

Cieslak, Douglas J - DNR

From: Cieslak, Douglas J - DNR
Sent: Tuesday, September 30, 2014 3:20 PM
To: 'Wayne Fassbender'
Cc: Brian Kappen; Skwierawski, M. Andrew
Subject: RE: Martino's Master Cleaners, 52nd Street, Kenosha, WI

Hi Wayne,

Thanks for your thoughtful work on this site. Based on our conversations, I understand there are no child bearing age women at risk of exposure at this residence. Therefore, I agree with your approach to pair the subsequent VI monitoring with other environmental testing in the hope that it will give us more information on the predominant contaminant migration pathway.

Please contact me again when you have received the results of the additional testing.

Thank you,
~Doug

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Doug Cieslak
Phone: (262) 884-2344
Douglas.Cieslak@wisconsin.gov

From: Wayne Fassbender [<mailto:WFassbender@enviroforensics.com>]
Sent: Tuesday, September 30, 2014 3:04 PM
To: Cieslak, Douglas J - DNR
Cc: Brian Kappen; Skwierawski, M. Andrew
Subject: Martino's Master Cleaners, 52nd Street, Kenosha, WI

Doug:

Per our conversation this afternoon, we will hold off on vapor mitigation actions at the off-site residential property located at 5231 40th Avenue for now. Recent sub-slab sample concentrations of PCE and TCE just exceeded vapor risk levels. However, samples of indoor air did not contain these compounds in concentrations exceeding vapor action levels and the residents are not in immediate risk of exposure.

Instead, we will re-sample the sub-slab and indoor air environments in another month to see how these levels compare with the results of planned water sampling and soil/soil gas sampling along utility lines that will take place in October. This will give us a better idea of the migration pathway. If we can interrupt the pathway during site remedial activities, then it may negate the need for a long-term mitigation system.

We will continue to monitor the sub-slab and indoor air environment at this residence periodically until our investigations are complete. If at any time during the course of periodic monitoring that an indoor vapor action level is exceeded for the site contaminants of concern, then as would be prudent and expected, we will install a sub-slab depressurization system for mitigation purposes.

Best regards,

Wayne Fassbender, PG, PMP

Senior Project Manager

EnviroForensics & PolicyFind | N16 W23390 Stone Ridge Drive, Suite G | Waukesha, WI 53188

P. 414.982.3988 | C. 262.490.6472 | F. 262.510.0460

www.enviroforensics.com

Turning Environmental Liabilities Into Assets®



View my
LinkedIn Profile



Privileged and Confidential

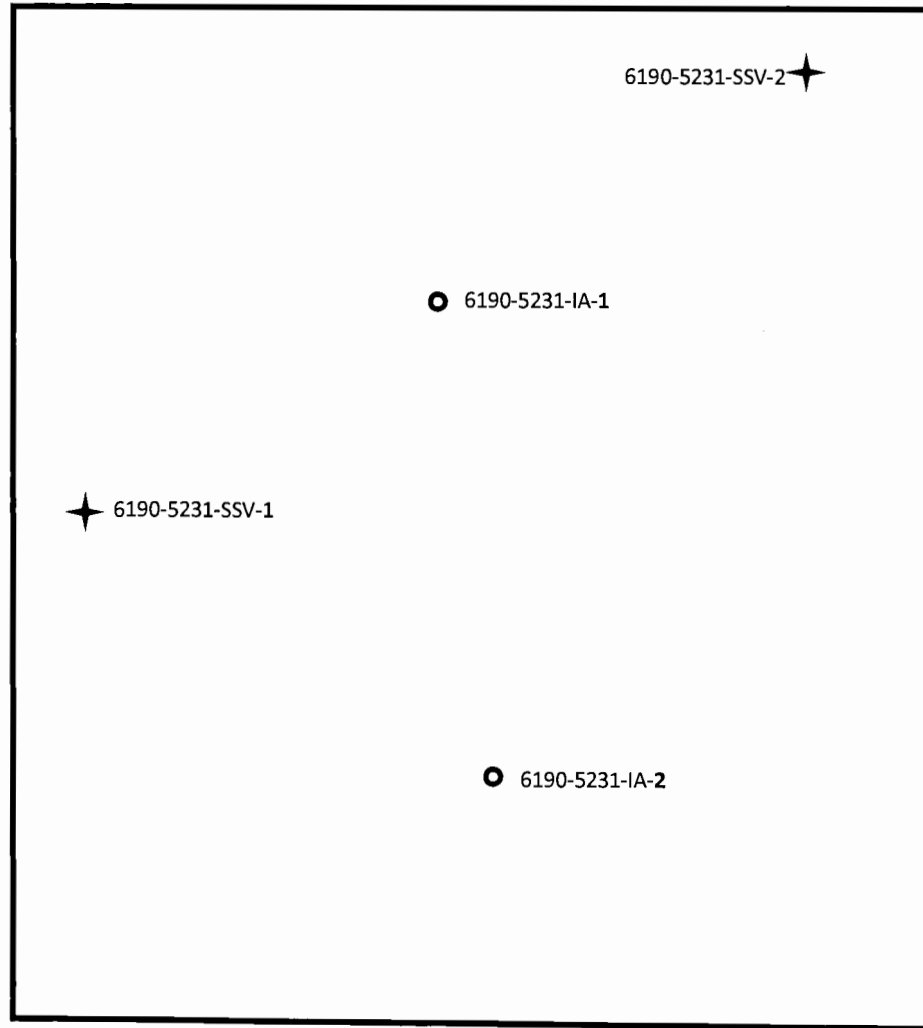
This communication and any attachments constitutes an electronic communication within the meaning of the Electronic Communications Privacy Act, 18 USC 2510, and its disclosure is strictly limited to the recipient intended by the sender of this message. This communication may contain confidential and privileged material for the sole use of the intended recipient and receipt by anyone other than the intended recipient does not constitute a loss of the confidential or privileged nature of the communication. Any interception, review, copying, disclosure, use or distribution of this communication by others is strictly prohibited. The sender takes no responsibility for any unauthorized reliance on this communication. If you have received this communication in error, please immediately notify the sender and delete the communication.

This email has been scanned for email related threats and delivered safely by Mimecast.
For more information please visit <http://www.mimecast.com>

VAPOR INTRUSION SAMPLE LOCATIONS
5231 40th Ave, Kenosha, Wisconsin

Driveway

40th Avenue



○ 6190-5231-OA



Legend

○ Indoor/Outdoor Air Sample

✦ Sub-Slab Vapor Sample

1 = Basement

2 = 1st Floor

Summary of Vapor Intrusion Assessment Analytical Results

5231 40th Avenue

Martino's 52nd Street

Kenosha, Wisconsin

Sample Address	Sample Identification	Sample Location	Applicable Criteria	Sample Date	Tetrachloroethene	Trichloroethene	Benzene	1,2-Dichloroethane	Acetone	Chloroform
INDOOR/ OUTDOOR AIR										
Residential Vapor Action Level					42	2.1	3.6	1.1	32,000	1.2
5231 40th Ave	6190-5231-OA	Outdoor	Residential	9/9/2014	<3.19	<1.07	<1.60	<0.40	<2,380	<0.83
5231 40th Ave	6190-5231-IA-1	Basement	Residential	9/9/2014	7.05	<1.07	1.73	8.86	<2,380	2.59
5231 40th Ave	6190-5231-IA-2	First Floor	Residential	9/9/2014	9.16	1.34	1.63	8.46	2,560	2.64
SUB-SLAB VAPOR										
Residential Vapor Risk Screening Level					420	21	36	11	320,000	12
5231 40th Ave	6190-5231-SSV-1	Basement	Residential	9/10/2014	215	<10.7	<16.0	<4.05	<23,800	<8.30
5231 40th Ave	6190-5231-SSV-2	Basement	Residential	9/10/2014	461	40.3	<16.0	<4.05	<23,800	<8.30

Notes:

Results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

Analysis performed by Envision Laboratories according to EPA Method TO-15

IA = Indoor Air

OA = Outdoor air (background)

SSV = Sub-slab vapor

Bolded values are above detection limits

Bolded and shaded values exceed the applicable residential screening or action level

Understanding Chemical Vapor Intrusion Testing Results

PUB-RR-977

Apr 2014

From the Lab to You

Chemical vapor samples were taken from underneath your house or building and possibly indoors as well. These samples have been tested by a certified laboratory and a report was issued. The Wisconsin Department of Natural Resources (DNR) uses these test results to determine if people in the building are being exposed to chemical vapors coming from nearby contaminated soil or groundwater, and to decide what, if any, action is needed to prevent this exposure.

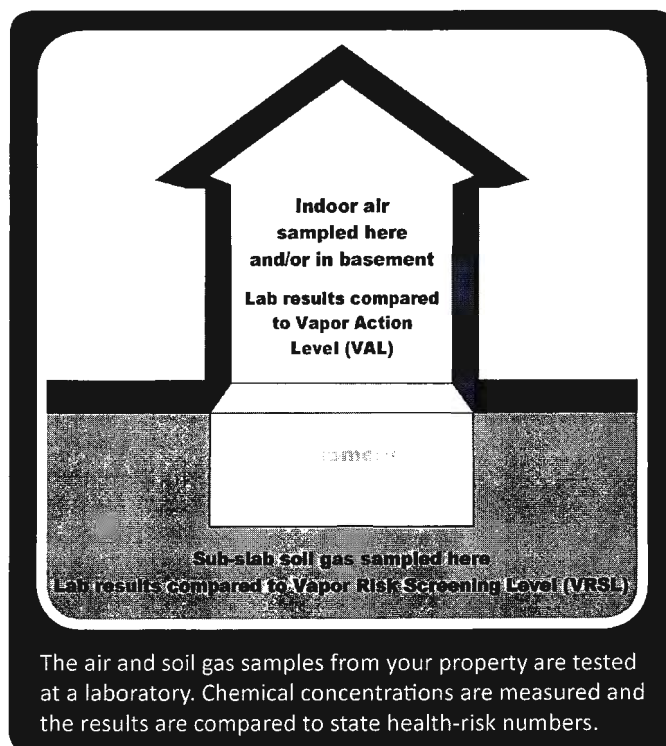
Indoor Air Testing Results

If indoor air samples were collected in your house or building, test results from the lab will be compared to the state Vapor Action Level (VAL) for chemicals of concern. If test results show chemical concentrations in your air below the VAL then adverse health effects are not expected, even if you were to breathe the chemical at this concentration for your whole life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposures to these chemical vapors be reduced. If test results show concentrations significantly above the VAL, or more than one type of chemical vapor is identified in your indoor air, the risk from exposure increases. If the concentration of any indoor chemical vapor exceeds 10 times the VAL, DNR is concerned about even short-term exposure and will typically require immediate action to address the problem.

The VAL for each chemical is set by scientific research. It is protective of all people, including those who are most susceptible to adverse health effects. For cancer-causing chemicals, no more than 1 in 100,000 people breathing indoor air with chemical concentrations below the VAL are expected to get cancer from exposure to that chemical. Concentrations above the VAL are of greater concern.

If test results identify chemicals in your air that are not present in nearby soil or groundwater contamination, it is likely that these vapors are coming from some product or activity in or near your house or building. Many everyday consumer products (e.g., cleaners, solvents, polish, adhesives, lubricants, aerosols, insect repellants, etc.); combustion processes (e.g., smoking, home heating); fuels in attached garages; dry cleaned clothing or draperies; and occupant activities (e.g., craft hobbies), also release chemical vapors into the air.



Sub-slab Soil Gas Testing Results

Soil gas samples were collected from the ground beneath the concrete slab of your building foundation or basement. The lab measured the concentrations of various chemicals in these samples. DNR compares these measurements to the state Vapor Risk Screening Level (VRSL), which identifies the concentration of a chemical in soil gas that scientific research suggests can be a health risk if vapor enters a building. If soil gas measurements exceed the VRSL for a chemical of concern, action to reduce exposure is strongly recommended.

The VRSL is a higher number (higher chemical concentration) than the VAL because it is presumed that concrete building foundations and basement walls will prevent most soil gas from entering a building. Further, any soil gas that does enter a building through cracks, holes, sump pumps, drains, etc., will be diluted to some extent by the indoor air. So, people inside will not be breathing air that includes the full concentration of chemical vapors that exist in the ground.



Wisconsin Department of Natural Resources
P.O. Box 7921, Madison, WI 53707
dnr.wi.gov, search "Brownfields"



DNR generally relies on the test results of the sub-slab soil gas samples when determining what, if any, action should be taken related to chemical vapors coming from nearby soil or groundwater contamination. Indoor air quality is highly variable, and it is difficult to make a definitive decision about vapor intrusion based on indoor air sampling alone.

Follow-Up Actions

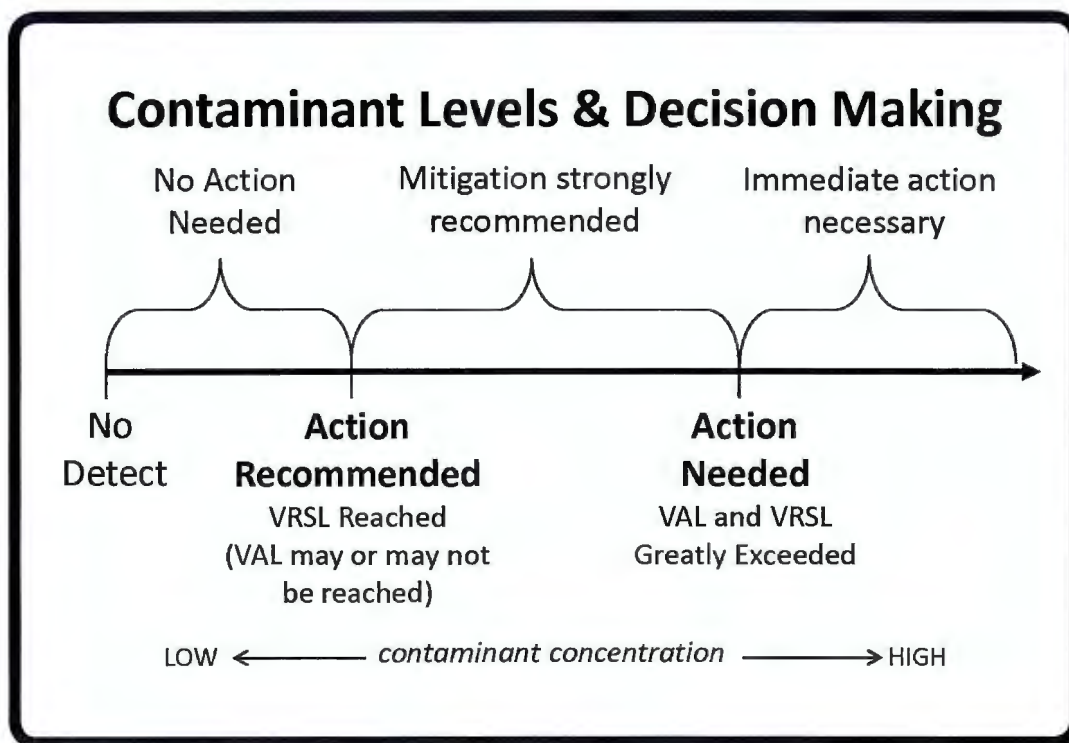
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

When test results show soil gas chemical concentrations above a VRSL, both DNR and the Wisconsin Department of

Health Services recommend that owners take action to reduce potential exposure. This typically involves installing a vapor mitigation system that vents chemical vapors from beneath your home or building to the outdoors, similar to a radon mitigation system.

If indoor air concentrations exceed a VAL, but sub-slab concentrations are less than a VRSL, then the chemical vapors are most likely coming from indoor sources. Steps should be taken by the house or building owner to identify the products and practices causing the problem and implement appropriate remedies.

If soil gas mitigation is recommended, a representative of the party who is responsible for the soil or groundwater contamination will contact you to discuss your options.



A Note about Measurement Units: The lab report may include some unfamiliar technical language. The most important point to note is whether or not the test result for a specific chemical exceeds a VAL or VRSL, which are also sometimes referred to, generically, as "screening levels."

The concentration of gaseous pollutants in air is typically described in two different ways: 1) as units of mass per volume, where $\mu\text{g}/\text{m}^3$ represents micrograms of gaseous pollutant per cubic meter of ambient air; and 2) as parts per billion by volume (ppbv), where the volume of a gaseous pollutant is compared to a set volume of ambient air. These are the numbers that are compared to the VAL and VRSL.

For more information, visit dnr.wi.gov/topic/Brownfields/Vapor.html

This document contains information about certain state statutes and administrative rules but does not necessarily include all of the details found in the statutes and rules. Readers should consult the actual language of the statutes and rules to answer specific questions. The Wisconsin Department of Natural Resources provides equal opportunity in its employment, programs, services, and functions under an Affirmative Action Plan. If you have any questions, please write to Equal Opportunity Office, Department of Interior, Washington, D.C. 20240. This publication is available in alternative format upon request. Please call 608-267-3543 for more information.



EnvisionAir
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

Mr. Brian Kappen
Enviroforensics
N16 W. 23390 Stone Ridge Dr
Suite G
Waukesha, WI 53188

September 26, 2014

ENVision Project Number: 2014-416
Client Project Name: 6190 – Martino's 52nd

Dear Mr. Kappen,

Please find the attached analytical report for the samples received September 12, 2014. All test methods performed were fully compliant with local, state, and federal EPA methods unless otherwise noted. The project was analyzed as requested on the enclosed chain of custody record. Please review the comments section for additional information about your results or Quality Control data.

Feel free to contact me if you have any questions or comments regarding your analytical report or service.

Thank you for your business. EnvisionAir looks forward to working with you on your next project.

Yours Sincerely,

A handwritten signature in black ink that reads "David Norris". The signature is written in a cursive, flowing style.

David Norris

Client Services Manager
EnvisionAir



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6190 MARTINO'S 52ND
Client Project Manager: K. HEIMSTEAD/B. KAPPEN
EnvisionAir Project Number: 2014-416

Sample Summary

Canister Pressure / Vacuum

<u>Laboratory Sample Number:</u>	<u>Sample Description:</u>	<u>Matrix:</u>	<u>START</u>	<u>START</u>	<u>End Date</u>	<u>End Time</u>	<u>Date</u>	<u>Time</u>	<u>Canister Pressure / Vacuum</u>		<u>Lab</u>
			<u>Date</u>	<u>Time</u>					<u>Initial Field</u>	<u>Final Field</u>	
			<u>Collected:</u>	<u>Collected:</u>	<u>Collected:</u>	<u>Collected:</u>	<u>Received:</u>	<u>Received</u>	<u>(in. Hg)</u>	<u>(in. Hg)</u>	<u>(in. Hg)</u>
14-1655	6190-5231-OA	A	9/9/14	10:30	9/10/14	10:35	9/12/14	14:46	-28	-2	-2
14-1656	6190-5231-IA-1	A	9/9/14	10:40	9/10/14	10:43	9/12/14	14:46	-29	-2	-2
14-1657	6190-5231-IA-2	A	9/9/14	10:45	9/10/14	10:40	9/12/14	14:46	-29	-4	-4
14-1658	6190-5231-SSV-1	A	9/9/14	11:00	9/10/14	11:05	9/12/14	14:46	-28	-1.5	-1.5
14-1659	6190-5231-SSV-2	A	9/9/14	11:25	9/10/14	11:32	9/12/14	14:46	-30	-1	-1



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6190 MARTINO'S 52ND
Client Project Manager: K. HEIMSTEAD/B. KAPPEN
EnvisionAir Project Number: 2014-416

Analytical Method: TO-15
Analytical Batch: 091514AIR

Client Sample ID: 6190-5231-OA
Envision Sample Number: 14-1655
Sample Matrix: AIR

Sample Collection START Date/Time: 9/9/14 10:30
Sample Collection END Date/Time: 9/10/14 10:35
Sample Received Date/Time: 9/12/14 14:46

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,1-Dichloropropene	< 45.4	45.4	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	< 0.40	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	< 1.60	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 0.83	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	< 3.19	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichlorethene	< 1.07	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	100%		
Analysis Date/Time:	9-16-14/12:25		
Analyst Initials	tjg		



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6190 MARTINO'S 52ND
Client Project Manager: K. HEIMSTEAD/B. KAPPEN
EnvisionAir Project Number: 2014-416

Analytical Method: TO-15
Analytical Batch: 091514AIR

Client Sample ID: 6190-5231-IA-1
Envision Sample Number: 14-1656
Sample Matrix: AIR

Sample Collection START Date/Time: 9/9/14 10:40
Sample Collection END Date/Time: 9/10/14 10:43
Sample Received Date/Time: 9/12/14 14:46

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,1,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,1-Dichloropropene	< 45.4	45.4	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	8.86	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	< 2380	2380	
Benzene	1.73	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	2.59	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	7.05	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichlorethene	< 1.07	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	105%		
Analysis Date/Time:	9-15-14/22:27		
Analyst Initials	tjg		



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6190 MARTINO'S 52ND
Client Project Manager: K. HEIMSTEAD/B. KAPPEN
EnvisionAir Project Number: 2014-416

Analytical Method: TO-15
Analytical Batch: 091514AIR

Client Sample ID: 6190-5231-IA-2
Envision Sample Number: 14-1657
Sample Matrix: AIR

Sample Collection START Date/Time: 9/9/14 10:45
Sample Collection END Date/Time: 9/10/14 10:40
Sample Received Date/Time: 9/12/14 14:46

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 492	492	
4-Methyl-2-pentanone (MIBK)	< 2050	2050	
1,1,1-Trichloroethane	< 546	546	
1,1,2,2-Tetrachloroethane	< 0.34	0.34	1
1,1,2-Trichloroethane	< 0.21	0.21	1
1,1-Dichloroethane	< 4.05	4.05	
1,1-Dichloroethene	< 198	198	
1,1-Dichloropropene	< 45.4	45.4	
1,2,4-Trichlorobenzene	< 0.74	0.74	
1,2,4-Trimethylbenzene	< 4.92	4.92	
1,2-dibromoethane (EDB)	< 0.03	0.03	1
1,2-Dichlorobenzene	< 60.1	60.1	
1,2-Dichloroethane	8.46	0.40	
1,2-Dichloropropane	< 0.46	0.46	
1,3,5-Trimethylbenzene	< 4.92	4.92	
1,3-Butadiene	< 0.22	0.22	
1,3-Dichlorobenzene	< 60.1	60.1	
1,4-Dichlorobenzene	< 0.60	0.60	
1,4-Dioxane	< 1.80	1.80	
2-Butanone (MEK)	< 2950	2950	
2-Hexanone	< 20.5	20.5	
Acetone	2,560	23800	2,3
Benzene	1.63	1.60	
Benzyl Chloride	< 0.41	0.41	1
Bromodichloromethane	< 0.54	0.54	1
Bromoform	< 10.3	10.3	
Bromomethane	< 3.88	3.88	
Carbon Disulfide	< 311	311	
Carbon Tetrachloride	< 0.63	0.63	
Chlorobenzene	< 23.0	23.0	
Chloroethane	< 13.2	13.2	



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	2.64	0.83	
Chloromethane	< 20.6	20.6	
cis-1,2-Dichloroethene	< 19.8	19.8	
cis-1,3-Dichloropropene	< 4.54	4.54	
Cyclohexane	< 5510	5510	
Dibromochloromethane	< 0.85	0.85	
Dichlorodifluoromethane	< 49.5	49.5	
Ethyl Acetate	< 1800	1800	
Ethylbenzene	< 8.68	8.68	
Hexachloro-1,3-butadiene	< 1.07	1.07	
Isooctane	< 467	467	
m,p-Xylene	< 43.4	43.4	
Methylene Chloride	< 41.7	41.7	
Methyl-tert-butyl ether	< 36.1	36.1	
N-Heptane	< 410	410	
N-Hexane	< 176	176	
o-Xylene	< 43.4	43.4	
Propylene	< 172	172	
Styrene	< 426	426	
Tetrachloroethene	9.16	3.19	
Tetrahydrofuran	< 295	295	
Toluene	< 3770	3770	
trans-1,2-Dichloroethene	< 39.6	39.6	
trans-1,3-Dichloropropene	< 4.54	4.54	
Trichlorethene	1.34	1.07	
Trichlorofluoromethane	< 562	562	
Vinyl Acetate	< 176	176	
Vinyl Bromide	< 0.44	0.44	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	105%		
Analysis Date/Time:	9-15-14/23:02		
Analyst Initials	tjg		



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6190 MARTINO'S 52ND
Client Project Manager: K. HEIMSTEAD/B. KAPPEN
EnvisionAir Project Number: 2014-416

Analytical Method: TO-15
Analytical Batch: 091714DAIR

Client Sample ID: 6190-5231-SSV-1 **Sample Collection START Date/Time:** 9/9/14 11:00
Envision Sample Number: 14-1658 **Sample Collection END Date/Time:** 9/10/14 11:05
Sample Matrix: AIR **Sample Received Date/Time:** 9/12/14 14:46

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 4920	4920	2
4-Methyl-2-pentanone (MIBK)	< 20500	20500	2
1,1,1-Trichloroethane	< 5460	5460	2
1,1,1,2-Tetrachloroethane	< 3.36	3.36	1,2
1,1,2-Trichloroethane	< 2.10	2.10	1,2
1,1-Dichloroethane	< 40.5	40.5	2
1,1-Dichloroethene	< 1980	1980	2
1,1-Dichloropropene	< 454	454	2
1,2,4-Trichlorobenzene	< 7.42	7.42	2
1,2,4-Trimethylbenzene	< 49.2	49.2	2
1,2-dibromoethane (EDB)	< 0.32	0.32	1,2
1,2-Dichlorobenzene	< 601	601	2
1,2-Dichloroethane	< 4.05	4.05	2
1,2-Dichloropropane	< 4.62	4.62	2
1,3,5-Trimethylbenzene	< 49.2	49.2	2
1,3-Butadiene	< 2.21	2.21	2
1,3-Dichlorobenzene	< 601	601	2
1,4-Dichlorobenzene	< 6.01	6.01	2
1,4-Dioxane	< 18.0	18.0	2
2-Butanone (MEK)	< 29500	29500	2
2-Hexanone	< 205	205	2
Acetone	< 23800	23800	2
Benzene	< 16.0	16.0	2
Benzyl Chloride	< 4.14	4.14	1,2
Bromodichloromethane	< 5.36	5.36	1,2
Bromoform	< 103	103	2
Bromomethane	< 38.8	38.8	2
Carbon Disulfide	< 3110	3110	2
Carbon Tetrachloride	< 6.29	6.29	2
Chlorobenzene	< 230	230	2
Chloroethane	< 132	132	2



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 8.30	8.30	2
Chloromethane	< 206	206	2
cis-1,2-Dichloroethene	< 198	198	2
cis-1,3-Dichloropropene	< 45.4	45.4	2
Cyclohexane	< 55100	55100	2
Dibromochloromethane	< 8.52	8.52	2
Dichlorodifluoromethane	< 495	495	2
Ethyl Acetate	< 18000	18000	2
Ethylbenzene	< 86.8	86.8	2
Hexachloro-1,3-butadiene	< 10.7	10.7	2
Isooctane	< 4670	4670	2
m,p-Xylene	< 434	434	2
Methylene Chloride	< 417	417	2
Methyl-tert-butyl ether	< 361	361	2
N-Heptane	< 4100	4100	2
N-Hexane	< 1760	1760	2
o-Xylene	< 434	434	2
Propylene	< 1720	1720	2
Styrene	< 4260	4260	2
Tetrachloroethene	215	31.9	2
Tetrahydrofuran	< 2950	2950	2
Toluene	< 37700	37700	2
trans-1,2-Dichloroethene	< 396	396	2
trans-1,3-Dichloropropene	< 45.4	45.4	2
Trichlorethene	< 10.7	10.7	2
Trichlorofluoromethane	< 5620	5620	2
Vinyl Acetate	< 1760	1760	2
Vinyl Bromide	< 4.37	4.37	2
Vinyl Chloride	< 12.8	12.8	2
4-bromofluorobenzene (surrogate)	115%		
Analysis Date/Time:	9-18-14/00:28		
Analyst Initials	tjg		



EnvisionAir
 1441 Sadler Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Client Name: ENVIROFORENSICS
Project ID: 6190 MARTINO'S 52ND
Client Project Manager: K. HEIMSTEAD/B. KAPPEN
EnvisionAir Project Number: 2014-416

Analytical Method: TO-15
Analytical Batch: 091714DAIR

Client Sample ID: 6190-5231-SSV-2 **Sample Collection START Date/Time:** 9/9/14 11:25
Envision Sample Number: 14-1659 **Sample Collection END Date/Time:** 9/10/14 11:32
Sample Matrix: AIR **Sample Received Date/Time:** 9/12/14 14:46

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
4-Ethyltoluene	< 4920	4920	2
4-Methyl-2-pentanone (MIBK)	< 20500	20500	2
1,1,1-Trichloroethane	< 5460	5460	2
1,1,2,2-Tetrachloroethane	< 3.36	3.36	1,2
1,1,2-Trichloroethane	< 2.10	2.10	1,2
1,1-Dichloroethane	< 40.5	40.5	2
1,1-Dichloroethene	< 1980	1980	2
1,1-Dichloropropene	< 454	454	2
1,2,4-Trichlorobenzene	< 7.42	7.42	2
1,2,4-Trimethylbenzene	< 49.2	49.2	2
1,2-dibromoethane (EDB)	< 0.32	0.32	1,2
1,2-Dichlorobenzene	< 601	601	2
1,2-Dichloroethane	< 4.05	4.05	2
1,2-Dichloropropane	< 4.62	4.62	2
1,3,5-Trimethylbenzene	< 49.2	49.2	2
1,3-Butadiene	< 2.21	2.21	2
1,3-Dichlorobenzene	< 601	601	2
1,4-Dichlorobenzene	< 6.01	6.01	2
1,4-Dioxane	< 18.0	18.0	2
2-Butanone (MEK)	< 29500	29500	2
2-Hexanone	< 205	205	2
Acetone	< 23800	23800	2
Benzene	< 16.0	16.0	2
Benzyl Chloride	< 4.14	4.14	1,2
Bromodichloromethane	< 5.36	5.36	1,2
Bromoform	< 103	103	2
Bromomethane	< 38.8	38.8	2
Carbon Disulfide	< 3110	3110	2
Carbon Tetrachloride	< 6.29	6.29	2
Chlorobenzene	< 230	230	2
Chloroethane	< 132	132	2



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
Chloroform	< 8.30	8.30	2
Chloromethane	< 206	206	2
cis-1,2-Dichloroethene	< 198	198	2
cis-1,3-Dichloropropene	< 45.4	45.4	2
Cyclohexane	< 55100	55100	2
Dibromochloromethane	< 8.52	8.52	2
Dichlorodifluoromethane	< 495	495	2
Ethyl Acetate	< 18000	18000	2
Ethylbenzene	< 86.8	86.8	2
Hexachloro-1,3-butadiene	< 10.7	10.7	2
Isooctane	< 4670	4670	2
m,p-Xylene	< 434	434	2
Methylene Chloride	< 417	417	2
Methyl-tert-butyl ether	< 361	361	2
N-Heptane	< 4100	4100	2
N-Hexane	< 1760	1760	2
o-Xylene	< 434	434	2
Propylene	< 1720	1720	2
Styrene	< 4260	4260	2
Tetrachloroethene	461	31.9	2
Tetrahydrofuran	< 2950	2950	2
Toluene	< 37700	37700	2
trans-1,2-Dichloroethene	< 396	396	2
trans-1,3-Dichloropropene	< 45.4	45.4	2
Trichlorethene	40.3	10.7	2
Trichlorofluoromethane	< 5620	5620	2
Vinyl Acetate	< 1760	1760	2
Vinyl Bromide	< 4.37	4.37	2
Vinyl Chloride	< 12.8	12.8	2
4-bromofluorobenzene (surrogate)	104%		
Analysis Date/Time:	9-18-14/04:02		
Analyst Initials	tjg		



EnvisionAir
 1441 Sadler Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Analytical Report

TO-15 Quality Control Data

EnvisionAir Batch Number: 091514AIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
4-Ethyltoluene	< 100	100	
4-Methyl-2-pentanone (MIBK)	< 500	500	
1,1,1-Trichloroethane	< 100	100	
1,1,2,2-Tetrachloroethane	< 0.049	0.049	1
1,1,2-Trichloroethane	< 0.038	0.038	1
1,1-Dichloroethane	< 1	1	
1,1-Dichloroethene	< 50	50	
1,1-Dichloropropene	< 10	10	
1,2,4-Trichlorobenzene	< 0.1	0.1	
1,2,4-Trimethylbenzene	< 1	1	
1,2-dibromoethane (EDB)	< 0.0041	0.0041	1
1,2-Dichlorobenzene	< 10	10	
1,2-Dichloroethane	< 0.1	0.1	
1,2-Dichloropropane	< 0.1	0.1	
1,3,5-Trimethylbenzene	< 1	1	
1,3-Butadiene	< 0.1	0.1	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 0.1	0.1	
1,4-Dioxane	< 0.5	0.5	
2-Butanone (MEK)	< 1000	1000	
2-Hexanone	< 5	5	
Acetone	< 1000	1000	
Benzene	< 0.5	0.5	
Benzyl Chloride	< 0.08	0.08	1
Bromodichloromethane	< 0.08	0.08	1
Bromoform	< 1	1	
Bromomethane	< 1	1	
Carbon Disulfide	< 100	100	
Carbon Tetrachloride	< 0.1	0.1	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
Chloroform	< 0.17	0.17	
Chloromethane	< 10	10	
cis-1,2-Dichloroethene	< 5	5	
cis-1,3-Dichloropropene	< 1	1	
Cyclohexane	< 1600	1600	
Dibromochloromethane	< 0.1	0.1	
Dichlorodifluoromethane	< 10	10	
Ethyl Acetate	< 500	500	
Ethylbenzene	< 2	2	
Hexachloro-1,3-butadiene	< 0.1	0.1	
Isooctane	< 100	100	
m,p-Xylene	< 10	10	
Methylene Chloride	< 12	12	
Methyl-tert-butyl ether	< 10	10	
N-Heptane	< 100	100	
N-Hexane	< 50	50	
o-Xylene	< 10	10	
Propylene	< 100	100	
Styrene	< 100	100	
Tetrachloroethene	< 0.47	0.47	
Tetrahydrofuran	< 100	100	



EnvisionAir
 1441 Sadler Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Analytical Report

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>				
Toluene	< 1000	1000					
trans-1,2-Dichloroethene	< 10	10					
trans-1,3-Dichloropropene	< 1	1					
Trichlorethene	< 0.2	0.2					
Trichlorofluoromethane	< 100	100					
Vinyl Acetate	< 50	50					
Vinyl Bromide	< 0.1	0.1					
Vinyl Chloride	< 0.5	0.5					
4-bromofluorobenzene (surrogate)	88%						
Analysis Date/Time:	9-15-14/17:52						
Analyst Initials	tjg						

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D Conc(ppbv)</u>	<u>LCS Rec.</u>	<u>LCSD Rec.</u>	<u>RPD</u>	<u>Flag</u>
Propylene	9.26	9.25	10	93%	93%	0.1%	
Dichlorodifluoromethane	9.12	9.24	10	91%	92%	1.3%	
Chloromethane	9.11	9.25	10	91%	93%	1.5%	
Vinyl Chloride	10.3	9.53	10	103%	95%	7.8%	
1,3-Butadiene	9.88	9.41	10	99%	94%	4.9%	
Bromomethane	10.6	10.4	10	106%	104%	1.9%	
Chloroethane	10.5	10.3	10	105%	103%	1.9%	
Vinyl Bromide	10.8	11.2	10	108%	112%	3.6%	
Trichlorofluoromethane	9.14	10.3	10	91%	103%	11.9%	
Acetone	10.8	11.5	10	108%	115%	6.3%	
1,1-Dichloroethene	9.9	10.8	10	99%	108%	8.7%	
Methylene Chloride	8.49	9.42	10	85%	94%	10.4%	
Carbon Disulfide	8.31	9.31	10	83%	93%	11.4%	
trans-1,2-Dichloroethene	8.82	10.1	10	88%	101%	13.5%	
Methyl-tert-butyl ether	9.58	10.7	10	96%	107%	11.0%	
1,1-Dichloroethane	9.08	9.32	10	91%	93%	2.6%	
Vinyl Acetate	9.13	9.73	10	91%	97%	6.4%	
N-Hexane	9.68	9.27	10	97%	93%	4.3%	
2-Butanone (MEK)	8.73	9.61	10	87%	96%	9.6%	
cis-1,2-Dichloroethene	8.65	9.7	10	87%	97%	11.4%	
Ethyl Acetate	8.44	9.36	10	84%	94%	10.3%	
Chloroform	8.96	8.64	10	90%	86%	3.6%	
Tetrahydrofuran	9.94	10.4	10	99%	104%	4.5%	
1,2-Dichloroethane	9.18	9.27	10	92%	93%	1.0%	
1,1,1-Trichloroethane	8.53	9.19	10	85%	92%	7.4%	
1,1-Dichloropropene	10.5	10.8	10	105%	108%	2.8%	
Carbon Tetrachloride	8.16	9.2	10	82%	92%	12.0%	
Benzene	8.73	9.16	10	87%	92%	4.8%	
Cyclohexane	9.9	10.3	10	99%	103%	4.0%	
1,2-Dichloropropane	9.28	9.59	10	93%	96%	3.3%	
Trichlorethene	8.34	8.77	10	83%	88%	5.0%	
Bromodichloromethane	8.26	8.97	10	83%	90%	8.2%	
1,4-Dioxane	9.1	8.07	10	91%	81%	12.0%	
Isooctane	9.5	9.44	10	95%	94%	0.6%	
N-Heptane	8.4	8.72	10	84%	87%	3.7%	
cis-1,3-Dichloropropene	9.95	10.3	10	100%	103%	3.5%	
4-Methyl-2-pentanone (MIBK)	8.81	8.79	10	88%	88%	0.2%	
trans-1,3-Dichloropropene	9.99	10.5	10	100%	105%	5.0%	
1,1,2-Trichloroethane	8.71	8.42	10	87%	84%	3.4%	
Toluene	8.22	9.01	10	82%	90%	9.2%	
2-Hexanone	8.41	8.11	10	84%	81%	3.6%	
Dibromochloromethane	8.47	9.12	10	85%	91%	7.4%	
1,2-dibromoethane (EDB)	9.02	9.53	10	90%	95%	5.5%	
Tetrachloroethene	9.52	10.6	10	95%	106%	10.7%	
Chlorobenzene	8.46	9.34	10	85%	93%	9.9%	
Ethylbenzene	9.46	10.3	10	95%	103%	8.5%	
m,p-Xylene	19.9	18.1	20	100%	91%	9.5%	
Bromoform	9.51	9.93	10	95%	99%	4.3%	



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Analytical Report

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D</u> <u>Conc(ppbv)</u>	<u>LCS</u> <u>Rec.</u>	<u>LCSD</u> <u>Rec.</u>	<u>RPD</u>	<u>Flag</u>
Styrene	8.61	9.21	10	86%	92%	6.7%	
1,1,2,2-Tetrachloroethane	8.54	8.69	10	85%	87%	1.7%	
o-Xylene	8.8	8.24	10	88%	82%	6.6%	
4-Ethyltoluene	8.75	9.35	10	88%	94%	6.6%	
1,3,5-Trimethylbenzene	8.94	9.29	10	89%	93%	3.8%	
1,2,4-Trimethylbenzene	8.22	8.59	10	82%	86%	4.4%	
1,3-Dichlorobenzene	10	9.72	10	100%	97%	2.8%	
Benzyl Chloride	9.32	10.1	10	93%	101%	8.0%	
1,4-Dichlorobenzene	8.78	8.45	10	88%	85%	3.8%	
1,2-Dichlorobenzene	9.32	10	10	93%	100%	7.0%	
1,2,4-Trichlorobenzene	10.3	10.8	10	103%	108%	4.7%	
Hexachloro-1,3-butadiene	9.89	8.46	10	99%	85%	15.6%	
4-bromofluorobenzene (surrogate)	90%	88%					
Analysis Date/Time:	9-15-14/15:22	9-15-14/15:58					
Analyst Initials	tjg	tjg					



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Analytical Report

TO-15 Quality Control Data

EnvisionAir Batch Number: 091714DAIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
4-Ethyltoluene	< 100	100	
4-Methyl-2-pentanone (MIBK)	< 500	500	
1,1,1-Trichloroethane	< 100	100	
1,1,2,2-Tetrachloroethane	< 0.049	0.049	1
1,1,2-Trichloroethane	< 0.038	0.038	1
1,1-Dichloroethane	< 1	1	
1,1-Dichloroethene	< 50	50	
1,1-Dichloropropene	< 10	10	
1,2,4-Trichlorobenzene	< 0.1	0.1	
1,2,4-Trimethylbenzene	< 1	1	
1,2-dibromoethane (EDB)	< 0.0041	0.0041	1
1,2-Dichlorobenzene	< 10	10	
1,2-Dichloroethane	< 0.1	0.1	
1,2-Dichloropropane	< 0.1	0.1	
1,3,5-Trimethylbenzene	< 1	1	
1,3-Butadiene	< 0.1	0.1	
1,3-Dichlorobenzene	< 10	10	
1,4-Dichlorobenzene	< 0.1	0.1	
1,4-Dioxane	< 0.5	0.5	
2-Butanone (MEK)	< 1000	1000	
2-Hexanone	< 5	5	
Acetone	< 1000	1000	
Benzene	< 0.5	0.5	
Benzyl Chloride	< 0.08	0.08	1
Bromodichloromethane	< 0.08	0.08	1
Bromoform	< 1	1	
Bromomethane	< 1	1	
Carbon Disulfide	< 100	100	
Carbon Tetrachloride	< 0.1	0.1	
Chlorobenzene	< 5	5	
Chloroethane	< 5	5	
Chloroform	< 0.17	0.17	
Chloromethane	< 10	10	
cis-1,2-Dichloroethene	< 5	5	
cis-1,3-Dichloropropene	< 1	1	
Cyclohexane	< 1600	1600	
Dibromochloromethane	< 0.1	0.1	
Dichlorodifluoromethane	< 10	10	
Ethyl Acetate	< 500	500	
Ethylbenzene	< 2	2	
Hexachloro-1,3-butadiene	< 0.1	0.1	
Isooctane	< 100	100	
m,p-Xylene	< 10	10	
Methylene Chloride	< 12	12	
Methyl-tert-butyl ether	< 10	10	
N-Heptane	< 100	100	
N-Hexane	< 50	50	
o-Xylene	< 10	10	
Propylene	< 100	100	
Styrene	< 100	100	
Tetrachloroethene	< 0.47	0.47	
Tetrahydrofuran	< 100	100	



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Analytical Report

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
Toluene	< 1000	1000	
trans-1,2-Dichloroethene	< 10	10	
trans-1,3-Dichloropropene	< 1	1	
Trichlorethene	< 0.2	0.2	
Trichlorofluoromethane	< 100	100	
Vinyl Acetate	< 50	50	
Vinyl Bromide	< 0.1	0.1	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	100%		
Analysis Date/Time:	9-17-14/21:23		
Analyst Initials	tjg		

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D Conc(ppbv)</u>	<u>LCS Rec.</u>	<u>LCSD Rec.</u>	<u>RPD</u>	<u>Flag</u>
Propylene	8.98	9.84	10	90%	98%	9.1%	
Dichlorodifluoromethane	9.61	10.8	10	96%	108%	11.4%	
Chloromethane	8.64	9.68	10	86%	97%	11.4%	
Vinyl Chloride	9.84	10.7	10	98%	107%	8.4%	
1,3-Butadiene	9.62	10.1	10	96%	101%	4.9%	
Bromomethane	10.8	9.49	10	108%	95%	12.9%	
Chloroethane	9.71	10.8	10	97%	108%	10.6%	
Vinyl Bromide	9.95	10.9	10	100%	109%	9.1%	
Trichlorofluoromethane	8.87	9.57	10	89%	96%	7.6%	
Acetone	9.32	10.6	10	93%	106%	12.9%	
1,1-Dichloroethene	9.99	11.1	10	100%	111%	10.5%	
Methylene Chloride	8.73	9.58	10	87%	96%	9.3%	
Carbon Disulfide	9.25	10.1	10	93%	101%	8.8%	
trans-1,2-Dichloroethene	10.3	11	10	103%	110%	6.6%	
Methyl-tert-butyl ether	10.3	11	10	103%	110%	6.6%	
1,1-Dichloroethane	9.38	9.96	10	94%	100%	6.0%	
Vinyl Acetate	9.51	10.8	10	95%	108%	12.7%	
N-Hexane	9.6	10.4	10	96%	104%	8.0%	
2-Butanone (MEK)	9.26	10.8	10	93%	108%	15.4%	
cis-1,2-Dichloroethene	10.5	11.4	10	105%	114%	8.2%	
Ethyl Acetate	10.8	10.9	10	108%	109%	0.9%	
Chloroform	8.9	9.88	10	89%	99%	10.4%	
Tetrahydrofuran	8.75	10.2	10	88%	102%	15.3%	
1,2-Dichloroethane	9.96	11.1	10	100%	111%	10.8%	
1,1,1-Trichloroethane	8.62	9.56	10	86%	96%	10.3%	
1,1-Dichloropropene	11.4	11.4	10	114%	114%	0.0%	
Carbon Tetrachloride	8.7	9.5	10	87%	95%	8.8%	
Benzene	8.65	9.2	10	87%	92%	6.2%	
Cyclohexane	9.89	10.6	10	99%	106%	6.9%	
1,2-Dichloropropane	9	9.87	10	90%	99%	9.2%	
Trichlorethene	8.03	8.56	10	80%	86%	6.4%	
Bromodichloromethane	8.39	8.98	10	84%	90%	6.8%	
1,4-Dioxane	11	10.7	10	110%	107%	2.8%	
Isooctane	9.09	9.76	10	91%	98%	7.1%	
N-Heptane	8.52	9.61	10	85%	96%	12.0%	
cis-1,3-Dichloropropene	10.4	10.6	10	104%	106%	1.9%	
4-Methyl-2-pentanone (MIBK)	10.7	10.2	10	107%	102%	4.8%	
trans-1,3-Dichloropropene	10.4	11.2	10	104%	112%	7.4%	
1,1,2-Trichloroethane	9.75	9.51	10	98%	95%	2.5%	
Toluene	9.06	9.79	10	91%	98%	7.7%	
2-Hexanone	10.7	11.5	10	107%	115%	7.2%	
Dibromochloromethane	8.45	9.21	10	85%	92%	8.6%	
1,2-dibromoethane (EDB)	9.15	9.88	10	92%	99%	7.7%	
Tetrachloroethene	8.92	10.1	10	89%	101%	12.4%	
Chlorobenzene	9.31	9.68	10	93%	97%	3.9%	
Ethylbenzene	8.96	9.43	10	90%	94%	5.1%	
m,p-Xylene	18.5	19.6	20	93%	98%	5.8%	
Bromoform	9	9.63	10	90%	96%	6.8%	



EnvisionAir
 1441 Sadlier Circle West Drive
 Indianapolis, IN 46239
 Ph: 317-351-0885
 Fax: 317-351-0882
 www.envision-air.com

Analytical Report

<u>LCS/LCSD</u>	<u>LCS Results (ppbv)</u>	<u>LCSD Results (ppbv)</u>	<u>LCS/D</u> <u>Conc(ppbv)</u>	<u>LCS</u> <u>Rec.</u>	<u>LCSD</u> <u>Rec.</u>	<u>RPD</u>	<u>Flag</u>
Styrene	10.1	10.9	10	101%	109%	7.6%	
1,1,2,2-Tetrachloroethane	9.15	9.96	10	92%	100%	8.5%	
o-Xylene	9.63	10.4	10	96%	104%	7.7%	
4-Ethyltoluene	9.99	11	10	100%	110%	9.6%	
1,3,5-Trimethylbenzene	9.71	10.7	10	97%	107%	9.7%	
1,2,4-Trimethylbenzene	9.96	10.9	10	100%	109%	9.0%	
1,3-Dichlorobenzene	8.06	8.75	10	81%	88%	8.2%	
Benzyl Chloride	9.76	10.7	10	98%	107%	9.2%	
1,4-Dichlorobenzene	9.99	10.4	10	100%	104%	4.0%	
1,2-Dichlorobenzene	8.67	10.3	10	87%	103%	17.2%	
1,2,4-Trichlorobenzene	8.7	9.41	10	87%	94%	7.8%	
Hexachloro-1,3-butadiene	9.53	10.8	10	95%	108%	12.5%	
4-bromofluorobenzene (surrogate)	93%	97%					
Analysis Date/Time:	9-17-14/18:49	9-17-14/20:49					
Analyst Initials	tjg	tjg					



EnvisionAir
1441 Sadlier Circle West Drive
Indianapolis, IN 46239
Ph: 317-351-0885
Fax: 317-351-0882
www.envision-air.com

Flag Number

Comments

- | | |
|---|---|
| 1 | Reporting limit is supported by MDL. TJG |
| 2 | Reported value is from a 10x dilution. TJG 9-25-14 |
| 3 | Reported value is below the reporting limit but above the MDL.
TJG 9-25-14 |

CHAIN OF CUSTODY RECORD

EnvisionAir | 1441 Sadlier Circle West Drive | Indianapolis, IN 46239 | Phone: (317) 351-0885 | Fax: (317) 351-0882

Client: <u>Enviro Forensics</u>	P.O. Number:
Report No: <u>W23390</u> <u>Siem Ridge Dr.</u> Address: <u>Waukesha WI 53188</u>	Project Name or Number: <u>690</u> <u>Machines 52nd</u>
Report To: <u>K. Heurstead / B. Kappen</u>	Sampled by: <u>K. Heurstead</u>
Phone: <u>317-972-7870</u>	QA/QC Required: (circle if applicable) Level III <u>Level IV</u>
Invoice Address:	Reporting Units needed: (circle) <u>ug/m³</u> mg/m ³ PPBV PPMV
Desired TAT: (Please Circle One) 1 day 2 days 3 days <u>5 (5 bus. days)</u>	Media type: 1LC = 1 Liter Canister 6LC = 6 Liter Canister TB = Tedlar Bag TD = Thermal Desorption Tube

REQUESTED PARAMETERS

TO-15 Full List

TO-15 Short List



Sampling Type:
 Soil-Gas:
 Sub-Slab:
 Indoor-Air:

www.envision-air.com

Canister Pressure / Vacuum

Air Sample ID	Media Type <small>(see code above)</small>	Coll. Date <small>(Grab/Comp Start)</small>	Coll. Time <small>(Grab/Comp Start)</small>	Coll. Date <small>(Comp. End)</small>	Coll. Time <small>(Comp. End)</small>					Canister Serial #	Flow Controller Serial #	Initial Field (in. Hg)	Final Field (in. Hg)	Lab Received (in. Hg)	EnvisionAir Sample Number
690-5231-0A	6LC	9/9/14	1030	9/10/14	1035	x				91538	07441	-28	-2	-2	14-1655
690-5231-IA-1	6LC	9/9/14	1040	9/10/14	1043	x				16034	07255	-29	-2	-2	14-1656
690-5231-IA-2	6LC	9/9/14	1045	9/10/14	1040	x				11068	07444	-29	-4	-4	14-1657
690-5231-SSV-1	1LC	9/10/14	1100	9/10/14	1105	x				83726	-	-28	-1.5	-1.5	14-1658
690-5231-SSV-2	1LC	9/10/14	1125	9/10/14	1132	x				2096	-	-30	-1	-1	14-1659

Comments: Level IV QA/QC needed for 6LC samples.

Relinquished by:	Date	Time	Received by:	Date	Time
<u>[Signature]</u>	<u>9/10/14</u>	<u>14:46</u>	<u>[Signature]</u>	<u>9/12/14</u>	<u>14:46</u>