

**Client:**

**Project:** SAE-Interim 2024; VRUI12424

**Work Order:** 24010865

**Work Order Sample Summary**

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<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>
24010865-01	Vermont+Race, Urbana IL	Air		1/24/2024 16:17	1/26/2024 10:20	<input type="checkbox"/>

# ALS Environmental

Date: 07-Feb-24

**Client:**

**Project:** SAE-Interim 2024; VRUI12424

**Work Order:** 24010865

## Case Narrative

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The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met 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.

Sampling information was provided by the client.

Sample start: January 24, 4:17 p.m.

Sample end: January 25, 12:04 a.m.

# ALS Environmental

Date: 07-Feb-24

**Client:**

**Project:** SAE-Interim 2024; VRUI12424

**Work Order:** 24010865

**Sample ID:** Vermont+Race, Urbana IL

**Lab ID:** 24010865-01

**Collection Date:** 1/24/2024 04:17 PM

**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>TO-15 BY GC/MS</b>			<b>ETO-15</b>			Analyst: <b>LAK</b>
1,1,1-Trichloroethane	ND		2.73	µg/m3	1	1/29/2024 10:14 AM
1,1,2,2-Tetrachloroethane	ND		3.43	µg/m3	1	1/29/2024 10:14 AM
1,1,2-Trichloroethane	ND		1.09	µg/m3	1	1/29/2024 10:14 AM
1,1-Dichloroethane	ND		2.02	µg/m3	1	1/29/2024 10:14 AM
1,1-Dichloroethene	ND		1.98	µg/m3	1	1/29/2024 10:14 AM
1,2,4-Trichlorobenzene	ND		3.71	µg/m3	1	1/29/2024 10:14 AM
1,2,4-Trimethylbenzene	ND		2.46	µg/m3	1	1/29/2024 10:14 AM
1,2-Dibromoethane	ND		1.54	µg/m3	1	1/29/2024 10:14 AM
1,2-Dichlorobenzene	ND		3.01	µg/m3	1	1/29/2024 10:14 AM
1,2-Dichloroethane	ND		0.809	µg/m3	1	1/29/2024 10:14 AM
1,2-Dichloropropane	ND		2.31	µg/m3	1	1/29/2024 10:14 AM
1,3,5-Trimethylbenzene	ND		2.46	µg/m3	1	1/29/2024 10:14 AM
1,3-Butadiene	ND		0.442	µg/m3	1	1/29/2024 10:14 AM
1,3-Dichlorobenzene	ND		3.01	µg/m3	1	1/29/2024 10:14 AM
1,4-Dichlorobenzene	ND		1.20	µg/m3	1	1/29/2024 10:14 AM
1,4-Dioxane	ND		1.80	µg/m3	1	1/29/2024 10:14 AM
2-Butanone	ND		2.95	µg/m3	1	1/29/2024 10:14 AM
2-Hexanone	ND		4.10	µg/m3	1	1/29/2024 10:14 AM
<b>2-Propanol</b>	<b>218</b>	E	<b>2.46</b>	<b>µg/m3</b>	1	1/29/2024 10:14 AM
4-Ethyltoluene	ND		2.46	µg/m3	1	1/29/2024 10:14 AM
4-Methyl-2-pentanone	ND		4.10	µg/m3	1	1/29/2024 10:14 AM
<b>Acetone</b>	<b>23.7</b>		<b>2.38</b>	<b>µg/m3</b>	1	1/29/2024 10:14 AM
Benzene	ND		1.60	µg/m3	1	1/29/2024 10:14 AM
Benzyl chloride	ND		2.55	µg/m3	1	1/29/2024 10:14 AM
Bromodichloromethane	ND		1.34	µg/m3	1	1/29/2024 10:14 AM
Bromoform	ND		5.17	µg/m3	1	1/29/2024 10:14 AM
Bromomethane	ND		1.94	µg/m3	1	1/29/2024 10:14 AM
Carbon disulfide	ND		1.56	µg/m3	1	1/29/2024 10:14 AM
Carbon tetrachloride	ND		3.15	µg/m3	1	1/29/2024 10:14 AM
Chlorobenzene	ND		2.30	µg/m3	1	1/29/2024 10:14 AM
Chloroethane	ND		1.32	µg/m3	1	1/29/2024 10:14 AM
<b>Chloroform</b>	<b>6.98</b>		<b>0.976</b>	<b>µg/m3</b>	1	1/29/2024 10:14 AM
<b>Chloromethane</b>	<b>1.16</b>		<b>1.03</b>	<b>µg/m3</b>	1	1/29/2024 10:14 AM
cis-1,2-Dichloroethene	ND		1.98	µg/m3	1	1/29/2024 10:14 AM
cis-1,3-Dichloropropene	ND		2.27	µg/m3	1	1/29/2024 10:14 AM
Cumene	ND		2.46	µg/m3	1	1/29/2024 10:14 AM
Cyclohexane	ND		1.72	µg/m3	1	1/29/2024 10:14 AM
Dibromochloromethane	ND		4.26	µg/m3	1	1/29/2024 10:14 AM
Dichlorodifluoromethane	ND		2.47	µg/m3	1	1/29/2024 10:14 AM

**Note:**

# ALS Environmental

Date: 07-Feb-24

**Client:**

**Project:** SAE-Interim 2024; VRUI12424

**Work Order:** 24010865

**Sample ID:** Vermont+Race, Urbana IL

**Lab ID:** 24010865-01

**Collection Date:** 1/24/2024 04:17 PM

**Matrix:** AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
<b>Ethyl acetate</b>	<b>6.05</b>		<b>1.80</b>	<b>µg/m3</b>	1	1/29/2024 10:14 AM
Ethylbenzene	ND		2.17	µg/m3	1	1/29/2024 10:14 AM
Freon 113	ND		3.83	µg/m3	1	1/29/2024 10:14 AM
Freon 114	ND		3.50	µg/m3	1	1/29/2024 10:14 AM
<b>Heptane</b>	<b>14.3</b>		<b>2.05</b>	<b>µg/m3</b>	1	1/29/2024 10:14 AM
Hexachlorobutadiene	ND		2.13	µg/m3	1	1/29/2024 10:14 AM
Hexane	ND		1.76	µg/m3	1	1/29/2024 10:14 AM
m,p-Xylene	ND		2.17	µg/m3	1	1/29/2024 10:14 AM
Methylene chloride	ND		7.00	µg/m3	1	1/29/2024 10:14 AM
MTBE	ND		1.80	µg/m3	1	1/29/2024 10:14 AM
Naphthalene	ND		1.05	µg/m3	1	1/29/2024 10:14 AM
o-Xylene	ND		2.17	µg/m3	1	1/29/2024 10:14 AM
Propene	ND		0.861	µg/m3	1	1/29/2024 10:14 AM
Styrene	ND		2.13	µg/m3	1	1/29/2024 10:14 AM
Tetrachloroethene	ND		3.39	µg/m3	1	1/29/2024 10:14 AM
Tetrahydrofuran	ND		1.47	µg/m3	1	1/29/2024 10:14 AM
<b>Toluene</b>	<b>4.18</b>		<b>1.88</b>	<b>µg/m3</b>	1	1/29/2024 10:14 AM
trans-1,2-Dichloroethene	ND		1.98	µg/m3	1	1/29/2024 10:14 AM
trans-1,3-Dichloropropene	ND		2.27	µg/m3	1	1/29/2024 10:14 AM
Trichloroethene	ND		1.07	µg/m3	1	1/29/2024 10:14 AM
Trichlorofluoromethane	ND		2.81	µg/m3	1	1/29/2024 10:14 AM
Vinyl acetate	ND		3.52	µg/m3	1	1/29/2024 10:14 AM
Vinyl chloride	ND		1.28	µg/m3	1	1/29/2024 10:14 AM
Surr: Bromofluorobenzene	94.1		60-140	%REC	1	1/29/2024 10:14 AM

**Note:**

Batch ID: **R225666** Instrument ID **VMS4** Method: **ETO-15**

MBLK		Sample ID: <b>mblk-R225666</b>			Units: <b>ppbv</b>		Analysis Date: <b>1/29/2024 09:08 AM</b>			
Client ID:		Run ID: <b>VMS4_240129A</b>			SeqNo: <b>3287633</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	ND	0.50								
1,1,2,2-Tetrachloroethane	ND	0.50								
1,1,2-Trichloroethane	ND	0.20								
1,1-Dichloroethane	ND	0.50								
1,1-Dichloroethene	ND	0.50								
1,2,4-Trichlorobenzene	ND	0.50								
1,2,4-Trimethylbenzene	ND	0.50								
1,2-Dibromoethane	ND	0.20								
1,2-Dichlorobenzene	ND	0.50								
1,2-Dichloroethane	ND	0.20								
1,2-Dichloropropane	ND	0.50								
1,3,5-Trimethylbenzene	ND	0.50								
1,3-Butadiene	ND	0.20								
1,3-Dichlorobenzene	ND	0.50								
1,4-Dichlorobenzene	ND	0.20								
1,4-Dioxane	ND	0.50								
2-Butanone	ND	1.0								
2-Hexanone	ND	1.0								
2-Propanol	ND	1.0								
4-Ethyltoluene	ND	0.50								
4-Methyl-2-pentanone	ND	1.0								
Acetone	ND	1.0								
Benzene	ND	0.50								
Benzyl chloride	ND	0.50								
Bromodichloromethane	ND	0.20								
Bromoform	ND	0.50								
Bromomethane	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.50								
Chlorobenzene	ND	0.50								
Chloroethane	ND	0.50								
Chloroform	ND	0.20								
Chloromethane	ND	0.50								
cis-1,2-Dichloroethene	ND	0.50								
cis-1,3-Dichloropropene	ND	0.50								
Cumene	ND	0.50								
Cyclohexane	ND	0.50								
Dibromochloromethane	ND	0.50								
Dichlorodifluoromethane	ND	0.50								
Ethyl acetate	ND	0.50								
Ethylbenzene	ND	0.50								

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

**Client:****Work Order:** 24010865**Project:** SAE-Interim 2024; VRUI12424**QC BATCH REPORT**

Batch ID: <b>R225666</b>	Instrument ID <b>VMS4</b>	Method: <b>ETO-15</b>					
Freon 113	ND	0.50					
Freon 114	ND	0.50					
Heptane	ND	0.50					
Hexachlorobutadiene	ND	0.20					
Hexane	ND	0.50					
m,p-Xylene	ND	0.50					
Methylene chloride	ND	2.0					
MTBE	ND	0.50					
Naphthalene	ND	0.20					
o-Xylene	ND	0.50					
Propene	ND	0.50					
Styrene	ND	0.50					
Tetrachloroethene	ND	0.50					
Tetrahydrofuran	ND	0.50					
Toluene	ND	0.50					
trans-1,2-Dichloroethene	ND	0.50					
trans-1,3-Dichloropropene	ND	0.50					
Trichloroethene	ND	0.20					
Trichlorofluoromethane	ND	0.50					
Vinyl acetate	ND	1.0					
Vinyl chloride	ND	0.50					
<i>Surr: Bromofluorobenzene</i>	9.3	0	10	0	93	60-140	0

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

**Client:**

**QC BATCH REPORT**

**Work Order:** 24010865

**Project:** SAE-Interim 2024; VRUI12424

Batch ID: **R225666**

Instrument ID **VMS4**

Method: **ETO-15**

LCS		Sample ID: <b>Ics-R225666</b>				Units: <b>ppbv</b>		Analysis Date: <b>1/29/2024 08:24 AM</b>		
Client ID:		Run ID: <b>VMS4_240129A</b>			SeqNo: <b>3287632</b>		Prep Date:		DF: <b>1</b>	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	10.17	0.50	10	0	102	58.8-163	0			
1,1,2,2-Tetrachloroethane	9.86	0.50	10	0	98.6	60-140	0			
1,1,2-Trichloroethane	9.88	0.20	10	0	98.8	60-140	0			
1,1-Dichloroethane	9.99	0.50	10	0	99.9	60-140	0			
1,1-Dichloroethene	10.39	0.50	10	0	104	60-140	0			
1,2,4-Trichlorobenzene	11.37	0.50	10	0	114	49.3-150	0			
1,2,4-Trimethylbenzene	11.29	0.50	10	0	113	50.1-162	0			
1,2-Dibromoethane	10.2	0.20	10	0	102	60-140	0			
1,2-Dichlorobenzene	10.7	0.50	10	0	107	41.9-141	0			
1,2-Dichloroethane	10.51	0.20	10	0	105	60-140	0			
1,2-Dichloropropane	9.97	0.50	10	0	99.7	60-140	0			
1,3,5-Trimethylbenzene	10.72	0.50	10	0	107	60-140	0			
1,3-Butadiene	9.69	0.20	10	0	96.9	50.6-140	0			
1,3-Dichlorobenzene	10.93	0.50	10	0	109	60-140	0			
1,4-Dichlorobenzene	10.9	0.20	10	0	109	55.1-145	0			
1,4-Dioxane	11.01	0.50	10	0	110	60-140	0			
2-Butanone	10.66	1.0	10	0	107	60-140	0			
2-Hexanone	12.82	1.0	10	0	128	56.2-162	0			
2-Propanol	11.6	1.0	10	0	116	60-140	0			
4-Ethyltoluene	11.75	0.50	10	0	118	60-140	0			
4-Methyl-2-pentanone	11.88	1.0	10	0	119	60-140	0			
Acetone	9.44	1.0	10	0	94.4	60-140	0			
Benzene	10.21	0.50	10	0	102	60-140	0			
Benzyl chloride	11.72	0.50	10	0	117	31.9-174	0			
Bromodichloromethane	9.93	0.20	10	0	99.3	60-140	0			
Bromoform	10.14	0.50	10	0	101	60-140	0			
Bromomethane	8.72	0.50	10	0	87.2	60-140	0			
Carbon disulfide	9.65	0.50	10	0	96.5	60-140	0			
Carbon tetrachloride	10.3	0.50	10	0	103	60-140	0			
Chlorobenzene	9.67	0.50	10	0	96.7	60-140	0			
Chloroethane	8.16	0.50	10	0	81.6	60-140	0			
Chloroform	9.96	0.20	10	0	99.6	60-140	0			
Chloromethane	9.95	0.50	10	0	99.5	60-140	0			
cis-1,2-Dichloroethene	10.96	0.50	10	0	110	60-140	0			
cis-1,3-Dichloropropene	10.81	0.50	10	0	108	60-140	0			
Cumene	10.86	0.50	10	0	109	60-140	0			
Cyclohexane	10.64	0.50	10	0	106	60-140	0			
Dibromochloromethane	10.15	0.50	10	0	102	60-140	0			
Dichlorodifluoromethane	9.88	0.50	10	0	98.8	60-140	0			
Ethyl acetate	10.01	0.50	10	0	100	60-140	0			
Ethylbenzene	10.43	0.50	10	0	104	60-140	0			
Freon 113	9.47	0.50	10	0	94.7	60-140	0			

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

Client:

# QC BATCH REPORT

Work Order: 24010865

Project: SAE-Interim 2024; VRUI12424

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Batch ID: <b>R225666</b>	Instrument ID <b>VMS4</b>	Method: <b>ETO-15</b>						
Freon 114	9.78	0.50	10	0	97.8	60-140	0	
Heptane	11.66	0.50	10	0	117	60-140	0	
Hexachlorobutadiene	8.68	0.20	10	0	86.8	60-140	0	
Hexane	11.16	0.50	10	0	112	60-140	0	
m,p-Xylene	21.07	0.50	20	0	105	60-140	0	
Methylene chloride	9.75	2.0	10	0	97.5	60-140	0	
MTBE	10.93	0.50	10	0	109	60.8-151	0	
Naphthalene	11.69	0.20	10	0	117	53.1-152	0	
o-Xylene	10.98	0.50	10	0	110	60-140	0	
Propene	9.19	0.50	10	0	91.9	34.4-139	0	
Styrene	11.18	0.50	10	0	112	60-140	0	
Tetrachloroethene	9.62	0.50	10	0	96.2	60-140	0	
Tetrahydrofuran	11.44	0.50	10	0	114	60-140	0	
Toluene	10.64	0.50	10	0	106	60-140	0	
trans-1,2-Dichloroethene	9.87	0.50	10	0	98.7	60-140	0	
trans-1,3-Dichloropropene	10.45	0.50	10	0	104	60-140	0	
Trichloroethene	10.12	0.20	10	0	101	60-140	0	
Trichlorofluoromethane	9.45	0.50	10	0	94.5	60-140	0	
Vinyl acetate	10.93	1.0	10	0	109	48.4-145	0	
Vinyl chloride	9.04	0.50	10	0	90.4	60-140	0	
<i>Surr: Bromofluorobenzene</i>	<i>10.11</i>	<i>0</i>	<i>10</i>	<i>0</i>	<i>101</i>	<i>60-140</i>	<i>0</i>	

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The following samples were analyzed in this batch: 24010865-01A

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



**Client:**  
**Project:** SAE-Interim 2024; VRUI12424  
**WorkOrder:** 24010865

**QUALIFIERS,  
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not 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 detected below quantitation limit
n	Not offered for accreditation
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

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/m3	
ppbv	

Sample Receipt Checklist

Client Name:

Date/Time Received: **26-Jan-24 10:20**

Work Order: **24010865**

Received by: **AB1**

Checklist completed by **Alec Bolender**

26-Jan-24

Reviewed by: **Shawn Smythe**

29-Jan-24

eSignature

Date

eSignature

Date

Matrices: air

Carrier name: FedEx

Shipping container/cooler in good condition? Yes  No  Not Present

Custody seals intact on shipping container/cooler? Yes  No  Not Present

Custody seals intact on sample bottles? Yes  No  Not Present

Chain of custody present? Yes  No

Chain of custody signed when relinquished and received? Yes  No

Chain of custody agrees with sample labels? Yes  No

Samples in proper container/bottle? Yes  No

Sample containers intact? Yes  No

Sufficient sample volume for indicated test? Yes  No

All samples received within holding time? Yes  No

Container/Temp Blank temperature in compliance? Yes  No

Sample(s) received on ice? Yes  No

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Date/Time sample(s) sent to storage:

Water - VOA vials have zero headspace? Yes  No  No VOA vials submitted

Water - pH acceptable upon receipt? Yes  No  N/A

pH adjusted? Yes  No  N/A

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction: