

Kaelin, Matthew N - DNR

From: Richard Werner <rwerner@eciconsulting.net>
Sent: Friday, April 06, 2018 8:11 AM
To: McIlheran, Adam S - DNR
Cc: Sam Kucia
Subject: BRRTS#02-41-20016_733 East Capitol Drive
Attachments: SOIL GAS SAMPLE LOCATION PLAN Model.pdf; 491600763_001 SOIL GAS.pdf

Good morning Adam

We thought the following technical information could help you in your review of the Final Post-Closure Modification (“PCM”) dated January 23, 2018 for the above referenced property located in Milwaukee, Wisconsin, hereinafter referenced as the subject property.

As you are aware, on April 24, 2017, WDNR approved a Post-Closure Modification (“PCM”) request made for the proposed redevelopment of the subject property into a medical outpatient dialysis center. The redevelopment activities at the subject property were initiated in June, 2017 and were substantially completed in December, 2017. The approved post-closure modification activities involved the removal and replacement of engineering controls at the subject property. The new engineering controls based on the proposed future use consisted primarily of a new site-wide cap (i.e., concrete building pad, concrete and asphalt pavement and clean fill landscaped areas). The Final PCM documentation was submitted to WDNR on January 23, 2018 for review and approval.

It is our understanding that you have indicated that you may require soil gas sampling beneath the building slab. On June 27, 2016, Environmental Consulting, Inc. completed soil gas sampling and analysis activities as part of the environmental due diligence activities prior to acquisition of the subject property. The Soil Gas Sample Location Plan and the laboratory analytical data package for the soil gas samples from the June 27, 2016 sampling event are included as an attachment to this email. The soil gas sampling and analysis activities included the collection and laboratory analysis of three (3) soil gas samples. The three (3) soil gas samples were collected from temporary sampling points advanced through the asphalt pavement on the subject property within the footprint of the proposed building. The soil gas sample laboratory analytical results were reported to be either not detected (“ND”) above laboratory reported detection limits or less than applicable WDNR sub-slab vapor risk screening levels for the contaminants of concern (i.e., petroleum compounds and chlorinated solvent compounds) in connection with the historic dry cleaning facility. It is Environmental Consulting, Inc.'s experience that soil gas sampling after the installation of a vapor mitigation system is not warranted or required. Furthermore, according to the current WDNR guidance entitled Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin (i.e., Wis. Stat. ch. 292; Wis. Admin. Code ch. NR 700), sub-slab soil gas sampling after the installation of a vapor mitigation system is not required. It should also be noted that sub-slab soil gas sampling is technically impractical because the sampling will damage the vapor mitigation system.

Nevertheless, as noted in the PCM, the vapor mitigation system was installed under the new building slab as an abundance of caution because the soil gas laboratory analytical results for the contaminants of concern were reported to be either not detected (“ND”) or less than applicable WDNR sub-slab screening levels.

Environmental Consulting, Inc. believes this technical information supports the position that post-closure soil gas sampling is not necessary.

Please do not hesitate to contact us at 610-279-7070 if you have any questions regarding this matter.

Richard S. Werner, P.G., LSRP
Environmental Consulting, Inc.
2002 Renaissance Boulevard
Suite 110
King of Prussia, Pennsylvania 19406
610-279-7070 (office)
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rwerner@eciconsulting.net

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856)858-4800 / (856)858-4571
<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491600763**Customer ID: **ENV62**Customer PO: **2016.11**

Attn: **Richard Werner**
Environmental Consulting, Inc
2002 Renaissance Blvd.
Suite 110
King of Prussia, PA 19406

Phone: **610-279-7070**Fax: **610-279-4334**Project: **709 E. Capitol Drive**Date Collected: **06/27/2016**Date Received: **06/28/2016****Laboratory Report- Sample Summary**

EMSL Sample ID.	Client Sample ID.	Start Sampling Date	Start Sampling Time
491600763-0001	SG1	6/27/2016	9:40 AM
491600763-0002	SG2	6/27/2016	12:19 PM
491600763-0003	SG3	6/27/2016	1:00 PM

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:
07/13/2016

Report Revision
 R0

Revision Comments
 Initial Report

Marjorie Howley, Laboratory Manager
 or other approved signatory

Test results meet all NELAP requirements unless otherwise specified.

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EMSL Order #:	491600763
EMSL Sample #:	491600763-1
Customer ID:	ENV62
Customer PO:	2016.11

Attn: **Richard Werner**
Environmental Consulting, Inc
2002 Renaissance Blvd.
Suite 110
King of Prussia, PA 19406

Phone: **610-279-7070**
 Fax: **610-279-4334**
 Date Collected: **06/27/2016**
 Date Received: **06/28/2016**

Project: **709 E. Capitol Drive**Sample ID: **SG1**

<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	07/13/2016	MTH	M3677.D	HD1467	50 cc	10
Dilution1	07/13/2016	MTH	M3687.D	HD1467	25 cc	180

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	300	10		520	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	5.5	5.0		11	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	10	5.0		22	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	140	5.0		260	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	23	5.0		57	12	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	2900	90	D	7000	210	Reported Dilution #1
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	10	5.0		36	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	320	5.0		1000	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	8.7	5.0		31	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	300	5.0		870	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	5.1	5.0		24	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	23	5.0		94	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	

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EMSL Order #: **491600763**
 EMSL Sample #: **491600763-1**
 Customer ID: **ENV62**
 Customer PO: **2016.11**

Attn: **Richard Werner**
Environmental Consulting, Inc
2002 Renaissance Blvd.
Suite 110
King of Prussia, PA 19406

Phone: **610-279-7070**
 Fax: **610-279-4334**
 Date Collected: **06/27/2016**
 Date Received: **06/28/2016**

Project: **709 E. Capitol Drive**

Sample ID: **SG1**

<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	07/13/2016	MTH	M3677.D	HD1467	50 cc	10
Dilution1	07/13/2016	MTH	M3687.D	HD1467	25 cc	180

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	52	5.0		190	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	14	5.0		60	22	
Xylene (p,m)	1330-20-7	106.2	43	10		190	43	
Xylene (Ortho)	95-47-6	106.2	15	5.0		63	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,1,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	5.3	5.0		26	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	5.3	5.0		26	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			4200	ppbv		10000	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

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**

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EMSL Order #: **491600763**
 EMSL Sample #: **491600763-2**
 Customer ID: **ENV62**
 Customer PO: **2016.11**

Attn: **Richard Werner**
Environmental Consulting, Inc
2002 Renaissance Blvd.
Suite 110
King of Prussia, PA 19406

Phone: **610-279-7070**
 Fax: **610-279-4334**
 Date Collected: **06/27/2016**
 Date Received: **06/28/2016**

Project: **709 E. Capitol Drive**

Sample ID: **SG2**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	07/13/2016	MTH	M3678.D	HD2120	25 cc	10
Dilution1	07/13/2016	MTH	M3688.D	HD2120	25 cc	270

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	170	10		290	17	
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	6.8	5.0		15	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	120	5.0		230	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	35	5.0		86	12	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	4000	140	D	9500	320	Reported Dilution #1
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	7.2	5.0		25	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	190	5.0		560	15	
cis-1,2-Dichloroethene	156-59-2	96.94	ND	5.0		ND	20	
Ethyl acetate	141-78-6	88.10	5.5	5.0		20	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	220	5.0		630	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	ND	5.0		ND	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	ND	5.0		ND	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	7.6	5.0		31	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	ND	5.0		ND	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	

**EMSL Analytical**

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EMSL Order #: **491600763**
 EMSL Sample #: **491600763-2**
 Customer ID: **ENV62**
 Customer PO: **2016.11**

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Phone: **610-279-7070**
 Fax: **610-279-4334**
 Date Collected: **06/27/2016**
 Date Received: **06/28/2016**

Project: **709 E. Capitol Drive**

Sample ID: **SG2**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	07/13/2016	MTH	M3678.D	HD2120	25 cc	10
Dilution1	07/13/2016	MTH	M3688.D	HD2120	25 cc	270

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	17	5.0		63	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,2,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			4800	ppbv		11000	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

9.9

Spike

10

Recovery

99%

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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EMSL Order #: **491600763**
 EMSL Sample #: **491600763-3**
 Customer ID: **ENV62**
 Customer PO: **2016.11**

Attn: **Richard Werner**
Environmental Consulting, Inc
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Suite 110
King of Prussia, PA 19406

Phone: **610-279-7070**
 Fax: **610-279-4334**
 Date Collected: **06/27/2016**
 Date Received: **06/28/2016**

Project: **709 E. Capitol Drive**

Sample ID: **SG3**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	07/13/2016	MTH	M3679.D	HD2337	25 cc	10
Dilution1	07/13/2016	MTH	M3689.D	HD2337	25 cc	270

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
Propylene	115-07-1	42.08	1200	270	D	2000	460	Reported Dilution #1
Freon 12(Dichlorodifluoromethane)	75-71-8	120.9	ND	5.0		ND	25	
Freon 114(1,2-Dichlorotetrafluoroethan	76-14-2	170.9	ND	5.0		ND	35	
Chloromethane	74-87-3	50.49	ND	5.0		ND	10	
n-Butane	106-97-8	58.12	ND	5.0		ND	12	
Vinyl chloride	75-01-4	62.50	ND	5.0		ND	13	
1,3-Butadiene	106-99-0	54.09	ND	5.0		ND	11	
Bromomethane	74-83-9	94.94	ND	5.0		ND	19	
Chloroethane	75-00-3	64.52	ND	5.0		ND	13	
Ethanol	64-17-5	46.07	74	5.0		140	9.4	
Bromoethene(Vinyl bromide)	593-60-2	106.9	ND	5.0		ND	22	
Freon 11(Trichlorofluoromethane)	75-69-4	137.4	ND	5.0		ND	28	
Isopropyl alcohol(2-Propanol)	67-63-0	60.10	34	5.0		84	12	
Freon 113(1,1,2-Trichlorotrifluoroethan	76-13-1	187.4	ND	5.0		ND	38	
Acetone	67-64-1	58.08	5500	140	D	13000	320	Reported Dilution #1
1,1-Dichloroethene	75-35-4	96.94	ND	5.0		ND	20	
Acetonitrile	75-05-8	41.00	ND	5.0		ND	8.4	
Tertiary butyl alcohol(TBA)	75-65-0	74.12	ND	5.0		ND	15	
Bromoethane(Ethyl bromide)	74-96-4	108.0	ND	5.0		ND	22	
3-Chloropropene(Allyl chloride)	107-05-1	76.53	ND	5.0		ND	16	
Carbon disulfide	75-15-0	76.14	ND	5.0		ND	16	
Methylene chloride	75-09-2	84.94	ND	5.0		ND	17	
Acrylonitrile	107-13-1	53.00	ND	5.0		ND	11	
Methyl-tert-butyl ether(MTBE)	1634-04-4	88.15	ND	5.0		ND	18	
trans-1,2-Dichloroethene	156-60-5	96.94	ND	5.0		ND	20	
n-Hexane	110-54-3	86.17	13	5.0		46	18	
1,1-Dichloroethane	75-34-3	98.96	ND	5.0		ND	20	
Vinyl acetate	108-05-4	86.00	ND	5.0		ND	18	
2-Butanone(MEK)	78-93-3	72.10	200	5.0		580	15	
cis-1,2-Dichloroethene	156-59-2	96.94	15	5.0		60	20	
Ethyl acetate	141-78-6	88.10	5.1	5.0		18	18	
Chloroform	67-66-3	119.4	ND	5.0		ND	24	
Tetrahydrofuran	109-99-9	72.11	200	5.0		590	15	
1,1,1-Trichloroethane	71-55-6	133.4	ND	5.0		ND	27	
Cyclohexane	110-82-7	84.16	17	5.0		60	17	
2,2,4-Trimethylpentane(Isooctane)	540-84-1	114.2	5.4	5.0		25	23	
Carbon tetrachloride	56-23-5	153.8	ND	5.0		ND	31	
n-Heptane	142-82-5	100.2	9.2	5.0		38	20	
1,2-Dichloroethane	107-06-2	98.96	ND	5.0		ND	20	
Benzene	71-43-2	78.11	ND	5.0		ND	16	
Trichloroethene	79-01-6	131.4	ND	5.0		ND	27	
1,2-Dichloropropane	78-87-5	113.0	70	5.0		320	23	
Methyl Methacrylate	80-62-6	100.12	ND	5.0		ND	20	
Bromodichloromethane	75-27-4	163.8	ND	5.0		ND	33	
1,4-Dioxane	123-91-1	88.12	ND	5.0		ND	18	
4-Methyl-2-pentanone(MIBK)	108-10-1	100.2	ND	5.0		ND	20	

**EMSL Analytical**

200 Route 130 North, Cinnaminson, NJ 08077
 Phone/Fax: (856)858-4800 / (856)858-4571
<http://www.EMSL.com> to15lab@EMSL.com

EMSL Order #: **491600763**
 EMSL Sample #: **491600763-3**
 Customer ID: **ENV62**
 Customer PO: **2016.11**

Attn: **Richard Werner**
Environmental Consulting, Inc
2002 Renaissance Blvd.
Suite 110
King of Prussia, PA 19406

Phone: **610-279-7070**
 Fax: **610-279-4334**
 Date Collected: **06/27/2016**
 Date Received: **06/28/2016**

Project: **709 E. Capitol Drive**

Sample ID: **SG3**

Analysis	Analysis Date	Analyst Init.	Lab File ID	Canister ID	Sample Vol.	Dil. Factor
Initial	07/13/2016	MTH	M3679.D	HD2337	25 cc	10
Dilution1	07/13/2016	MTH	M3689.D	HD2337	25 cc	270

Target Compound Results Summary

Target Compounds	CAS#	MW	Result ppbv	RL ppbv	Q	Result ug/m3	RL ug/m3	Comments
cis-1,3-Dichloropropene	10061-01-5	111.0	ND	5.0		ND	23	
Toluene	108-88-3	92.14	9.5	5.0		36	19	
trans-1,3-Dichloropropene	10061-02-6	111.0	ND	5.0		ND	23	
1,1,2-Trichloroethane	79-00-5	133.4	ND	5.0		ND	27	
2-Hexanone(MBK)	591-78-6	100.1	ND	5.0		ND	20	
Tetrachloroethene	127-18-4	165.8	ND	5.0		ND	34	
Dibromochloromethane	124-48-1	208.3	ND	5.0		ND	43	
1,2-Dibromoethane	106-93-4	187.8	ND	5.0		ND	38	
Chlorobenzene	108-90-7	112.6	ND	5.0		ND	23	
Ethylbenzene	100-41-4	106.2	ND	5.0		ND	22	
Xylene (p,m)	1330-20-7	106.2	ND	10		ND	43	
Xylene (Ortho)	95-47-6	106.2	ND	5.0		ND	22	
Styrene	100-42-5	104.1	ND	5.0		ND	21	
Isopropylbenzene (cumene)	98-82-8	120.19	ND	5.0		ND	25	
Bromoform	75-25-2	252.8	ND	5.0		ND	52	
1,1,1,2-Tetrachloroethane	79-34-5	167.9	ND	5.0		ND	34	
4-Ethyltoluene	622-96-8	120.2	ND	5.0		ND	25	
1,3,5-Trimethylbenzene	108-67-8	120.2	ND	5.0		ND	25	
2-Chlorotoluene	95-49-8	126.6	ND	5.0		ND	26	
1,2,4-Trimethylbenzene	95-63-6	120.2	ND	5.0		ND	25	
1,3-Dichlorobenzene	541-73-1	147.0	ND	5.0		ND	30	
1,4-Dichlorobenzene	106-46-7	147.0	ND	5.0		ND	30	
Benzyl chloride	100-44-7	126.0	ND	5.0		ND	26	
1,2-Dichlorobenzene	95-50-1	147.0	ND	5.0		ND	30	
1,2,4-Trichlorobenzene	120-82-1	181.5	ND	5.0		ND	37	
Hexachloro-1,3-butadiene	87-68-3	260.8	ND	5.0		ND	53	
Naphthalene	91-20-3	128.17	ND	5.0		ND	26	
Total Target Compound Concentrations:			7400	ppbv		17000	ug/m3	

Surrogate

4-Bromofluorobenzene

Result

10

Spike

10

Recovery

100%

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

491600763

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 and achieve requested TAT

Company: Environmental Consulting Inc.

Contact Person:

Name: Richard S. Werner

E-mail: rwerner@eciconsulting.net

Additional E-mails:

Telephone #: 610-279-7070 Fax #: 610-279-4334

Library Search requested: YES NO

A library search 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.

Sample Type:

- Indoor Air Quality (Home/Office)
- IAQ (Industrial)
- Other:
- Vent Gas
- Soil Gas

Sample Description: Soil Gas

2016 JUN 28 A 10:31
RECEIVED
ENVIRONMENTAL CONSULTING INC.

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/NIOSH RELS
- EPA PELS - Circle one: Residential Industrial
- NJ DEP - Circle one: Indoor Air Soil Gas
- NC DENR - Circle one: Indoor Air Soil Gas
- PA DEP - Circle one: Indoor Air Soil Gas
- Other, These are the compounds I want reported:
- Possible Sources of Contaminants
- TVOC (Library Search Required for this format)
- Ohio - Circle one: Residential Commercial
- Indiana Dept Env Mgmt Screening Levels
- Vermont DEP IROCP (soil gas only)

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):
- C₁-C₆ hydrocarbons
- Methane only
- ASTM-D5504 via GC/SCD (choose one below): *
- Sulfur Scan (H₂S, COS, MeSH, EtSH, DMS)
- H₂S only

*Note: Hold time for sulfur gases is 3 days when collected in can. We can NOT guarantee analysis within hold time if cans are received on Fridays or after 12pm Monday - Thursday.

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 field sampling for these parameters, please contact your sales rep for the proper media. Please note: there is an additional charge for any of the tests below.

- Draeger CMS Analyzer:
- CO; CO₂; SO₂; EtO; NH₃; Cl₂; H₂S; NO₂; NO_x; O₂;
- Petroleum hydrocarbons; Phosgene; Phosphine

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.

Soil Gas Sample Laboratory Analytical Results
709 East Capitol Drive
City of Milwaukee, Milwaukee County, Wisconsin 53212
June 27, 2016

Parameters	SG1	SG2	SG3	WDR
Acetone	7,000	9,500	13,000	1,066,666
2-Butanone (MEK)	1,000	560	580	173,333
1,3-Butadiene	22	15	ND	31.3
Chloromethane	11	ND	ND	13,000
Cyclohexane	ND	ND	60	210,000
cis-1,2-Dichloroethene	ND	ND	60	NS
1,2-Dichloropropane	ND	ND	320	93.3
Ethanol	260	230	140	NS
Ethyl Acetate	31	20	18	2,433
Ethylbenzene	60	ND	ND	1,600
4-Ethyltoluene	26	ND	ND	NS
n-Heptane	94	31	38	NS
n-Hexane	36	25	46	24,333
Isopropyl Alcohol	57	86	84	7,000
Propylene	520	290	2,000	103,333
Tetrahydrofuran	870	630	590	NS
Toluene	190	63	36	730,000
1,2,4-Trimethylbenzene	26	ND	ND	1,000
2,2,4-Trimethylpentane	24	ND	25	NS
Xylenes (total)	253	ND	ND	15,000

All values are expressed in units of micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).
 Only those VOCs detected above laboratory method detection limits are presented in this table.
 ND denotes not detected above laboratory method detection limits where the method detection limits are less than applicable WDR standards.
 Shaded concentrations denote concentrations detected above WDR Sub-Slab Vapor Risk Screening Levels.

1. WDR Standards: WI Vapor Quick Look-Up Table, Indoor Air Vapor Action Levels and Vapor Risk Screening Levels based on May, 2016 USEPA Regional Screening Level Tables and the USEPA Regional Screening Levels – Generic Table using Sub-slab vapor Attenuation Factor (0.03) for Residential/Small Commercial Buildings.



LEGEND

= SOIL GAS SAMPLE LOCATION AND NUMBER

NOTES:

SITE MAP DERIVED FROM DIGITIZED 2014 GOOGLE EARTH AERIAL PHOTOGRAPH.
 SCALE IS APPROXIMATE AS THIS SITE PLAN IS INTENDED FOR ILLUSTRATIVE PURPOSES ONLY.

ENVIRONMENTAL CONSULTING, INC. 2002 RENAISSANCE BOULEVARD SUITE 110 KING OF PRUSSIA, PENNSYLVANIA 19406	JOB No. 2016.110	DRAWN BY: ADH	SCALE: 1"=40'	FIGURE No.: 3-1
	DATE: 8/8/16	CHECKED BY: SJK	TITLE: SOIL GAS SAMPLE LOCATION PLAN	
709-733 EAST CAPITOL DRIVE MILWAUKEE, MILWAUKEE COUNTY, WISCONSIN 53212				