ALS Environmental

22-May-2018

Kerri Castlen
Southwest Ohio Air Quality Agency
250 William Howard Taft Road
1st Floor
Cincinnati, OH 45219

Tel: 513-946-7777
Fax: 513-946-7778

Re: Middletown Work Order: **1805759**

Dear Kerri,

ALS Environmental received 3 samples on 18-May-2018 12:45 PM 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.

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 Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16.

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

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ALS Environmental

Date: 22-May-18

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Work Order: **1805759**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1805759-01	AK-WAN051618-18343	Air		5/17/2018 08:59	5/18/2018 12:45	☐
1805759-02	31170 HQWA	Air		5/18/2018 08:40	5/18/2018 12:45	☐
1805759-03	CleanOnly	Air		5/18/2018	5/18/2018 12:45	☐

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Sample ID: AK-WAN051618-18343
Collection Date: 5/17/2018 08:59 AM

Work Order: 1805759
Lab ID: 1805759-01
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			**ETO-15**			Analyst: **MRJ**
1,1,1-Trichloroethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,1,2,2-Tetrachloroethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,1,2-Trichloroethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,1-Dichloroethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,1-Dichloroethene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,2,4-Trichlorobenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,2,4-Trimethylbenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,2-Dibromoethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,2-Dichlorobenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,2-Dichloroethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,2-Dichloropropane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,3,5-Trimethylbenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,3-Butadiene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,3-Dichlorobenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,4-Dichlorobenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
1,4-Dioxane	ND		1.0	ppbv	1	5/21/2018 05:36 PM
2-Butanone	ND		0.50	ppbv	1	5/21/2018 05:36 PM
2-Hexanone	ND		1.0	ppbv	1	5/21/2018 05:36 PM
2-Propanol	**2.0**		**1.0**	**ppbv**	1	5/21/2018 05:36 PM
4-Ethyltoluene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
4-Methyl-2-pentanone	ND		1.0	ppbv	1	5/21/2018 05:36 PM
Acetone	**4.5**		**1.0**	**ppbv**	1	5/21/2018 05:36 PM
Benzene	**5.1**		**0.50**	**ppbv**	1	5/21/2018 05:36 PM
Benzyl chloride	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Bromodichloromethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Bromoform	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Bromomethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Carbon disulfide	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Carbon tetrachloride	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Chlorobenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Chloroethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Chloroform	ND		0.20	ppbv	1	5/21/2018 05:36 PM
Chloromethane	**0.62**		**0.50**	**ppbv**	1	5/21/2018 05:36 PM
cis-1,2-Dichloroethene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
cis-1,3-Dichloropropene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Cumene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Cyclohexane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Dibromochloromethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Dichlorodifluoromethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM

Note:

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Sample ID: AK-WAN051618-18343
Collection Date: 5/17/2018 08:59 AM

Work Order: 1805759
Lab ID: 1805759-01
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Ethylbenzene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Freon 113	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Freon 114	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Heptane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Hexachlorobutadiene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Hexane	**0.64**		**0.50**	**ppbv**	1	5/21/2018 05:36 PM
m,p-Xylene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Methylene chloride	ND		1.0	ppbv	1	5/21/2018 05:36 PM
MTBE	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Naphthalene	**1.0**		**0.20**	**ppbv**	1	5/21/2018 05:36 PM
o-Xylene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Propene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Styrene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Tetrachloroethene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Tetrahydrofuran	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Toluene	**1.3**		**0.50**	**ppbv**	1	5/21/2018 05:36 PM
trans-1,2-Dichloroethene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
trans-1,3-Dichloropropene	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Trichloroethene	ND		0.20	ppbv	1	5/21/2018 05:36 PM
Trichlorofluoromethane	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Vinyl acetate	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Vinyl chloride	ND		0.50	ppbv	1	5/21/2018 05:36 PM
Surr: Bromofluorobenzene	*103*		*60-140*	*%REC*	1	5/21/2018 05:36 PM
TO-15 BY GC/MS			**ETO-15**			Analyst: **MRJ**
1,1,1-Trichloroethane	ND		2.73	µg/m3	1	5/21/2018 05:36 PM
1,1,2,2-Tetrachloroethane	ND		3.43	µg/m3	1	5/21/2018 05:36 PM
1,1,2-Trichloroethane	ND		2.73	µg/m3	1	5/21/2018 05:36 PM
1,1-Dichloroethane	ND		2.02	µg/m3	1	5/21/2018 05:36 PM
1,1-Dichloroethene	ND		1.98	µg/m3	1	5/21/2018 05:36 PM
1,2,4-Trichlorobenzene	ND		3.71	µg/m3	1	5/21/2018 05:36 PM
1,2,4-Trimethylbenzene	ND		2.46	µg/m3	1	5/21/2018 05:36 PM
1,2-Dibromoethane	ND		3.84	µg/m3	1	5/21/2018 05:36 PM
1,2-Dichlorobenzene	ND		3.01	µg/m3	1	5/21/2018 05:36 PM
1,2-Dichloroethane	ND		2.02	µg/m3	1	5/21/2018 05:36 PM
1,2-Dichloropropane	ND		2.31	µg/m3	1	5/21/2018 05:36 PM
1,3,5-Trimethylbenzene	ND		2.46	µg/m3	1	5/21/2018 05:36 PM
1,3-Butadiene	ND		1.11	µg/m3	1	5/21/2018 05:36 PM
1,3-Dichlorobenzene	ND		3.01	µg/m3	1	5/21/2018 05:36 PM
1,4-Dichlorobenzene	ND		3.01	µg/m3	1	5/21/2018 05:36 PM

Note:

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Work Order: 1805759
Sample ID: AK-WAN051618-18343
Lab ID: 1805759-01
Collection Date: 5/17/2018 08:59 AM
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		3.60	µg/m3	1	5/21/2018 05:36 PM
2-Butanone	ND		1.47	µg/m3	1	5/21/2018 05:36 PM
2-Hexanone	ND		4.10	µg/m3	1	5/21/2018 05:36 PM
2-Propanol	**4.92**		**2.46**	**µg/m3**	1	5/21/2018 05:36 PM
4-Ethyltoluene	ND		2.46	µg/m3	1	5/21/2018 05:36 PM
4-Methyl-2-pentanone	ND		4.10	µg/m3	1	5/21/2018 05:36 PM
Acetone	**10.6**		**2.38**	**µg/m3**	1	5/21/2018 05:36 PM
Benzene	**16.2**		**1.60**	**µg/m3**	1	5/21/2018 05:36 PM
Benzyl chloride	ND		2.59	µg/m3	1	5/21/2018 05:36 PM
Bromodichloromethane	ND		3.35	µg/m3	1	5/21/2018 05:36 PM
Bromoform	ND		5.17	µg/m3	1	5/21/2018 05:36 PM
Bromomethane	ND		1.94	µg/m3	1	5/21/2018 05:36 PM
Carbon disulfide	ND		1.56	µg/m3	1	5/21/2018 05:36 PM
Carbon tetrachloride	ND		3.15	µg/m3	1	5/21/2018 05:36 PM
Chlorobenzene	ND		2.30	µg/m3	1	5/21/2018 05:36 PM
Chloroethane	ND		1.32	µg/m3	1	5/21/2018 05:36 PM
Chloroform	ND		0.976	µg/m3	1	5/21/2018 05:36 PM
Chloromethane	**1.28**		**1.03**	**µg/m3**	1	5/21/2018 05:36 PM
cis-1,2-Dichloroethene	ND		1.98	µg/m3	1	5/21/2018 05:36 PM
cis-1,3-Dichloropropene	ND		2.27	µg/m3	1	5/21/2018 05:36 PM
Cumene	ND		2.46	µg/m3	1	5/21/2018 05:36 PM
Cyclohexane	ND		1.72	µg/m3	1	5/21/2018 05:36 PM
Dibromochloromethane	ND		4.26	µg/m3	1	5/21/2018 05:36 PM
Dichlorodifluoromethane	ND		2.47	µg/m3	1	5/21/2018 05:36 PM
Ethyl acetate	ND		1.80	µg/m3	1	5/21/2018 05:36 PM
Ethylbenzene	ND		2.17	µg/m3	1	5/21/2018 05:36 PM
Freon 113	ND		3.83	µg/m3	1	5/21/2018 05:36 PM
Freon 114	ND		3.50	µg/m3	1	5/21/2018 05:36 PM
Heptane	ND		2.05	µg/m3	1	5/21/2018 05:36 PM
Hexachlorobutadiene	ND		5.33	µg/m3	1	5/21/2018 05:36 PM
Hexane	**2.26**		**1.76**	**µg/m3**	1	5/21/2018 05:36 PM
m,p-Xylene	ND		2.17	µg/m3	1	5/21/2018 05:36 PM
Methylene chloride	ND		3.47	µg/m3	1	5/21/2018 05:36 PM
MTBE	ND		1.80	µg/m3	1	5/21/2018 05:36 PM
Naphthalene	**5.45**		**1.05**	**µg/m3**	1	5/21/2018 05:36 PM
o-Xylene	ND		2.17	µg/m3	1	5/21/2018 05:36 PM
Propene	ND		0.861	µg/m3	1	5/21/2018 05:36 PM
Styrene	ND		2.13	µg/m3	1	5/21/2018 05:36 PM
Tetrachloroethene	ND		3.39	µg/m3	1	5/21/2018 05:36 PM
Tetrahydrofuran	ND		1.47	µg/m3	1	5/21/2018 05:36 PM

Note:

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Work Order: 1805759
Sample ID: AK-WAN051618-18343
Lab ID: 1805759-01
Collection Date: 5/17/2018 08:59 AM
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	**4.79**		**1.88**	**µg/m3**	1	5/21/2018 05:36 PM
trans-1,2-Dichloroethene	ND		1.98	µg/m3	1	5/21/2018 05:36 PM
trans-1,3-Dichloropropene	ND		2.27	µg/m3	1	5/21/2018 05:36 PM
Trichloroethene	ND		1.07	µg/m3	1	5/21/2018 05:36 PM
Trichlorofluoromethane	ND		2.81	µg/m3	1	5/21/2018 05:36 PM
Vinyl acetate	ND		1.76	µg/m3	1	5/21/2018 05:36 PM
Vinyl chloride	ND		1.28	µg/m3	1	5/21/2018 05:36 PM
Surr: Bromofluorobenzene	*103*		*60-140*	*%REC*	1	5/21/2018 05:36 PM

Note:

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Sample ID: 31170 HQWA
Collection Date: 5/18/2018 08:40 AM

Work Order: 1805759
Lab ID: 1805759-02
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
TO-15 BY GC/MS			**ETO-15**			Analyst: **MRJ**
1,1,1-Trichloroethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,1,2,2-Tetrachloroethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,1,2-Trichloroethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,1-Dichloroethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,1-Dichloroethene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,2,4-Trichlorobenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,2,4-Trimethylbenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,2-Dibromoethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,2-Dichlorobenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,2-Dichloroethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,2-Dichloropropane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,3,5-Trimethylbenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,3-Butadiene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,3-Dichlorobenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,4-Dichlorobenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
1,4-Dioxane	ND		1.0	ppbv	1	5/21/2018 06:22 PM
2-Butanone	ND		0.50	ppbv	1	5/21/2018 06:22 PM
2-Hexanone	ND		1.0	ppbv	1	5/21/2018 06:22 PM
2-Propanol	**2.9**		**1.0**	**ppbv**	1	5/21/2018 06:22 PM
4-Ethyltoluene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
4-Methyl-2-pentanone	ND		1.0	ppbv	1	5/21/2018 06:22 PM
Acetone	**8.5**		**1.0**	**ppbv**	1	5/21/2018 06:22 PM
Benzene	**1.7**		**0.50**	**ppbv**	1	5/21/2018 06:22 PM
Benzyl chloride	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Bromodichloromethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Bromoform	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Bromomethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Carbon disulfide	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Carbon tetrachloride	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Chlorobenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Chloroethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Chloroform	ND		0.20	ppbv	1	5/21/2018 06:22 PM
Chloromethane	**0.58**		**0.50**	**ppbv**	1	5/21/2018 06:22 PM
cis-1,2-Dichloroethene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
cis-1,3-Dichloropropene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Cumene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Cyclohexane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Dibromochloromethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Dichlorodifluoromethane	**0.53**		**0.50**	**ppbv**	1	5/21/2018 06:22 PM

Note:

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Sample ID: 31170 HQWA
Collection Date: 5/18/2018 08:40 AM

Work Order: 1805759
Lab ID: 1805759-02
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Ethyl acetate	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Ethylbenzene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Freon 113	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Freon 114	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Heptane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Hexachlorobutadiene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Hexane	**2.3**		**0.50**	**ppbv**	1	5/21/2018 06:22 PM
m,p-Xylene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Methylene chloride	**2.6**		**1.0**	**ppbv**	1	5/21/2018 06:22 PM
MTBE	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Naphthalene	**1.1**		**0.20**	**ppbv**	1	5/21/2018 06:22 PM
o-Xylene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Propene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Styrene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Tetrachloroethene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Tetrahydrofuran	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Toluene	**0.98**		**0.50**	**ppbv**	1	5/21/2018 06:22 PM
trans-1,2-Dichloroethene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
trans-1,3-Dichloropropene	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Trichloroethene	ND		0.20	ppbv	1	5/21/2018 06:22 PM
Trichlorofluoromethane	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Vinyl acetate	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Vinyl chloride	ND		0.50	ppbv	1	5/21/2018 06:22 PM
Surr: Bromofluorobenzene	*115*		*60-140*	*%REC*	1	5/21/2018 06:22 PM
TO-15 BY GC/MS			**ETO-15**			Analyst: **MRJ**
1,1,1-Trichloroethane	ND		2.73	µg/m3	1	5/21/2018 06:22 PM
1,1,2,2-Tetrachloroethane	ND		3.43	µg/m3	1	5/21/2018 06:22 PM
1,1,2-Trichloroethane	ND		2.73	µg/m3	1	5/21/2018 06:22 PM
1,1-Dichloroethane	ND		2.02	µg/m3	1	5/21/2018 06:22 PM
1,1-Dichloroethene	ND		1.98	µg/m3	1	5/21/2018 06:22 PM
1,2,4-Trichlorobenzene	ND		3.71	µg/m3	1	5/21/2018 06:22 PM
1,2,4-Trimethylbenzene	ND		2.46	µg/m3	1	5/21/2018 06:22 PM
1,2-Dibromoethane	ND		3.84	µg/m3	1	5/21/2018 06:22 PM
1,2-Dichlorobenzene	ND		3.01	µg/m3	1	5/21/2018 06:22 PM
1,2-Dichloroethane	ND		2.02	µg/m3	1	5/21/2018 06:22 PM
1,2-Dichloropropane	ND		2.31	µg/m3	1	5/21/2018 06:22 PM
1,3,5-Trimethylbenzene	ND		2.46	µg/m3	1	5/21/2018 06:22 PM
1,3-Butadiene	ND		1.11	µg/m3	1	5/21/2018 06:22 PM
1,3-Dichlorobenzene	ND		3.01	µg/m3	1	5/21/2018 06:22 PM
1,4-Dichlorobenzene	ND		3.01	µg/m3	1	5/21/2018 06:22 PM

Note:

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Sample ID: 31170 HQWA
Collection Date: 5/18/2018 08:40 AM

Work Order: 1805759
Lab ID: 1805759-02
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
1,4-Dioxane	ND		3.60	µg/m3	1	5/21/2018 06:22 PM
2-Butanone	ND		1.47	µg/m3	1	5/21/2018 06:22 PM
2-Hexanone	ND		4.10	µg/m3	1	5/21/2018 06:22 PM
2-Propanol	**7.20**		**2.46**	**µg/m3**	1	5/21/2018 06:22 PM
4-Ethyltoluene	ND		2.46	µg/m3	1	5/21/2018 06:22 PM
4-Methyl-2-pentanone	ND		4.10	µg/m3	1	5/21/2018 06:22 PM
Acetone	**20.1**		**2.38**	**µg/m3**	1	5/21/2018 06:22 PM
Benzene	**5.37**		**1.60**	**µg/m3**	1	5/21/2018 06:22 PM
Benzyl chloride	ND		2.59	µg/m3	1	5/21/2018 06:22 PM
Bromodichloromethane	ND		3.35	µg/m3	1	5/21/2018 06:22 PM
Bromoform	ND		5.17	µg/m3	1	5/21/2018 06:22 PM
Bromomethane	ND		1.94	µg/m3	1	5/21/2018 06:22 PM
Carbon disulfide	ND		1.56	µg/m3	1	5/21/2018 06:22 PM
Carbon tetrachloride	ND		3.15	µg/m3	1	5/21/2018 06:22 PM
Chlorobenzene	ND		2.30	µg/m3	1	5/21/2018 06:22 PM
Chloroethane	ND		1.32	µg/m3	1	5/21/2018 06:22 PM
Chloroform	ND		0.976	µg/m3	1	5/21/2018 06:22 PM
Chloromethane	**1.20**		**1.03**	**µg/m3**	1	5/21/2018 06:22 PM
cis-1,2-Dichloroethene	ND		1.98	µg/m3	1	5/21/2018 06:22 PM
cis-1,3-Dichloropropene	ND		2.27	µg/m3	1	5/21/2018 06:22 PM
Cumene	ND		2.46	µg/m3	1	5/21/2018 06:22 PM
Cyclohexane	ND		1.72	µg/m3	1	5/21/2018 06:22 PM
Dibromochloromethane	ND		4.26	µg/m3	1	5/21/2018 06:22 PM
Dichlorodifluoromethane	**2.62**		**2.47**	**µg/m3**	1	5/21/2018 06:22 PM
Ethyl acetate	ND		1.80	µg/m3	1	5/21/2018 06:22 PM
Ethylbenzene	ND		2.17	µg/m3	1	5/21/2018 06:22 PM
Freon 113	ND		3.83	µg/m3	1	5/21/2018 06:22 PM
Freon 114	ND		3.50	µg/m3	1	5/21/2018 06:22 PM
Heptane	ND		2.05	µg/m3	1	5/21/2018 06:22 PM
Hexachlorobutadiene	ND		5.33	µg/m3	1	5/21/2018 06:22 PM
Hexane	**8.07**		**1.76**	**µg/m3**	1	5/21/2018 06:22 PM
m,p-Xylene	ND		2.17	µg/m3	1	5/21/2018 06:22 PM
Methylene chloride	**9.10**		**3.47**	**µg/m3**	1	5/21/2018 06:22 PM
MTBE	ND		1.80	µg/m3	1	5/21/2018 06:22 PM
Naphthalene	**5.66**		**1.05**	**µg/m3**	1	5/21/2018 06:22 PM
o-Xylene	ND		2.17	µg/m3	1	5/21/2018 06:22 PM
Propene	ND		0.861	µg/m3	1	5/21/2018 06:22 PM
Styrene	ND		2.13	µg/m3	1	5/21/2018 06:22 PM
Tetrachloroethene	ND		3.39	µg/m3	1	5/21/2018 06:22 PM
Tetrahydrofuran	ND		1.47	µg/m3	1	5/21/2018 06:22 PM

Note:

ALS Environmental

Date: *22-May-18*

Client: Southwest Ohio Air Quality Agency
Project: Middletown
Sample ID: 31170 HQWA
Collection Date: 5/18/2018 08:40 AM

Work Order: 1805759
Lab ID: 1805759-02
Matrix: AIR

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Toluene	**3.69**		**1.88**	**µg/m3**	1	5/21/2018 06:22 PM
trans-1,2-Dichloroethene	ND		1.98	µg/m3	1	5/21/2018 06:22 PM
trans-1,3-Dichloropropene	ND		2.27	µg/m3	1	5/21/2018 06:22 PM
Trichloroethene	ND		1.07	µg/m3	1	5/21/2018 06:22 PM
Trichlorofluoromethane	ND		2.81	µg/m3	1	5/21/2018 06:22 PM
Vinyl acetate	ND		1.76	µg/m3	1	5/21/2018 06:22 PM
Vinyl chloride	ND		1.28	µg/m3	1	5/21/2018 06:22 PM
Surr: Bromofluorobenzene	*115*		*60-140*	*%REC*	1	5/21/2018 06:22 PM

Note:

ALS Environmental

Date: 22-May-18

Client: Southwest Ohio Air Quality Agency

Work Order: 1805759

Project: Middletown

QC BATCH REPORT

Batch ID: **R152369** Instrument ID: **VMS4** Method: **ETO-15**

mblk Sample ID: **MBLK-R152369** Units: **ppbv** Analysis Date: **5/21/2018 04:08 PM**

Client ID: Run ID: **VMS4_180521A** SeqNo: **1753045** Prep Date: DF: **1**

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	0.50								
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	0.50								
1,2-Dichlorobenzene	ND	0.50								
1,2-Dichloroethane	ND	0.50								
1,2-Dichloropropane	ND	0.50								
1,3,5-Trimethylbenzene	ND	0.50								
1,3-Butadiene	ND	0.50								
1,3-Dichlorobenzene	ND	0.50								
1,4-Dichlorobenzene	ND	0.50								
1,4-Dioxane	ND	1.0								
2-Butanone	ND	0.50								
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	0.50								
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: Southwest Ohio Air Quality Agency
Work Order: 1805759
Project: Middletown

QC BATCH REPORT

Batch ID: **R152369** Instrument ID: **VMS4** Method: **ETO-15**

Freon 113	ND	0.50					
Freon 114	ND	0.50					
Heptane	ND	0.50					
Hexachlorobutadiene	ND	0.50					
Hexane	ND	0.50					
m,p-Xylene	ND	0.50					
Methylene chloride	ND	1.0					
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	0.50					
Vinyl chloride	ND	0.50					
Surr: Bromofluorobenzene	9.28	0	*10*	0	*92.8*	*60-140*	0

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

Client: Southwest Ohio Air Quality Agency
Work Order: 1805759
Project: Middletown

QC BATCH REPORT

Batch ID: **R152369** Instrument ID: **VMS4** Method: **ETO-15**

lcs Sample ID: **LCS-R152369** Units: **ppbv** Analysis Date: **5/21/2018 03:23 PM**
Client ID: Run ID: **VMS4_180521A** SeqNo: **1753044** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	9.68	0.50	10	0	96.8	58.8-163	0			
1,1,2,2-Tetrachloroethane	10.04	0.50	10	0	100	60-140	0			
1,1,2-Trichloroethane	9.87	0.50	10	0	98.7	60-140	0			
1,1-Dichloroethane	9.75	0.50	10	0	97.5	60-140	0			
1,1-Dichloroethene	9.32	0.50	10	0	93.2	60-140	0			
1,2,4-Trichlorobenzene	10	0.50	10	0	100	49.3-150	0			
1,2,4-Trimethylbenzene	10	0.50	10	0	100	50.1-162	0			
1,2-Dibromoethane	10.16	0.50	10	0	102	60-140	0			
1,2-Dichlorobenzene	10.05	0.50	10	0	100	41.9-141	0			
1,2-Dichloroethane	9.83	0.50	10	0	98.3	60-140	0			
1,2-Dichloropropane	9.79	0.50	10	0	97.9	60-140	0			
1,3,5-Trimethylbenzene	9.86	0.50	10	0	98.6	60-140	0			
1,3-Butadiene	10.5	0.50	10	0	105	50.6-140	0			
1,3-Dichlorobenzene	10.05	0.50	10	0	100	60-140	0			
1,4-Dichlorobenzene	10.02	0.50	10	0	100	55.1-145	0			
1,4-Dioxane	9.5	1.0	10	0	95	60-140	0			
2-Butanone	10	0.50	10	0	100	60-140	0			
2-Hexanone	9.94	1.0	10	0	99.4	56.2-162	0			
2-Propanol	10.08	1.0	10	0	101	60-140	0			
4-Ethyltoluene	10.01	0.50	10	0	100	60-140	0			
4-Methyl-2-pentanone	9.98	1.0	10	0	99.8	60-140	0			
Acetone	9.45	1.0	10	0	94.5	60-140	0			
Benzene	9.77	0.50	10	0	97.7	60-140	0			
Benzyl chloride	10.29	0.50	10	0	103	31.9-174	0			
Bromodichloromethane	9.96	0.50	10	0	99.6	60-140	0			
Bromoform	10.44	0.50	10	0	104	60-140	0			
Bromomethane	9.19	0.50	10	0	91.9	60-140	0			
Carbon disulfide	9.75	0.50	10	0	97.5	60-140	0			
Carbon tetrachloride	9.84	0.50	10	0	98.4	60-140	0			
Chlorobenzene	9.99	0.50	10	0	99.9	60-140	0			
Chloroethane	9.26	0.50	10	0	92.6	60-140	0			
Chloroform	9.87	0.20	10	0	98.7	60-140	0			
Chloromethane	9.23	0.50	10	0	92.3	60-140	0			
cis-1,2-Dichloroethene	9.81	0.50	10	0	98.1	60-140	0			
cis-1,3-Dichloropropene	9.79	0.50	10	0	97.9	60-140	0			
Cumene	9.95	0.50	10	0	99.5	60-140	0			
Cyclohexane	9.84	0.50	10	0	98.4	60-140	0			
Dibromochloromethane	10.13	0.50	10	0	101	60-140	0			
Dichlorodifluoromethane	9.79	0.50	10	0	97.9	60-140	0			
Ethyl acetate	9.81	0.50	10	0	98.1	60-140	0			
Ethylbenzene	9.95	0.50	10	0	99.5	60-140	0			
Freon 113	9.37	0.50	10	0	93.7	60-140	0			

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

Client: Southwest Ohio Air Quality Agency
Work Order: 1805759
Project: Middletown

QC BATCH REPORT

Batch ID: **R152369** Instrument ID: **VMS4** Method: **ETO-15**

Freon 114	9.56	0.50	10	0	95.6	60-140	0
Heptane	9.86	0.50	10	0	98.6	60-140	0
Hexachlorobutadiene	9.49	0.50	10	0	94.9	60-140	0
Hexane	9.79	0.50	10	0	97.9	60-140	0
m,p-Xylene	19.41	0.50	20	0	97	60-140	0
Methylene chloride	9.21	1.0	10	0	92.1	60-140	0
MTBE	9.66	0.50	10	0	96.6	60.8-151	0
Naphthalene	9.74	0.20	10	0	97.4	53.1-152	0
o-Xylene	9.79	0.50	10	0	97.9	60-140	0
Propene	9.16	0.50	10	0	91.6	34.4-139	0
Styrene	10.01	0.50	10	0	100	60-140	0
Tetrachloroethene	9.73	0.50	10	0	97.3	60-140	0
Tetrahydrofuran	9.69	0.50	10	0	96.9	60-140	0
Toluene	9.78	0.50	10	0	97.8	60-140	0
trans-1,2-Dichloroethene	9.34	0.50	10	0	93.4	60-140	0
trans-1,3-Dichloropropene	9.27	0.50	10	0	92.7	60-140	0
Trichloroethene	9.71	0.20	10	0	97.1	60-140	0
Trichlorofluoromethane	9.16	0.50	10	0	91.6	60-140	0
Vinyl acetate	10.34	0.50	10	0	103	48.4-145	0
Vinyl chloride	9.69	0.50	10	0	96.9	60-140	0
Surr: Bromofluorobenzene	10.11	0	*10*	0	*101*	*60-140*	0

The following samples were analyzed in this batch: 1805759-01A 1805759-02A

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

ALS Environmental

Date: 22-May-18

Client: Southwest Ohio Air Quality Agency
Project: Middletown
WorkOrder: **1805759**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	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

Acronym	Description
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

Units Reported	Description
µg/m3	
ppbv	

ALS Environmental

Sample Receipt Checklist

Client Name: **SOUTHWESTOH-CINCINNATI** Date/Time Received: **18-May-18 12:45**

Work Order: **1805759** Received by: **JNW**

Checklist completed by: Jan Wilcox (eSignature) 18-May-18 (Date) Reviewed by: Rob Nieman (eSignature) 22-May-18 (Date)

Matrices:

Carrier name: Client

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 ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
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: