



April 28, 2016

RECEIVED  
MAY 04 2016

Dan Martino, Sr.  
Martino's Master Dry Cleaners  
7513 41<sup>st</sup> Avenue  
Kenosha, Wisconsin 53142

BY: .....

**Subject: Vapor Intrusion Monitoring Results  
Martino's Master Dry Cleaners  
3917 52<sup>nd</sup> Street Avenue, Kenosha, Wisconsin  
BRRTS #: 02-30-552186  
Project #: 6190**

Dear Mr. Martino:

Environmental Forensic Investigations, Inc. (EnviroForensics) is pleased to provide the results of vapor intrusion (VI) monitoring conducted at your property located on 52<sup>nd</sup> Street in Kenosha, Wisconsin. VI monitoring was requested by the Wisconsin Department of Natural Resources (WDNR) in a letter dated November 18, 2015. Specifically, monitoring was requested in the units of the building without vapor mitigation systems installed. The VI monitoring work scope was presented in a memorandum submitted to project stakeholders on January 14, 2016.

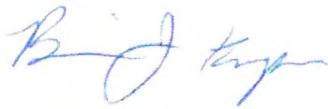
The VI monitoring activities were conducted on February 23, 2016 and consisted of indoor air sample collection at 3931, 3931A, 3933, and 3935 52<sup>nd</sup> Street. The building layout is depicted on **Figure 1**. An outdoor air sample was collected concurrently to evaluate background conditions. The samples were collected in 6-liter vacuum canisters over an 8-hour period as recommended by WDNR for commercial properties. The samples were submitted to a laboratory for analysis of tetrachloroethene (PCE) and associated degradation compounds according to EPA Test Method TO-15.

### Sampling Results

The analytical results of the air samples are summarized and compared to vapor action levels (VALs) in the attached **Table 1**. Previous indoor air sample results associated with the target units of the building are included in **Table 1** for reference. The laboratory report is also attached. The compounds of concern were not detected in the air samples with one exception: cis-1,2-dichloroethene was detected in the sample collected from 3931A (currently occupied by Subway restaurant) at a concentration of 5.04 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ). This is a very low concentration which is just above the laboratory detection limit of 3.96  $\mu\text{g}/\text{m}^3$ . A VAL has not been established for cis-1,2-dichloroethene.

Based on the results of this sampling event, the vapor intrusion pathway does not appear to be complete and sub-slab vapors are not affecting indoor air in the monitored units of the building. The next VI monitoring event is scheduled for July 2016. We will provide a summary and analysis of the sampling results. If you have any questions or concerns, please contact us at 262-290-4001 or by email at [bkappen@enviroforensics.com](mailto:bkappen@enviroforensics.com). We appreciate the opportunity to continue to provide services on this project.

Sincerely,  
**Environmental Forensic Investigations, Inc.**

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

Brian Kappen, PG  
*Project Manager*

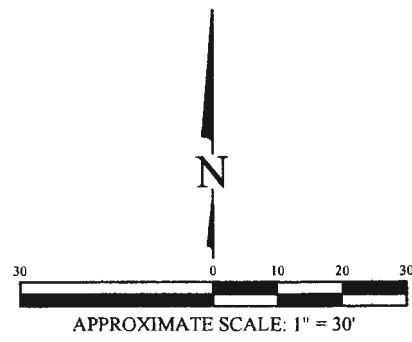
Wayne Fassbender, PG, PMP  
*Senior Project Manager*

Copy: Doug Cieslak, Wisconsin Department of Natural Resources

Attachments: Figure 1 – Site Layout  
Table 1 – Vapor Intrusion Monitoring Results Summary  
Laboratory Analytical Report

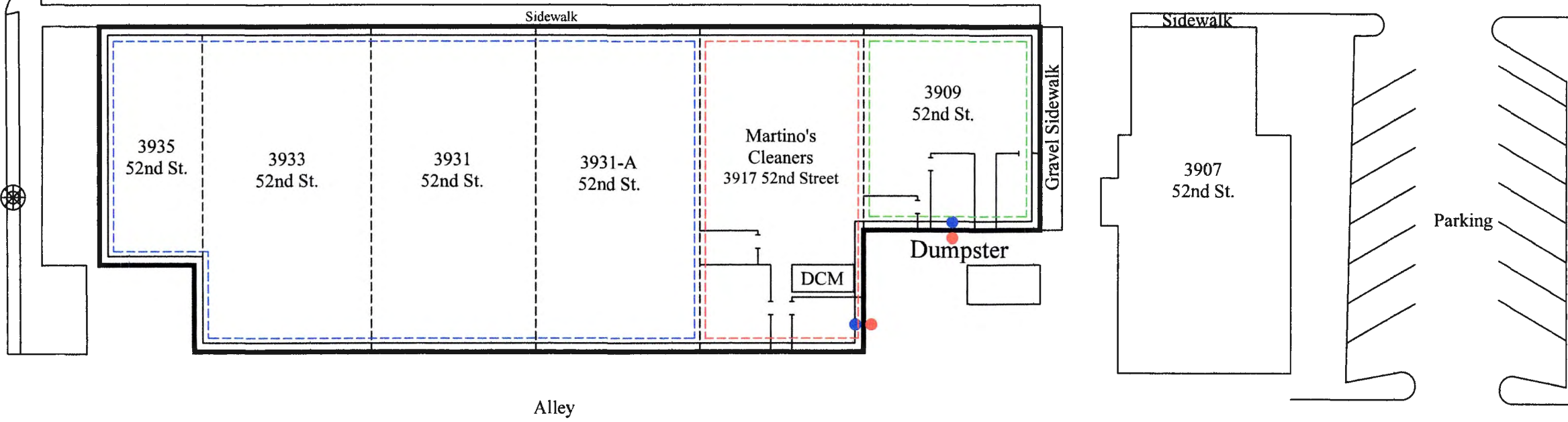
**Legend**

- SSDS Extraction point
- SSDS Fan
- - - Slab foundation #1
- - - Slab foundation #2
- - - Slab foundation #3

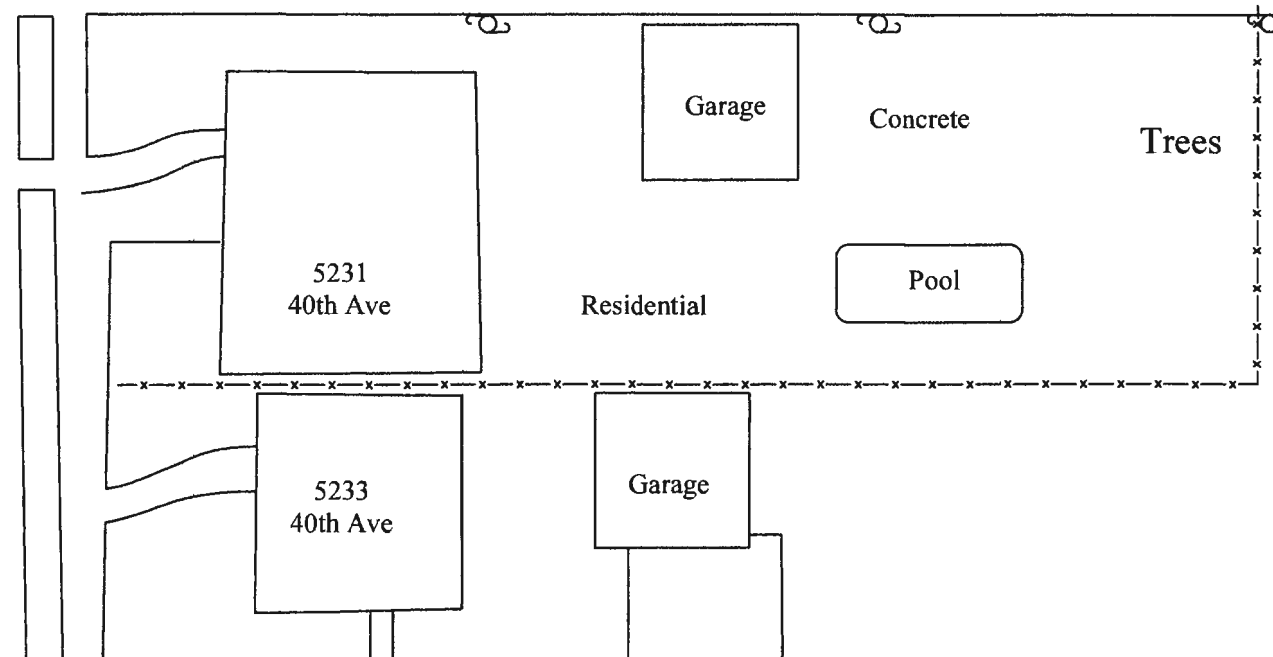


Parking Lot

40th AVENUE



Alley



Grass

**SITE LAYOUT**

Martino's Cleaners  
3917 52nd Street  
Kenosha, Wisconsin

Date:	2/12/16
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6190-0813

**ENVIROforensics**  
ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.  
602 N. Capitol Ave., Ste. 210 • Indianapolis, IN 46204  
EnviroForensics.com

Figure	1
Project	6190

**TABLE 1**  
**VAPOR INTRUSION MONITORING RESULTS SUMMARY**

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

Sample Address	Sample Identification	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
Outdoor	6190-OA	10/30/2012	<1.4	<1.1	<0.79	NA	<0.51
	6190-OA-1	11/24/2014	<3.19	<1.07	<19.8	<39.6	<1.28
	6190-OA-1	2/23/2016	<3.19	<1.07	<3.96	<3.96	<0.64
3931 52nd St	6190-IA-1	10/30/2012	<2.3	<1.8	<1.4	NA	<0.87
	6190-3931B-IA-1	11/24/2014	<b>98.7</b>	<1.07	<19.8	<39.6	<1.28
	6190-3931-IA-1	2/23/2016	<3.19	<1.07	<3.96	<3.96	<0.64
3931A 52nd St	6190-3931A-IA-1	11/24/2014	<b>64.2</b>	<1.07	<19.8	<39.6	<1.28
	6190-3931-A-IA-1	2/23/2016	<3.19	<1.07	<b>5.04</b>	<3.96	<0.64
3933 52nd St	6190-3933-IA-1	2/23/2016	<3.19	<1.07	<3.96	<3.96	<0.64
3935 52nd St	6190-3935-IA-1	2/23/2016	<3.19	<1.07	<3.96	<3.96	<0.64
<b>Vapor Action Level<sup>1</sup></b>			<b>180</b>	<b>8.8</b>	<b>NE</b>	<b>NE</b>	<b>440</b>

**Notes:**

<sup>1</sup> Vapor action levels are calculated in accordance with the procedures described in WDNR Publication RR-800

All concentrations reported in units in micrograms per cubic meter = µg/m<sup>3</sup>

**Bolded** values are above method detection limits

NA = Not Analyzed

NE = Not Established

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

March 4, 2016

EnvisionAir Project Number: 2016-146  
Client Project Name: 6190.18c / Martino's 52<sup>nd</sup> St

Dear Mr. Kappen,

Please find the attached analytical report for the samples received February 26, 2016. 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,



Stanley A Hunnicutt

Project Manager  
EnvisionAir, LLC

Client Name: ENVIROFORENSICS  
 Project ID: 6379  
 Client Project Manager: JASON OLAND  
 EnvisionAir Project Number: 2016-146

**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>Initial Field</u>	<u>Final Field</u>	<u>Lab</u>
			<u>Collected:</u>	<u>Collected:</u>							<u>Collected:</u>
			<u>(in. Hg)</u>	<u>(in. Hg)</u>					<u>(in. Hg)</u>	<u>(in. Hg)</u>	<u>(in. Hg)</u>
16-521	6190-OA-1	A	2/23/16	9:13	2/23/16	17:13	2/26/16	10:00	-30	-6.5	-6.5
16-522	6190-3931-A-IA-1	A	2/23/16	8:35	2/23/16	16:31	2/26/16	10:00	-30	-8	-8
16-523	6190-3931-IA-1	A	2/23/16	8:43	2/23/16	16:42	2/26/16	10:00	-29.5	-8	-8
16-524	6190-3933-IA-1	A	2/23/16	9:02	2/23/16	17:02	2/26/16	10:00	-29	-8.5	-8.5
16-525	6190-3935-IA-1	A	2/23/16	10:48	2/23/16	18:48	2/26/16	10:00	-30	-7.5	-7.5

**Client Name:** ENVIROFORENSICS  
**Project ID:** 6190.18C / MARTINO'S 52ND ST  
**Client Project Manager:** BRIAN KAPPEN  
**EnvisionAir Project Number:** 2016-146

**Analytical Method:** TO-15  
**Analytical Batch:** 022616AIR

**Client Sample ID:** 6190-OA-1      **Sample Collection START Date/Time:** 2/23/16      9:13  
**Envision Sample Number:** 16-521      **Sample Collection END Date/Time:** 2/23/16      17:13  
**Sample Matrix:** AIR      **Sample Received Date/Time:** 2/26/16      10:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 3.96	3.96	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 3.96	3.96	
Trichlorethene	< 1.07	1.07	
Vinyl Chloride	< 0.64	0.64	
4-bromofluorobenzene (surrogate)	122%		
Analysis Date/Time:	2-26-16/18:44		
Analyst Initials	tjg		

**Client Name:** ENVIROFORENSICS  
**Project ID:** 6190.18C / MARTINO'S 52ND ST  
**Client Project Manager:** BRIAN KAPPEN  
**EnvisionAir Project Number:** 2016-146

**Analytical Method:** TO-15  
**Analytical Batch:** 022616AIR

**Client Sample ID:** 6190-3931-A-IA-1    **Sample Collection START Date/Time:** 2/23/16    8:35  
**Envision Sample Number:** 16-522    **Sample Collection END Date/Time:** 2/23/16    16:31  
**Sample Matrix:** AIR    **Sample Received Date/Time:** 2/26/16    10:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	5.04	3.96	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 3.96	3.96	
Trichlorethene	< 1.07	1.07	
Vinyl Chloride	< 0.64	0.64	
4-bromofluorobenzene (surrogate)	110%		
Analysis Date/Time:	2-27-16/01:24		
Analyst Initials	tjg		



**Client Name:** ENVIROFORENSICS  
**Project ID:** 6190.18C / MARTINO'S 52ND ST  
**Client Project Manager:** BRIAN KAPPEN  
**EnvisionAir Project Number:** 2016-146

**Analytical Method:** TO-15  
**Analytical Batch:** 022616AIR

**Client Sample ID:** 6190-3931-IA-1      **Sample Collection START Date/Time:** 2/23/16      8:43  
**Envision Sample Number:** 16-523      **Sample Collection END Date/Time:** 2/23/16      16:42  
**Sample Matrix:** AIR      **Sample Received Date/Time:** 2/26/16      10:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 3.96	3.96	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 3.96	3.96	
Trichlorethene	< 1.07	1.07	
Vinyl Chloride	< 0.64	0.64	
4-bromofluorobenzene (surrogate)	110%		
Analysis Date/Time:	2-27-16/02:06		
Analyst Initials	tjg		

Client Name: ENVIROFORENSICS

Project ID: 6190.18C / MARTINO'S 52ND ST

Client Project Manager: BRIAN KAPPEN

EnvisionAir Project Number: 2016-146

Analytical Method: TO-15  
Analytical Batch: 022616AIR

Client Sample ID: 6190-3933-IA-1      Sample Collection START Date/Time: 2/23/16      9:02  
Sample Collection END Date/Time: 2/23/16      17:02  
Envision Sample Number: 16-524      Sample Received Date/Time: 2/26/16      10:00  
Sample Matrix: AIR

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 3.96	3.96	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 3.96	3.96	
Trichloroethene	< 1.07	1.07	
Vinyl Chloride	< 0.64	0.64	
4-bromofluorobenzene (surrogate)	118%		
Analysis Date/Time:	2-27-16/02:49		
Analyst Initials	tjg		

**Client Name:** ENVIROFORENSICS  
**Project ID:** 6190.18C / MARTINO'S 52ND ST  
**Client Project Manager:** BRIAN KAPPEN  
**EnvisionAir Project Number:** 2016-146

**Analytical Method:** TO-15  
**Analytical Batch:** 022616AIR

**Client Sample ID:** 6190-3935-IA-1      **Sample Collection START Date/Time:** 2/23/16      10:48  
**Envision Sample Number:** 16-525      **Sample Collection END Date/Time:** 2/23/16      18:48  
**Sample Matrix:** AIR      **Sample Received Date/Time:** 2/26/16      10:00

<u>Compounds</u>	<u>Sample Results ug/m<sup>3</sup></u>	<u>Reporting Limit ug/m<sup>3</sup></u>	<u>Flag</u>
cis-1,2-Dichloroethene	< 3.96	3.96	
Tetrachloroethene	< 3.19	3.19	
trans-1,2-Dichloroethene	< 3.96	3.96	
Trichlorethene	< 1.07	1.07	
Vinyl Chloride	< 0.64	0.64	
4-bromofluorobenzene (surrogate)	120%		
Analysis Date/Time:	2-27-16/03:32		
Analyst Initials	tjg		

**TO-15 Quality Control Data**

EnvisionAir Batch Number: 022616AIR

<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	
Trichlorethene	< 0.2	0.2	
Vinyl Chloride	< 0.5	0.5	
4-bromofluorobenzene (surrogate)	109%		
Analysis Date/Time:	2-26-16/16:52		
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>
Vinyl Chloride	9.49	9.85	10	95%	99%	3.7%	
trans-1,2-Dichloroethene	10.4	10.7	10	104%	107%	2.8%	
cis-1,2-Dichloroethene	9.86	10.2	10	99%	102%	3.4%	
Trichlorethene	9.9	10.2	10	99%	102%	3.0%	
Tetrachloroethene	9.45	9.75	10	95%	98%	3.1%	
4-bromofluorobenzene (surrogate)	98%	100%					
Analysis Date/Time:	2-26-16/15:32	2-26-16/16:15					
Analyst Initials	tjg	tjg					

Flag Number

1

Comments

Reporting limit is supported by MDL. TJG

BJK

# CHAIN OF CUSTODY RECORD

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

Client: <u>Enviro Forensics</u>	P.O. Number: <u>20160115</u>
Report Address: <u>N16 W23390 Ste G Stone Ridge Dr Waukegan WI 53185</u>	Project Name or Number: <u>Martino's 52<sup>nd</sup> St 6190.18c</u>
Report To: <u>B. Kappen</u>	Sampled by: <u>M. Stettinisch</u>
Phone: <u>317-972-7870</u>	QA/QC Required: (circle if applicable) Level III <u>Level IV</u>
Invoice Address: <u>Stone</u>	Reporting Units needed: (circle) <u>ug/m<sup>3</sup></u> mg/m <sup>3</sup> PPBV PPMV
Desired TAT: (Please Circle One) <u>1 day</u> 2 days 3 days <u>Std (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:   
 Outdoor Air:  **Canister Pressure / Vacuum**

www.envision-air.com

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
6190-04-1	6LC	2/23	0913	2/23	1713				11083	05253	-30	-6.5	-6.5	16-521
6190-3931-A-IA-1	6LC	2/23	0835	2/23	1631				15564	03059	-30	-8	-8	16-522
6190-3921-IA-1	6LC	2/23	0843	2/23	1642				19627	05304	-29.5	-8	-8	16-523
6190-3933-IA-1	6LC	2/23	0902	2/23	1702				91537	02219	-29	-8.5	-8.5	16-524
6190-3935-IA-1	6LC	2/23	1048	2/23	1848				16033	02225	-30	-7.5	-7.5	16-525

Comments:

Relinquished by:	Date	Time	Received by:	Date	Time
<u>Morgan Stettinisch</u>	<u>2/24/16</u>	<u>1557</u>	<u>Fedex / Anthony A. Munnico</u>	<u>2/26/16</u>	<u>1000</u>