



EMSL Analytical
 200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856)858-4800 / (856)858-4571
<http://www.EMSL.com> TO-15_Lab@emsl.com

EMSL Order #: **491400491**
 Customer ID: **QAIL42**
 Customer PO: **1354**

Attn: **QAI Laboratories**
QAI Laboratories
1325 N. 108th East Ave.
Tulsa, OK 74116

Phone: **918-437-8333**
 Fax: **Not Available**

Project: **TJ1768 – TO-15+ Bulk Sample**

Collected: **05/27/2014**
 Received: **06/06/2014**

Laboratory Report- Sample Summary

EMSL Sample ID.	Client Sample ID.	Start Sampling Date	Start Sampling Time
491400491-0001	Duct Amour	5/27/2014	
491400491-B	Background Sample	Prepped 6/10/14	

If "Preliminary Report" is displayed in the signature box; this indicates that there are samples that have not yet been analyzed, that are in a preliminary state, or that analysis is in progress but not completed at the time of report issue.

Report Date:	Report Revision	Revision Comments
06/13/2014	R1	Initial Report
07/02/2014	R2	Corrected CAS numbers

Marjorie Howley, Laboratory Manager
 or other approved signatory

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EMSL Order #: **491400491**
 EMSL Sample #: **491400491-1**
 Customer ID: **QAIL42**
 Customer PO: **1354**

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Phone: **918-437-8333**
 Fax: **Not Available**
 Date Collected: **05/27/2014**
 Date Received: **06/06/2014**

Project: **TJ1768 -- TO-15+ Bulk Sample**

Sample ID: **Duct Amour**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	06/11/2014	RR	J0734.D	Jar1	125 cc	2

Target Compound Results Summary -PPMV

Target Compounds	CAS#	MW	Result ppmv	RL ppmv	Q	Result mg/m3	RL mg/m3	Comments
Propylene	115-07-1	42.08	ND	0.0020		ND	0.0034	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.0010		ND	0.0049	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.0010		ND	0.0070	
Chloromethane	74-87-3	50.49	ND	0.0010		ND	0.0021	
n-Butane	106-97-8	58.12	ND	0.0010		ND	0.0024	
Vinyl chloride	75-01-4	62.50	ND	0.0010		ND	0.0026	
1,3-Butadiene	106-99-0	54.09	ND	0.0010		ND	0.0022	
Bromomethane	74-83-9	94.94	ND	0.0010		ND	0.0039	
Chloroethane	75-00-3	64.52	ND	0.0010		ND	0.0026	
Ethanol	64-17-5	46.07	0.0880	0.0010	E	0.1700	0.0019	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.0010		ND	0.0044	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.0010		ND	0.0056	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	0.1300	0.0010	E	0.3100	0.0025	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.0010		ND	0.0077	
Acetone	67-64-1	58.08	0.0210	0.0010		0.0500	0.0024	
1,1-Dichloroethene	75-35-4	96.94	ND	0.0010		ND	0.0040	
Acetonitrile	75-05-8	41.00	ND	0.0010		ND	0.0017	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.0010		ND	0.0030	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.0010		ND	0.0044	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.0010		ND	0.0031	
Carbon disulfide	75-15-0	76.14	ND	0.0010		ND	0.0031	
Methylene chloride	75-09-2	84.94	0.0016	0.0010		0.0055	0.0035	
Acrylonitrile	107-13-1	53.00	ND	0.0010		ND	0.0022	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.0010		ND	0.0036	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.0010		ND	0.0040	
n-Hexane	110-54-3	86.17	ND	0.0010		ND	0.0035	
1,1-Dichloroethane	75-34-3	98.96	ND	0.0010		ND	0.0040	
Vinyl acetate	108-05-4	86.00	ND	0.0010		ND	0.0035	
2-Butanone(MEK)	78-93-3	72.10	ND	0.0010		ND	0.0029	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.0010		ND	0.0040	
Ethyl acetate	141-78-6	88.10	ND	0.0010		ND	0.0036	
Chloroform	67-66-3	119.4	ND	0.0010		ND	0.0049	
Tetrahydrofuran	109-99-9	72.11	ND	0.0010		ND	0.0029	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.0010		ND	0.0055	
Cyclohexane	110-82-7	84.16	ND	0.0010		ND	0.0034	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.0010		ND	0.0047	
Carbon tetrachloride	56-23-5	153.8	ND	0.0010		ND	0.0063	
n-Heptane	142-82-5	100.2	ND	0.0010		ND	0.0041	
1,2-Dichloroethane	107-06-2	98.96	ND	0.0010		ND	0.0040	
Benzene	71-43-2	78.11	ND	0.0010		ND	0.0032	
Trichloroethene	79-01-6	131.4	ND	0.0010		ND	0.0054	
1,2-Dichloropropane	78-87-5	113.0	ND	0.0010		ND	0.0046	
Methyl Methacrylate	80-62-6	100.12	ND	0.0010		ND	0.0041	
Bromodichloromethane	75-27-4	163.8	ND	0.0010		ND	0.0067	
1,4-Dioxane	123-91-1	88.12	ND	0.0010		ND	0.0036	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.0010		ND	0.0041	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.0010		ND	0.0045	



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EMSL Order #: **491400491**
 EMSL Sample #: **491400491-1**
 Customer ID: **QAIL42**
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Attn: **QAI Laboratories**
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Tulsa, OK 74116

Phone: **918-437-8333**
 Fax: **Not Available**
 Date Collected: **05/27/2014**
 Date Received: **06/06/2014**

Project: **TJ1768 -- TO-15+ Bulk Sample**

Sample ID: **Duct Amour**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	06/11/2014	RR	J0734.D	Jar1	125 cc	2

Target Compound Results Summary -PPMV

Target Compounds	CAS#	MW	Result ppmv	RL ppmv	Q	Result mg/m3	RL mg/m3	Comments
Toluene	108-88-3	92.14	ND	0.0010		ND	0.0038	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.0010		ND	0.0045	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.0010		ND	0.0055	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.0010		ND	0.0041	
Tetrachloroethene	127-18-4	165.8	ND	0.0010		ND	0.0068	
Dibromochloromethane	124-48-1	208.3	ND	0.0010		ND	0.0085	
1,2-Dibromoethane	106-93-4	187.8	ND	0.0010		ND	0.0077	
Chlorobenzene	108-90-7	112.6	ND	0.0010		ND	0.0046	
Ethylbenzene	100-41-4	106.2	ND	0.0010		ND	0.0043	
Xylene (p,m)	1330-20-7	106.2	ND	0.0020		ND	0.0087	
Xylene (Ortho)	95-47-6	106.2	ND	0.0010		ND	0.0043	
Styrene	100-42-5	104.1	ND	0.0010		ND	0.0043	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.0010		ND	0.0049	
Bromoform	75-25-2	252.8	ND	0.0010		ND	0.0100	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.0010		ND	0.0069	
4-Ethyltoluene	622-96-8	120.2	ND	0.0010		ND	0.0049	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.0010		ND	0.0049	
2-Chlorotoluene	95-49-8	126.6	ND	0.0010		ND	0.0052	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.0010		ND	0.0049	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.0010		ND	0.0060	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.0010		ND	0.0060	
Benzyl chloride	100-44-7	126.0	ND	0.0010		ND	0.0052	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.0010		ND	0.0060	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.0010		ND	0.0074	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.0010		ND	0.0110	
Naphthalene	91-20-3	128.17	ND	0.0010		ND	0.0052	
Total Target Compound Concentrations:			0.2400	ppmv		0.5400	mg/m3	

Surrogate

4-Bromofluorobenzene

Result
9.8

Spike
10

Recovery
98%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).



NJDEP Certification #: 03036

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 Customer ID: **QAIL42**
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Attn: **QAI Laboratories**
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1325 N. 108th East Ave.
Tulsa, OK 74116

Phone: **918-437-8333**
 Fax: **Not Available**
 Date Collected: **05/27/2014**
 Date Received: **06/06/2014**

Project: **TJ1768 -- TO-15+ Bulk Sample**

Sample ID: **Not Supplied**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	06/12/2014	RR	J0755.D	Jar3	125 cc	2

Target Compound Results Summary -PPMV

Target Compounds	CAS#	MW	Result ppmv	RL ppmv	Q	Result mg/m3	RL mg/m3	Comments
Propylene	115-07-1	42.08	ND	0.0020		ND	0.0034	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	0.0010		ND	0.0049	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	0.0010		ND	0.0070	
Chloromethane	74-87-3	50.49	ND	0.0010		ND	0.0021	
n-Butane	106-97-8	58.12	ND	0.0010		ND	0.0024	
Vinyl chloride	75-01-4	62.50	ND	0.0010		ND	0.0026	
1,3-Butadiene	106-99-0	54.09	ND	0.0010		ND	0.0022	
Bromomethane	74-83-9	94.94	ND	0.0010		ND	0.0039	
Chloroethane	75-00-3	64.52	ND	0.0010		ND	0.0026	
Ethanol	64-17-5	46.07	0.0360	0.0010		0.0670	0.0019	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	0.0010		ND	0.0044	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	0.0010		ND	0.0056	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	0.0290	0.0010		0.0720	0.0025	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	0.0010		ND	0.0077	
Acetone	67-64-1	58.08	0.0100	0.0010		0.0250	0.0024	
1,1-Dichloroethene	75-35-4	96.94	ND	0.0010		ND	0.0040	
Acetonitrile	75-05-8	41.00	ND	0.0010		ND	0.0017	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	0.0010		ND	0.0030	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	0.0010		ND	0.0044	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	0.0010		ND	0.0031	
Carbon disulfide	75-15-0	76.14	ND	0.0010		ND	0.0031	
Methylene chloride	75-09-2	84.94	ND	0.0010		ND	0.0035	
Acrylonitrile	107-13-1	53.00	ND	0.0010		ND	0.0022	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	0.0010		ND	0.0036	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	0.0010		ND	0.0040	
n-Hexane	110-54-3	86.17	ND	0.0010		ND	0.0035	
1,1-Dichloroethane	75-34-3	98.96	ND	0.0010		ND	0.0040	
Vinyl acetate	108-05-4	86.00	ND	0.0010		ND	0.0035	
2-Butanone(MEK)	78-93-3	72.10	ND	0.0010		ND	0.0029	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	0.0010		ND	0.0040	
Ethyl acetate	141-78-6	88.10	ND	0.0010		ND	0.0036	
Chloroform	67-66-3	119.4	ND	0.0010		ND	0.0049	
Tetrahydrofuran	109-99-9	72.11	ND	0.0010		ND	0.0029	
1,1,1-Trichloroethane	71-55-6	133.4	ND	0.0010		ND	0.0055	
Cyclohexane	110-82-7	84.16	ND	0.0010		ND	0.0034	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	0.0010		ND	0.0047	
Carbon tetrachloride	56-23-5	153.8	ND	0.0010		ND	0.0063	
n-Heptane	142-82-5	100.2	ND	0.0010		ND	0.0041	
1,2-Dichloroethane	107-06-2	98.96	ND	0.0010		ND	0.0040	
Benzene	71-43-2	78.11	ND	0.0010		ND	0.0032	
Trichloroethene	79-01-6	131.4	ND	0.0010		ND	0.0054	
1,2-Dichloropropane	78-87-5	113.0	ND	0.0010		ND	0.0046	
Methyl Methacrylate	80-62-6	100.12	ND	0.0010		ND	0.0041	
Bromodichloromethane	75-27-4	163.8	ND	0.0010		ND	0.0067	
1,4-Dioxane	123-91-1	88.12	ND	0.0010		ND	0.0036	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	0.0010		ND	0.0041	
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	0.0010		ND	0.0045	



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Phone: **918-437-8333**
 Fax: **Not Available**
 Date Collected: **05/27/2014**
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Project: **TJ1768 -- TO-15+ Bulk Sample**

Sample ID: **Not Supplied**

<u>Analysis</u>	<u>Analysis Date</u>	<u>Analyst Init.</u>	<u>Lab File ID</u>	<u>Canister ID</u>	<u>Sample Vol.</u>	<u>Dil. Factor</u>
Initial	06/12/2014	RR	J0755.D	Jar3	125 cc	2

Target Compound Results Summary -PPMV

Target Compounds	CAS#	MW	Result ppmv	RL ppmv	Q	Result mg/m3	RL mg/m3	Comments
Toluene	108-88-3	92.14	ND	0.0010		ND	0.0038	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	0.0010		ND	0.0045	
1,1,2-Trichloroethane	79-00-5	133.4	ND	0.0010		ND	0.0055	
2-Hexanone(MBK)	591-78-6	100.1	ND	0.0010		ND	0.0041	
Tetrachloroethene	127-18-4	165.8	ND	0.0010		ND	0.0068	
Dibromochloromethane	124-48-1	208.3	ND	0.0010		ND	0.0085	
1,2-Dibromoethane	106-93-4	187.8	ND	0.0010		ND	0.0077	
Chlorobenzene	108-90-7	112.6	ND	0.0010		ND	0.0046	
Ethylbenzene	100-41-4	106.2	ND	0.0010		ND	0.0043	
Xylene (p,m)	1330-20-7	106.2	ND	0.0020		ND	0.0087	
Xylene (Ortho)	95-47-6	106.2	ND	0.0010		ND	0.0043	
Styrene	100-42-5	104.1	ND	0.0010		ND	0.0043	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	0.0010		ND	0.0049	
Bromoform	75-25-2	252.8	ND	0.0010		ND	0.0100	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	0.0010		ND	0.0069	
4-Ethyltoluene	622-96-8	120.2	ND	0.0010		ND	0.0049	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	0.0010		ND	0.0049	
2-Chlorotoluene	95-49-8	126.6	ND	0.0010		ND	0.0052	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	0.0010		ND	0.0049	
1,3-Dichlorobenzene	541-73-1	147.0	ND	0.0010		ND	0.0060	
1,4-Dichlorobenzene	106-46-7	147.0	ND	0.0010		ND	0.0060	
Benzyl chloride	100-44-7	126.0	ND	0.0010		ND	0.0052	
1,2-Dichlorobenzene	95-50-1	147.0	ND	0.0010		ND	0.0060	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	0.0010		ND	0.0074	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	0.0010		ND	0.0110	
Naphthalene	91-20-3	128.17	ND	0.0010		ND	0.0052	
Total Target Compound Concentrations:			0.0750	ppmv		0.1600	mg/m3	

Surrogate

4-Bromofluorobenzene

Result
9.4

Spike
10

Recovery
94%

Qualifier Definitions

ND = Non Detect

B = Compound also found in method blank.

E = Estimated concentration exceeding upper calibration range.

D = Result reported from diluted analysis.

Method Reference

USEPA: Compendium Method TO-15, "Determination of Volatile Organic Compounds (VOCs) in Air..." Collected in Specially-Prepared Canisters and Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), January 1999, (EPA/625/R-96/010b).



NJDEP Certification #: 03036



EMSL ANALYTICAL, INC.
LABORATORY PRODUCTS • TRAINING

491400491

Chain of Custody

EMSL Order Number (Lab Use Only):

EMSL ANALYTICAL, INC.
200 ROUTE 130 NORTH
CHINAMONSON, NJ 08077
PHONE (856) 858-4800
FAX (856) 858-3502

Report To Contact Name: QAI Laboratories	Bill To Company: Same	Sampled By (Signature):
Company Name: QAI Laboratories	Attention To: Celeste Beato	Number of Samples in Shipment: 1
Address 1: 1325 North 108 th East Avenue	Address 1: Same	Date of Shipment: 5/30/14
Address 2:	Address 2: Same	U.S. State where Samples Collected: OK
Phone : 918-437-8333	Fax : 918-437-8487	Purchase Order: 1354
Email Results To: rworch@qai.org	Project Name: TJ1768	

Turnaround Time – Please Check: Please Note Standard TAT is 2 Week.					
2 Week	1 Week	4 Day	3 Day	2 Day	1 Day
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			Other (Call Lab)	Lot #:	
				Media Type: Coating	
				Manufacturer/Part #:	

Sample ID	Media	Analyte / Method	Volume	Sample Date/Time	Location	Comments
Duct Amour	Coating	VOAs via TO-15 w/ library	32 sq in	5/27/14	Tulsa, OK	

Note: Most NIOSH and OSHA methods require field blanks. It is the IH field sampler's responsibility to submit the proper number of field blanks and duplicates.

Released By	Date	Received By	Date
		<i>[Signature]</i>	6/10/2014
		<i>[Signature]</i>	6/6/14
			Analyst Receipt

Comments: