.4	85-125	0			
Xylenes, Total	5291	300	6000	0	88.2	80-126	0			
Surr: 1,2-Dichloroethane-d4	1854	0	2000	0	92.7	75-120	0			
Surr: 4-Bromofluorobenzene	2067	0	2000	0	103	80-110	0			
Surr: Dibromofluoromethane	2027	0	2000	0	101	85-115	0			
Surr: Toluene-d8	1933	0	2000	0	96.6	85-110	0			

MSD				Sample ID: 17081528-01A MSD			Units: µg/L		Analysis Date: 8/24/2017 06:22 PM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS5_170824A			SeqNo: 4603256		Prep Date:	
									DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	3499	100	2000	1530	98.4	85-125	3465	0.976	30	
Ethylbenzene	1780	100	2000	22	87.9	85-125	1757	1.3	30	
m,p-Xylene	3566	200	4000	34	88.3	75-130	3510	1.58	30	
Naphthalene	4251	500	2000	2187	103	55-160	4047	4.92	30	
o-Xylene	1829	100	2000	16	90.6	80-125	1781	2.66	30	
Toluene	1787	100	2000	27	88	85-125	1775	0.674	30	
Xylenes, Total	5395	300	6000	0	89.9	80-126	5291	1.95	30	
Surr: 1,2-Dichloroethane-d4	1868	0	2000	0	93.4	75-120	1854	0.752	30	
Surr: 4-Bromofluorobenzene	2076	0	2000	0	104	80-110	2067	0.434	30	
Surr: Dibromofluoromethane	1995	0	2000	0	99.8	85-115	2027	1.59	30	
Surr: Toluene-d8	1919	0	2000	0	96	85-110	1933	0.727	30	

The following samples were analyzed in this batch:

17081528-01A	17081528-02A	17081528-03A
17081528-04A		

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

Client: U.S. Steel - Gary Works
 Work Order: 17081528
 Project: USS-GARY CAMU SPRAY 8.23.17

QC BATCH REPORT

Batch ID: **R218557** Instrument ID **VMS8** Method: **SW8260B**

MBLK		Sample ID: VLKW2-170824-R218557				Units: µg/L		Analysis Date: 8/24/2017 05:42 PM		
Client ID:		Run ID: VMS8_170824A				SeqNo: 4603189		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	0.19	5.0								J
o-Xylene	U	1.0								
Toluene	U	1.0								
Xylenes, Total	U	3.0								
Surr: 1,2-Dichloroethane-d4	19.89	0	20	0	99.4	75-120	0			
Surr: 4-Bromofluorobenzene	19.42	0	20	0	97.1	80-110	0			
Surr: Dibromofluoromethane	20.13	0	20	0	101	85-115	0			
Surr: Toluene-d8	19.7	0	20	0	98.5	85-110	0			

LCS		Sample ID: VLCSW2-170824-R218557				Units: µg/L		Analysis Date: 8/24/2017 04:09 PM		
Client ID:		Run ID: VMS8_170824A				SeqNo: 4603188		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	20.01	1.0	20	0	100	85-125	0			
Ethylbenzene	19.76	1.0	20	0	98.8	85-125	0			
m,p-Xylene	40.62	2.0	40	0	102	75-130	0			
Naphthalene	18.06	5.0	20	0	90.3	55-160	0			
o-Xylene	19.74	1.0	20	0	98.7	80-125	0			
Toluene	19.78	1.0	20	0	98.9	85-125	0			
Xylenes, Total	60.36	3.0	60	0	101	80-126	0			
Surr: 1,2-Dichloroethane-d4	20.46	0	20	0	102	75-120	0			
Surr: 4-Bromofluorobenzene	20.49	0	20	0	102	80-110	0			
Surr: Dibromofluoromethane	20.71	0	20	0	104	85-115	0			
Surr: Toluene-d8	19.85	0	20	0	99.2	85-110	0			

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

Client: U.S. Steel - Gary Works
 Work Order: 17081528
 Project: USS-GARY CAMU SPRAY 8.23.17

QC BATCH REPORT

Batch ID: **R218557** Instrument ID **VMS8** Method: **SW8260B**

MS				Sample ID: 17081528-01A MS			Units: µg/L		Analysis Date: 8/25/2017 01:06 AM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS8_170824A			SeqNo: 4603195		Prep Date:	
									DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1554	10	80	1450	130	85-125	0			SEO
Ethylbenzene	107	10	80	24.8	103	85-125	0			
m,p-Xylene	203.5	20	160	35.6	105	75-130	0			
Naphthalene	2774	50	80	2528	307	55-160	0			SEO
o-Xylene	95.5	10	80	17	98.1	80-125	0			
Toluene	114.6	10	80	29.2	107	85-125	0			
Xylenes, Total	299	30	240	52.6	103	80-126	0			
Surr: 1,2-Dichloroethane-d4	206.5	0	200	0	103	75-120	0			
Surr: 4-Bromofluorobenzene	199.1	0	200	0	99.6	80-110	0			
Surr: Dibromofluoromethane	205.9	0	200	0	103	85-115	0			
Surr: Toluene-d8	199.1	0	200	0	99.6	85-110	0			

MSD				Sample ID: 17081528-01A MSD			Units: µg/L		Analysis Date: 8/25/2017 01:22 AM	
Client ID: CAMU Spray Influent - Grab				Run ID: VMS8_170824A			SeqNo: 4603196		Prep Date:	
									DF: 10	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Benzene	1666	10	130	1450	166	85-125	1554	6.96	30	SEO
Ethylbenzene	154.3	10	130	24.8	99.6	85-125	107	36.2	30	R
m,p-Xylene	284.3	20	260	35.6	95.7	75-130	203.5	33.1	30	R
Naphthalene	2835	50	130	2528	236	55-160	2774	2.16	30	SEO
o-Xylene	138.4	10	130	17	93.4	80-125	95.5	36.7	30	R
Toluene	155.8	10	130	29.2	97.4	85-125	114.6	30.5	30	R
Xylenes, Total	422.7	30	300	52.6	123	80-126	299	34.3	30	R
Surr: 1,2-Dichloroethane-d4	208.1	0	200	0	104	75-120	206.5	0.772	30	
Surr: 4-Bromofluorobenzene	200.6	0	200	0	100	80-110	199.1	0.751	30	
Surr: Dibromofluoromethane	207.4	0	200	0	104	85-115	205.9	0.726	30	
Surr: Toluene-d8	201.3	0	200	0	101	85-110	199.1	1.1	30	

The following samples were analyzed in this batch:

17081528-01A	17081528-02A
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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
(Fax) 616.399.6185

Page 1 of 1

17081528

Customer Information				Project Information				ALS Project Manager: Amanda Grzybowski				ALS Work Order #: 1301220					
Purchase Order				Project Name				Parameter/Method Request for Analysis									
Work Order				Project Number				BTEX 8260B, Naphthalene 8260B									
Company Name				Bill To Company				Ammonia 350.1									
Send Report To				Invoice Attn.													
Address				Address													
City/State/Zip				City/State/Zip													
Phone				Phone													
Fax				Fax													
e-Mail Address																	
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]	8/23/17	1135	AQ	1	3	X										
2	CAMU Spray Influent [Grab]	8/23/17	1135	AQ	3	1		X									
3																	
4	CAMU Spray Middle [Grab]	8/23/17	1130	AQ	1	3	X										
5	CAMU Spray Middle [Grab]	8/23/17	1130	AQ	3	1		X									
6																	
7	CAMU Spray Effluent [Grab]	8/23/17	1125	AQ	1	3	X										
8	CAMU Spray Effluent [Grab]	8/23/17	1125	AQ	3	1		X									
9																	
10	CAMU Spray Trip Blank	8/23/17	0600	AQ	1	1	X										
11																	
12																	
13																	
14																	
15																	

Shipments: Please Print & Sign
Relinquished by: B. Owen / ALS
Date: 8/23/17
Time: 1005
Received by: JHull
Date: 8/24/17
Time: 1000
Relinquished by: JHull
Date: 8/23/17
Time: 1005
Received by: JHull
Date: 8/24/17
Time: 1000
Relinquished by: JHull
Date: 8/23/17
Time: 1005
Received by: JHull
Date: 8/24/17
Time: 1000

QC Package: (Check Box Below)
☒ Level II: Standard QC
☐ Level III: Raw Data
☐ Level IV: SW846 Methods/CLP like
☐ Other:

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C
Note: Any changes must be made in writing once samples and COC

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Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

Sample Receipt Checklist

Client Name: USS-GARY

Date/Time Received: 24-Aug-17 00:00

Work Order: 17081528

Received by: JR

Checklist completed by Joseph Ribar
eSignature

24-Aug-17
Date

Reviewed by: Joseph Ribar
eSignature

24-Aug-17
Date

Matrices: aqueous

Carrier name: FedEx

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>2.8c/2.8c</u> <u>IR</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>8/24/2017 10:32:01 AM</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 - 2.2/2.2 c SR2

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: