



May 16, 2017

Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources  
2984 Shawano Avenue  
P.O. Box 10448  
Green Bay, Wisconsin 54307-0448

Attn: Tauren R. Beggs

RE: WDNR BRRTS No. 02-36-544383  
Status Report – May 2017 Soil Gas and Groundwater Monitoring Results  
United Laundries and Dry Cleaners, Inc. 623 Reed Avenue, Manitowoc, Wisconsin

Dear Mr. Beggs:

Shannon & Wilson prepared this Report to summarize recent soil gas and groundwater results for the United Laundries and Dry Cleaners, Inc. (United) facility. Site activities were completed in accordance with Shannon & Wilson's January 11, 2017 change order request. The change order was prepared in response to WDNR's review of Wisconsin Department of Natural Resources (WDNR) Case Closure Denial letter dated August 11<sup>th</sup>, 2016, and subsequent email dated December 22, 2016. The scope of work for this revised change order was approved by WDNR on January 19, 2017 and includes the following tasks:

- Additional groundwater sample collection at MW-10 in February and May 2017;
- Additional soil sample collection to define the extent of soil contamination;
- SVE confirmation soil and soil gas sample collection;
- Operation and Maintenance Plan preparation; and
- Resubmittal of Case Closure documents.

Results for post remediation soil samples, soil gas, and groundwater samples collected in February 2017 were summarized in a March 14<sup>th</sup> status report. May 2017 results are summarized in this status report.

#### ***May 2017 Groundwater and Soil Gas Sample Collection***

Additional groundwater and soil gas samples were collected on May 1<sup>st</sup>, 2017. A groundwater sample collected at MW-10 was submitted to Pace Analytical and analyzed for VOCs by Method

8260. Historic groundwater monitoring results are summarized in Table 1 and the laboratory report is included in Attachment A.

Concurrent with MW-10 sample collection, Shannon & Wilson collected sub-floor soil gas samples at the United and Piggly Wiggly buildings. In preparation for soil gas sampling, all three SSDS's were turned off on December 30, 2016. Soil gas samples were collected from sub-floor vapor probes VP-1, VP-2, and VP-3 at the United Dry Cleaner building and at VP-4 at the Piggly Wiggly building. Flexible tubing was used to connect each probe to 6-liter Summa canisters provided by the laboratory. Summa canisters were equipped with a flow controller calibrated by the laboratory; each canister took approximately 55 minutes to fill.

May 2017 soil gas sampling included a background sample, an indoor air sample, and a duplicate sample. Summa canisters for indoor air and background samples were equipped with a flow controller calibrated by the laboratory for eight-hours. The summa canister for the background sample was placed near the exterior southern wall the United Dry Cleaners building, and the sample collected on May 1<sup>st</sup> between 9:15 a.m. and 5:15 p.m. The canister for the indoor air sample was placed near the center of the United Dry Cleaner building within the former dry cleaner store. This sample collected also collected on May 1<sup>st</sup> between 9:15 a.m. and 5:15 p.m. while the building was unoccupied. The duplicate sample was collected at VP-2.

All air samples were analyzed for chlorinated VOCs (cis-1,2-dichloroethene, trans 1,2-dichloroethene, tetrachloroethene, trichloroethene, and vinyl chloride) using EPA Method TO-15 by Pace Analytical Services of Minneapolis, Minnesota. Vapor probe and indoor results are summarized in Tables 2A and 2B. Laboratory reports for May 2017 soil gas samples are included in Attachment B.

### ***May 2017 Groundwater and Soil Gas Sample Results***

Tetrachloroethene (PCE) was detected in the February 2017 MW-10 sample at a low concentration (3.7 µg/L). As with previous MW-10 samples, PCE was detected above the 0.5 µg/L Preventive Action Limit (PAL), but below the 5 µg/L Enforcement Standard (ES).

In May 2017 PCE was detected in all four sub-floor vapor probes at concentrations that ranged from 7.6 ppbv at VP-1 to 173 ppbv in the duplicate sample collected at VP-2. PCE in these samples is below the 210 ppbv Vapor Risk Screening Level (VRSL) for residential buildings, and below the 900 ppbv VRSL for small commercial buildings.

### ***Background and Indoor Air Sample Results***

Indoor air and background samples were collected in February and May 2017 concurrent with vapor probe soil gas sampling. In February PCE was detected in the indoor air sample at 122 ppbv, and in the background samples at 0.52 ppbv. In May PCE was detected in the background samples at 0.25 ppbv and in the indoor air sample at 0.64 ppbv; TCE was also detected in the indoor air sample at 0.099 ppbv. PCE exceeded the vapor action level (VAL) for residential buildings and for small commercial buildings in February, but was below the VAL in the May indoor air sample and both background samples.

Both indoor air samples were collected from the former dry cleaning store (center suite). The dry cleaning business is no longer operating. All dry cleaning equipment was removed, but three drums containing dry cleaning chemicals were present when the February indoor air sample was collected. Following February indoor air sampling, the tenant made arrangements for removal of the dry cleaning chemicals. On March 30, 2017, Safety-Kleen System Inc. removed three drums from the building and transported this material off-site for disposal. The disposal manifest for these drums is included in Attachment C. PCE was then detected in the May sample at a low concentration below the VAL. These results indicate that drums of dry cleaning chemicals likely interfered with the February indoor air sample.

### ***Conclusions and Recommendations***

PCE was detected in all five samples collected from MW-10. Concentration ranged from 2.8 µg/l in November 2015 and 3.9µg/l in February 2017. Though detected above the 0.5 µg/L PAL, it remains below the 5 µg/L ES. Consequently, Shannon & Wilson recommends no additional groundwater sampling, and abandonment of all site wells. Following well abandonment, revised off-site letters should be sent to the same property owners as initial off-site letters sent in May 2016. Copies of these letters will then be included with the revised case closure request.

Soil gas samples were collected at vapor probes VP-1, VP-2, VP-3, and VP-4 in November 2016, February 2017, and May 2017. All samples were collected while the SSDS systems were not in operation. Results indicate that PCE remains at concentrations below the 210 ppbv VRSL for residential buildings and below the 900 ppbv VRSL for small commercial buildings. Shannon & Wilson understands that operation of three sub-floor depressurization systems (SSDS)<sup>1</sup> will not be required as a continuing obligation following case closure because no VRSLs were exceeded in these vapor probe samples. Consequently, the long-term maintenance plan will be limited to

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<sup>1</sup> All three SSDS's were installed as an interim response in December 2011.

Ms. Tauren R. Beggs  
Wisconsin Department of Natural Resources  
May 16, 2017  
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**SHANNON & WILSON, INC.**

maintaining the concrete floor and asphalt pavement as caps. The long-term maintenance plan will also be included with the revised case closure request.

If you have any questions, please call me at (608) 442-5223.

Sincerely,

**SHANNON & WILSON, INC.**

Mark S. McColloch, P.G.  
Senior Associate

cc: Steve Hamann, Zenith Properties LLC

Attachments

- |              |   |
|--------------|---|
| Table 1      | Historic Groundwater Sample Results   |
| Table 2A     | Results for Soil Gas Probes – Residential Building Vapor Risk Screening Levels      |
| Table 2B     | Results for Soil Gas Probes – Small Commercial Building Vapor Risk Screening Levels |
| Attachment A | Laboratory Report – May 2017 MW-10 Groundwater Sample                               |
| Attachment B | Laboratory Report – May 2017 Soil Gas Samples                                       |
| Attachment C | Dry Cleaning Chemical Disposal Documentation  |

## **Tables**

**Table 1 (Page 1 of 2)**  
**Historic Groundwater Sample Results**  
**United Laundries and Dry Cleaners, Inc., 623 Reed Avenue, Manitowoc, Wisconsin**

Sample Date / Analyte	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	PAL	ES
<b>January 25, 2006</b>												
Tetrachloroethene (PCE)	180	--	--	--	--	--	--	--	--	--	0.5	5
<b>March 19, 2010</b>												
Tetrachloroethene (PCE)	120	41	17	--	--	--	--	--	--	--	0.5	5
1,1,1 Trichloroethane	<1.8	<0.50>	<0.37>	--	--	--	--	--	--	--	40	200
<b>October 5, 2010</b>												
Tetrachloroethene (PCE)	58.4	62.1	11.8(12.0)	5.2	41.1	--	--	--	--	--	0.5	5
Trichloroethene (TCE)	0.67 J	<0.48	<0.48	<0.48	<0.48	--	--	--	--	--	0.5	5
1,1,1 Trichloroethane	<0.90	1.7	<0.90	<0.90	<0.90	--	--	--	--	--	40	200
<b>April 27, 2011</b>												
Tetrachloroethene (PCE)	87.4(83.1)	71.0	9.9	3.1	40.5	--	--	--	--	--	0.5	5
Trichloroethene (TCE)	0.93 J	<0.48	<0.48	<0.48	<0.48	--	--	--	--	--	0.5	5
1,1,1 Trichloroethane	<0.90	1.3	<0.90	<0.90	<0.90	--	--	--	--	--	40	200
<b>December 21, 2011</b>												
Tetrachloroethene (PCE)	--	--	--	--	--	32.1(30.6)	23.9	--	--	--	0.5	5
Methylene Chloride	--	--	--	--	--	0.46	<0.43	--	--	--	0.5	5
<b>November 14, 2012</b>												
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	13.6(14.2)	<0.45	--	0.5	5
<b>November 19, 2013</b>												
Tetrachloroethene (PCE)	72.7	35.2	8.4	1.1	35.1(31.5)	28.9	15.5	9.6	<0.45	--	0.5	5
Trichloroethene (TCE)	0.97 J	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	--	0.5	5
1,1,1 Trichloroethane	0.59 J	0.59 J	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	--	40	200
<b>February 11, 2014</b>												
Tetrachloroethene (PCE)	30.7(31.5)	36.7	--	<0.47	--	34.6	26.0	8.2	--	--	0.5	5
Trichloroethene (TCE)	<0.36	<0.36	--	<0.36	--	<0.36	<0.36	<0.36	--	--	0.5	5
1,1,1 Trichloroethane	<0.44	0.55 J	--	<0.44	--	<0.44	<0.44	<0.44	--	--	40	200
<b>May 14, 2014</b>												
Tetrachloroethene (PCE)	27.0(27.3)	15.9	5.7	0.96	27.4	24.7	10.3	3.7	<0.45	--	0.5	5
<b>August 19, 2014</b>												
Tetrachloroethene (PCE)	25.5	10.8	4.8	0.69 J	18.7(17.9)	22.7	21.4	2.1	<0.45	--	0.5	5
1,2-Dichlorobenzene	<0.50	<0.50	<0.50	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	--	60	600

**Table 1 (Page 2 of 2)**  
**Historic Groundwater Sample Results**  
**United Laundries and Dry Cleaners, Inc., 623 Reed Avenue, Manitowoc, Wisconsin**

Sample Date / Analyte	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	PAL	ES
<i>November 25, 2014</i>												
Tetrachloroethene (PCE)	19.5	9.2	6.8	<0.50	10.3	36.3	21.4(20.8)	3.5	<0.50	--	0.5	5
<i>February 25, 2015</i>												
Tetrachloroethene (PCE)	20.3	8.4	7.1	<0.50	11.1	30.1(30.1)	22.7	3.0	--	--	0.5	5
<i>May 14, 2015</i>												
Tetrachloroethene (PCE)	16.1	18.6	7.4	<0.50	9.9	33.9	22.4(21.4)	2.8	<0.50	--	0.5	5
<i>August 31, 2015</i>												
Tetrachloroethene (PCE)	12.6(12.9)	9.0	6.8	<0.50	9.1	29.8	22.1	2.6	<0.50	--	0.5	5
Methyl-tert-butyl ether	0.18 J	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	--	12	60`
<i>November 5, 2015</i>												
Tetrachloroethene (PCE)	9.1	12.6	5.7	<0.50	6.8	33.6	17.4(17.2)	2.2	<0.50	2.8	0.5	5
1,1,1 Trichloroethane	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.83 J	40	200
Methyl-tert-butyl ether	0.18 J	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	12	60`
<i>February 17, 2016</i>												
Tetrachloroethene (PCE)	11.1(9.7)	8.1	5.4	<0.50	5.6	37.2	18.0	1.9	<0.50	3.5	0.5	5
Methyl-tert-butyl ether	<0.17(0.29J)	<0.17	0.23 J	<0.17	0.26 J	<0.17	<0.17	<0.17	<0.17	0.29 J	12	60
<i>November 17, 2016</i>												
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	3.8	0.5	5
1,1,1 Trichloroethane	--	--	--	--	--	--	--	--	--	0.90 J	40	200
Methyl-tert-butyl ether	--	--	--	--	--	--	--	--	--	0.21 J	12	60
<i>February 1, 2017</i>												
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	3.9	0.5	5
1,1,1 Trichloroethane	--	--	--	--	--	--	--	--	--	1.0	40	200
Methyl-tert-butyl ether	--	--	--	--	--	--	--	--	--	0.19 J	12	60
<i>May 1, 2017</i>												
Tetrachloroethene (PCE)	--	--	--	--	--	--	--	--	--	3.7	0.5	5
1,1,1 Trichloroethane	--	--	--	--	--	--	--	--	--	0.56 J	40	200

PAL - Preventive Action Limit per Wisconsin Admin. Code sec. NR 141.10.

ES - Enforcement Standard per Wisconsin Admin. Code sec. NR 141.10.

< - Not Detected at or above adjusted reporting limit.

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

Duplicate sample results are shown in parenthesis.

All concentrations are reported in µg/l

Concentrations exceeding the PAL are in red italics.

Concentrations exceeding the ES have been shaded yellow.

**Table 2A**  
**Results for Soil Gas Probes – Residential Building Vapor Risk Screening Levels**  
**Piggly Wiggly and United Dry Cleaners Buildings**  
**United Laundries and Dry Cleaners, Inc., 623 Reed Avenue, Manitowoc, Wisconsin**

Constituents	Vapor Risk Screening Level <sup>(1)</sup>	Vapor Action Level <sup>(2)</sup>	Attenuation Factor <sup>(3)</sup>	Soil Gas Probe (Sub-Floor)					
				VP-1	VP-2	FD-1(VP-2)	VP-3	VP-4	
				Sample Location	VP-1	VP-2	FD-1(VP-2)	VP-3	VP-4
				Sample Date	Apr-11	Apr-11	Apr-11	Apr-11	Apr-11
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<6.7	<214	<172	<13,700	<686	
trans-1,2-Dichloroethene	--	NA	0.03	<6.7	<214	<172	<13,700	<686	
Tetrachloroethene (PCE)	210	6.2	0.03	<b>87.7</b>	<b>1,710</b>	<b>1,270</b>	<b>763,000</b>	<b>2,700</b>	
Trichloroethene (TCE)	13	0.39	0.03	<6.7	<214	<172	<13,700	<686	
Vinyl Chloride	22	0.65	0.03	<6.7	<214	<172	<13,700	<686	
				Sample Location	VP-1	VP-2	VP-2(FD-1)	VP-3	VP-4
				Sample Date	Mar-12	Mar-12	Mar-12	Mar-12	Mar-12
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<13.4	<3.4	<13.4	<3.4	<0.67	
trans-1,2-Dichloroethene	--	NA	0.03	<13.4	<3.4	<13.4	<3.4	<0.67	
Tetrachloroethene (PCE)	210	6.2	0.03	<b>184</b>	<b>318</b>	<b>268</b>	<b>70.5</b>	<b>63.8</b>	
Trichloroethene (TCE)	13	0.39	0.03	<13.4	<3.4	<13.4	<3.4	<0.67	
Vinyl Chloride	22	0.65	0.03	<13.4	<3.4	<13.4	<3.4	<0.67	
				Sample Location	VP-1	VP-2	--	VP-3	VP-4
				Sample Date	Aug-12	Aug-12	Aug-12	Aug-12	Aug-12
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<3.5	--	--	--	--	
trans-1,2-Dichloroethene	--	NA	0.03	<3.5	--	--	--	--	
Tetrachloroethene (PCE)	210	6.2	0.03	<b>140</b>	--	--	--	--	
Trichloroethene (TCE)	13	0.39	0.03	<3.5	--	--	--	--	
Vinyl Chloride	22	0.65	0.03	<3.5	--	--	--	--	
				Sample Location	VP-1	VP-2	--	VP-3	VP-4
				Sample Date	Nov-16	Nov-16	Nov-16	Nov-16	Nov-16
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<0.082	<0.082	--	<0.082	<0.082	
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	--	<0.13	<0.13	
Tetrachloroethene (PCE)	210	6.2	0.03	<b>25.4</b>	<b>167</b>	--	<b>27.3</b>	<b>21.6</b>	
Trichloroethene (TCE)	13	0.39	0.03	<0.068	<0.068	--	<b>0.2</b>	<b>0.095</b>	
Vinyl Chloride	22	0.65	0.03	<0.1	<0.1	--	<0.1	<0.1	
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4
				Sample Date	Feb-17	Feb-17	Feb-17	Feb-17	Feb-17
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<0.082	<0.084	<0.077	<0.082	<0.082	<0.092
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.12	<0.13	<0.13	<0.14
Tetrachloroethene (PCE)	210	6.2	0.03	<b>8.1</b>	<b>97.9</b>	<b>88.9</b>	<b>27.4</b>	<b>6.4</b>	<b>122</b>
Trichloroethene (TCE)	13	0.39	0.03	<0.068	<0.07	<0.064	<b>0.084 J</b>	<0.068	<0.068
Vinyl Chloride	22	0.65	0.03	<0.1	<0.1	<0.096	<0.1	<0.1	<0.11
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4
				Sample Date	May-17	May-17	May-17	May-17	May-17
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<0.084	<0.082	<0.082	<0.082	<0.082	<0.082
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
Tetrachloroethene (PCE)	210	6.2	0.03	<b>7.6</b>	<b>167</b>	<b>173</b>	<b>38</b>	<b>23.4</b>	<b>0.64</b>
Trichloroethene (TCE)	13	0.39	0.03	<0.07	<0.068	<0.068	<0.17	<0.068	<b>0.099 J</b>
Vinyl Chloride	22	0.65	0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4
				Sample Date	May-17	May-17	May-17	May-17	May-17
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<0.084	<0.082	<0.082	<0.082	<0.082	<0.082
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
Tetrachloroethene (PCE)	210	6.2	0.03	<b>7.6</b>	<b>167</b>	<b>173</b>	<b>38</b>	<b>23.4</b>	<b>0.64</b>
Trichloroethene (TCE)	13	0.39	0.03	<0.07	<0.068	<0.068	<0.17	<0.068	<b>0.099 J</b>
Vinyl Chloride	22	0.65	0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4
				Sample Date	Feb-17	Feb-17	Feb-17	Feb-17	Feb-17
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<0.082	<0.084	<0.077	<0.082	<0.082	<0.092
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.12	<0.13	<0.13	<0.14
Tetrachloroethene (PCE)	210	6.2	0.03	<b>8.1</b>	<b>97.9</b>	<b>88.9</b>	<b>27.4</b>	<b>6.4</b>	<b>122</b>
Trichloroethene (TCE)	13	0.39	0.03	<0.068	<0.07	<0.064	<b>0.084 J</b>	<0.068	<0.068
Vinyl Chloride	22	0.65	0.03	<0.1	<0.1	<0.096	<0.1	<0.1	<0.11
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4
				Sample Date	May-17	May-17	May-17	May-17	May-17
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<0.084	<0.082	<0.082	<0.082	<0.082	<0.082
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
Tetrachloroethene (PCE)	210	6.2	0.03	<b>7.6</b>	<b>167</b>	<b>173</b>	<b>38</b>	<b>23.4</b>	<b>0.64</b>
Trichloroethene (TCE)	13	0.39	0.03	<0.07	<0.068	<0.068	<0.17	<0.068	<b>0.099 J</b>
Vinyl Chloride	22	0.65	0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4
				Sample Date	Feb-17	Feb-17	Feb-17	Feb-17	Feb-17
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-Dichloroethene	--	NA	0.03	<0.082	<0.084	<0.077	<0.082	<0.082	<0.082
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.12	<0.13</td		

**Table 2B**  
**Results for Soil Gas Probes – Small Commercial Building Vapor Risk Screening Levels**  
**Piggly Wiggly and United Dry Cleaners Buildings**  
**United Laundries and Dry Cleaners, Inc., 623 Reed Avenue, Manitowoc, Wisconsin**

Constituents	Vapor Risk Screening Level <sup>(1)</sup>	Vapor Action Level <sup>(2)</sup>	Attenuation Factor <sup>(3)</sup>	Soil Gas Probe (Sub-Floor)						
				VP-1	VP-2	FD-1(VP-2)	VP-3	VP-4		
				Sample Location	VP-1	VP-2	FD-1(VP-2)	VP-3	VP-4	
				Sample Date	Apr-11	Apr-11	Apr-11	Apr-11	Apr-11	
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0	
cis-1,2-Dichloroethene	--	NA	0.03	<6.7	<214	<172	<13,700	<686		
trans-1,2-Dichloroethene	--	NA	0.03	<6.7	<214	<172	<13,700	<686		
Tetrachloroethene (PCE)	900	27	0.03	<b>87.7</b>	<b>1,710</b>	<b>1,270</b>	<b>763,000</b>	<b>2,700</b>		
Trichloroethene (TCE)	53	1.6	0.03	<6.7	<214	<172	<13,700	<686		
Vinyl Chloride	370	11	0.03	<6.7	<214	<172	<13,700	<686		
				Sample Location	VP-1	VP-2	VP-2(FD-1)	VP-3	VP-4	
				Sample Date	Mar-12	Mar-12	Mar-12	Mar-12	Mar-12	
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0	
cis-1,2-Dichloroethene	--	NA	0.03	<13.4	<3.4	<13.4	<3.4	<0.67		
trans-1,2-Dichloroethene	--	NA	0.03	<13.4	<3.4	<13.4	<3.4	<0.67		
Tetrachloroethene (PCE)	900	27	0.03	<b>184</b>	<b>318</b>	<b>268</b>	<b>70.5</b>	<b>63.8</b>		
Trichloroethene (TCE)	53	1.6	0.03	<13.4	<3.4	<13.4	<3.4	<0.67		
Vinyl Chloride	370	11	0.03	<13.4	<3.4	<13.4	<3.4	<0.67		
				Sample Location	VP-1	VP-2	--	VP-3	VP-4	
				Sample Date	Aug-12	Aug-12	Aug-12	Aug-12	Aug-12	
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0	
cis-1,2-Dichloroethene	--	NA	0.03	<3.5	--	--	--	--		
trans-1,2-Dichloroethene	--	NA	0.03	<3.5	--	--	--	--		
Tetrachloroethene (PCE)	900	27	0.03	<b>140</b>	--	--	--	--		
Trichloroethene (TCE)	53	1.6	0.03	<3.5	--	--	--	--		
Vinyl Chloride	370	11	0.03	<3.5	--	--	--	--		
				Sample Location	VP-1	VP-2	--	VP-3	VP-4	
				Sample Date	Nov-16	Nov-16	Nov-16	Nov-16	Nov-16	
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0	
cis-1,2-Dichloroethene	--	NA	0.03	<0.082	<0.082	--	<0.082	<0.082		
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	--	<0.13	<0.13		
Tetrachloroethene (PCE)	900	27	0.03	<b>25.4</b>	<b>167</b>	--	<b>27.3</b>	<b>21.6</b>		
Trichloroethene (TCE)	53	1.6	0.03	<0.068	<0.068	--	<b>0.2</b>	<b>0.095</b>		
Vinyl Chloride	370	11	0.03	<0.1	<0.1	--	<0.1	<0.1		
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4	Indoor Air
				Sample Date	Feb-17	Feb-17	Feb-17	Feb-17	Feb-17	Background
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0	Feb-17
cis-1,2-Dichloroethene	--	NA	0.03	<0.082	<0.084	<0.077	<0.082	<0.082	<0.082	<0.092
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.12	<0.13	<0.13	<0.13	<0.14
Tetrachloroethene (PCE)	900	27	0.03	<b>8.1</b>	<b>97.9</b>	<b>88.9</b>	<b>27.4</b>	<b>6.4</b>	<b>122</b>	<b>0.52</b>
Trichloroethene (TCE)	53	1.6	0.03	<0.068	<0.07	<0.064	<b>0.084 J</b>	<0.068	<0.068	<0.075
Vinyl Chloride	370	11	0.03	<0.1	<0.1	<0.096	<0.1	<0.1	<0.1	<0.11
				Sample Location	VP-1	VP-2	Dup#1(VP-2)	VP-3	VP-4	Indoor Air
				Sample Date	May-17	May-17	May-17	May-17	May-17	Background
				Sample Depth (ft.)	<1.0	<1.0	<1.0	<1.0	<1.0	May-17
cis-1,2-Dichloroethene	--	NA	0.03	<0.084	<0.082	<0.082	<0.082	<0.082	<0.084	<0.082
trans-1,2-Dichloroethene	--	NA	0.03	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13
Tetrachloroethene (PCE)	900	27	0.03	<b>7.6</b>	<b>167</b>	<b>173</b>	<b>38</b>	<b>23.4</b>	<b>0.64</b>	<b>0.25</b>
Trichloroethene (TCE)	53	1.6	0.03	<0.07	<0.068	<0.068	<0.17	<0.068	<b>0.099 J</b>	<0.068
Vinyl Chloride	370	11	0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Vapor Risk Screening Level (VRSL) = Vapor Action Level (VAL) ÷ Attenuation Factor (AF) per Wisconsin Department of Natural Resources Quick Look-Up Table, dated May 2016.

Vapor Action Level (VAL) for Residential Land Use per Wisconsin Department of Natural Resources Quick Look-Up Table, dated May 2016.

Attenuation Factor (AF) = 0.03 for sub-floor vapor for Residential/Small Commercial Buildings per Wisconsin Department of Natural Resources Quick Look-Up Table, dated June 2015

Concentrations exceeding the VRSL are shown in bold.

< Below reporting limit

J Estimated concentration at or above the LOD and below the LQD.

All units are reported in parts per billion by volume (ppbv)

FD-1 -Field duplicate

## **Attachment A**

**Laboratory Report  
May 2017 MW-10  
Groundwater Sample**

May 04, 2017

Mark McColloch  
SHANNON & WILSON, INC.  
6506 Schroeder Road  
Suite 201  
Madison, WI 53711

RE: Project: 42-1-37409 UNITED DRY CLEANERS  
Pace Project No.: 40149183

Dear Mark McColloch:

Enclosed are the analytical results for sample(s) received by the laboratory on May 01, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 42-1-37409 UNITED DRY CLEANERS  
Pace Project No.: 40149183

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40149183001	MW-10	Water	05/01/17 10:30	05/01/17 14:15
40149183002	TRIP BLANK	Water	05/01/17 00:00	05/01/17 14:15

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## SAMPLE ANALYTE COUNT

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

Lab ID	Sample ID	Method	Analysts	Analytics Reported
40149183001	MW-10	EPA 8260	LAP	64
40149183002	TRIP BLANK	EPA 8260	LAP	64

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## SUMMARY OF DETECTION

Project: 42-1-37409 UNITED DRY CLEANERS  
Pace Project No.: 40149183

Lab Sample ID	Client Sample ID	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40149183001</b>	<b>MW-10</b>						
EPA 8260	1,1,1-Trichloroethane		0.56J	ug/L	1.0	05/03/17 10:01	
EPA 8260	Tetrachloroethylene		3.7	ug/L	1.0	05/03/17 10:01	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

Sample: MW-10	Lab ID: 40149183001	Collected: 05/01/17 10:30	Received: 05/01/17 14:15	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		05/03/17 10:01	630-20-6	
1,1,1-Trichloroethane	0.56J	ug/L	1.0	0.50	1		05/03/17 10:01	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		05/03/17 10:01	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		05/03/17 10:01	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		05/03/17 10:01	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		05/03/17 10:01	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		05/03/17 10:01	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		05/03/17 10:01	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		05/03/17 10:01	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		05/03/17 10:01	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		05/03/17 10:01	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		05/03/17 10:01	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		05/03/17 10:01	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		05/03/17 10:01	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		05/03/17 10:01	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		05/03/17 10:01	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		05/03/17 10:01	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		05/03/17 10:01	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		05/03/17 10:01	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		05/03/17 10:01	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		05/03/17 10:01	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		05/03/17 10:01	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		05/03/17 10:01	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		05/03/17 10:01	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		05/03/17 10:01	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		05/03/17 10:01	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/03/17 10:01	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	100-42-5	
Tetrachloroethene	3.7	ug/L	1.0	0.50	1		05/03/17 10:01	127-18-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

Sample: MW-10	Lab ID: 40149183001	Collected: 05/01/17 10:30	Received: 05/01/17 14:15	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Toluene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		05/03/17 10:01	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		05/03/17 10:01	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/03/17 10:01	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/03/17 10:01	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		05/03/17 10:01	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:01	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		05/03/17 10:01	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		05/03/17 10:01	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/03/17 10:01	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		05/03/17 10:01	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	82	%	70-130		1		05/03/17 10:01	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		05/03/17 10:01	1868-53-7	
Toluene-d8 (S)	100	%	70-130		1		05/03/17 10:01	2037-26-5	

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## ANALYTICAL RESULTS

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

Sample: TRIP BLANK	Lab ID: 40149183002	Collected: 05/01/17 00:00	Received: 05/01/17 14:15	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	<0.18	ug/L	1.0	0.18	1		05/03/17 10:23	630-20-6	
1,1,1-Trichloroethane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	71-55-6	
1,1,2,2-Tetrachloroethane	<0.25	ug/L	1.0	0.25	1		05/03/17 10:23	79-34-5	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		05/03/17 10:23	79-00-5	
1,1-Dichloroethane	<0.24	ug/L	1.0	0.24	1		05/03/17 10:23	75-34-3	
1,1-Dichloroethene	<0.41	ug/L	1.0	0.41	1		05/03/17 10:23	75-35-4	
1,1-Dichloropropene	<0.44	ug/L	1.0	0.44	1		05/03/17 10:23	563-58-6	
1,2,3-Trichlorobenzene	<2.1	ug/L	5.0	2.1	1		05/03/17 10:23	87-61-6	
1,2,3-Trichloropropane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	96-18-4	
1,2,4-Trichlorobenzene	<2.2	ug/L	5.0	2.2	1		05/03/17 10:23	120-82-1	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	95-63-6	
1,2-Dibromo-3-chloropropane	<2.2	ug/L	5.0	2.2	1		05/03/17 10:23	96-12-8	
1,2-Dibromoethane (EDB)	<0.18	ug/L	1.0	0.18	1		05/03/17 10:23	106-93-4	
1,2-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	95-50-1	
1,2-Dichloroethane	<0.17	ug/L	1.0	0.17	1		05/03/17 10:23	107-06-2	
1,2-Dichloropropane	<0.23	ug/L	1.0	0.23	1		05/03/17 10:23	78-87-5	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	108-67-8	
1,3-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	541-73-1	
1,3-Dichloropropane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	142-28-9	
1,4-Dichlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	106-46-7	
2,2-Dichloropropane	<0.48	ug/L	1.0	0.48	1		05/03/17 10:23	594-20-7	
2-Chlorotoluene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	95-49-8	
4-Chlorotoluene	<0.21	ug/L	1.0	0.21	1		05/03/17 10:23	106-43-4	
Benzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	71-43-2	
Bromobenzene	<0.23	ug/L	1.0	0.23	1		05/03/17 10:23	108-86-1	
Bromochloromethane	<0.34	ug/L	1.0	0.34	1		05/03/17 10:23	74-97-5	
Bromodichloromethane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	75-27-4	
Bromoform	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	75-25-2	
Bromomethane	<2.4	ug/L	5.0	2.4	1		05/03/17 10:23	74-83-9	
Carbon tetrachloride	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	56-23-5	
Chlorobenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	108-90-7	
Chloroethane	<0.37	ug/L	1.0	0.37	1		05/03/17 10:23	75-00-3	
Chloroform	<2.5	ug/L	5.0	2.5	1		05/03/17 10:23	67-66-3	
Chloromethane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	74-87-3	
Dibromochloromethane	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	124-48-1	
Dibromomethane	<0.43	ug/L	1.0	0.43	1		05/03/17 10:23	74-95-3	
Dichlorodifluoromethane	<0.22	ug/L	1.0	0.22	1		05/03/17 10:23	75-71-8	
Diisopropyl ether	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	108-20-3	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	100-41-4	
Hexachloro-1,3-butadiene	<2.1	ug/L	5.0	2.1	1		05/03/17 10:23	87-68-3	
Isopropylbenzene (Cumene)	<0.14	ug/L	1.0	0.14	1		05/03/17 10:23	98-82-8	
Methyl-tert-butyl ether	<0.17	ug/L	1.0	0.17	1		05/03/17 10:23	1634-04-4	
Methylene Chloride	<0.23	ug/L	1.0	0.23	1		05/03/17 10:23	75-09-2	
Naphthalene	<2.5	ug/L	5.0	2.5	1		05/03/17 10:23	91-20-3	
Styrene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	100-42-5	
Tetrachloroethene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	127-18-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

Sample: TRIP BLANK	Lab ID: 40149183002	Collected: 05/01/17 00:00	Received: 05/01/17 14:15	Matrix: Water					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>	Analytical Method: EPA 8260								
Toluene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	108-88-3	
Trichloroethene	<0.33	ug/L	1.0	0.33	1		05/03/17 10:23	79-01-6	
Trichlorofluoromethane	<0.18	ug/L	1.0	0.18	1		05/03/17 10:23	75-69-4	
Vinyl chloride	<0.18	ug/L	1.0	0.18	1		05/03/17 10:23	75-01-4	
cis-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/03/17 10:23	156-59-2	
cis-1,3-Dichloropropene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	10061-01-5	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		05/03/17 10:23	179601-23-1	
n-Butylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	104-51-8	
n-Propylbenzene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	103-65-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	95-47-6	
p-Isopropyltoluene	<0.50	ug/L	1.0	0.50	1		05/03/17 10:23	99-87-6	
sec-Butylbenzene	<2.2	ug/L	5.0	2.2	1		05/03/17 10:23	135-98-8	
tert-Butylbenzene	<0.18	ug/L	1.0	0.18	1		05/03/17 10:23	98-06-6	
trans-1,2-Dichloroethene	<0.26	ug/L	1.0	0.26	1		05/03/17 10:23	156-60-5	
trans-1,3-Dichloropropene	<0.23	ug/L	1.0	0.23	1		05/03/17 10:23	10061-02-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	89	%	70-130		1		05/03/17 10:23	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		05/03/17 10:23	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		05/03/17 10:23	2037-26-5	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

QC Batch:	254337	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV
Associated Lab Samples:	40149183001, 40149183002		

METHOD BLANK: 1499948 Matrix: Water

Associated Lab Samples: 40149183001, 40149183002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	05/03/17 07:27	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	05/03/17 07:27	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	05/03/17 07:27	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	05/03/17 07:27	
1,1-Dichloroethane	ug/L	<0.24	1.0	05/03/17 07:27	
1,1-Dichloroethene	ug/L	<0.41	1.0	05/03/17 07:27	
1,1-Dichloropropene	ug/L	<0.44	1.0	05/03/17 07:27	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	05/03/17 07:27	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	05/03/17 07:27	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	05/03/17 07:27	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	05/03/17 07:27	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	05/03/17 07:27	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	05/03/17 07:27	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	05/03/17 07:27	
1,2-Dichloroethane	ug/L	<0.17	1.0	05/03/17 07:27	
1,2-Dichloropropane	ug/L	<0.23	1.0	05/03/17 07:27	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	05/03/17 07:27	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	05/03/17 07:27	
1,3-Dichloropropane	ug/L	<0.50	1.0	05/03/17 07:27	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	05/03/17 07:27	
2,2-Dichloropropane	ug/L	<0.48	1.0	05/03/17 07:27	
2-Chlorotoluene	ug/L	<0.50	1.0	05/03/17 07:27	
4-Chlorotoluene	ug/L	<0.21	1.0	05/03/17 07:27	
Benzene	ug/L	<0.50	1.0	05/03/17 07:27	
Bromobenzene	ug/L	<0.23	1.0	05/03/17 07:27	
Bromochloromethane	ug/L	<0.34	1.0	05/03/17 07:27	
Bromodichloromethane	ug/L	<0.50	1.0	05/03/17 07:27	
Bromoform	ug/L	<0.50	1.0	05/03/17 07:27	
Bromomethane	ug/L	<2.4	5.0	05/03/17 07:27	
Carbon tetrachloride	ug/L	<0.50	1.0	05/03/17 07:27	
Chlorobenzene	ug/L	<0.50	1.0	05/03/17 07:27	
Chloroethane	ug/L	<0.37	1.0	05/03/17 07:27	
Chloroform	ug/L	<2.5	5.0	05/03/17 07:27	
Chloromethane	ug/L	<0.50	1.0	05/03/17 07:27	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	05/03/17 07:27	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	05/03/17 07:27	
Dibromochloromethane	ug/L	<0.50	1.0	05/03/17 07:27	
Dibromomethane	ug/L	<0.43	1.0	05/03/17 07:27	
Dichlorodifluoromethane	ug/L	<0.22	1.0	05/03/17 07:27	
Diisopropyl ether	ug/L	<0.50	1.0	05/03/17 07:27	
Ethylbenzene	ug/L	<0.50	1.0	05/03/17 07:27	

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## QUALITY CONTROL DATA

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

METHOD BLANK: 1499948

Matrix: Water

Associated Lab Samples: 40149183001, 40149183002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	05/03/17 07:27	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	05/03/17 07:27	
m&p-Xylene	ug/L	<1.0	2.0	05/03/17 07:27	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	05/03/17 07:27	
Methylene Chloride	ug/L	<0.23	1.0	05/03/17 07:27	
n-Butylbenzene	ug/L	<0.50	1.0	05/03/17 07:27	
n-Propylbenzene	ug/L	<0.50	1.0	05/03/17 07:27	
Naphthalene	ug/L	<2.5	5.0	05/03/17 07:27	
o-Xylene	ug/L	<0.50	1.0	05/03/17 07:27	
p-Isopropyltoluene	ug/L	<0.50	1.0	05/03/17 07:27	
sec-Butylbenzene	ug/L	<2.2	5.0	05/03/17 07:27	
Styrene	ug/L	<0.50	1.0	05/03/17 07:27	
tert-Butylbenzene	ug/L	<0.18	1.0	05/03/17 07:27	
Tetrachloroethene	ug/L	<0.50	1.0	05/03/17 07:27	
Toluene	ug/L	<0.50	1.0	05/03/17 07:27	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	05/03/17 07:27	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	05/03/17 07:27	
Trichloroethene	ug/L	<0.33	1.0	05/03/17 07:27	
Trichlorofluoromethane	ug/L	<0.18	1.0	05/03/17 07:27	
Vinyl chloride	ug/L	<0.18	1.0	05/03/17 07:27	
4-Bromofluorobenzene (S)	%	85	70-130	05/03/17 07:27	
Dibromofluoromethane (S)	%	98	70-130	05/03/17 07:27	
Toluene-d8 (S)	%	103	70-130	05/03/17 07:27	

LABORATORY CONTROL SAMPLE: 1499949

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	52.0	104	70-131	
1,1,2,2-Tetrachloroethane	ug/L	50	47.6	95	67-130	
1,1,2-Trichloroethane	ug/L	50	47.5	95	70-130	
1,1-Dichloroethane	ug/L	50	46.2	92	70-133	
1,1-Dichloroethene	ug/L	50	47.6	95	70-130	
1,2,4-Trichlorobenzene	ug/L	50	44.2	88	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	46.0	92	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	49.7	99	70-130	
1,2-Dichlorobenzene	ug/L	50	49.2	98	70-130	
1,2-Dichloroethane	ug/L	50	48.4	97	70-130	
1,2-Dichloropropane	ug/L	50	50.0	100	70-130	
1,3-Dichlorobenzene	ug/L	50	47.4	95	70-130	
1,4-Dichlorobenzene	ug/L	50	48.6	97	70-130	
Benzene	ug/L	50	53.2	106	60-135	
Bromodichloromethane	ug/L	50	49.1	98	70-130	
Bromoform	ug/L	50	47.3	95	70-130	
Bromomethane	ug/L	50	39.1	78	33-130	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

LABORATORY CONTROL SAMPLE: 1499949

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	51.8	104	70-138	
Chlorobenzene	ug/L	50	49.4	99	70-130	
Chloroethane	ug/L	50	38.6	77	51-130	
Chloroform	ug/L	50	51.0	102	70-130	
Chloromethane	ug/L	50	54.2	108	25-132	
cis-1,2-Dichloroethene	ug/L	50	47.5	95	69-130	
cis-1,3-Dichloropropene	ug/L	50	50.1	100	70-130	
Dibromochloromethane	ug/L	50	48.0	96	70-130	
Dichlorodifluoromethane	ug/L	50	55.0	110	23-130	
Ethylbenzene	ug/L	50	55.0	110	70-136	
Isopropylbenzene (Cumene)	ug/L	50	55.2	110	70-140	
m&p-Xylene	ug/L	100	112	112	70-138	
Methyl-tert-butyl ether	ug/L	50	45.5	91	66-138	
Methylene Chloride	ug/L	50	44.4	89	70-130	
o-Xylene	ug/L	50	54.6	109	70-134	
Styrene	ug/L	50	51.2	102	70-133	
Tetrachloroethene	ug/L	50	49.9	100	70-138	
Toluene	ug/L	50	53.0	106	70-130	
trans-1,2-Dichloroethene	ug/L	50	46.6	93	70-131	
trans-1,3-Dichloropropene	ug/L	50	44.4	89	69-130	
Trichloroethene	ug/L	50	53.8	108	70-130	
Trichlorofluoromethane	ug/L	50	50.4	101	50-150	
Vinyl chloride	ug/L	50	52.4	105	49-130	
4-Bromofluorobenzene (S)	%			98	70-130	
Dibromofluoromethane (S)	%			102	70-130	
Toluene-d8 (S)	%			97	70-130	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 1499953 1499954

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	RPD	Max Qual
		40149183001	Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	MSD % Rec				
1,1,1-Trichloroethane	ug/L	0.56J	50	50	50.6	51.3	100	102	70-134	1	20		
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	45.2	46.8	90	94	67-130	3	20		
1,1,2-Trichloroethane	ug/L	<0.20	50	50	46.4	48.2	93	96	70-130	4	20		
1,1-Dichloroethane	ug/L	<0.24	50	50	44.2	44.6	88	89	70-134	1	20		
1,1-Dichloroethene	ug/L	<0.41	50	50	46.1	46.2	92	92	68-136	0	20		
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	43.5	44.4	87	89	62-139	2	20		
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	42.0	46.1	84	92	50-150	9	20		
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	48.7	51.9	97	104	70-130	6	20		
1,2-Dichlorobenzene	ug/L	<0.50	50	50	46.6	48.4	93	97	70-130	4	20		
1,2-Dichloroethane	ug/L	<0.17	50	50	45.6	45.8	91	92	70-130	1	20		
1,2-Dichloropropene	ug/L	<0.23	50	50	49.0	48.7	98	97	70-130	1	20		
1,3-Dichlorobenzene	ug/L	<0.50	50	50	45.4	47.2	91	94	70-131	4	20		
1,4-Dichlorobenzene	ug/L	<0.50	50	50	47.1	47.7	94	95	70-130	1	20		

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## QUALITY CONTROL DATA

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

Parameter	Units	40149183001		MS		MSD		1499954		Max		
		Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD RPD	Qual	
Benzene	ug/L	<0.50	50	50	52.0	52.5	104	105	57-138	1	20	
Bromodichloromethane	ug/L	<0.50	50	50	48.4	49.0	97	98	70-130	1	20	
Bromoform	ug/L	<0.50	50	50	45.9	48.0	92	96	70-130	4	20	
Bromomethane	ug/L	<2.4	50	50	40.4	42.6	81	85	33-130	5	27	
Carbon tetrachloride	ug/L	<0.50	50	50	51.4	50.8	103	102	70-138	1	20	
Chlorobenzene	ug/L	<0.50	50	50	47.8	50.0	96	100	70-130	5	20	
Chloroethane	ug/L	<0.37	50	50	37.1	37.2	74	74	51-130	0	20	
Chloroform	ug/L	<2.5	50	50	49.6	50.2	99	100	70-130	1	20	
Chloromethane	ug/L	<0.50	50	50	51.4	51.0	103	102	25-132	1	20	
cis-1,2-Dichloroethene	ug/L	<0.26	50	50	46.6	46.8	93	94	61-140	1	20	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	48.9	49.1	98	98	70-130	1	20	
Dibromochloromethane	ug/L	<0.50	50	50	46.6	48.7	93	97	70-130	5	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	52.6	52.8	105	106	23-130	0	20	
Ethylbenzene	ug/L	<0.50	50	50	53.0	55.0	106	110	70-138	4	20	
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	54.1	55.7	108	111	70-152	3	20	
m&p-Xylene	ug/L	<1.0	100	100	108	110	108	110	70-140	2	20	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	44.8	45.2	90	90	66-139	1	20	
Methylene Chloride	ug/L	<0.23	50	50	43.6	43.6	87	87	70-130	0	20	
o-Xylene	ug/L	<0.50	50	50	53.4	54.6	107	109	70-134	2	20	
Styrene	ug/L	<0.50	50	50	49.4	51.3	99	103	70-138	4	20	
Tetrachloroethene	ug/L	3.7	50	50	52.3	54.1	97	101	70-148	3	20	
Toluene	ug/L	<0.50	50	50	51.5	53.5	103	107	70-130	4	20	
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	45.8	45.9	92	92	70-133	0	20	
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	43.3	45.4	87	91	69-130	5	20	
Trichloroethene	ug/L	<0.33	50	50	51.6	52.5	103	105	70-131	2	20	
Trichlorofluoromethane	ug/L	<0.18	50	50	48.3	48.5	97	97	50-150	1	20	
Vinyl chloride	ug/L	<0.18	50	50	51.2	50.0	102	100	49-133	2	20	
4-Bromofluorobenzene (S)	%						99	100	70-130			
Dibromofluoromethane (S)	%						103	101	70-130			
Toluene-d8 (S)	%						97	101	70-130			

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## QUALIFIERS

Project: 42-1-37409 UNITED DRY CLEANERS

Pace Project No.: 40149183

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 42-1-37409 UNITED DRY CLEANERS  
 Pace Project No.: 40149183

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40149183001	MW-10	EPA 8260	254337		
40149183002	TRIP BLANK	EPA 8260	254337		

## REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

**Company Name:** SHAWNEE WILSON, INC.  
**Branch/Location:** MADISON, WI  
**Project Contact:** MARK MCCULLAGH  
**Phone:** 608/442-5223  
**Project Number:** 42-1-37407  
**Project Name:** UNRED DRY CLEANS

**Project State:** WISCONSIN

**Sampled By (Print):** MARK S. MCCULLAGH

**Sampled By (Sign):** *Mark S. McCullagh*

**PO #:**

**Program:**

**Data Package Options**

EPA Level III

EPA Level IV

NOT needed on your sample

**MS/MSD**

On your sample

(billable)

your sample

**Matrix Codes**

A = Air

B = Biota

C = Charcoal

D = HCl

E = H<sub>2</sub>SO<sub>4</sub>

F = HNO<sub>3</sub>

G = NaOH

H = Sodium Bisulfate Solution

I = Sodium Thiosulfate

J = Other

**PRESERVATION (CODE)\***

**FILTERED?**

**(YES/NO)**

**PICK LETTER**

**B**

## CHAIN OF CUSTODY

**Pace Analytical®**  
www.pacealabs.com

UPPER MIDWEST REGION  
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

Vol44183

<b>Quote #:</b>	<b>Mark McCullagh</b>
<b>Mail To Contact:</b>	<b>SHAWNEE WILSON</b>
<b>Mail To Company:</b>	<b>SHAWNEE WILSON</b>
<b>Invoice To Address:</b>	<b>6568 SCHROEDER RD, MADISON, WI 53711</b>
<b>Invoice To Phone:</b>	<b>608/442-5223</b>
<b>CLIENT COMMENTS</b>	<b>3-40 ml vials 2-40 ml vials</b>
<b>LAB COMMENTS (Lab Use Only)</b>	<b>Profile #</b>

Version 6.0 08/14/06

Rush Turnaround Time Requested - Prelims  
(Rush TAT subject to approval/surcharge)

Date Needed:  
Transmit Prelim Rush Results by (complete what you want):

Email #1:

Email #2:

Telephone:

Fax:

Samples on HOLD are subject to special pricing and release of liability

Reinforced BY: *Mark S. McCullagh* Date/Time: 05-01-12 14:15 Received BY: *Mark S. McCullagh* Date/Time: 05-01-12 14:15

Reinforced BY: *Mark S. McCullagh* Date/Time: Received BY: *Mark S. McCullagh* Date/Time: *05/01/12*

Reinforced BY: *Mark S. McCullagh* Date/Time: Received BY: *Mark S. McCullagh* Date/Time: *05/01/12*

Reinforced BY: *Mark S. McCullagh* Date/Time: Received BY: *Mark S. McCullagh* Date/Time: *05/01/12*

Reinforced BY: *Mark S. McCullagh* Date/Time: Received BY: *Mark S. McCullagh* Date/Time: *05/01/12*

Reinforced BY: *Mark S. McCullagh* Date/Time: Received BY: *Mark S. McCullagh* Date/Time: *05/01/12*

PAGE Project No.

Received BY: *Mark S. McCullagh* Date/Time: *05/01/12*

Receipt Temp = *RT* °C

Sample Receipt pH

OK / Adjusted

Cooler Custody Seal

Present / Not Present

Intact / Not Intact

## Sample Condition Upon Receipt

Pace Analytical Services, Inc.  
1241 Bellevue Street, Suite 9  
Green Bay, WI 54302

Pace Analytical

Client Name: Shannon Wilson

Project #:

WO# : 40149183



40149183

Courier:  FedEx  UPS Client  Pace Other:

Tracking #:

Custody Seal on Cooler/Box Present:  yes  no Seals intact:  yes  noCustody Seal on Samples Present:  yes  no Seals intact:  yes  noPacking Material:  Bubble Wrap  Bubble Bags  None  OtherThermometer Used N/AType of Ice: Wet Blue Dry None Samples on ice, cooling process has begunCooler Temperature Uncorr: ROI /Corr:Biological Tissue is Frozen:  yesTemp Blank Present:  yes  no no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Person examining contents:

Date: 5-17-17Initials: SK

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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.		
Samples Arrived within Hold Time: - VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:		
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: -Pace Containers Used: -Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.		
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.		
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH +ZnAct		
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> ≥2, NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
exceptions: VOA coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lab Std #ID of preservative	Date/ Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.		
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.		
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Pace Trip Blank Lot # (if purchased):	<u>381</u>	<u>5-17-17</u>		

## Client Notification/ Resolution:

If checked, see attached form for additional comments 

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

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

Project Manager Review: RMW for DMDate: 5/11/17

## **Attachment B**

### **Laboratory Report May 2017 Soil Gas Samples**

May 12, 2017

Mr. Mark McColloch  
Shannon & Wilson, Inc.  
6506 Schroeder Road  
Suite 201  
Madison, WI 53719

RE: Project: 42-1-37409 United Dry Cleaner  
Pace Project No.: 10387022

Dear Mr. McColloch:

Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Sarah Platzer  
sarah.platzer@pacelabs.com  
(612)607-1700  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 42-1-37409 United Dry Cleaner  
 Pace Project No.: 10387022

---

### Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414	Minnesota Certification #: 027-053-137
A2LA Certification #: 2926.01	Mississippi Certification #: MN00064
Alabama Certification #: 40770	Montana Certification #: CERT0092
Alaska Contaminated Sites Certification #: UST-078	Nebraska Certification #: NE-OS-18-06
Alaska DW Certification #: MN00064	Nevada Certification #: MN00064
Arizona Certification #: AZ0014	New Hampshire Certification #: 2081
Arkansas Certification #: 88-0680	New Jersey Certification #: MN002
California Certification #: MN00064	New York Certification #: 11647
CNMI Saipan Certification #: MP0003	North Carolina DW Certification #: 27700
Colorado Certification #: MN00064	North Carolina WW Certification #: 530
Connecticut Certification #: PH-0256	North Dakota Certification #: R-036
EPA Region 8 Certification #: 8TMS-L	Ohio DW Certification #: 41244
Florida Certification #: E87605	Ohio VAP Certification #: CL101
Georgia Certification #: 959	Oklahoma Certification #: 9507
Guam EPA Certification #: MN00064	Oregon NwTPH Certification #: MN300001
Hawaii Certification #: MN00064	Oregon Secondary Certification #: MN200001
Idaho Certification #: MN00064	Pennsylvania Certification #: 68-00563
Illinois Certification #: 200011	Puerto Rico Certification #: MN00064
Indiana Certification #: C-MN-01	South Carolina Certification #: 74003001
Iowa Certification #: 368	Tennessee Certification #: TN02818
Kansas Certification #: E-10167	Texas Certification #: T104704192
Kentucky DW Certification #: 90062	Utah Certification #: MN00064
Kentucky WW Certification #: 90062	Virginia Certification #: 460163
Louisiana DEQ Certification #: 03086	Washington Certification #: C486
Louisiana DW Certification #: MN00064	West Virginia DW Certification #: 9952 C
Maine Certification #: MN00064	West Virginia WW Certification #: 382
Maryland Certification #: 322	Wisconsin Certification #: 999407970
Michigan Certification #: 9909	Wyoming via EPA Region 8 Certification #: 8TMS-L

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 42-1-37409 United Dry Cleaner  
 Pace Project No.: 10387022

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10387022001	VP-1	Air	05/01/17 11:45	05/02/17 10:00
10387022002	VP-2	Air	05/01/17 12:35	05/02/17 10:00
10387022003	VP-3	Air	05/01/17 12:35	05/02/17 10:00
10387022004	VP-4	Air	05/01/17 13:35	05/02/17 10:00
10387022005	Indoor Air	Air	05/01/17 17:15	05/02/17 10:00
10387022006	Background	Air	05/01/17 17:15	05/02/17 10:00
10387022007	Dup #1	Air	05/01/17 12:35	05/02/17 10:00

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 42-1-37409 United Dry Cleaner  
 Pace Project No.: 10387022

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10387022001	VP-1	TO-15	NCK	5
10387022002	VP-2	TO-15	CH1, NCK	5
10387022003	VP-3	TO-15	NCK	5
10387022004	VP-4	TO-15	NCK	5
10387022005	Indoor Air	TO-15	NCK	5
10387022006	Background	TO-15	NCK	5
10387022007	Dup #1	TO-15	CH1, NCK	5

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 42-1-37409 United Dry Cleaner

Pace Project No.: 10387022

Sample: VP-1	Lab ID: 10387022001	Collected: 05/01/17 11:45	Received: 05/02/17 10:00	Matrix: Air					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>	Analytical Method: TO-15								
cis-1,2-Dichloroethene	<0.34	ug/m3	1.1	0.34	1.39		05/05/17 00:31	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/m3	1.1	0.53	1.39		05/05/17 00:31	156-60-5	
Tetrachloroethene	52.3	ug/m3	0.96	0.39	1.39		05/05/17 00:31	127-18-4	
Trichloroethene	<0.38	ug/m3	0.76	0.38	1.39		05/05/17 00:31	79-01-6	
Vinyl chloride	<0.27	ug/m3	0.36	0.27	1.39		05/05/17 00:31	75-01-4	
<b>Sample: VP-2</b>	<b>Lab ID: 10387022002</b>	Collected: 05/01/17 12:35	Received: 05/02/17 10:00	Matrix: Air					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>	Analytical Method: TO-15								
cis-1,2-Dichloroethene	<0.33	ug/m3	1.1	0.33	1.34		05/05/17 01:02	156-59-2	
trans-1,2-Dichloroethene	<0.51	ug/m3	1.1	0.51	1.34		05/05/17 01:02	156-60-5	
Tetrachloroethene	1150	ug/m3	18.5	7.5	26.8		05/05/17 19:22	127-18-4	
Trichloroethene	<0.37	ug/m3	0.74	0.37	1.34		05/05/17 01:02	79-01-6	
Vinyl chloride	<0.26	ug/m3	0.35	0.26	1.34		05/05/17 01:02	75-01-4	
<b>Sample: VP-3</b>	<b>Lab ID: 10387022003</b>	Collected: 05/01/17 12:35	Received: 05/02/17 10:00	Matrix: Air					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>	Analytical Method: TO-15								
cis-1,2-Dichloroethene	<0.33	ug/m3	1.1	0.33	1.34		05/05/17 01:34	156-59-2	
trans-1,2-Dichloroethene	<0.51	ug/m3	1.1	0.51	1.34		05/05/17 01:34	156-60-5	
Tetrachloroethene	262	ug/m3	0.92	0.37	1.34		05/05/17 01:34	127-18-4	
Trichloroethene	0.92	ug/m3	0.74	0.37	1.34		05/05/17 01:34	79-01-6	
Vinyl chloride	<0.26	ug/m3	0.35	0.26	1.34		05/05/17 01:34	75-01-4	
<b>Sample: VP-4</b>	<b>Lab ID: 10387022004</b>	Collected: 05/01/17 13:35	Received: 05/02/17 10:00	Matrix: Air					
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>	Analytical Method: TO-15								
cis-1,2-Dichloroethene	<0.33	ug/m3	1.1	0.33	1.34		05/05/17 02:07	156-59-2	
trans-1,2-Dichloroethene	<0.51	ug/m3	1.1	0.51	1.34		05/05/17 02:07	156-60-5	
Tetrachloroethene	161	ug/m3	0.92	0.37	1.34		05/05/17 02:07	127-18-4	
Trichloroethene	<0.37	ug/m3	0.74	0.37	1.34		05/05/17 02:07	79-01-6	
Vinyl chloride	<0.26	ug/m3	0.35	0.26	1.34		05/05/17 02:07	75-01-4	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 42-1-37409 United Dry Cleaner

Pace Project No.: 10387022

<b>Sample: Indoor Air</b>	<b>Lab ID: 10387022005</b>	Collected: 05/01/17 17:15	Received: 05/02/17 10:00	Matrix: Air
---------------------------	----------------------------	---------------------------	--------------------------	-------------

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>	Analytical Method: TO-15								
cis-1,2-Dichloroethene	<0.34	ug/m3	1.1	0.34	1.39		05/04/17 22:55	156-59-2	
trans-1,2-Dichloroethene	<0.53	ug/m3	1.1	0.53	1.39		05/04/17 22:55	156-60-5	
Tetrachloroethene	4.4	ug/m3	0.96	0.39	1.39		05/04/17 22:55	127-18-4	
Trichloroethene	0.54J	ug/m3	0.76	0.38	1.39		05/04/17 22:55	79-01-6	
Vinyl chloride	<0.27	ug/m3	0.36	0.27	1.39		05/04/17 22:55	75-01-4	

<b>Sample: Background</b>	<b>Lab ID: 10387022006</b>	Collected: 05/01/17 17:15	Received: 05/02/17 10:00	Matrix: Air
---------------------------	----------------------------	---------------------------	--------------------------	-------------

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>	Analytical Method: TO-15								
cis-1,2-Dichloroethene	<0.33	ug/m3	1.1	0.33	1.34		05/04/17 23:28	156-59-2	
trans-1,2-Dichloroethene	<0.51	ug/m3	1.1	0.51	1.34		05/04/17 23:28	156-60-5	
Tetrachloroethene	1.7	ug/m3	0.92	0.37	1.34		05/04/17 23:28	127-18-4	
Trichloroethene	<0.37	ug/m3	0.74	0.37	1.34		05/04/17 23:28	79-01-6	
Vinyl chloride	<0.26	ug/m3	0.35	0.26	1.34		05/04/17 23:28	75-01-4	

<b>Sample: Dup #1</b>	<b>Lab ID: 10387022007</b>	Collected: 05/01/17 12:35	Received: 05/02/17 10:00	Matrix: Air
-----------------------	----------------------------	---------------------------	--------------------------	-------------

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>TO15 MSV AIR</b>	Analytical Method: TO-15								
cis-1,2-Dichloroethene	<0.33	ug/m3	1.1	0.33	1.34		05/04/17 23:59	156-59-2	
trans-1,2-Dichloroethene	<0.51	ug/m3	1.1	0.51	1.34		05/04/17 23:59	156-60-5	
Tetrachloroethene	1190	ug/m3	23.3	9.4	33.77		05/05/17 18:55	127-18-4	
Trichloroethene	<0.37	ug/m3	0.74	0.37	1.34		05/04/17 23:59	79-01-6	
Vinyl chloride	<0.26	ug/m3	0.35	0.26	1.34		05/04/17 23:59	75-01-4	

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 42-1-37409 United Dry Cleaner

Pace Project No.: 10387022

QC Batch:	472224	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samples: 10387022001, 10387022002, 10387022003, 10387022004, 10387022005, 10387022006, 10387022007			

METHOD BLANK: 2576547 Matrix: Air

Associated Lab Samples: 10387022001, 10387022002, 10387022003, 10387022004, 10387022005, 10387022006, 10387022007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/m3	<0.25	0.81	05/04/17 10:42	
Tetrachloroethene	ug/m3	<0.28	0.69	05/04/17 10:42	
trans-1,2-Dichloroethene	ug/m3	<0.38	0.81	05/04/17 10:42	
Trichloroethene	ug/m3	<0.28	0.55	05/04/17 10:42	
Vinyl chloride	ug/m3	<0.20	0.26	05/04/17 10:42	

LABORATORY CONTROL SAMPLE: 2576548

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/m3	43.9	41.8	95	70-133	
Tetrachloroethene	ug/m3	72.4	74.5	103	70-130	
trans-1,2-Dichloroethene	ug/m3	41.9	42.2	101	70-131	
Trichloroethene	ug/m3	57.9	59.9	104	70-130	
Vinyl chloride	ug/m3	27	29.0	107	70-130	

SAMPLE DUPLICATE: 2577001

Parameter	Units	10387228002 Result	Dup Result	RPD	Max RPD	Qualifiers
cis-1,2-Dichloroethene	ug/m3	ND	<0.40		25	
Tetrachloroethene	ug/m3	1.2	1.3	7	25	
trans-1,2-Dichloroethene	ug/m3	ND	<0.62		25	
Trichloroethene	ug/m3	ND	0.82J		25	
Vinyl chloride	ug/m3	ND	<0.31		25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: 42-1-37409 United Dry Cleaner  
Pace Project No.: 10387022

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 42-1-37409 United Dry Cleaner

Pace Project No.: 10387022

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10387022001	VP-1	TO-15	472224		
10387022002	VP-2	TO-15	472224		
10387022003	VP-3	TO-15	472224		
10387022004	VP-4	TO-15	472224		
10387022005	Indoor Air	TO-15	472224		
10387022006	Background	TO-15	472224		
10387022007	Dup #1	TO-15	472224		

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

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

10387022

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
<b>Company:</b> <u>Shannon &amp; Wilson, Inc.</u> <b>Address:</b> <u>8306 Seward Rd</u> <b>MADISON, WI 53711  <b>Email To:</b>  <u>Mike@shawnwil.com</u>  <b>Phone:</b>  <u>608/442-5723</u>  <b>Requested Due Date/TAT:</b>  <u></u> </b>		<b>Report To:</b> <u>Pace</u> <b>Copy To:</b> <u></u> <b>Purchase Order No.:</b> <u></u> <b>Project Name:</b> <u>Lead Dry Clean</u> <b>Project Number:</b> <u>42-1-37409</u> <b>Pace Project Manager/Sales Rep.:</b> <u></u> <b>Pace Profile #:</b> <u></u>		<b>Attention:</b> <u>Mark McClellan</u> <b>Company Name:</b> <u>Shannon &amp; Wilson, Inc.</u> <b>Address:</b> <u>6506 Seward Rd</u> <b>Pace Quote Reference:</b> <u></u> <b>Location of Sampling by State:</b> <u></u> <b>Report Level:</b> <u>II.</u>	
<b>'Section D Required Client Information</b> <b>AIR SAMPLE ID</b> Sample IDs MUST BE UNIQUE		<b>COLLECTED</b> PID Reading (Client Only) MED CODE Valid Media Codes: Toclar Bag 1Liter Summa Can 6Litter Summa Can Low Volume Puff High Volume Puff Other		<b>Flow</b> Control Number Summa Can Number Final Field - psig Calibrator Pressure (Initial Field - psig)	
#	ITEM	DATE	TIME	DATE	TIME
1	VP-1	05/01/12	11:00	05/11/12	11:45
2	VP-2	05/01/12	11:45	05/11/12	13:35
3	VP-3				
3	VP-4				
4	INDOOR AIR	05/01/12	12:40	05/11/12	13:35
5	BACKGROUN	05/01/12	11:15	05/11/12	11:15
6	DUP #1	05/01/12	11:05	05/11/12	12:35
7					
8					
9					
10					
11					
12					
<b>RELINQUISHED BY / AFFILIATION</b> <u>Mark McClellan - Pace 5/11/12</u>		<b>DATE</b>	<b>TIME</b>	<b>ACCEPTED BY / AFFILIATION</b>	<b>DATE</b>
<b>Comments :</b> <u></u>					
<b>SAMPLE CONDITIONS</b> <b>TO-15 Short List*</b> TO-15 TO-14 TO-13 (PCBs) TO-3 M (Merchane) TO-3 C (Fixed Gases (%)) PM10 Final Field - psig Calibrator Pressure (Initial Field - psig)					
<b>Method:</b> <u></u>					
<b>Pace Lab ID:</b> <u>C01</u> <u>C02</u> <u>C03</u> <u>C04</u> <u>C05</u> <u>C06</u> <u>C07</u>					
<b>Samples IntraC</b> <b>Received on</b> <b>Temp in °C</b> <b>Sampled Dealer</b> <b>Customer ID</b> <b>V/N V/N V/N V/N V/N V/N</b>					
<b>PRINT Name of Sampler</b> <u>Mark S. McClellan</u> <b>Signature of Sampler</b> <u>Mike McClellan</u> <b>DATE Signed (MM/DD/YR)</b> <u>05/01/12 2012</u>					

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of Sampler  
Signature of Sampler  
DATE Signed (MM/DD/YR)

<i>Pace Analytical</i>	Document Name: <b>Air Sample Condition Upon Receipt</b>	Document Revised: 26APR2016 Page 1 of 1
	Document No.: <b>F-MN-A-106-rev.11</b>	Issuing Authority: <b>Pace Minnesota Quality Office</b>

Air Sample Condition  
Upon Receipt

Client Name:

Project #:

*Shannon & Wilson*

WO# : 10387022



10387022

Courier:  FedEx  UPS  Speedee  Client

Commercial  Pace  Other: \_\_\_\_\_

Tracking Number: *73009704 0365, 0376*

Custody Seal on Cooler/Box Present?  Yes  No Seals Intact?  Yes  No Optional: Proj. Due Date: Proj. Name: \_\_\_\_\_

Packing Material:  Bubble Wrap  Bubble Bags  Foam  None  Tin Can  Other: \_\_\_\_\_ Temp Blank rec:  Yes  No

Temp. (TO17 and TO13 samples only) (°C): \_\_\_\_\_ Corrected Temp (°C): \_\_\_\_\_ Thermom. Used:  B88A912167504  151401163  
 B88A0143310098  151401164

Temp should be above freezing to 6°C Correction Factor: \_\_\_\_\_

Date & Initials of Person Examining Contents: *EN S/2/D*

Type of ice Received  Blue  Wet  None

#### Comments:

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 and/or Signature on COC?	<input checked="" 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 (<72 hr)?	<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: <i>Air Can</i> Airbag Filter TDT Passive	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	11.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	12.

Samples Received: *IT-facing FFT*

Canisters			Canisters		
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID

#### CLIENT NOTIFICATION/RESOLUTION

Field Data Required?  Yes  No

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

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

Project Manager Review: *Shawn Wilson*

Date: 5/2/2017

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)



Pace Analytical Services, Inc.  
1700 Elm Street – Suite 200  
Minneapolis, MN 55414  
Phone: 612.607.1700  
Fax: 612.607.6444

## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
Phone: (920)374-2034

Lab Project Number: 10387022  
Project Name: 42-1-37409 United Dry Cleaner

Lab Sample No: 10387022001 ProjSampleNum: 10387022001 Date Collected: 05/01/17 11:45  
Client Sample ID: VP-1 Matrix: Air Date Received: 05/02/17 10:00

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b>							
TO-15							
cis-1,2-Dichloroethene	<0.084	ppbv	0.27	0.084	05/05/17 0:31	NCK	156-59-2
Tetrachloroethene	7.6	ppbv	0.14	0.057	05/05/17 0:31	NCK	127-18-4
trans-1,2-Dichloroethene	<0.13	ppbv	0.27	0.13	05/05/17 0:31	NCK	156-60-5
Trichloroethene	<0.07	ppbv	0.14	0.07	05/05/17 0:31	NCK	79-01-6
Vinyl chloride	<0.1	ppbv	0.14	0.1	05/05/17 0:31	NCK	75-01-4

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

Date: 5/12/2017

Units Conversion Request

Page 1

## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
 Phone: (920)374-2034

Lab Project Number: 10387022  
 Project Name: 42-1-37409 United Dry Cleaner

Lab Sample No:	10387022002	ProjSampleNum:	10387022002	Date Collected:	05/01/17 12:35
Client Sample ID:	VP-2	Matrix:	Air	Date Received:	05/02/17 10:00

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b>							
TO-15							
cis-1,2-Dichloroethene	<0.082	ppbv	0.27	0.082	05/05/17 1:02	NCK	156-59-2
Tetrachloroethene	167	ppbv	2.7	1.1	05/05/17 19:22	CH1	127-18-4
trans-1,2-Dichloroethene	<0.13	ppbv	0.27	0.13	05/05/17 1:02	NCK	156-60-5
Trichloroethene	<0.068	ppbv	0.14	0.068	05/05/17 1:02	NCK	79-01-6
Vinyl chloride	<0.1	ppbv	0.13	0.1	05/05/17 1:02	NCK	75-01-4

**DISCLAIMER:** These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT



Pace Analytical Services, Inc.  
1700 Elm Street – Suite 200  
Minneapolis, MN 55414  
Phone: 612.607.1700  
Fax: 612.607.6444

## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
Phone: (920)374-2034

Lab Project Number: 10387022  
Project Name: 42-1-37409 United Dry Cleaner

Lab Sample No: 10387022003 ProjSampleNum: 10387022003 Date Collected: 05/01/17 12:35  
Client Sample ID: VP-3 Matrix: Air Date Received: 05/02/17 10:00

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b>							
TO-15							
cis-1,2-Dichloroethene	<0.082	ppbv	0.27	0.082	05/01/17 1:34	NCK	156-59-2
Tetrachloroethene	38	ppbv	0.13	0.054	05/01/17 1:34	NCK	127-18-4
trans-1,2-Dichloroethene	<0.13	ppbv	0.27	0.13	05/01/17 1:34	NCK	156-60-5
Trichloroethene	0.17	ppbv	0.14	0.068	05/01/17 1:34	NCK	79-01-6
Vinyl chloride	<0.1	ppbv	0.13	0.1	05/01/17 1:34	NCK	75-01-4

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

Date: 5/12/2017

Units Conversion Request

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Pace Analytical Services, Inc.  
1700 Elm Street – Suite 200  
Minneapolis, MN 55414  
Phone: 612.607.1700  
Fax: 612.607.6444

## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
Phone: (920)374-2034

Lab Project Number: 10387022  
Project Name: 42-1-37409 United Dry Cleaner

Lab Sample No: 10387022004 ProjSampleNum: 10387022004 Date Collected: 05/01/17 13:35  
Client Sample ID: VP-4 Matrix: Air Date Received: 05/02/17 10:00

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b>							
TO-15							
cis-1,2-Dichloroethene	<0.082	ppbv	0.27	0.082	05/05/17 2:07	NCK	156-59-2
Tetrachloroethene	23.4	ppbv	0.13	0.054	05/05/17 2:07	NCK	127-18-4
trans-1,2-Dichloroethene	<0.13	ppbv	0.27	0.13	05/05/17 2:07	NCK	156-60-5
Trichloroethene	<0.068	ppbv	0.14	0.068	05/05/17 2:07	NCK	79-01-6
Vinyl chloride	<0.1	ppbv	0.13	0.1	05/05/17 2:07	NCK	75-01-4

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

Date: 5/12/2017

Units Conversion Request

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Pace Analytical Services, Inc.  
1700 Elm Street – Suite 200  
Minneapolis, MN 55414  
Phone: 612.607.1700  
Fax: 612.607.6444

## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
Phone: (920)374-2034

Lab Project Number: 10387022  
Project Name: 42-1-37409 United Dry Cleaner

Lab Sample No: 10387022005 ProjSampleNum: 10387022005 Date Collected: 05/01/17 17:15  
Client Sample ID: Indoor Air Matrix: Air Date Received: 05/02/17 10:00

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b>							
TO-15							
cis-1,2-Dichloroethene	<0.084	ppbv	0.27	0.084	05/04/17 22:55	NCK	156-59-2
Tetrachloroethene	0.64	ppbv	0.14	0.057	05/04/17 22:55	NCK	127-18-4
trans-1,2-Dichloroethene	<0.13	ppbv	0.27	0.13	05/04/17 22:55	NCK	156-60-5
Trichloroethene	0.099J	ppbv	0.14	0.07	05/04/17 22:55	NCK	79-01-6
Vinyl chloride	<0.1	ppbv	0.14	0.1	05/04/17 22:55	NCK	75-01-4

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

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## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
 Phone: (920)374-2034

Lab Project Number: 10387022  
 Project Name: 42-1-37409 United Dry Cleaner

Lab Sample No:	10387022006	ProjSampleNum:	10387022006	Date Collected:	05/01/17 17:15
Client Sample ID:	Background	Matrix:	Air	Date Received:	05/02/17 10:00

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b>							
TO-15							
cis-1,2-Dichloroethene	<0.082	ppbv	0.27	0.082	05/04/17 23:28	NCK	156-59-2
Tetrachloroethene	0.25	ppbv	0.13	0.054	05/04/17 23:28	NCK	127-18-4
trans-1,2-Dichloroethene	<0.13	ppbv	0.27	0.13	05/04/17 23:28	NCK	156-60-5
Trichloroethene	<0.068	ppbv	0.14	0.068	05/04/17 23:28	NCK	79-01-6
Vinyl chloride	<0.1	ppbv	0.13	0.1	05/04/17 23:28	NCK	75-01-4

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

Date: 5/12/2017

Units Conversion Request

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## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
 Phone: (920)374-2034

Lab Project Number: 10387022  
 Project Name: 42-1-37409 United Dry Cleaner

Lab Sample No:	10387022007	ProjSampleNum:	10387022007	Date Collected:	05/01/17 12:35
Client Sample ID:	Dup #1	Matrix:	Air	Date Received:	05/02/17 10:00

Parameters	Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b>							
TO-15							
cis-1,2-Dichloroethene	<0.082	ppbv	0.27	0.082	05/04/17 23:59	NCK	156-59-2
Tetrachloroethene	173	ppbv	3.4	1.4	05/05/17 18:55	CH1	127-18-4
trans-1,2-Dichloroethene	<0.13	ppbv	0.27	0.13	05/04/17 23:59	NCK	156-60-5
Trichloroethene	<0.068	ppbv	0.14	0.068	05/04/17 23:59	NCK	79-01-6
Vinyl chloride	<0.1	ppbv	0.13	0.1	05/04/17 23:59	NCK	75-01-4

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT



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1700 Elm Street – Suite 200  
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## ANALYTICAL RESULTS

Client: Shannon & Wilson, Inc.  
Phone: (920)374-2034

Lab Project Number: 10387022  
Project Name: 42-1-37409 United Dry Cleaner

## PARAMETER FOOTNOTES

## SUPPLEMENTAL REPORT

Date: 5/12/2017

Units Conversion Request

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## **Attachment C**

### **Dry Cleaning Chemical Disposal Documentation**

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number WID981788508	2. Page 1 of 1	3. Emergency Response Phone 1-800-468-1760	4. Manifest Tracking Number <b>005713845 SKS</b>				
5. Generator's Name and Mailing Address United Cleaners 623 Reed Avenue MANITOWOC Generator's Phone: 920-682-8282 WI 54220-0000									
Generator's Site Address (if different than mailing address)									
6. Transporter 1 Company Name SAFETY-KLEEN SYSTEMS INC U.S. EPA ID Number TXR000081205									
7. Transporter 2 Company Name U.S. EPA ID Number									
8. Designated Facility Name and Site Address CLEAN HARBORS DEER PARK 2027 INDEPENDENCE PARKWAY SOUTH LA PORTE TX 77571 U.S. EPA ID Number TXD055141378 Facility's Phone: 281-930-2300									
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) 1. UN2810 WASTE TOXIC LIQUID, ORGANIC N.O.S. (TETRACHLOROETHYLENE, TRICHLOROETHYLENE) 6.1 PG III RQ (F002)	10. Containers		11. Total Quantity 100	12. Unit Wt./Vol. P	13. Waste Codes			
		No.	Type DF				F002 D007 D039 D040 D076		
X	2. UN2810 WASTE TOXIC LIQUID, ORGANIC N.O.S. (TETRACHLOROETHYLENE, TRICHLOROETHYLENE) 6.1 PG III RQ (F002)	2	DM	450	P	605H F002 D007 D039 D040 D076			
	3.					605H			
	4.					605H			
14. Special Handling Instructions and Additional Information TSD:DE 7327B653 UN46795 201713 CB610 1) ERG#1531 24 HR EMERGENCY # 800-468-1760 (SAFETY-KLEEN) AUTHORITY FOR BY-SEN TO THE SPOT CARRYING PLANS NOTICE OF CARRIER'S AUTHORITY TO CARRY									
15. GENERATOR/S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.						Month	Day	Year	
Generator's/Offeror's Printed/Typed Name <i>[Signature]</i>						<i>[Signature]</i>	3	30	17
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.						Port of entry/exit:			
Transporter signature (for exports only):						Date leaving U.S.:			
17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name <i>[Signature]</i>						Signature	Month	Day	Year
Transporter 2 Printed/Typed Name <i>[Signature]</i>						Signature	Month	Day	Year
18. Discrepancy									
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						Manifest Reference Number:			
18b. Alternate Facility (or Generator)						U.S. EPA ID Number			
Facility's Phone:									
18c. Signature of Alternate Facility (or Generator)						Month	Day	Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1.		2.		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a						Month	Day	Year	
Printed/Typed Name <i>[Signature]</i>						Signature	Month	Day	Year

PLANT: KSU SAFETY-KLEEN 03/28/2017 PAGE:1  
GENERATOR NAME: United Cleaners LDR NOTIFICATION FORM 09:56:34  
SK Shipping #: 221987812 MANIFEST NO.: 5713845sk5  
Pursuant to 40 CFR 268.7(a), I hereby notify that this shipment contains waste  
restricted under 40 CFR part 268 land disposal restrictions (LDR).  
OR SALES SERVICE NO.: 73278653  
CUST#: UN46795

A. GENERAL WASTE NOTIFICATION

LDR FORM LINE NO: 1 MANIFEST PAGE/LINE# 01/001 SKPRFL NO: 150589  
SKDOT#: 7050108

EPA WASTE CODES & LDR SUBCATEGORIES (IF ANY):

D007 TCLP TOXICITY BASED ON TCLP (SW846)

D039

D040

F002

Treatability group: NWW Non-Wastewater

Waste Constituent Notification:

Legend

Number Constituent

91 CHLOROFORM

118 P-DICHLOROBENZENE

165 HEXACHLOROBUTADIENE

229 TETRACHLOROETHYLENE

237 TRICHLOROETHYLENE

250 CADMIUM

251 CHROMIUM (TOTAL)

255 LEAD

260 SILVER

NOTES

EXP NOV 2017 THIS LDR EXPIRES ON 12/31/2017



GENERATOR'S AUTHORIZED

SIGNATURE

PLANT: KSU

TOP COPY: GENERATOR

NAME & TITLE

(PRINTED OR TYPED)

CSG: 0 REF#: 73278653

DATE

3 / 30 / 17

MIDDLE COPY: FACILITY SW: 201713 BOTTOM COPY: TRANSFER