TTI ENVIRONMENTAL, INC
Consulting & Contracting

1253 North Church Street, Moorestown, NJ 08057
www.ttienv.com o 856-840-8800 f 856-840-8815

October 5, 2017

Mr. Stephen J. Brennan, MBA, CPA
Business Administrator/Board Secretary
Pinelands Regional School District
520 Nugentown Road, Little Egg Harbor, New Jersey 08087

Reference: Indoor Air Quality Testing
Pinelands Regional High School
TTI Project No. 17-1224

Dear Mr. Brennan:

In response to your request, TTI Environmental, Inc. (TTI) conducted indoor air quality testing utilizing TO-15 canisters in two (2) locations at the Pinelands Regional High School. The study was performed at the request of the District in request to concerns by school staff of possible indoor air quality associated with the on-going roofing project. The results of the sampling are attached to this letter report.

The results of the sampling revealed slightly elevated levels of target compounds above the USEPA Air Screening Levels for Residential and Industrial Standards. At this time, TTI recommends the building remain unoccupied until further investigation and testing can be conducted.

If you should have any questions or require additional information, please feel free to contact me at any time.

Sincerely,

James A. Guilardi
Senior Project Manager

AIR SAMPLING ANALYSIS RESULTS

USEPA TO-15
External Chain of Custody/ Field Test Data Sheet

EMSL Analytical, Inc.
200 Route 130 North
Cinnaminson, NJ 08077
Ph. (800) 220-3675
Fax (856) 786-0327

EMSL ANALYTICAL, INC.

EMSL Order Number (Lab Use Only): 491700999

Report To Contact Name: Jim Gaillard	Bill To Company: Same	Sampled By (Sign):
Company Name: TTI Environmental Inc.	Attention To:	Sampled By (Name): A. Cullitan
Address 1: 1253 N Church St.	Address 1:	Total # of Samples: 2
Address 2: Moorestown, NJ	Address 2:	Date Shipped:
Phone No.: 609-314-1683 Fax:	Phone No.: Fax:	Sample Collection Zip Code: 08087
Email Results To: J.mcG@TTIENV.com	Project Name: 17-1224 Pinelands Region	Purchase Order: 023650

Turnaround Time (In Business Days): ☐ 10 Day Standard ☐ 5 Day ☐ 4 Day ☐ 3 Day ☐ 2 Day ☒ 1 Day ☐ Other

Reporting Format: ☒ Results Only (Standard Lab Report) ☐ Full Deliverables (Surcharge may apply) ☐ Other

Field Use - All Information Required! | Lab Use Only

EMSL Sample Identifier	Client Field Sample Identification	Sampling Start Information Barometric Pres. ("Hg): 30.5 Start Date	Time (24 hr clock)	Canister Pressure ("Hg)	Interior Temp. (F)	Sampling Stop Information Barometric Pres. ("Hg): 30.5 Stop Date	Time (24 hr clock)	Canister Pressure ("Hg)	Interior Temp. (F)	Canister Information: Canister ID	Size (L)	Can Cert Batch ID	Outgoing Pressure ("Hg)	Incoming Pressure ("Hg)	Flow Controller: Reg. ID	Cal Flow (ml/min)	Analysis: USEPA TO-15	NJDEP LLTO-15	LIBRARY SEARCH	Other (Specify)	Matrix: Indoor/ Ambient Air	Soil Gas	Landfill/ Vent
	Room 164	10-3-17	1037	-30.9	68°F	10-3-17	1648	-5.0	68°F	E0263	6	C3509	-29.6	-4.4	3690	141	X		X		X		
	Upper level-Media	10-3-17	1042	-30.2	69°F	10-3-17	1649	-5.0	69°F	0657	↓	↓	↓	-3.4	5955	↓	X		X		X		

RECEIVED OCT 04 2017 CINNAMINSON, N.J. ENSL

Comments:

Lab Canister Certification
Analyst Signature (TO-15):

Relinquished by:	Date/ Time	Received by:	Date/ Time	Affixed Seal #	Reason for Exchange (circle appropriate)
	10/3/17 0827				Shipping Courier Receiving Sampling (Other) PKU
	10/3/17 18:45		10/3/17 6:45pm		(Shipping) Courier Receiving Sampling Other:
	10/3/17 6:45pm		10/4/17 0724		Shipping Courier Receiving Sampling (Other) AN
					Shipping Courier Receiving Sampling Other:
					Shipping Courier Receiving Sampling Other:

4917700999

TO-15 Sample Information

Please fill out this worksheet in addition to the Chain of Custody form. This information helps us to best analyze your samples, achieve requested TAT and provide you with helpful interpretation information.

Company: TTI Environmental, Inc.

Contact Person:

Name: Jim Ciuilardi

E-mail: JimG@TTIENV.com

Additional E-mails:

Telephone #: 609-314-1083

Library Search requested: [X] YES [ ] NO

A library search (*aka Tentatively Identified Compounds*) will identify up to 20 of the largest, non-target peaks that are not part of the standard TO-15 list of 74 compounds. If you are performing an Indoor Air Quality or odor investigation, the library search is recommended to provide you with all available information for your sample.

Sample Type:

[X] Indoor Air Quality (Home/Office) [ ] Soil Gas/Sub Slab
[ ] IAQ (Industrial)
[ ] Other:

Sample Description: Room 164 and Upper Level (Media)

RECEIVED EMSL CINNAMINSON, N.J. 2017 OCT -3 P 6:46

PLEASE NOTE: The result forms that we provide will not indicate whether your results have exceeded any Exposure Limit criteria established by any regulatory agency. If you would like that information, please check off below which regulatory comparison forms you would like to receive.

[ ] OSHA PELs/NIOSH RELs *combined form*
[ ] EPA RSLs - *5/2016 Blended for THQ=1.0 and THQ=0.1*
[X] NJ DEP *1/2013* - **Circle one:** (Indoor Air) Soil Gas
[ ] NC DENR *4/2014* **-Circle one:** Residential Non-residentia
[ ] PA DEP - *11/2016* Indoor Air
[ ] PA DEP- 11/2016: Sub Slab Soil Gas OR Near Source Soil Gas
[ ] CA HHSL *11/2004* - **Circle on** Indoor Air Soil Gas
[ ] Potential Sources of Compounds found in your IAQ sample
[X] TVOC (Library Search Required for this format)
[ ] Ohio *4/2013* **-Circle one:** Residential Commercial
[ ] Indiana Dept Env Mgmt Screeening Levels *3/2016*
[ ] Vermont DEP IROCP *4/2012* **(soil gas only)**
[ ] California OEHHA *2/2012*
[ ] Other, These are the compounds I want reported:

Additional analyses that can be performed from your canister. Please note: there is an additional charge for any of the tests below.

US EPA TO-3 via GC/FID **(choose one below):**
[ ] C_1-C_6 hydrocarbons
[ ] Methane only

ASTM-D5504 *via GC/SCD* **(choose one below):** *
[ ] Sulfur Scan (H_2S, COS, MeSH, EtSH, DMS)
[ ] H_2S only

***Note**: *Hold time for sulfur gases is 1 day from collection. Please schedule your sample collection so that samples are received in the lab prior to noon on Friday. Analysis performed out of hold time will have a notation in the report.*

We can provide the following CMS tests from your canisters. Please note that these tests are to be used for IAQ/Screening purposes ONLY. EMSL recommends alternate field sampling techniques for these parameters (with the exception of water vapor); please contact your sales rep for the proper media. Please note: there is an additional charge for any of the tests

Draeger CMS Analyzer:
[ ] CO [ ] CO_2 [ ] NH_3 [ ] O2 [ ] Water Vapor

Sample Retention Policy: All canisters are guaranteed to be retained for one day after results are reported. Please review your results promptly to ensure that your project scope is fully addressed. Cans may be retained for a longer period of time but arrangements to hold your cans must be made through your customer account representative quickly. Thank you.

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Phone/Fax: (856)858-4800 / (856)858-4571
http://www.EMSL.com to15lab@EMSL.com

EMSL Order #: **491700999**
EMSL Sample #: **491700999-1**
Customer ID: **TTIE54**
Customer PO: **23650**

Attn: **Jim Guilardi**
TTI Environmental Inc.
1253 North Church Street
Moorestown, NJ 08057

Phone: **856-840-8800**
Fax: **856-840-8815**
Date Collected: **10/3/2017**
Date Received: **10/4/2017**

Project: **17-1224 Pinelands Regional**

Sample ID: **Room 164**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	10/05/2017	MTH	P0921.D	E0263	290 cc	1

USEPA Generic Air Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Residential ug/m3	>	Industrial ug/m3	>
Propylene	115-07-1	42.08	ND		ND	3100		13000	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	100		440	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	N.E.		N.E.	
Chloromethane	74-87-3	50.49	0.78		1.6	94.0		390	
n-Butane	106-97-8	58.12	1.7		4.1	N.E.		N.E.	
Vinyl chloride	75-01-4	62.50	ND		ND	0.170		2.80	
1,3-Butadiene	106-99-0	54.09	ND		ND	0.0940		0.410	
Bromomethane	74-83-9	94.94	ND		ND	5.20		22.0	
Chloroethane	75-00-3	64.52	ND		ND	10000		44000	
Ethanol	64-17-5	46.07	18		34	N.E.		N.E.	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	0.0880		0.380	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	0.98		5.5	N.E.		N.E.	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.5		3.7	210		880	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	31000		130000	
Acetone	67-64-1	58.08	6.0		14	32000		140000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	210		880	
Acetonitrile	75-05-8	41.00	ND		ND	63.0		260	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	N.E.		N.E.	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	N.E.		N.E.	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	0.470		2.00	
Carbon disulfide	75-15-0	76.14	ND		ND	730		3100	
Methylene chloride	75-09-2	84.94	ND		ND	100		1200	
Acrylonitrile	107-13-1	53.00	ND		ND	0.0410		0.180	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	11.0		47.0	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	N.E.		N.E.	
n-Hexane	110-54-3	86.17	ND		ND	730		3100	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	1.80		7.70	
Vinyl acetate	108-05-4	86.00	ND		ND	210		880	
2-Butanone(MEK)	78-93-3	72.10	ND		ND	5200		22000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	N.E.		N.E.	
Ethyl acetate	141-78-6	88.10	ND		ND	73.0		310	
Chloroform	67-66-3	119.40	ND		ND	0.120		0.530	
Tetrahydrofuran	109-99-9	72.11	ND		ND	2100		8800	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	5200		22000	
Cyclohexane	110-82-7	84.16	ND		ND	6300		26000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	0.470		2.00	
n-Heptane	142-82-5	100.20	ND		ND	N.E.		N.E.	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	0.110		0.470	
Benzene	71-43-2	78.11	ND		ND	0.360		1.60	
Trichloroethene	79-01-6	131.40	ND		ND	0.480		3.00	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	0.280		1.20	
Methyl Methacrylate	80-62-6	100.12	ND		ND	730		3100	
Bromodichloromethane	75-27-4	163.80	ND		ND	0.0760		0.330	
1,4-Dioxane	123-91-1	88.12	ND		ND	0.560		2.50	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	3100		13000	

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Moorestown, NJ 08057

Phone: **856-840-8800**
Fax: **856-840-8815**
Date Collected: **10/3/2017**
Date Received: **10/4/2017**

Project: **17-1224 Pinelands Regional**

Sample ID: **Room 164**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	10/05/2017	MTH	P0921.D	E0263	290 cc	1

USEPA Generic Air Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Residential ug/m3	>	Industrial ug/m3	>
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	N.E.		N.E.	
Toluene	108-88-3	92.14	1.0		3.8	5200		22000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	N.E.		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	0.180		0.770	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	31.0		130	
Tetrachloroethene	127-18-4	165.80	ND		ND	11.0		47.0	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	0.00470		0.0200	
Chlorobenzene	108-90-7	112.60	ND		ND	52.0		220	
Ethylbenzene	100-41-4	106.20	0.63		2.7	1.10		4.90	
Xylene (p,m)	1330-20-7	106.20	2.1		9.0	100		440	
Xylene (Ortho)	95-47-6	106.20	0.80		3.5	100		440	
Styrene	100-42-5	104.10	ND		ND	1000		4400	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	420		1800	
Bromoform	75-25-2	252.80	ND		ND	2.60		11.0	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	0.0480		0.210	
4-Ethyltoluene	622-96-8	120.20	2.1		10	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	0.98		4.8	N.E.		N.E.	
2-Chlorotoluene	95-49-8	126.60	ND		ND	N.E.		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	3.0		15	7.30		31.0	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	0.260		1.10	
Benzyl chloride	100-44-7	126.00	ND		ND	0.0570		0.250	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	210		880	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	2.10		8.80	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	0.130		0.560	
Naphthalene	91-20-3	128.17	ND		ND	0.0830		0.360	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
RSL= Regional Screening Level {Target Hazard Quotient (THQ) =0.1 if available, otherwise THQ = 1}

Agency Definitions
United States Environmental Protection Agency

Reference
EPA Regional Screening Levels (RSLs), May 2016

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration
NS= No Sscreening Value

Regional Screening Level Definition
Target Hazard Quotients (THQ)=0.1 is used for screening when multiple contaminants of concern are

NJDEP Certification #: 03036

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Date Collected: **10/3/2017**
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Project: **17-1224 Pinelands Regional**

Sample ID: **Room 164**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	10/05/2017	MTH	P0921.D	E0263	290 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Propylene	115-07-1	42.08	ND		ND	N.E.		N.E.	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	ND		ND	4900000		4900000	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	7000000		7000000	
Chloromethane	74-87-3	50.49	0.78		1.6	LFC		210000	
n-Butane	106-97-8	58.12	1.7		4.1	1900000		1900000	
Vinyl chloride	75-01-4	62.50	ND		ND	LFC		2600	
1,3-Butadiene	106-99-0	54.09	ND		ND	LFC		2200	
Bromomethane	74-83-9	94.94	ND		ND	LFC		78000	
Chloroethane	75-00-3	64.52	ND		ND	LFC		2600000	
Ethanol	64-17-5	46.07	18		34	1900000		1900000	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	LFC		N.E.	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	0.98		5.5	5600000		5600000	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	1.5		3.7	980000		980000	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	7700000		7700000	
Acetone	67-64-1	58.08	6.0		14	590000		2400000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	790000		790000	
Acetonitrile	75-05-8	41.00	ND		ND	34000		67000	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	300000		300000	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	880000		880000	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	3100		3100	
Carbon disulfide	75-15-0	76.14	ND		ND	3100		62000	
Methylene chloride	75-09-2	84.94	ND		ND	LFC		87000	
Acrylonitrile	107-13-1	53.00	ND		ND	2200		4300	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	N.E.		N.E.	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	790000		790000	
n-Hexane	110-54-3	86.17	ND		ND	180000		1800000	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	400000		400000	
Vinyl acetate	108-05-4	86.00	ND		ND	14000		N.E.	
2-Butanone(MEK)	78-93-3	72.10	ND		ND	590000		590000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	790000		790000	
Ethyl acetate	141-78-6	88.10	ND		ND	1400000		1400000	
Chloroform	67-66-3	119.40	ND		ND	9800		240000	
Tetrahydrofuran	109-99-9	72.11	ND		ND	590000		590000	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	1900000		1900000	
Cyclohexane	110-82-7	84.16	ND		ND	1000000		1000000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	ND		ND	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	13000		63000	
n-Heptane	142-82-5	100.20	ND		ND	350000		2000000	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	4000		200000	
Benzene	71-43-2	78.11	ND		ND	320		3200	
Trichloroethene	79-01-6	131.40	ND		ND	130000		540000	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	LFC		350000	
Methyl Methacrylate	80-62-6	100.12	ND		ND	410000		410000	
Bromodichloromethane	75-27-4	163.80	ND		ND	N.E.		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	3600		360000	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	200000		410000	

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Initial	10/05/2017	MTH	P0921.D	E0263	290 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	4500		N.E.	
Toluene	108-88-3	92.14	1.0		3.8	380000		750000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	4500		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	55000		55000	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	4100		410000	
Tetrachloroethene	127-18-4	165.80	ND		ND	LFC		680000	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	350		150000	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		350000	
Ethylbenzene	100-41-4	106.20	0.63		2.7	430000		430000	
Xylene (p,m)	1330-20-7	106.20	2.1		9.0	430000		430000	
Xylene (Ortho)	95-47-6	106.20	0.80		3.5	430000		430000	
Styrene	100-42-5	104.10	ND		ND	210000		430000	
Isopropylbenzene (cumene)	98-82-8	120.19	ND		ND	250000		250000	
Bromoform	75-25-2	252.80	ND		ND	5200		5200	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	6900		34000	
4-Ethyltoluene	622-96-8	120.20	2.1		10	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	0.98		4.8	120000		120000	
2-Chlorotoluene	95-49-8	126.60	ND		ND	260000		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	3.0		15	120000		120000	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	LFC		450000	
Benzyl chloride	100-44-7	126.00	ND		ND	5200		5200	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	300000		300000	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	37000		N.E.	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	210		N.E.	
Naphthalene	91-20-3	128.17	ND		ND	52000		52000	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
REL= Recommended Exposure Limit, PEL= Permissable Exposure Limit

Agency Definitions
NIOSH= The National Institute for Occupational Safety and Health

Compound Exposure Definitions
NE= No Limit Established
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Reference
Occupational Safety and Health Administration (OSHA) General Industry Air Contaminants Standard (29 CFR 1910.1000)

NJDEP Certification #: 03036

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EMSL Order #: **491700999**
EMSL Sample #: **491700999-2**
Customer ID: **TTIE54**
Customer PO: **23650**

Attn: **Jim Guilardi**
TTI Environmental Inc.
1253 North Church Street
Moorestown, NJ 08057

Phone: **856-840-8800**
Fax: **856-840-8815**
Date Collected: **10/3/2017**
Date Received: **10/4/2017**

Project: **17-1224 Pinelands Regional**

Sample ID: **Upperlevel - Media**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	10/05/2017	MTH	P0922.D	E0657	280 cc	1

USEPA Generic Air Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Residential ug/m3	>	Industrial ug/m3	>
Propylene	115-07-1	42.08	2.0		3.5	3100		13000	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	0.50		2.5	100		440	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	N.E.		N.E.	
Chloromethane	74-87-3	50.49	1.7		3.6	94.0		390	
n-Butane	106-97-8	58.12	29		70	N.E.		N.E.	
Vinyl chloride	75-01-4	62.50	ND		ND	0.170		2.80	
1,3-Butadiene	106-99-0	54.09	ND		ND	0.0940		0.410	
Bromomethane	74-83-9	94.94	ND		ND	5.20		22.0	
Chloroethane	75-00-3	64.52	ND		ND	10000		44000	
Ethanol	64-17-5	46.07	48	E	90	N.E.		N.E.	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	0.0880		0.380	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	4.2		24	N.E.		N.E.	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	7.0		17	210		880	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	31000		130000	
Acetone	67-64-1	58.08	9.9		24	32000		140000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	210		880	
Acetonitrile	75-05-8	41.00	ND		ND	63.0		260	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	N.E.		N.E.	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	N.E.		N.E.	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	0.470		2.00	
Carbon disulfide	75-15-0	76.14	ND		ND	730		3100	
Methylene chloride	75-09-2	84.94	ND		ND	100		1200	
Acrylonitrile	107-13-1	53.00	ND		ND	0.0410		0.180	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	11.0		47.0	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	N.E.		N.E.	
n-Hexane	110-54-3	86.17	8.1		28	730		3100	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	1.80		7.70	
Vinyl acetate	108-05-4	86.00	ND		ND	210		880	
2-Butanone(MEK)	78-93-3	72.10	ND		ND	5200		22000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	N.E.		N.E.	
Ethyl acetate	141-78-6	88.10	ND		ND	73.0		310	
Chloroform	67-66-3	119.40	ND		ND	0.120		0.530	
Tetrahydrofuran	109-99-9	72.11	ND		ND	2100		8800	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	5200		22000	
Cyclohexane	110-82-7	84.16	2.9		10	6300		26000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	6.7		31	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	0.470		2.00	
n-Heptane	142-82-5	100.20	8.7		35	N.E.		N.E.	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	0.110		0.470	
Benzene	71-43-2	78.11	2.8		8.9	0.360		1.60	
Trichloroethene	79-01-6	131.40	ND		ND	0.480		3.00	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	0.280		1.20	
Methyl Methacrylate	80-62-6	100.12	ND		ND	730		3100	
Bromodichloromethane	75-27-4	163.80	ND		ND	0.0760		0.330	
1,4-Dioxane	123-91-1	88.12	ND		ND	0.560		2.50	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	3100		13000	

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Phone: 856-840-8800
Fax: 856-840-8815
Date Collected: 10/3/2017
Date Received: 10/4/2017

Project: **17-1224 Pinelands Regional**

Sample ID: **Upperlevel - Media**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	10/05/2017	MTH	P0922.D	E0657	280 cc	1

USEPA Generic Air Screening Level Summary Table

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	Residential ug/m3	>	Industrial ug/m3	>
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	N.E.		N.E.	
Toluene	108-88-3	92.14	15		58	5200		22000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	N.E.		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	0.180		0.770	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	31.0		130	
Tetrachloroethene	127-18-4	165.80	ND		ND	11.0		47.0	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	0.00470		0.0200	
Chlorobenzene	108-90-7	112.60	ND		ND	52.0		220	
Ethylbenzene	100-41-4	106.20	8.4		37	1.10		4.90	
Xylene (p,m)	1330-20-7	106.20	25		110	100		440	
Xylene (Ortho)	95-47-6	106.20	12		53	100		440	
Styrene	100-42-5	104.10	ND		ND	1000		4400	
Isopropylbenzene (cumene)	98-82-8	120.19	3.9		19	420		1800	
Bromoform	75-25-2	252.80	ND		ND	2.60		11.0	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	0.0480		0.210	
4-Ethyltoluene	622-96-8	120.20	31		150	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	17		85	N.E.		N.E.	
2-Chlorotoluene	95-49-8	126.60	ND		ND	N.E.		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	37		180	7.30		31.0	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	0.260		1.10	
Benzyl chloride	100-44-7	126.00	ND		ND	0.0570		0.250	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	210		880	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	2.10		8.80	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	0.130		0.560	
Naphthalene	91-20-3	128.17	2.1		11	0.0830		0.360	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

The > column is used to flag exceedences as marked

Exposure Limit Definitions
RSL= Regional Screening Level {Target Hazard Quotient (THQ) =0.1 if available, otherwise THQ = 1}

Agency Definitions
United States Environmental Protection Agency

Reference
EPA Regional Screening Levels (RSLs), May 2016

Compound Exposure Definitions
NE= No Limit Established
LFC= Lowest Feasible Concentration
NS= No Sscreening Value

Regional Screening Level Definition
Target Hazard Quotients (THQ)=0.1 is used for screening when multiple contaminants of concern are

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Customer ID: **TTIE54**
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Attn: **Jim Guilardi**
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Phone: **856-840-8800**
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Date Collected: **10/3/2017**
Date Received: **10/4/2017**

Project: **17-1224 Pinelands Regional**

Sample ID: **Upperlevel - Media**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	10/05/2017	MTH	P0922.D	E0657	280 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
Propylene	115-07-1	42.08	2.0		3.5	N.E.		N.E.	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.90	0.50		2.5	4900000		4900000	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.90	ND		ND	7000000		7000000	
Chloromethane	74-87-3	50.49	1.7		3.6	LFC		210000	
n-Butane	106-97-8	58.12	29		70	1900000		1900000	
Vinyl chloride	75-01-4	62.50	ND		ND	LFC		2600	
1,3-Butadiene	106-99-0	54.09	ND		ND	LFC		2200	
Bromomethane	74-83-9	94.94	ND		ND	LFC		78000	
Chloroethane	75-00-3	64.52	ND		ND	LFC		2600000	
Ethanol	64-17-5	46.07	48	E	90	1900000		1900000	
Bromoethene(Vinyl bromide)	593-60-2	106.90	ND		ND	LFC		N.E.	
Freon 11(Trichlorofluoromethane)	75-69-4	137.40	4.2		24	5600000		5600000	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	7.0		17	980000		980000	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.40	ND		ND	7700000		7700000	
Acetone	67-64-1	58.08	9.9		24	590000		2400000	
1,1-Dichloroethene	75-35-4	96.94	ND		ND	790000		790000	
Acetonitrile	75-05-8	41.00	ND		ND	34000		67000	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND		ND	300000		300000	
Bromoethane(Ethyl bromide)	74-96-4	108.00	ND		ND	880000		880000	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND		ND	3100		3100	
Carbon disulfide	75-15-0	76.14	ND		ND	3100		62000	
Methylene chloride	75-09-2	84.94	ND		ND	LFC		87000	
Acrylonitrile	107-13-1	53.00	ND		ND	2200		4300	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND		ND	N.E.		N.E.	
trans-1,2-Dichloroethene	156-60-5	96.94	ND		ND	790000		790000	
n-Hexane	110-54-3	86.17	8.1		28	180000		1800000	
1,1-Dichloroethane	75-34-3	98.96	ND		ND	400000		400000	
Vinyl acetate	108-05-4	86.00	ND		ND	14000		N.E.	
2-Butanone(MEK)	78-93-3	72.10	ND		ND	590000		590000	
cis-1,2-Dichloroethene	156-59-2	96.94	ND		ND	790000		790000	
Ethyl acetate	141-78-6	88.10	ND		ND	1400000		1400000	
Chloroform	67-66-3	119.40	ND		ND	9800		240000	
Tetrahydrofuran	109-99-9	72.11	ND		ND	590000		590000	
1,1,1-Trichloroethane	71-55-6	133.40	ND		ND	1900000		1900000	
Cyclohexane	110-82-7	84.16	2.9		10	1000000		1000000	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.20	6.7		31	N.E.		N.E.	
Carbon tetrachloride	56-23-5	153.80	ND		ND	13000		63000	
n-Heptane	142-82-5	100.20	8.7		35	350000		2000000	
1,2-Dichloroethane	107-06-2	98.96	ND		ND	4000		200000	
Benzene	71-43-2	78.11	2.8		8.9	320		3200	
Trichloroethene	79-01-6	131.40	ND		ND	130000		540000	
1,2-Dichloropropane	78-87-5	113.00	ND		ND	LFC		350000	
Methyl Methacrylate	80-62-6	100.12	ND		ND	410000		410000	
Bromodichloromethane	75-27-4	163.80	ND		ND	N.E.		N.E.	
1,4-Dioxane	123-91-1	88.12	ND		ND	3600		360000	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.20	ND		ND	200000		410000	

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Project: **17-1224 Pinelands Regional**

Sample ID: **Upperlevel - Media**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	10/05/2017	MTH	P0922.D	E0657	280 cc	1

NIOSH and OSHA Exposure Limit Comparisons

Target Compounds	CAS#	MW	Result ppbv	Q	Result ug/m3	NIOSH REL ug/m3	>	OSHA PEL ug/m3	>
cis-1,3-Dichloropropene**	10061-01-5	111.00	ND		ND	4500		N.E.	
Toluene	108-88-3	92.14	15		58	380000		750000	
trans-1,3-Dichloropropene**	10061-02-6	111.00	ND		ND	4500		N.E.	
1,1,2-Trichloroethane	79-00-5	133.40	ND		ND	55000		55000	
2-Hexanone(MBK)	591-78-6	100.10	ND		ND	4100		410000	
Tetrachloroethene	127-18-4	165.80	ND		ND	LFC		680000	
Dibromochloromethane	124-48-1	208.30	ND		ND	N.E.		N.E.	
1,2-Dibromoethane	106-93-4	187.80	ND		ND	350		150000	
Chlorobenzene	108-90-7	112.60	ND		ND	N.E.		350000	
Ethylbenzene	100-41-4	106.20	8.4		37	430000		430000	
Xylene (p,m)	1330-20-7	106.20	25		110	430000		430000	
Xylene (Ortho)	95-47-6	106.20	12		53	430000		430000	
Styrene	100-42-5	104.10	ND		ND	210000		430000	
Isopropylbenzene (cumene)	98-82-8	120.19	3.9		19	250000		250000	
Bromoform	75-25-2	252.80	ND		ND	5200		5200	
1,1,2,2-Tetrachloroethane	79-34-5	167.90	ND		ND	6900		34000	
4-Ethyltoluene	622-96-8	120.20	31		150	N.E.		N.E.	
1,3,5-Trimethylbenzene	108-67-8	120.20	17		85	120000		120000	
2-Chlorotoluene	95-49-8	126.60	ND		ND	260000		N.E.	
1,2,4-Trimethylbenzene	95-63-6	120.20	37		180	120000		120000	
1,3-Dichlorobenzene	541-73-1	147.00	ND		ND	N.E.		N.E.	
1,4-Dichlorobenzene	106-46-7	147.00	ND		ND	LFC		450000	
Benzyl chloride	100-44-7	126.00	ND		ND	5200		5200	
1,2-Dichlorobenzene	95-50-1	147.00	ND		ND	300000		300000	
1,2,4-Trichlorobenzene	120-82-1	181.50	ND		ND	37000		N.E.	
Hexachloro-1,3-butadiene	87-68-3	260.80	ND		ND	210		N.E.	
Naphthalene	91-20-3	128.17	2.1		11	52000		52000	

**The concentrations of each isomer should be added if multiple isomers are present and compared to the total screening level.

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