Air Toxics LTD.
Laboratory Services Since 1989

7/23/2009

Mr. Doug Lam
Trihydro Corporation
5000 State Route 128

Cleves OH 45002

Project Name: MNA Vapor Sampling
Project #: 500-017-012
Workorder #: 0907205B

Dear Mr. Doug Lam

The following report includes the data for the above referenced project for sample(s) received on 7/10/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for you air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Brandon Dunmore at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Brandon Dunmore
Project Manager

Air Toxics LTD.
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WORK ORDER #: 0907205B

Work Order Summary

CLIENT:	Mr. Doug Lam Trihydro Corporation 5000 State Route 128 Cleves, OH 45002	**BILL TO:**	Mr. Tim Gunn Trihydro Corporation 5000 State Route 128 Cleves, OH 45002
PHONE:	513-353-1323 ext 23	**P.O. #**	08-049WO-L
FAX:	513-353-4664	**PROJECT #**	500-017-012 MNA Vapor Sampling
DATE RECEIVED:	07/10/2009	**CONTACT:**	Brandon Dunmore
DATE COMPLETED:	07/23/2009		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
06A	OA-1,070109	Modified TO-15	6.8 "Hg	5 psi
07A	Lab Blank	Modified TO-15	NA	NA
08A	CCV	Modified TO-15	NA	NA
09A	LCS	Modified TO-15	NA	NA

CERTIFIED BY: Linda L. Truman DATE: 07/23/09

Laboratory Director

Certfication numbers: CA NELAP - 02110CA, LA NELAP/LELAP- AI 30763, NJ NELAP - CA004
NY NELAP - 11291, UT NELAP - 9166389892, AZ Licensure AZ0719
Name of Accrediting Agency: NELAP/Florida Department of Health, Scope of Application: Clean Air Act,
Accreditation number: E87680, Effective date: 07/01/08, Expiration date: 06/30/09
Air Toxics Ltd. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-15
Trihydro Corporation
Workorder# 0907205B

One 6 Liter Summa Canister (100% Certified) sample was received on July 10, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***TO-15***	***ATL Modifications***
ICAL %RSD acceptance criteria	+- 30% RSD with 2 compounds allowed out to < 40% RSD	30% RSD with 4 compounds allowed out to < 40% RSD
Daily Calibration	+- 30% Difference	</= 30% Difference with four allowed out up to </=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases
Sample collection media	Summa canister	ATL recommends use of summa canisters to insure data defensibility, but will report results from Tedlar bags at client request

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The reported CCV for each daily batch may be derived from more than one analytical file due to the client's request for non-standard compounds. Non-standard compounds may have different acceptance criteria than the standard TO-14A/TO-15 compound list as per contract or verbal agreement.

All Quality Control Limit failures and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page.

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified may be false positives.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OA-1,070109

Lab ID#: 0907205B-06A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.43	0.86	2.1
Chloromethane	0.17	0.45	0.36	0.93
Freon 11	0.17	0.24	0.97	1.4
Ethanol	0.86	9.9	1.6	19
Acetone	0.86	95 E	2.0	230 E
2-Propanol	0.86	48	2.1	120
Methylene Chloride	0.35	1.1	1.2	3.9
Hexane	0.17	18	0.61	63
2-Butanone (Methyl Ethyl Ketone)	0.17	9.8	0.51	29
Benzene	0.17	0.31	0.55	0.99
Heptane	0.17	0.38	0.71	1.6
4-Methyl-2-pentanone	0.17	0.33	0.71	1.4
Toluene	0.17	18	0.65	69
Ethyl Benzene	0.17	0.32	0.75	1.4
m,p-Xylene	0.17	0.81	0.75	3.5
o-Xylene	0.17	0.35	0.75	1.5
4-Ethyltoluene	0.17	0.18	0.85	0.91
1,2,4-Trimethylbenzene	0.17	0.18	0.85	0.89
Isopentane	0.86	25	2.6	74
Butane	0.86	3.4	2.0	8.0

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Client Sample ID: OA-1,070109

Lab ID#: 0907205B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072215**	**Date of Collection:**	**7/1/09 1:42:00 PM**
Dil. Factor:	**1.73**	**Date of Analysis:**	**7/22/09 03:39 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.17	0.43	0.86	2.1
Freon 114	0.17	Not Detected	1.2	Not Detected
Chloromethane	0.17	0.45	0.36	0.93
Vinyl Chloride	0.17	Not Detected	0.44	Not Detected
1,3-Butadiene	0.17	Not Detected	0.38	Not Detected
Bromomethane	0.17	Not Detected	0.67	Not Detected
Chloroethane	0.17	Not Detected	0.46	Not Detected
Freon 11	0.17	0.24	0.97	1.4
Ethanol	0.86	9.9	1.6	19
Freon 113	0.17	Not Detected	1.3	Not Detected
1,1-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Acetone	0.86	95 E	2.0	230 E
2-Propanol	0.86	48	2.1	120
Carbon Disulfide	0.86	Not Detected	2.7	Not Detected
Methylene Chloride	0.35	1.1	1.2	3.9
Methyl tert-butyl ether	0.17	Not Detected U J	0.62	Not Detected U J
trans-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Hexane	0.17	18	0.61	63
1,1-Dichloroethane	0.17	Not Detected	0.70	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.17	9.8	0.51	29
cis-1,2-Dichloroethene	0.17	Not Detected	0.68	Not Detected
Tetrahydrofuran	0.86	Not Detected	2.6	Not Detected
Chloroform	0.17	Not Detected	0.84	Not Detected
1,1,1-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Cyclohexane	0.17	Not Detected	0.60	Not Detected
Carbon Tetrachloride	0.17	Not Detected	1.1	Not Detected
Benzene	0.17	0.31	0.55	0.99
1,2-Dichloroethane	0.17	Not Detected	0.70	Not Detected
Heptane	0.17	0.38	0.71	1.6
Trichloroethene	0.17	Not Detected	0.93	Not Detected
1,2-Dichloropropane	0.17	Not Detected	0.80	Not Detected
1,4-Dioxane	0.17	Not Detected	0.62	Not Detected
Bromodichloromethane	0.17	Not Detected	1.2	Not Detected
cis-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
4-Methyl-2-pentanone	0.17	0.33	0.71	1.4
Toluene	0.17	18	0.65	69
trans-1,3-Dichloropropene	0.17	Not Detected	0.78	Not Detected
1,1,2-Trichloroethane	0.17	Not Detected	0.94	Not Detected
Tetrachloroethene	0.17	Not Detected	1.2	Not Detected

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: OA-1,070109

Lab ID#: 0907205B-06A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072215**	**Date of Collection:**	**7/1/09 1:42:00 PM**
Dil. Factor:	**1.73**	**Date of Analysis:**	**7/22/09 03:39 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.86	Not Detected	3.5	Not Detected
Dibromochloromethane	0.17	Not Detected	1.5	Not Detected
1,2-Dibromoethane (EDB)	0.17	Not Detected	1.3	Not Detected
Chlorobenzene	0.17	Not Detected	0.80	Not Detected
Ethyl Benzene	0.17	0.32	0.75	1.4
m,p-Xylene	0.17	0.81	0.75	3.5
o-Xylene	0.17	0.35	0.75	1.5
Styrene	0.17	Not Detected	0.74	Not Detected
Bromoform	0.17	Not Detected	1.8	Not Detected
Cumene	0.17	Not Detected	0.85	Not Detected
1,1,2,2-Tetrachloroethane	0.17	Not Detected	1.2	Not Detected
Propylbenzene	0.17	Not Detected	0.85	Not Detected
4-Ethyltoluene	0.17	0.18	0.85	0.91
1,3,5-Trimethylbenzene	0.17	Not Detected	0.85	Not Detected
1,2,4-Trimethylbenzene	0.17	0.18	0.85	0.89
1,3-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,4-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
alpha-Chlorotoluene	0.17	Not Detected	0.90	Not Detected
1,2-Dichlorobenzene	0.17	Not Detected	1.0	Not Detected
1,2,4-Trichlorobenzene	0.86	Not Detected	6.4	Not Detected
Hexachlorobutadiene	0.86	Not Detected	9.2	Not Detected
Naphthalene	0.86	Not Detected	4.5	Not Detected
Butylbenzene	0.86	Not Detected	4.7	Not Detected
sec-Butylbenzene	0.86	Not Detected	4.7	Not Detected
Isopentane	0.86	25	2.6	74
Butane	0.86	3.4	2.0	8.0
Methylcyclohexane	0.86	Not Detected	3.5	Not Detected

E = Exceeds instrument calibration range.
UJ = Non-detected compound associated with low bias in the CCV
Container Type: 6 Liter Summa Canister (100% Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	108	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: Lab Blank

Lab ID#: 0907205B-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072212a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/22/09 01:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.10	Not Detected	0.49	Not Detected
Freon 114	0.10	Not Detected	0.70	Not Detected
Chloromethane	0.10	Not Detected	0.21	Not Detected
Vinyl Chloride	0.10	Not Detected	0.26	Not Detected
1,3-Butadiene	0.10	Not Detected	0.22	Not Detected
Bromomethane	0.10	Not Detected	0.39	Not Detected
Chloroethane	0.10	Not Detected	0.26	Not Detected
Freon 11	0.10	Not Detected	0.56	Not Detected
Ethanol	0.50	Not Detected	0.94	Not Detected
Freon 113	0.10	Not Detected	0.77	Not Detected
1,1-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Acetone	0.50	Not Detected	1.2	Not Detected
2-Propanol	0.50	Not Detected	1.2	Not Detected
Carbon Disulfide	0.50	Not Detected	1.6	Not Detected
Methylene Chloride	0.20	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.10	Not Detected U J	0.36	Not Detected U J
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Hexane	0.10	Not Detected	0.35	Not Detected
1,1-Dichloroethane	0.10	Not Detected	0.40	Not Detected
2-Butanone (Methyl Ethyl Ketone)	0.10	Not Detected	0.29	Not Detected
cis-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.10	Not Detected	0.49	Not Detected
1,1,1-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Cyclohexane	0.10	Not Detected	0.34	Not Detected
Carbon Tetrachloride	0.10	Not Detected	0.63	Not Detected
Benzene	0.10	Not Detected	0.32	Not Detected
1,2-Dichloroethane	0.10	Not Detected	0.40	Not Detected
Heptane	0.10	Not Detected	0.41	Not Detected
Trichloroethene	0.10	Not Detected	0.54	Not Detected
1,2-Dichloropropane	0.10	Not Detected	0.46	Not Detected
1,4-Dioxane	0.10	Not Detected	0.36	Not Detected
Bromodichloromethane	0.10	Not Detected	0.67	Not Detected
cis-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
4-Methyl-2-pentanone	0.10	Not Detected	0.41	Not Detected
Toluene	0.10	Not Detected	0.38	Not Detected
trans-1,3-Dichloropropene	0.10	Not Detected	0.45	Not Detected
1,1,2-Trichloroethane	0.10	Not Detected	0.54	Not Detected
Tetrachloroethene	0.10	Not Detected	0.68	Not Detected

Air Toxics LTD.
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Client Sample ID: Lab Blank

Lab ID#: 0907205B-07A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072212a**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/22/09 01:04 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
2-Hexanone	0.50	Not Detected	2.0	Not Detected
Dibromochloromethane	0.10	Not Detected	0.85	Not Detected
1,2-Dibromoethane (EDB)	0.10	Not Detected	0.77	Not Detected
Chlorobenzene	0.10	Not Detected	0.46	Not Detected
Ethyl Benzene	0.10	Not Detected	0.43	Not Detected
m,p-Xylene	0.10	Not Detected	0.43	Not Detected
o-Xylene	0.10	Not Detected	0.43	Not Detected
Styrene	0.10	Not Detected	0.42	Not Detected
Bromoform	0.10	Not Detected	1.0	Not Detected
Cumene	0.10	Not Detected	0.49	Not Detected
1,1,2,2-Tetrachloroethane	0.10	Not Detected	0.69	Not Detected
Propylbenzene	0.10	Not Detected	0.49	Not Detected
4-Ethyltoluene	0.10	Not Detected	0.49	Not Detected
1,3,5-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,2,4-Trimethylbenzene	0.10	Not Detected	0.49	Not Detected
1,3-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,4-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
alpha-Chlorotoluene	0.10	Not Detected	0.52	Not Detected
1,2-Dichlorobenzene	0.10	Not Detected	0.60	Not Detected
1,2,4-Trichlorobenzene	0.50	Not Detected	3.7	Not Detected
Hexachlorobutadiene	0.50	Not Detected	5.3	Not Detected
Naphthalene	0.50	Not Detected	2.6	Not Detected
Butylbenzene	0.50	Not Detected	2.7	Not Detected
sec-Butylbenzene	0.50	Not Detected	2.7	Not Detected
Isopentane	0.50	Not Detected	1.5	Not Detected
Butane	0.50	Not Detected	1.2	Not Detected
Methylcyclohexane	0.50	Not Detected	2.0	Not Detected

UJ = Non-detected compound associated with low bias in the CCV

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	109	70-130
Toluene-d8	99	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: CCV

Lab ID#: 0907205B-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072208**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/22/09 09:52 AM**	

Compound	%Recovery
Freon 12	111
Freon 114	102
Chloromethane	107
Vinyl Chloride	102
1,3-Butadiene	99
Bromomethane	95
Chloroethane	92
Freon 11	116
Ethanol	90
Freon 113	108
1,1-Dichloroethene	104
Acetone	102
2-Propanol	94
Carbon Disulfide	118
Methylene Chloride	99
Methyl tert-butyl ether	61 Q
trans-1,2-Dichloroethene	101
Hexane	102
1,1-Dichloroethane	107
2-Butanone (Methyl Ethyl Ketone)	103
cis-1,2-Dichloroethene	98
Tetrahydrofuran	101
Chloroform	109
1,1,1-Trichloroethane	109
Cyclohexane	102
Carbon Tetrachloride	129
Benzene	104
1,2-Dichloroethane	117
Heptane	104
Trichloroethene	111
1,2-Dichloropropane	102
1,4-Dioxane	97
Bromodichloromethane	120
cis-1,3-Dichloropropene	113
4-Methyl-2-pentanone	106
Toluene	106
trans-1,3-Dichloropropene	97
1,1,2-Trichloroethane	106
Tetrachloroethene	107

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: CCV

Lab ID#: 0907205B-08A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072208**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/22/09 09:52 AM**	

Compound	%Recovery
2-Hexanone	96
Dibromochloromethane	115
1,2-Dibromoethane (EDB)	107
Chlorobenzene	102
Ethyl Benzene	101
m,p-Xylene	103
o-Xylene	104
Styrene	99
Bromoform	119
Cumene	106
1,1,2,2-Tetrachloroethane	99
Propylbenzene	108
4-Ethyltoluene	109
1,3,5-Trimethylbenzene	106
1,2,4-Trimethylbenzene	107
1,3-Dichlorobenzene	103
1,4-Dichlorobenzene	102
alpha-Chlorotoluene	111
1,2-Dichlorobenzene	103
1,2,4-Trichlorobenzene	80
Hexachlorobutadiene	94
Naphthalene	70
Butylbenzene	82
sec-Butylbenzene	85
Isopentane	102
Butane	106
Methylcyclohexane	102

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	103	70-130
4-Bromofluorobenzene	104	70-130

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907205B-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072207**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/22/09 09:01 AM**	

Compound	%Recovery
Freon 12	115
Freon 114	107
Chloromethane	103
Vinyl Chloride	104
1,3-Butadiene	101
Bromomethane	104
Chloroethane	100
Freon 11	120
Ethanol	68
Freon 113	123
1,1-Dichloroethene	111
Acetone	90
2-Propanol	85
Carbon Disulfide	97
Methylene Chloride	107
Methyl tert-butyl ether	78
trans-1,2-Dichloroethene	101
Hexane	101
1,1-Dichloroethane	111
2-Butanone (Methyl Ethyl Ketone)	104
cis-1,2-Dichloroethene	101
Tetrahydrofuran	99
Chloroform	112
1,1,1-Trichloroethane	114
Cyclohexane	101
Carbon Tetrachloride	128
Benzene	102
1,2-Dichloroethane	120
Heptane	102
Trichloroethene	111
1,2-Dichloropropane	99
1,4-Dioxane	90
Bromodichloromethane	118
cis-1,3-Dichloropropene	105
4-Methyl-2-pentanone	102
Toluene	108
trans-1,3-Dichloropropene	101
1,1,2-Trichloroethane	109
Tetrachloroethene	112

Air Toxics LTD.
Laboratory Services Since 1989

Client Sample ID: LCS

Lab ID#: 0907205B-09A

MODIFIED EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**z072207**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 7/22/09 09:01 AM**	

Compound	%Recovery
2-Hexanone	98
Dibromochloromethane	120
1,2-Dibromoethane (EDB)	106
Chlorobenzene	104
Ethyl Benzene	105
m,p-Xylene	102
o-Xylene	103
Styrene	101
Bromoform	118
Cumene	109
1,1,2,2-Tetrachloroethane	97
Propylbenzene	109
4-Ethyltoluene	106
1,3,5-Trimethylbenzene	102
1,2,4-Trimethylbenzene	103
1,3-Dichlorobenzene	101
1,4-Dichlorobenzene	97
alpha-Chlorotoluene	112
1,2-Dichlorobenzene	96
1,2,4-Trichlorobenzene	65 Q
Hexachlorobutadiene	65 Q
Naphthalene	70
Butylbenzene	Not Spiked
sec-Butylbenzene	Not Spiked
Isopentane	109
Butane	106
Methylcyclohexane	99

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	107	70-130
Toluene-d8	97	70-130
4-Bromofluorobenzene	105	70-130