



October 16, 2009

Mr. Jeff Ackerman, P.G.  
Remediation and Redevelopment  
State of Wisconsin Department of Natural Resources  
South Central Regional Headquarters  
3911 Fish Hatchery Road  
Fitchburg, WI 53711-5397

**Re: Data Transmittal Letter  
DERF Interim Remedial Action  
Former Robinson's Cleaners  
1819 Milwaukee Street, Janesville, WI  
WI BRRTS#02-54-248342  
EnviroForensics Project 6156**

Dear Mr. Ackerman:

Environmental Forensic Investigations, Inc. (EnviroForensics) has completed indoor air sampling activities at the Former Robinson's Cleaners facility located at 1819 Milwaukee Street in Janesville, Wisconsin (Site). Previous indoor air samples collected within a leased tenant space at the Site (1817 Milwaukee Street; Checks for Cash) contained concentrations of perchloroethylene (PCE) and trichloroethylene (TCE) at levels in excess of the applicable standards. Modifications were made to the heating ventilation and air conditioning (HVAC) system in an effort to isolate the tenant space from the active dry cleaning facility

#### **I. SAMPLING ACTIVITIES**

The sampling was conducted in accordance with the Interim Action Vapor Mitigation Work Plan dated September 9, 2009, which was approved by the Wisconsin Department of Natural Resources (WDNR) in a letter dated September 15, 2009. EnviroForensics mobilized to the site on September 25, 2009 and collected one ambient indoor air sample from the leased tenant space over the course of eight (8) hours from 10:00 am to 6:00 pm. Additionally, a sample was collected from an onsite, outdoor location. Air samples were collected into laboratory supplied six-liter Suma canisters and shipped to Pace Analytical of Minneapolis, Minnesota for analysis of volatile organics via method TO-15. Field sampling sheets are provided in Attachment A and the laboratory report is provided in Attachment B.

Environmental Forensic Investigations, Inc.  
1060 North Capitol Avenue, Suite E230, Indianapolis, IN 46204  
Phone: 317-972-7870 • Fax 317-972-7875

## II. RESULTS

The analytical results indicate that constituents of concern, trichloroethylene (TCE) and perchloroethylene (PCE) were present in the indoor air sample at levels in excess of the 1E-06 Carcinogenic Target Risk (TR), but less than the 1E-4 TR. The reported levels are very much lower than the 8-hour permissible exposure levels (PELs) established for the workplace by the Occupational Safety and Health Administration (OSHA). The results from previous and recent sampling events are summarized in the table below.

10-28-08  
TABLE 1.  
INDOOR AIR SAMPLING RESULTS

6/12/09 Indoor Air				
Compound	Result	1E-04 TR	1E-06 TR	OSHA PEL
Trichloroethylene	181.5 ug/m3	610 ug/m3	6.1 ug/m3	5.3705E5
Perchloroethylene	47.57 ug/m3	210 ug/m3	2.1 ug/m3	6.7782E5
9/25/09 Indoor Air				
Compound	Result	1E-04 TR	1E-06 TR	OSHA PEL
Trichloroethylene	94.8 ug/m3	610 ug/m3	6.1 ug/m3	5.3705E5
Perchloroethylene	77 ug/m3	210 ug/m3	2.1 ug/m3	6.7782E5

## III. DISCUSSION

Based upon the results of the indoor air sampling event conducted on September 25, 2009 in the tenant space at the site, it appears that the modifications to the HVAC system have not significantly decreased the levels of PCE and TCE in the ambient air. As shown on the attached sampling sheets, the barometric pressure readings collected inside the tenant space during sampling were only slightly higher than the outdoor barometric pressure readings. It is likely that with additional adjustments to the HVAC system, a higher positive pressure differential can be created and maintained inside the tenant space, thereby reducing the potential for vapor intrusion into the space. However, the responsible party intends to request a minimum of three (3) competitive bids per NR 169 requirements for the installation of a sub-slab depressurization system that would be designed to decrease the intrusion of vapors into the occupied tenant space.

We appreciate the opportunity to provide you with this information. If you have any questions or would like to discuss this transmittal, please don't hesitate to call at 317.972.7870.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Carnahan", with a long horizontal flourish extending to the right.

Jeff Carnahan, LPG  
Senior Project Manager

Copy: Ray Gehrig, Ms. Marcia O'Loughlin (via email)  
Henry Nehls-Lowe, Wisconsin Department of Health (via email)

Attachments



**ATTACHMENT A**

Environmental Forensic Investigations, Inc.  
1060 North Capitol Avenue, Suite E230, Indianapolis, IN 46204  
Phone: 317-972-7870 • Fax 317-972-7875



Vapor Intrusion Field Sampling Form

1060 N. Capitol Avenue, Ste. E230, Indianapolis, IN 46204 T:317-972-7870 F: 317-972-7875

Table with 4 columns: Field Name, Value, Field Name, Value. Includes Project Name (Robinson's Cleaners), Location (1819 Milwaukee St. WI), Project No. (6156.01), Client (Ray Gehrig), Start Date (9/25/2009), Sample Date (9/25/2009), Sample ID (6156-summa1034-O), Sample Time (1005 - 1805), and Canister ID (1034).

Main data table with 7 columns: Time (hh:mm), Vacuum Reading (In. of H2O), Wind Direction, Wind Speed (mph), Temperature (°F), Barometer (Hg), and Relative Humidity (%). Contains 5 rows of data for times 1005, 1205, 1405, 1605, and 1805.

Notes: A light sprinkle came through during the testing duration. The flow back filter and air filter were present.



Vapor Intrusion Field Sampling Form

1060 N. Capitol Avenue, Ste. E230, Indianapolis, IN 46204 T:317-972-7870 F: 317-972-7875

Table with 4 columns: Field Name, Value, Field Name, Value. Includes PROJECT NAME (Robinson's Cleaners), LOCATION/ADDRESS (1819 Milwaukee St. WI), PROJECT NO. (6156.01), CLIENT/CONTACT (Ray Gehrig), DATA COLLECTION: START DATE (9/25/2009), SAMPLE DATE (9/25/2009), SAMPLE ID (6156-summa493-I), SAMPLE TIME (1000 - 1800), CANISTER ID (493), END DATE (9/25/2009).

Main data table with 7 columns: Time (hh:mm), Vacuum Reading (In. of H2O), Wind Direction, Wind Speed (mph), Temperature (°F), Barometer (Hg), Relative Humidity (%). Contains 5 rows of data and 20 empty rows.

Notes:



**ATTACHMENT B**

Environmental Forensic Investigations, Inc.  
1060 North Capitol Avenue, Suite E230, Indianapolis, IN 46204  
Phone: 317-972-7870 \* Fax 317-972-7875



Pace Analytical Services, Inc.  
1700 Elm Street - Suite 200  
Minneapolis, MN 55414  
(612)607-1700

October 12, 2009

Mr. Jeff Carnahan  
EnviroForensics  
1060 N. Capital  
E-230  
Indianapolis, IN 46204

RE: Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

Dear Mr. Carnahan:

Enclosed are the analytical results for sample(s) received by the laboratory on September 30, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Colin Schuft

colin.schuft@pacelabs.com  
Project Manager

Enclosures

**REPORT OF LABORATORY ANALYSIS**

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## CERTIFICATIONS

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

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### Minnesota Certification IDs

Alaska Certification #: UST-078  
1700 Elm Street SE, Suite 200 Minneapolis, MN 55414  
California Certification #: 01155CA  
Florida/NELAP Certification #: E87605  
Illinois Certification #: 200011  
Iowa Certification #: 368  
Kansas Certification #: E-10167  
Louisiana Certification #: 03086  
Louisiana Certification #: LA080009  
Maine Certification #: 2007029  
Minnesota Certification #: 027-053-137

Montana Certification #: MT CERT0092  
New Jersey Certification #: MN-002  
New York Certification #: 11647  
North Carolina Certification #: 530  
North Dakota Certification #: R-036  
Oregon Certification #: MN200001  
Pennsylvania Certification #: 68-00563  
Tennessee Certification #: 02818  
Washington Certification #: C754  
Wisconsin Certification #: 999407970  
Arizona Certification #: AZ-0014

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10113651001	6156-SUMMA-493-I	Air	09/25/09 18:00	09/30/09 08:58
10113651002	6156-SUMMA-1034-O	Air	09/25/09 18:05	09/30/09 08:58

### REPORT OF LABORATORY ANALYSIS

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OUTSIDE

**ANALYTICAL RESULTS**

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

Sample: 6156-SUMMA-1034-O Lab ID: 10113651002 Collected: 09/25/09 18:05 Received: 09/30/09 08:58 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>		Analytical Method: TO-15						
Acetone	30.0	ug/m3	0.64	1.34		10/07/09 19:16	67-64-1	
Benzene	6.1	ug/m3	0.87	1.34		10/07/09 19:16	71-43-2	
Bromodichloromethane	ND	ug/m3	1.9	1.34		10/07/09 19:16	75-27-4	
Bromoform	ND	ug/m3	2.8	1.34		10/07/09 19:16	75-25-2	
Bromomethane	ND	ug/m3	1.1	1.34		10/07/09 19:16	74-83-9	
1,3-Butadiene	ND	ug/m3	0.60	1.34		10/07/09 19:16	106-99-0	
2-Butanone (MEK)	ND	ug/m3	0.80	1.34		10/07/09 19:16	78-93-3	
Carbon disulfide	ND	ug/m3	0.84	1.34		10/07/09 19:16	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.7	1.34		10/07/09 19:16	56-23-5	
Chlorobenzene	ND	ug/m3	1.3	1.34		10/07/09 19:16	108-90-7	
Chloroethane	ND	ug/m3	0.72	1.34		10/07/09 19:16	75-00-3	
Chloroform	ND	ug/m3	1.3	1.34		10/07/09 19:16	67-66-3	
Chloromethane	ND	ug/m3	0.56	1.34		10/07/09 19:16	74-87-3	
Cyclohexane	22.4	ug/m3	0.91	1.34		10/07/09 19:16	110-82-7	
Dibromochloromethane	ND	ug/m3	2.3	1.34		10/07/09 19:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	2.1	1.34		10/07/09 19:16	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.6	1.34		10/07/09 19:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.6	1.34		10/07/09 19:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.6	1.34		10/07/09 19:16	106-46-7	
Dichlorodifluoromethane	2.2	ug/m3	1.3	1.34		10/07/09 19:16	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.1	1.34		10/07/09 19:16	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.1	1.34		10/07/09 19:16	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.1	1.34		10/07/09 19:16	75-35-4	
cis-1,2-Dichloroethene	1.2	ug/m3	1.1	1.34		10/07/09 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	1.34		10/07/09 19:16	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.3	1.34		10/07/09 19:16	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.2	1.34		10/07/09 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.2	1.34		10/07/09 19:16	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.9	1.34		10/07/09 19:16	76-14-2	
Ethyl acetate	ND	ug/m3	0.98	1.34		10/07/09 19:16	141-78-6	
Ethylbenzene	2.0	ug/m3	1.2	1.34		10/07/09 19:16	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.4	1.34		10/07/09 19:16	622-96-8	
n-Heptane	16.6	ug/m3	1.1	1.34		10/07/09 19:16	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	2.9	1.34		10/07/09 19:16	87-68-3	
n-Hexane	59.8	ug/m3	0.96	1.34		10/07/09 19:16	110-54-3	
2-Hexanone	ND	ug/m3	1.1	1.34		10/07/09 19:16	591-78-6	
Methylene Chloride	ND	ug/m3	0.95	1.34		10/07/09 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	1.1	1.34		10/07/09 19:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	0.98	1.34		10/07/09 19:16	1634-04-4	
Propylene	ND	ug/m3	0.47	1.34		10/07/09 19:16	115-07-1	
Styrene	ND	ug/m3	1.2	1.34		10/07/09 19:16	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.9	1.34		10/07/09 19:16	79-34-5	
Tetrachloroethene	7.4	ug/m3	1.9	1.34		10/07/09 19:16	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.80	1.34		10/07/09 19:16	109-99-9	
Toluene	7.0	ug/m3	1.0	1.34		10/07/09 19:16	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	1.3	1.34		10/07/09 19:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.5	1.34		10/07/09 19:16	71-55-6	

Date: 10/12/2009 12:31 PM

**REPORT OF LABORATORY ANALYSIS**

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INSIDE

**ANALYTICAL RESULTS**

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

Sample: 6156-SUMMA-493-I Lab ID: 10113651001 Collected: 09/25/09 18:00 Received: 09/30/09 08:58 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>		Analytical Method: TO-15						
1,1,2-Trichloroethane	ND	ug/m3	1.5	1.34		10/07/09 20:21	79-00-5	
Trichloroethene	94.8	ug/m3	0.74	1.34		10/07/09 20:21	79-01-6	
Trichlorofluoromethane	2.2	ug/m3	1.5	1.34		10/07/09 20:21	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.1	1.34		10/07/09 20:21	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	3.4	1.34		10/07/09 20:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	3.4	1.34		10/07/09 20:21	108-67-8	
Vinyl acetate	ND	ug/m3	0.95	1.34		10/07/09 20:21	108-05-4	
Vinyl chloride	ND	ug/m3	0.70	1.34		10/07/09 20:21	75-01-4	
m&p-Xylene	5.6	ug/m3	2.4	1.34		10/07/09 20:21	1330-20-7	
o-Xylene	2.3	ug/m3	1.2	1.34		10/07/09 20:21	95-47-6	

INSIDE

ANALYTICAL RESULTS

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

Sample: 6156-SUMMA-493-I Lab ID: 10113651001 Collected: 09/25/09 18:00 Received: 09/30/09 08:58 Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>		Analytical Method: TO-15						
Acetone	22.8	ug/m3	0.64	1.34		10/07/09 20:21	67-64-1	
Benzene	3.7	ug/m3	0.87	1.34		10/07/09 20:21	71-43-2	
Bromodichloromethane	ND	ug/m3	1.9	1.34		10/07/09 20:21	75-27-4	
Bromoform	ND	ug/m3	2.8	1.34		10/07/09 20:21	75-25-2	
Bromomethane	ND	ug/m3	1.1	1.34		10/07/09 20:21	74-83-9	
1,3-Butadiene	ND	ug/m3	0.60	1.34		10/07/09 20:21	106-99-0	
2-Butanone (MEK)	5.6	ug/m3	0.80	1.34		10/07/09 20:21	78-93-3	
Carbon disulfide	ND	ug/m3	0.84	1.34		10/07/09 20:21	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.7	1.34		10/07/09 20:21	56-23-5	
Chlorobenzene	ND	ug/m3	1.3	1.34		10/07/09 20:21	108-90-7	
Chloroethane	ND	ug/m3	0.72	1.34		10/07/09 20:21	75-00-3	
Chloroform	ND	ug/m3	1.3	1.34		10/07/09 20:21	67-66-3	
Chloromethane	1.5	ug/m3	0.56	1.34		10/07/09 20:21	74-87-3	
Cyclohexane	8.0	ug/m3	0.91	1.34		10/07/09 20:21	110-82-7	
Dibromochloromethane	ND	ug/m3	2.3	1.34		10/07/09 20:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	2.1	1.34		10/07/09 20:21	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.6	1.34		10/07/09 20:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.6	1.34		10/07/09 20:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.6	1.34		10/07/09 20:21	106-46-7	
Dichlorodifluoromethane	20.5	ug/m3	1.3	1.34		10/07/09 20:21	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.1	1.34		10/07/09 20:21	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.1	1.34		10/07/09 20:21	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.1	1.34		10/07/09 20:21	75-35-4	
cis-1,2-Dichloroethene	1.7	ug/m3	1.1	1.34		10/07/09 20:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	1.34		10/07/09 20:21	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.3	1.34		10/07/09 20:21	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.2	1.34		10/07/09 20:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.2	1.34		10/07/09 20:21	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.9	1.34		10/07/09 20:21	76-14-2	
Ethyl acetate	1.1	ug/m3	0.98	1.34		10/07/09 20:21	141-78-6	
Ethylbenzene	1.8	ug/m3	1.2	1.34		10/07/09 20:21	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.4	1.34		10/07/09 20:21	622-96-8	
n-Heptane	4.7	ug/m3	1.1	1.34		10/07/09 20:21	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	2.9	1.34		10/07/09 20:21	87-68-3	
n-Hexane	12.0	ug/m3	0.96	1.34		10/07/09 20:21	110-54-3	
2-Hexanone	ND	ug/m3	1.1	1.34		10/07/09 20:21	591-78-6	
Methylene Chloride	2.2	ug/m3	0.95	1.34		10/07/09 20:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	1.1	1.34		10/07/09 20:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	0.98	1.34		10/07/09 20:21	1634-04-4	
Propylene	ND	ug/m3	0.47	1.34		10/07/09 20:21	115-07-1	
Styrene	ND	ug/m3	1.2	1.34		10/07/09 20:21	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.9	1.34		10/07/09 20:21	79-34-5	
Tetrachloroethene	77.7	ug/m3	1.9	1.34		10/07/09 20:21	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.80	1.34		10/07/09 20:21	109-99-9	
Toluene	12.0	ug/m3	1.0	1.34		10/07/09 20:21	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	1.3	1.34		10/07/09 20:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.5	1.34		10/07/09 20:21	71-55-6	

Date: 10/12/2009 12:31 PM

REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
10113651001	6156-SUMMA-493-I	TO-15	LCW	57
10113651002	6156-SUMMA-1034-O	TO-15	LCW	57

### REPORT OF LABORATORY ANALYSIS

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OUTSIDE

**ANALYTICAL RESULTS**

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

Sample: 6156-SUMMA-1034-O    Lab ID: 10113651002    Collected: 09/25/09 18:05    Received: 09/30/09 08:58    Matrix: Air

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>		Analytical Method: TO-15						
1,1,2-Trichloroethane	ND	ug/m3	1.5	1.34		10/07/09 19:16	79-00-5	
Trichloroethene	2.7	ug/m3	0.74	1.34		10/07/09 19:16	79-01-6	
Trichlorofluoromethane	1.6	ug/m3	1.5	1.34		10/07/09 19:16	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.1	1.34		10/07/09 19:16	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	3.4	1.34		10/07/09 19:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	3.4	1.34		10/07/09 19:16	108-67-8	
Vinyl acetate	ND	ug/m3	0.95	1.34		10/07/09 19:16	108-05-4	
Vinyl chloride	ND	ug/m3	0.70	1.34		10/07/09 19:16	75-01-4	
m&p-Xylene	4.9	ug/m3	2.4	1.34		10/07/09 19:16	1330-20-7	
o-Xylene	1.5	ug/m3	1.2	1.34		10/07/09 19:16	95-47-6	

### QUALITY CONTROL DATA

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

QC Batch: AIR/9221 Analysis Method: TO-15  
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level  
Associated Lab Samples: 10113651001, 10113651002

METHOD BLANK: 693482 Matrix: Air  
Associated Lab Samples: 10113651001, 10113651002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	10/07/09 18:11	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.4	10/07/09 18:11	
1,1,2-Trichloroethane	ug/m3	ND	1.1	10/07/09 18:11	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	10/07/09 18:11	
1,1-Dichloroethane	ug/m3	ND	0.82	10/07/09 18:11	
1,1-Dichloroethene	ug/m3	ND	0.81	10/07/09 18:11	
1,2,4-Trichlorobenzene	ug/m3	ND	0.99	10/07/09 18:11	
1,2,4-Trimethylbenzene	ug/m3	ND	2.5	10/07/09 18:11	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.6	10/07/09 18:11	
1,2-Dichlorobenzene	ug/m3	ND	1.2	10/07/09 18:11	
1,2-Dichloroethane	ug/m3	ND	0.82	10/07/09 18:11	
1,2-Dichloropropane	ug/m3	ND	0.94	10/07/09 18:11	
1,3,5-Trimethylbenzene	ug/m3	ND	2.5	10/07/09 18:11	
1,3-Butadiene	ug/m3	ND	0.45	10/07/09 18:11	
1,3-Dichlorobenzene	ug/m3	ND	1.2	10/07/09 18:11	
1,4-Dichlorobenzene	ug/m3	ND	1.2	10/07/09 18:11	
2-Butanone (MEK)	ug/m3	ND	0.60	10/07/09 18:11	
2-Hexanone	ug/m3	ND	0.83	10/07/09 18:11	
4-Ethyltoluene	ug/m3	ND	2.5	10/07/09 18:11	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	0.83	10/07/09 18:11	
Acetone	ug/m3	ND	0.48	10/07/09 18:11	
Benzene	ug/m3	ND	0.65	10/07/09 18:11	
Bromodichloromethane	ug/m3	ND	1.4	10/07/09 18:11	
Bromoform	ug/m3	ND	2.1	10/07/09 18:11	
Bromomethane	ug/m3	ND	0.79	10/07/09 18:11	
Carbon disulfide	ug/m3	ND	0.63	10/07/09 18:11	
Carbon tetrachloride	ug/m3	ND	1.3	10/07/09 18:11	
Chlorobenzene	ug/m3	ND	0.94	10/07/09 18:11	
Chloroethane	ug/m3	ND	0.54	10/07/09 18:11	
Chloroform	ug/m3	ND	0.99	10/07/09 18:11	
Chloromethane	ug/m3	ND	0.42	10/07/09 18:11	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	10/07/09 18:11	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	10/07/09 18:11	
Cyclohexane	ug/m3	ND	0.68	10/07/09 18:11	
Dibromochloromethane	ug/m3	ND	1.7	10/07/09 18:11	
Dichlorodifluoromethane	ug/m3	ND	1.0	10/07/09 18:11	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	10/07/09 18:11	
Ethyl acetate	ug/m3	ND	0.73	10/07/09 18:11	
Ethylbenzene	ug/m3	ND	0.88	10/07/09 18:11	
Hexachloro-1,3-butadiene	ug/m3	ND	2.2	10/07/09 18:11	
m&p-Xylene	ug/m3	ND	1.8	10/07/09 18:11	
Methyl-tert-butyl ether	ug/m3	ND	0.73	10/07/09 18:11	
Methylene Chloride	ug/m3	ND	0.71	10/07/09 18:11	

Date: 10/12/2009 12:31 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

METHOD BLANK: 693482 Matrix: Air

Associated Lab Samples: 10113651001, 10113651002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
n-Heptane	ug/m3	ND	0.83	10/07/09 18:11	
n-Hexane	ug/m3	ND	0.72	10/07/09 18:11	
o-Xylene	ug/m3	ND	0.88	10/07/09 18:11	
Propylene	ug/m3	ND	0.35	10/07/09 18:11	
Styrene	ug/m3	ND	0.87	10/07/09 18:11	
Tetrachloroethene	ug/m3	ND	1.4	10/07/09 18:11	
Tetrahydrofuran	ug/m3	ND	0.60	10/07/09 18:11	
Toluene	ug/m3	ND	0.77	10/07/09 18:11	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	10/07/09 18:11	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	10/07/09 18:11	
Trichloroethene	ug/m3	ND	0.55	10/07/09 18:11	
Trichlorofluoromethane	ug/m3	ND	1.1	10/07/09 18:11	
Vinyl acetate	ug/m3	ND	0.71	10/07/09 18:11	
Vinyl chloride	ug/m3	ND	0.52	10/07/09 18:11	

LABORATORY CONTROL SAMPLE: 693483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.6	67.3	121	55-127	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	81.8	117	58-128	
1,1,2-Trichloroethane	ug/m3	55.5	65.8	119	58-126	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	77.0	99	49-134	
1,1-Dichloroethane	ug/m3	41.1	41.9	102	52-129	
1,1-Dichloroethene	ug/m3	40.3	47.7	118	50-130	
1,2,4-Trichlorobenzene	ug/m3	75.4	52.7	70	30-150	
1,2,4-Trimethylbenzene	ug/m3	50	70.8	142	53-144	
1,2-Dibromoethane (EDB)	ug/m3	78.1	96.0	123	57-137	
1,2-Dichlorobenzene	ug/m3	61.1	72.7	119	65-140	
1,2-Dichloroethane	ug/m3	41.4	50.5	122	54-125	
1,2-Dichloropropane	ug/m3	50.8	62.5	123	60-125	
1,3,5-Trimethylbenzene	ug/m3	50	60.5	121	54-139	
1,3-Butadiene	ug/m3	22.5	25.1	111	54-125	
1,3-Dichlorobenzene	ug/m3	61.1	75.9	124	62-140	
1,4-Dichlorobenzene	ug/m3	61.1	71.7	117	61-139	
2-Butanone (MEK)	ug/m3	30	24.4	81	47-138	
2-Hexanone	ug/m3	41.6	45.3	109	40-143	
4-Ethyltoluene	ug/m3	50	69.0	138	57-139	
4-Methyl-2-pentanone (MIBK)	ug/m3	41.6	46.5	112	54-132	
Acetone	ug/m3	24.1	17.6	73	44-147	
Benzene	ug/m3	32.5	36.3	112	60-125	
Bromodichloromethane	ug/m3	68.1	87.2	128	53-130	
Bromoform	ug/m3	105	117	111	55-125	
Bromomethane	ug/m3	39.5	46.1	117	53-132	
Carbon disulfide	ug/m3	31.7	36.7	116	57-150	
Carbon tetrachloride	ug/m3	64	77.1	121	53-125	

Date: 10/12/2009 12:31 PM

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

LABORATORY CONTROL SAMPLE: 693483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlorobenzene	ug/m3	46.8	58.9	126	50-136	
Chloroethane	ug/m3	26.8	30.1	112	55-130	
Chloroform	ug/m3	49.6	57.2	115	56-125	
Chloromethane	ug/m3	21	25.2	120	49-127	
cis-1,2-Dichloroethene	ug/m3	40.3	46.0	114	58-127	
cis-1,3-Dichloropropene	ug/m3	46.1	58.8	127	62-135	
Cyclohexane	ug/m3	35.7	43.5	122	56-135	
Dibromochloromethane	ug/m3	86.6	96.5	111	48-132	
Dichlorodifluoromethane	ug/m3	50.3	40.5	81	54-130	
Dichlorotetrafluoroethane	ug/m3	71.1	67.9	96	50-125	
Ethyl acetate	ug/m3	36.6	46.1	126	70-141	
Ethylbenzene	ug/m3	44.1	56.4	128	57-135	
Hexachloro-1,3-butadiene	ug/m3	108	71.1	66	30-150	
m&p-Xylene	ug/m3	88.3	110	124	61-135	
Methyl-tert-butyl ether	ug/m3	36.6	42.2	115	56-130	
Methylene Chloride	ug/m3	35.3	33.1	94	49-127	
n-Heptane	ug/m3	41.7	45.9	110	57-133	
n-Hexane	ug/m3	35.8	40.8	114	55-135	
o-Xylene	ug/m3	44.1	53.1	120	60-134	
Propylene	ug/m3	17.5	14.9	85	63-147	
Styrene	ug/m3	43.3	60.0	139	58-142	
Tetrachloroethene	ug/m3	68.9	82.6	120	61-132	
Tetrahydrofuran	ug/m3	22.5	18.8	84	67-134	
Toluene	ug/m3	38.3	43.8	114	56-132	
trans-1,2-Dichloroethene	ug/m3	40.3	52.0	129	52-131	
trans-1,3-Dichloropropene	ug/m3	48.9	61.0	125	62-131	
Trichloroethene	ug/m3	54.6	70.0	128	68-150	
Trichlorofluoromethane	ug/m3	57.1	65.5	115	52-142	
Vinyl acetate	ug/m3	35.8	38.8	109	53-136	
Vinyl chloride	ug/m3	26	28.1	108	57-132	

## QUALIFIERS

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

U - Indicates the compound was analyzed for, but not detected.

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 6156 Robinson Cleaners  
Pace Project No.: 10113651

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10113651001	6156-SUMMA-493-I	TO-15	AIR/9221		
10113651002	6156-SUMMA-1034-O	TO-15	AIR/9221		



# AIR: CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10113651

00578

Page: 1 of 1

<b>Section A</b> Required Client Information:	<b>Section B</b> Required Project Information:	<b>Section C</b> Invoice Information:
Company: <u>ENVIROFORENSICS</u>	Report To: <u>Jeff Carnahan</u>	Attention:
Address: <u>1060 N. CAPITAL E-230</u>	Copy To:	Company Name:
<u>INDIANAPOLIS, IN. 46204</u>	Purchase Order No.:	Address:
Email To: <u>J.Carnahan@enviroforensics.com</u>	Project Name: <u>Robinson Cleaners</u>	Pace Quote Reference:
Phone: <u>(317) 972-7870</u> Fax: <u>(317) 972-7875</u>	Project Number: <u>6156</u>	Pace Project Manager/Sales Rep.:
Requested Due Date/TAT:	Pace Profile #: <u>27655-2</u>	

Program

UST  Superfund  Emmissions  Clean Air Act

Voluntary Clean Up  Dry Clean  RCRA  Other DERF

Location of Sampling by State: WI

Reporting Units  
 ug/m<sup>3</sup> \_\_\_\_\_ mg/m<sup>3</sup> \_\_\_\_\_  
 PPBV \_\_\_\_\_ PPMV \_\_\_\_\_  
 Other \_\_\_\_\_

Report Level II. \_\_\_\_\_ III. \_\_\_\_\_ IV.  Other \_\_\_\_\_

ITEM #	Section D Required Client Information <b>AIR SAMPLE ID</b> One Character per box. (A-Z, 0-9, -) Sample IDs MUST BE UNIQUE	Valid Media Codes MEDIA CODE Tedlar Bag TB 1 Liter Summa Can 1LC 6 Liter Summa Can 6LC Low Volume Puff LVP High Volume Puff HVP Other PM10	MEDIA CODE SAMPLE TYPE G=Grab C=Composite	COLLECTED				Canister Pressure (Initial Field)	Canister Pressure (Final Field)	Summa Can Number	Method:	Pace Lab ID									
				COMPOSITE START		COMPOSITE - END/GRAB							TO-3 (Met + Hg/Agony)	TO-3M (PMV MEE)	3C - Fixed Gas (%)	TO-14 (Hg/VOC)	TO-15 (Sb/VOC)	TO-15 (Low Level)	TO-13 (PAH)	TO-4 (PCBs)	PM10
				DATE	TIME	DATE	TIME														
1	6156-SUMMA-493-I		6LC C	9/25/09	1000	9/25/09	1800	28.5	61	0493	X	10113651001									
2	6156-SUMMA-1034-O		6LC C	9/25/09	1005	9/25/09	1805	29.0	61	1034	X	002									
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Additional Comments:	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	<u>George G. Stam Jr.</u>	9/25/09	1830	<u>[Signature]</u>	9/25/09	08:58	AND <input checked="" type="checkbox"/> Y/N <input checked="" type="checkbox"/> Y/N <input checked="" type="checkbox"/> Y/N
							Y/N Y/N Y/N Y/N Y/N Y/N
							Y/N Y/N Y/N Y/N Y/N Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: George G. Stam Jr.

SIGNATURE of SAMPLER: [Signature] DATE Signed (MM/DD/YY): 09/25/09

Temp in °C

Received on Ice

Custody Sealed Cooler

Samples Intact

ORIGINAL

14 of 15





**AIR Sample Condition Upon Receipt**

Client Name: ENVIROFORENSICS Project # 10113651

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace Other \_\_\_\_\_

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other \_\_\_\_\_

Optional  
Proj. Due Date:  
Proj. Name:

Tracking #: 4688318 10104769; 4776

Comments:

Date and Initials of person examining contents: 9-30-09

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Media: <u>AIR (CAN)</u>		11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.

Samples Received: 2 CANS, 2 FC'S

Canisters		Flow Controllers		Stand Alone G		Tedlar Bags	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
<u>493-I</u>	<u>0493</u>						
<u>1034-O</u>	<u>1034</u>						

Client Notification/ Resolution: \_\_\_\_\_ Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: 9/30/09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)  
A106 Rev.01 (22May2009)