



February 19, 2021

Rick & Cathy Gulick
5231 40th Ave
Kenosha, WI 53142

Subject: Environmental Investigation Sampling Results
BRRTS#: 02-30-552186

Dear Mr. and Mrs. Gulick:

In accordance with the executed Agreement to Provide Access for Sampling Activities, and in accordance with Wisconsin Department of Natural Resources (WDNR) regulation NR 716.14, EnviroForensics, LLC is providing the results of environmental samples collected from your property located at 5231 40th Avenue in Kenosha, Wisconsin. The samples were collected on February 11, 2021. The sampling activities are part of an environmental investigation being performed for the Martino's Master Drycleaner facility located at 3917 52nd Street in Kenosha, WI at the direction of the WDNR pursuant to the authority granted to it under State and Federal law. The chemicals of concern for the investigation are the dry cleaning solvent tetrachloroethene (PCE) and its associated breakdown products.

The Responsible Party is:

Martino's Master Drycleaners
7513 41st Ave
Kenosha, WI
262-694-7545

Sampling Results

Two (2) sub-slab vapor samples designated 6190-5231-SSV-1 and 6190-5231-SSV-2 were collected from the basement of your home. Indoor air samples 6190-5231-IA-1 and 6190-5231-IA-2 were collected from the basement and first floor, respectively. For quality control purposes a sample of outdoor air designated 6190-5231-OA was also collected. The sampling locations are depicted on the attached figure. The results of the vapor and air samples are summarized and compared to WDNR standards on the attached **Table 1**. The laboratory report that relates to the vapor and air samples are also attached.

As shown on the attached table, the chemicals of concern were not detected in the indoor air samples collected from your home on February 11, 2021. The sub-slab vapor samples contained both PCE and trichloroethene (TCE), which is a breakdown product of PCE. The concentrations of both compounds were well below the residential vapor risk screening level established by

Document: 6190-1737



WDNR for use in evaluating chemical concentrations at sites such as this. The concentrations were also substantially less than those detected in previous vapor samples collected in 2014.

If you have any questions or concerns, please contact me at 262-745-5054 or by email at bkappen@enviroforensics.com. The WDNR project manager, Jane Pfeiffer, can be reached at 414-435-8021. We greatly appreciate your help and patience with this matter.

Sincerely,
EnviroForensics, LLC

A handwritten signature in blue ink, appearing to read "Brian Kappen".

Brian Kappen, PG
Project Manager

Copy: Jane Pfeiffer, Wisconsin Department of Natural Resources

Attachments: Sample Location Map
Results Summary Table
WDNR Fact Sheet - Understanding Chemical Vapor Intrusion Testing Results
Analytical Laboratory Report

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

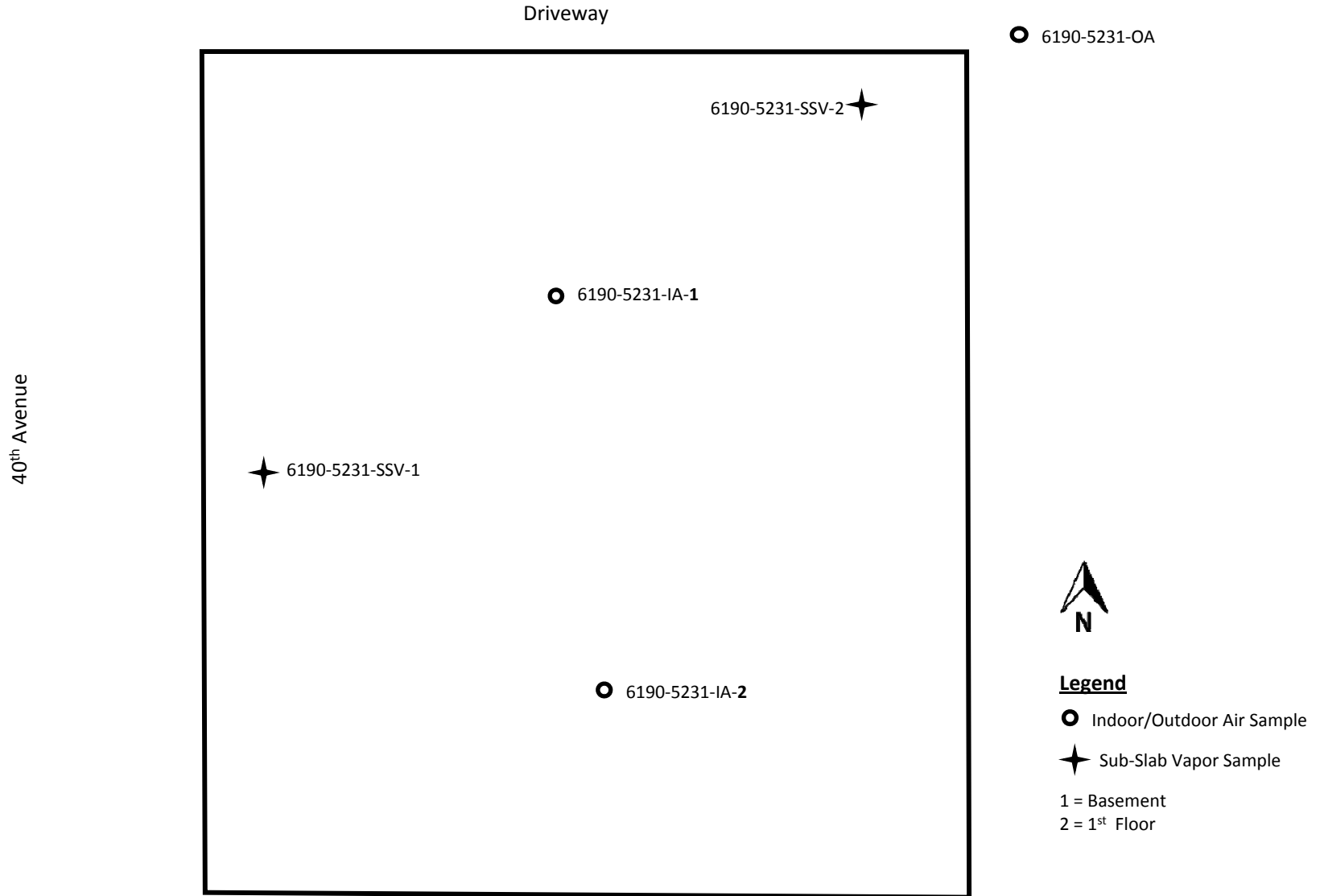


TABLE 1
VAPOR INTRUSION ASSESSMENT RESULTS SUMMARY - 5231 40th AVENUE

Martino's Master Drycleaners
 3917 52nd Street, Kenosha, Wisconsin

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
6190-5231-OA	Outdoor	Residential	9/9/2014	<3.19	<1.07	<1.60	<0.40	<2,380	<0.83
			12/9/2014	<3.19	<1.07	<1.60	<0.40	<2,380	<0.83
			2/11/2021	<3.19	<1.07	NA	NA	NA	NA
6190-5231-IA-1	Basement	Residential	9/9/2014	7.05	<1.07	1.73	8.86	<2,380	2.59
			12/9/2014	<3.19	<1.07	<1.60	<0.40	<2,380	1.37
			2/11/2021	<3.19	<1.07	NA	NA	NA	NA
6190-5231-IA-2	First Floor	Residential	9/9/2014	9.16	1.34	1.63	8.46	2,560	2.64
			12/9/2014	<3.19	<1.07	<1.60	1.82	<2,380	1.27
			2/11/2021	<3.19	<1.07	NA	NA	NA	NA
SUB-SLAB VAPOR									
Residential Vapor Risk Screening Level				1,400	70	120	37	1,067,000	40
6190-5231-SSV-1	Basement	Residential	9/10/2014	215	<10.7	<16.0	<4.05	<23,800	<8.30
			12/9/2014	125	13.4	<16.0	<4.05	<23,800	9.28
			2/11/2021	31.0	2.36	NA	NA	NA	NA
6190-5231-SSV-2	Basement	Residential	9/10/2014	461	40.3	<16.0	<4.05	<23,800	<8.30
			12/9/2014	300	27.4	<16.0	<4.05	<23,800	9.28
			2/11/2021	66.2	3.82	NA	NA	NA	NA

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

NA = Not analyzed

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

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.

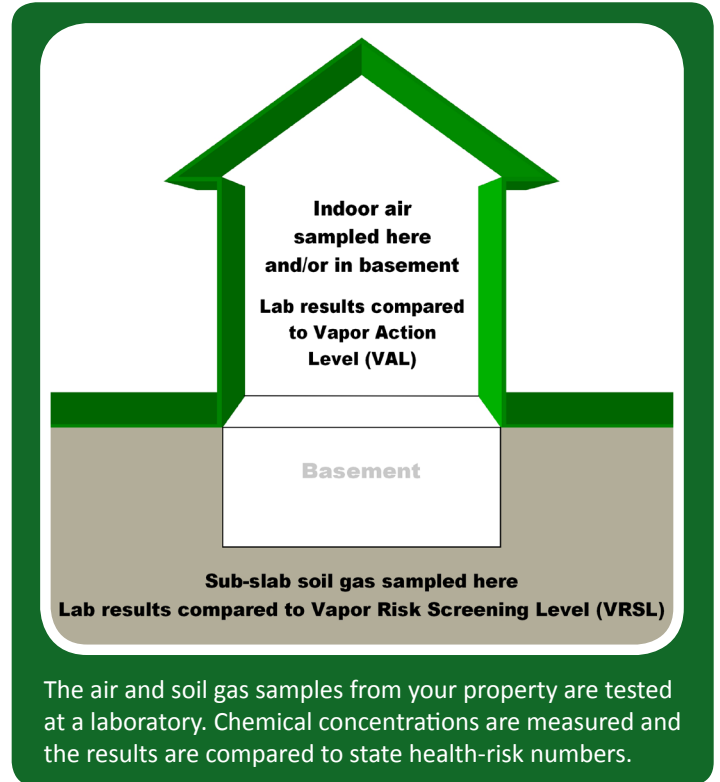
Indoor Air Testing Results

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. The VAL is a chemical compound's numerical value that represents a health hazard risk to no more than 1 in 100,000 people during a lifetime of exposure. If test results show chemical concentrations in your air below the VAL then adverse health effects are extremely rare, even if you were to breathe the chemical at this concentration for your entire life.

Test results showing chemical concentrations in the air at or above the VAL prompt DNR to recommend that exposure 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 greatly exceeds 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.

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.



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

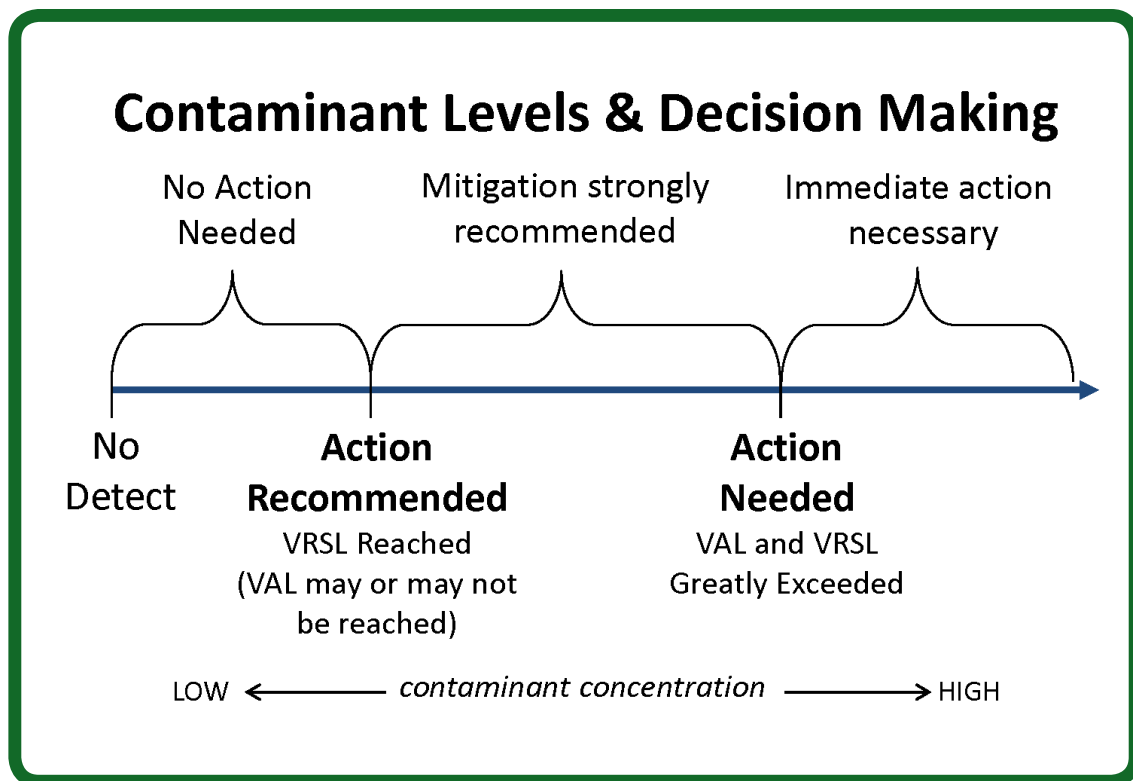
If your test results are less than a VAL for indoor air, or a VRSL for sub-slab soil gas, then the air in the house or building should not present a health concern. Follow-up sampling and testing may be necessary to confirm the results, but no other action is typically suggested.

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



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

February 18, 2021

EnvisionAir Project Number: 2021-81
Client Project Name: 6190

Dear Mr. Kappen,

Please find the attached analytical report for the samples received February 12, 2021. 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 "Stanley A. Hunnicutt".

Stanley A Hunnicutt

Project Manager
EnvisionAir, LLC



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Client Name: ENVIROFORENSICS
Project ID: 6190
Client Project Manager: BRIAN KAPPEN
EnvisionAir Project Number: 2021-81

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>
21-444	6190-5231-OA	A	2/10/21	10:15	2/11/21	9:57	2/12/21	15:00	-30	0	0
21-445	6190-5231-IA-1	A	2/10/21	10:09	2/11/21	9:59	2/12/21	15:00	-30	-5	-5
21-446	6190-5231-IA-2	A	2/10/21	10:14	2/11/21	9:58	2/12/21	15:00	-30	-6	-6
21-447	6190-5231-SSV-1	A	2/11/21	10:38	2/11/21	10:42	2/12/21	15:00	-26	-4	-4
21-448	6190-5231-SSV-2	A	2/11/21	10:13	2/11/21	10:18	2/12/21	15:00	-29	-4	-4



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Client Name: ENVIROFORENSICS

Project ID: 6190

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2021-81

Analytical Method: TO-15
Analytical Batch: 021321AIR

Client Sample ID: 6190-5231-OA

Sample Collection START Date/Time: 2/10/21 10:15

Sample Collection END Date/Time: 2/11/21 9:57

EnvisionAir Sample Number: 21-444

Sample Received Date/Time: 2/12/21 15:00

Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	107%		
Analysis Date/Time:	2-15-21/09:19		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS

Project ID: 6190

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2021-81

Analytical Method: TO-15
Analytical Batch: 021321AIR

Client Sample ID: 6190-5231-IA-1

Sample Collection START Date/Time: 2/10/21 10:09

Sample Collection END Date/Time: 2/11/21 9:59

EnvisionAir Sample Number: 21-445

Sample Received Date/Time: 2/12/21 15:00

Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	96%		
Analysis Date/Time:	2-15-21/17:07		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS

Project ID: 6190

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2021-81

Analytical Method: TO-15
Analytical Batch: 021321AIR

Client Sample ID: 6190-5231-IA-2

Sample Collection START Date/Time: 2/10/21 10:14

Sample Collection END Date/Time: 2/11/21 9:58

EnvisionAir Sample Number: 21-446

Sample Received Date/Time: 2/12/21 15:00

Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	93%		
Analysis Date/Time:	2-15-21/17:49		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS

Project ID: 6190

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2021-81

Analytical Method: TO-15
Analytical Batch: 021321AIR

Client Sample ID: 6190-5231-SSV-1

Sample Collection START Date/Time: 2/11/21 10:38

Sample Collection END Date/Time: 2/11/21 10:42

EnvisionAir Sample Number: 21-447

Sample Received Date/Time: 2/12/21 15:00

Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	31.0	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	2.36	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	97%		
Analysis Date/Time:	2-15-21/18:33		
Analyst Initials	tjg		



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Client Name: ENVIROFORENSICS

Project ID: 6190

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2021-81

Analytical Method: TO-15
Analytical Batch: 021321AIR

Client Sample ID: 6190-5231-SSV-2

Sample Collection START Date/Time: 2/11/21 10:13

Sample Collection END Date/Time: 2/11/21 10:18

EnvisionAir Sample Number: 21-448

Sample Received Date/Time: 2/12/21 15:00

Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m³</u>	<u>Reporting Limit ug/m³</u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 19.8	19.8	
Tetrachloroethene	66.2	3.19	
trans-1,2-Dichloroethene	< 39.6	39.6	
Trichloroethene	3.82	1.07	
Vinyl Chloride	< 1.28	1.28	
4-bromofluorobenzene (surrogate)	89%		
Analysis Date/Time:	2-15-21/19:58		
Analyst Initials	tjg		

TO-15 Quality Control Data

EnvisionAir Batch Number: 021321AIR

<u>Method Blank (MB):</u>	<u>MB Results (ppbv)</u>	<u>Reporting Limit (ppbv)</u>	<u>Flags</u>
cis-1,2-Dichloroethene	< 5	5	
Tetrachloroethene	< 0.47	0.47	
trans-1,2-Dichloroethene	< 10	10	
Trichloroethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	107%		
Analysis Date/Time:	2-14-21/21:50		
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>
Vinyl Chloride	9.75	9.21	10	98%	92%	5.7%	
trans-1,2-Dichloroethene	11.6	11.6	10	116%	116%	0.0%	
cis-1,2-Dichloroethene	11.3	11.3	10	113%	113%	0.0%	
Trichloroethene	9.44	10.1	10	94%	101%	6.8%	
Tetrachloroethene	10.7	11	10	107%	110%	2.8%	
4-bromofluorobenzene (surrogate)	95%	106%					
Analysis Date/Time:	2-14-21/22:37	2-15-21/16:24					
Analyst Initials	tjg	tjg					



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Flag Number

Comments

CHAIN OF CUSTODY RECORD

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

Client: EnviroForensics	P.O. Number: 2021-0069
Report Address: bkappen@enviroforensics.com	Project Name or Number: 6190
Report To: B. Kappen	Sampled by:
Phone: 262-745-5054	QA/QC Required: (circle if applicable) Level III Level IV
Invoice Address: accounts payable @enviroforensics.com	Reporting Units needed: (circle) ug/m³ mg/m ³ PPBV PPMV
Desired TAT: (Please Circle One) 1 day 2 days 3 days Std (5 bus. days)	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 (Specify in notes)



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

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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
6190-5231-0A	6LL	2-10-21	10:15	2-11-21	9:57	X			80636	5002	-30	0	0	21-444
6190-5231-IA-1	6LC	2-10-21	10:09	2-11-21	9:59	X			91607	7461	-30	-5	-5	21-445
6190-5231-IA-2	6LC	2-10-21	10:14	2-11-21	9:58	X			19622	4648	-30	-6	-6	21-446
6190-5231-SSV-1	1LC	2-11-21	10:38	2-11-21	10:42	X			83819	0084	-26	-4	-4	21-447
6190-5231-SSV-2	1LC	2-11-21	10:13	2-11-21	10:18	X			8387	0091	-29	-4	-4	21-448

Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
<i>[Signature]</i>	2-11-21	12:30	<i>[Signature]</i>	2-11-21	12:30
			<i>[Signature]</i>	2/12/21	1500