June 14, 2011

Mr. John J. Hnat, PG, CPG
Southeast Region Headquarters
Wisconsin Department of Natural Resources
2300 N. Dr. Martin Luther King Jr. Drive
Milwaukee, WI 53212

Subject: **Vapor Intrusion Assessment Status Report**
Shirdon Corp. d/b/a Shorewood Queensway Dry Cleaners
4300 N Oakland Avenue
Shorewood, Wisconsin
WDNR BRRTS: 02-41-552089
EnviroForensics Project # 6107

FID 241 094 590

Dear Mr. Hnat:

Per your request and on behalf of Shirdon Corp. d/b/a Shorewood Queensway Dry Cleaners, Environmental Forensic Investigations, Inc. (EnviroForensics) has prepared this Vapor Intrusion (VI) Assessment Status Report for the site located at 4300 N Oakland Avenue in Shorewood, Wisconsin (Site). Several phases of investigation have been conducted at the Site in response to the initial discovery of a release of the dry cleaning solvent perchlorethylene (PERC), otherwise known as tetrachloroethylene (PCE), to subsurface media. Comprehensive soil and groundwater analytical results from the investigations conducted at the Site to date are presented in Figures and Tables 1 through 3. This Status Report is not intended to serve as the Site Investigation Report required by NR 716.15, but rather, is intended to notify the Wisconsin Department of Natural Resources (WDNR) of current site conditions and to facilitate further communications on the issue.

A completed Form 4400-237 Technical Assistance and Environmental Liability Clarification Request, along with the $500 fee in accordance with NR 749 is also enclosed with this report.

Soil Gas Survey
Based upon the soil and groundwater data, a preliminary screening of the potential VI exposure pathway was performed in accordance with the WDNR publication Draft PUB-RR-800 *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*, June 2010 (VI Guidance) since Final guidance was not yet available from the WDNR. Following the preliminary screening, a work scope was implemented that included the collection of eleven (11)

Environmental Forensic Investigations, Inc.
602 North Capitol Avenue, Suite 210, Indianapolis, IN 46204
Phone: 317-972-7870 • Fax 317-972-7875

deep soil gas samples from approximately 7 feet below ground surface. Soil gas samples were collected from on-site and off-site locations on September 24, 2010 and were analyzed by Pace Laboratories of St. Paul, Minnesota for volatile organic compounds utilizing method TO-15. A summary of the analytical results of soil gas sampling are presented in Table 4 and graphically on Figure 4. The laboratory report is included as Attachment 1.

Sub-Slab Vapor Survey

Based on the results of the soil gas survey, particularly at SG-3, SG-9 and SG-10, further evaluation of the potential VI exposure pathway was necessary at the adjacent property located to the east (1808 E. Marion Street) and to the north (4312-4334 N. Oakland Avenue). The occupied structure present at 1808 E. Marion Street is a single family residence with a basement. The occupied structure present at 4312-4334 N. Oakland Avenue is a mixed used facility with retail and commercial businesses occupying basement and first floor tenant spaces. Approximately 10 residential apartments are located on the 2nd floor above the northern two-thirds of the building, farthest away from the Shorewood Queensway Cleaners.

A work scope was prepared in accordance with the Final PUB-RR-800 dated December 2010 that included the collection of sub-slab vapor samples from the basements of both structures. EnviroForensics mobilized to the Site on May 5-6, 2011 and installed two (2) sub-slab vapor ports at 1808 E. Marion Street and three (3) sub-slab vapor ports at 4312-4334 N. Oakland Avenue. The locations of all sub-slab vapor sampling ports are identified on Figure 4. In accordance with the Final VI Guidance, the sampling ports were purged, allowed to equilibrate, tested for seal integrity via helium tracer testing and tested for connection leaks via a negative pressure shut-in test. Sub-slab vapor samples were sent to Pace for analysis of VOCs via TO-15.

The results from the sub-slab investigations are presented on Figures and Tables 5 and 6. There were no Contaminants of Concern (COCs) detected in the sub-slab samples SSV-1808-1 and SSV-1808-2 above the Target Sub-slab Vapor Screening Levels collected at the basement of the residence (1808 E. Marion Street).

Findings

As shown in Table 5 Figure 5, the samples collected from the sub-slab space at 1808 E. Marion structure did not contain concentrations of PCE at levels in excess of the 41 ug/m^3 screening level for residential scenarios at either location.

As shown in Table 6 Figure 6, the sub-slab space beneath the 4312-4334 N Oakland structure contains concentrations of PCE at levels in excess of the 210 ug/m^3 screening level for commercial scenarios at locations SSV-PEG-1 and SSV-PEG-2. Elevated levels of PCE were not detected in SSV-PEG-3; the location of which roughly correlates to the southernmost extent of 2nd floor residential apartments. The concentrations of PCE in the sub-slab vapor decrease with distance from the south end of the building.

According to the laboratory, the reporting limit for PCE in the sample from SSV-PEG-3 was elevated due to sample dilutions required by analytical interferences. Upon further communication with the laboratory; however, they were able to determine that no PCE was present in the sample at a concentration of 188 ug/m^3, which is below the applicable screening level.

Conclusions

Consistent with Section VII A of the Final VI Guidance, we would like to explore with you alternatives for mitigating the potential VI exposure pathway in the southern portion of the 4312-4334 structure near SSV-PEG-1 and SSV-PEG-2.

Please contact us at 317-972-7870, if you have any questions or require additional information regarding this submittal.

Sincerely,

Hari Regupathy, L.P.G.
Hydrogeologist

Jeff Carnahan, L.P.G.
Senior Project Manager

Attachments

Copy: Ms. Shirley Carlson – Shorewood Queensway Cleaners
Attorney William Mulligan - Davis & Kuelthau, s.c.

TABLES

TABLE 1
SUMMARY OF SOIL SAMPLE, ANALYTICAL RESULTS

Shorewood Queensway Cleaners
Shorewood , WI

Boring Identification	Sample Depth	Date Sampled	Tetrachloroethene (µg/kg)	Trichloroethene (µg/kg)	cis-1,2-Dichloroethene (µg/kg)	trans-1,2-Dichloroethene (µg/kg)	Vinyl chloride (µg/kg)	1,1,2,2-Tetrachloroethane (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)	1,2-Dichloropropane (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	Chlorobenzene (µg/kg)	Chloroform (µg/kg)	Ethylbenzene (µg/kg)	Naphthalene (µg/kg)	Toluene (µg/kg)	n-Propylbenzene (µg/kg)	p-Isopropyltoluene (µg/kg)	sec-Butylbenzene (µg/kg)	Total Xylene (µg/kg)
SB-1	9-10	2/25/2009	240	< 1.1[a]	< 6.2	< 6.2	< 2.1[a]	< 6.2	< 6.2	< 1.2[a]	< 6.2	< 6.2	< 6.2	< 6.2	< 6.2	6.9	< 6.2	< 6.2	< 6.2	< 6.2
	25-26	2/25/2009	< 4.5	< 0.82[a]	< 4.5	< 4.5	< 1.5[a]	< 4.5	< 4.5	< 0.91[a]	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5	< 4.5
SB-2	15-16	2/25/2009	5.8	< 0.84[a]	< 4.6	< 4.6	< 1.6[a]	< 4.6	< 4.6	< 0.93[a]	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6	< 4.6
	27-28	2/25/2009	< 4.4	< 0.80[a]	< 4.4	< 4.4	< 1.5[a]	< 4.4	< 4.4	< 0.88[a]	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4	< 4.4
SB-3	3-4	2/25/2009	53,000	4.8[b]	< 5	< 5	< 1.7[a]	7.0	< 5	< 1.0[a]	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
	6-7	2/25/2009	64,000	2.3[b]	< 4.7	< 4.7	< 1.6[a]	5.2	< 4.7	< 0.93[a]	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7	< 4.7
	27-28	2/25/2009	8.0	< 0.88[a]	< 4.9	< 4.9	< 1.7[a]	< 4.9	< 4.9	< 0.98[a]	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9
SB-4	11-11.5	2/25/2009	3,500,000	620	24.0	< 4.6	< 1.6[a]	< 4.6	< 4.6	22.0	< 4.6	< 4.6	< 4.6	6.4	< 4.6	35.0	< 4.6	< 4.6	< 4.6	28.0
	12.5-13	2/25/2009	370,000	240	19.0	< 4.5	< 1.5[a]	< 4.5	< 4.5	16.0	< 4.5	140	< 4.5	5.6	< 4.5	35.0	< 4.5	< 4.5	< 4.5	23.0
SB-5	6-6.5	2/25/2009	300,000	640	160	< 4.4	< 1.5[a]	5.3	< 4.4	< 0.88[a]	< 4.4	14.0	4.5	< 4.4	< 4.4	5.5	< 4.4	< 4.4	< 4.4	< 4.4
	10-10.5	2/25/2009	4,100,000	790	87.0	< 4.5	1.8[b]	< 4.5	< 4.5	16.0	< 4.5	18.0	< 4.5	5.9	< 4.5	15.0	< 4.5	< 4.5	< 4.5	16.0
SB-6	2-4	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-7	4-6	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-8	2-4	11/13/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	112	< 25.0
	12-14	11/13/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-9	4-6	11/13/2009	72,000	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	11/13/2009	72.6	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-10	6-8	11/13/2009	526	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	11/13/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-11	6-8	11/12/2009	72,200	347	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
	12-14	11/12/2009	68.3J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-12	6-8	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-13	4-6	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	14-16	11/12/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-14	4-6	11/13/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	11/13/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-15	6-8	9/23/2010	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	279	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	9/23/2010	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-16	6-8	9/23/2010	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
	12-14	9/23/2010	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
SB-17	6-8	9/23/2010	< 100	< 100	< 100	< 100	< 100	< 100	1,880	< 100	594	< 100	< 100	< 100	2,640	< 100	201J	203J	164J	< 100
	18-20	9/23/2010	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
HA-1	5	11/13/2009	1,690	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
HA-2	5	11/13/2009	2,330	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	118	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
HA-3	5	11/13/2009	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	113	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
HA-4	5	11/13/2009	76.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
HA-5	5	9/23/2010	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
HA-6	5	9/23/2010	8,390	45.3J	48.4J	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0
Soil Residual Contaminant Level - Inhalation, Industrial			35,000	230	1,300,000	3,200,000	890	21,000	NE	40,000	NE	340,000	910	400,000	1,000	670,000	NE	NE	NE	1,900,000
Soil Residual Contaminant Level - Inhalation, Non-Industrial			2,100	14	1,300,000	3,200,000	53	1,300	NE	5,800	NE	49,000	54	400,000	10	670,000	NE	NE	NE	270,000
Soil Residual Contaminant Level - Soil to Goundwater			4.1	3.7	55	98	0.13	7.4	NE	3.9	NE	150	39	1,500	2	1,400	NE	NE	NE	160,000

Notes:

ug/kg = micrograms per kilogram
Samples analyzed using EPA SW-846 Method 8260
VOCs = Volatile Organic Compounds
Bolded and orange shaded values are above Soil Residual Contaminant Level, Inhalation (Industrial)
Bolded and blue shaded values are above Soil Residual Contaminant Level, Inhalation (Non-Industrial)
Bolded and green shaded values are above Soil Residual Contaminant Level, Soil to Groundwater
Bolded values are above Laboratory Detection Limits
[a]EPA Maximum Contaminant Level (MCL)
[b]On EPA's Drinking Water Contaminant Candidate List
J=Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit
NE = Not Established

TABLE 2
SUMMARY OF GROUNDWATER SAMPLE, ANALYTICAL RESULTS

Shorewood Queensway Cleaners
Shorewood , WI

Boring Identification	Sample Depth	Date Sampled	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl chloride	1,1-Dichloroethene	Chloromethane	Chlorobenzene	Chloroform	1,1-Dichloropropene	Toluene
VOCs (µg/l)													
SB-5	**8.0**	2/26/2009	**170,000**	**1,700**	**4,600**	**100**	**2,300**	**7.70**	< 5	**18.0**	**6.40**	**11.0**	**5.50**
SB-7	**8.0**	11/19/2009	**0.95J**	< 0.48	< 0.83	< 0.89	< 0.18	< 0.57	**0.32J**	< 0.41	< 1.3	< 0.75	< 0.67
SB-8	**12.3**	11/19/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.57	**1.10**	< 0.41	< 1.3	< 0.75	< 0.67
SB-9	**10.7**	11/20/2009	**373**	< 1.9	< 3.3	< 3.6	< 0.72	< 2.3	< 0.96	< 0.41	< 1.3	< 0.75	< 0.67
SB-10	**16.0**	11/20/2009	**53.2**	< 0.48	< 0.83	< 0.89	< 0.18	< 0.57	**3.20**	< 0.41	< 1.3	< 0.75	< 0.67
SB-12	**8.3**	11/20/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.57	**0.83J**	< 0.41	< 1.3	< 0.75	< 0.67
SB-14	**22.0**	11/19/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.57	**1.30**	< 0.42	< 1.4	< 0.75	< 0.67
Public Health Enforcement Standards (ug/l)			**5**	**5**	**70**	**100**	**0.2**	**7**	**8.3**	**100[a]**	**6**	**NE[b]**	**1,000**
Public Health Preventive Action Level (ug/l)			**0.5**	**0.5**	**7**	**20**	**0.02**	**0.7**	**0.83**	**NE**	**0.6**	**NE**	**200**

Notes:
ug/l = micrograms per liter
Samples analyzed using EPA SW-846 Method 8260
VOCs = Volatile Organic Compounds
Bolded and orange shaded values are above Public Health Enforcement Standards
Bolded and blue Shaded values are above Public Health Preventive Action Levels
Bolded values are above detection limits
[a]EPA Maximum Contaminant Level (MCL)
[b]On EPA's Drinking Water Contaminant Candidate List
J=Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit
NE = Not Established

TABLE 3
GROUNDWATER MONITORING WELL SAMPLE, ANALYTICAL RESULTS

Shorewood Queensway Cleaners
Shorewood , WI

Boring Identification	Sample Depth	Date Sampled	Tetrachloroethene (µg/l)	Trichloroethene (µg/l)	cis-1,2-Dichloroethene (µg/l)	trans-1,2-Dichloroethene (µg/l)	Vinyl chloride (µg/l)	Benzene (µg/l)	Chloromethane (µg/l)	Ethylbenzene (µg/l)	Naphthalene (µg/l)	1,2,4-Trimethylbenzene (µg/l)	1,3,5-Trimethylbenzene (µg/l)
VOCs (µg/l)													
MW-1	**2.95**	5/5/2011	**0.61J**	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	<0.54	<0.89	<0.97	<0.83
		10/18/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/26/2010	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/20/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/27/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
MW-2	**6.05**	5/5/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	<0.54	<0.89	<0.97	<0.83
		10/18/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/26/2010	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/19/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/27/2009	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
MW-3	**9.61**	5/5/2011	**16**	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	<0.54	<0.89	<0.97	<0.83
		10/18/2010	**23.7**	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/26/2010	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		11/20/2009	**90.0**	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/27/2009	**1,200**	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
MW-4	**3.32**	5/5/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	<0.54	<0.89	<0.97	<0.83
		10/18/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/26/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	NS	NS	NS	NS
		11/19/2009	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
		2/27/2009	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-5	**5.83**	5/6/2011	**747**	**31.0**	**44.2**	**2.4J**	< 0.45	< 1.0	< 0.60	<0.54	<0.89	<0.97	<0.83
		10/18/2010	**978**	**45.1**	**63.7**	< 8.9	< 1.8	< 4.1	< 2.4	ND	ND	ND	ND
		2/26/2010	**239**	**10.7**	**17.9**	**1.10**	< 0.18	< 0.41	**0.34J**	NS	NS	NS	NS
		11/19/2009	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
		2/27/2009	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-6	**7.79**	5/6/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	<0.54	<0.89	<0.97	<0.83
		10/18/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	**0.33J**	ND	ND	ND	ND
		2/26/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	**0.41J**	NS	NS	NS	NS
		11/19/2009	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
		2/27/2009	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-7	**14.16**	5/6/2011	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	<0.54	<0.89	<0.97	<0.83
		10/18/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	**0.92J**	ND	ND	ND	ND
		2/26/2010	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		11/19/2009	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		2/27/2009	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-8	**18.40**	5/5/2011	0.49J	< 0.48	< 0.83	< 0.89	< 0.18	**0.68J**	< 0.24	**0.99J**	**9.9J**	**5**	**3**
		10/18/2010	< 0.45	< 0.48	< 0.83	< 0.89	< 0.18	< 0.41	< 0.24	ND	ND	ND	ND
		2/26/2010	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		11/19/2009	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
		2/27/2009	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Public Health Enforcement Standards (ug/l)			**5**	**5**	**70**	**100**	**0.2**	**5**	**8.3**	**700**	**100**	**480**	**480**
Public Health Preventive Action Level (ug/l)			**0.5**	**0.5**	**7**	**20**	**0.02**	**0.5**	**0.83**	**140**	**10**	**96**	**96**

Notes:

ug/l = micrograms per liter
Samples analyzed using EPA SW-846 Method 8260
VOCs = Volatile Organic Compounds
Bolded and orange shaded values are above Public Health Enforcement Standards
Bolded and blue Shaded values are above Public Health Preventive Action Levels
Bolded values are above detection limits
J=Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit
N.E. = Not Established
NS = Not Sampled
NI = Not Installed
WI = Well Installation Completed yet not producing water
ND = Below laboratory detection limit

TABLE 4
SOIL GAS VAPOR, ANALYTICAL RESULTS

Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

Sampling Identification	Date Sampled	Tetrachloroethene (µg/m3)	Trichloroethene (µg/m3)	cis-1,2-Dichloroethene (µg/m3)	trans-1,2-Dichloroethene (µg/m3	Vinyl chloride (µg/m3)	Acetone (µg/m3)	Benzene (µg/m3)	2-Butanone (µg/m3)	Carbon disulfide (µg/m3)	Chlorobenzene (µg/m3)	Chloroethane (µg/m3)	Cyclohexane (µg/m3)	Ethyl acetate (µg/m3)	Ethylbenzene (µg/m3)	4-Ethyltoluene (µg/m3)	n-Heptane (µg/m3)	n-Hexane (µg/m3)	Methylene Chloride (µg/m3)	Propylene (µg/m3)	Tetrahydrofuran (µg/m3)	Toluene (µg/m3)	1,2,4-Trimethylbenzene (µg/m3)	1,3,5-Trimethylbenzene (µg/m3)	Total Xylenes (µg/m3)
6107-SG-1	9/24/2010	199	ND	ND	ND	ND	ND	ND	ND	320	ND	ND	76.9	ND	ND	ND	75.5	148	ND	201	ND	227	75.1	85.5	ND
6107-SG-2	9/24/2010	8.40	ND	ND	ND	ND	24.3	34.7	9.30	93.8	ND	ND	59.9	ND	21.1	10.8	47.5	133	ND	503	ND	177	20.2	9.7	102
6107-SG-3	9/24/2010	1,650,000	ND	163,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
6107-SG-4	9/24/2010	533	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	255	ND	ND	255	145	140	ND
6107-SG-5	9/24/2010	15,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,010	2,770	ND	ND	ND	ND	ND	ND
6107-SG-6	9/24/2010	86.5	11.8	6.10	ND	ND	7.60	6.30	ND	ND	12.5	ND	6.60	ND	ND	ND	ND	9.10	10.1	ND	ND	58.1	5.30	5.30	12.6
6107-SG-7	9/24/2010	299	16.0	ND	ND	ND	ND	24.4	21.2	115	ND	7.30	43.0	ND	23.4	13.1	ND	74.8	52.2	549	ND	206	17.9	11.9	101
6107-SG-8	9/24/2010	29.0	ND	ND	ND	ND	ND	21.2	25.2	146	ND	ND	46.3	105	28.1	13.0	ND	65.7	128	581	ND	212	17.9	11.8	137
6107-SG-9	9/24/2010	267,000	1,450	1,010	ND	ND	ND	292	ND	516	ND	ND	204	ND	ND	ND	318	377	ND	331	ND	382	174	174	ND
6107-SG-10	9/24/2010	496,000	41,400	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11,100	ND	4,710	5,720	6,400	ND
6107-SG-11	9/24/2010	79.3	11.6	ND	ND	ND	111	ND	18.4	ND	ND	ND	140	ND	18.6	ND	43.6	159	238	ND	32.7	67.7	ND	ND	78.8
6107-DUP-1 (SG-3)	9/24/2010	2,630,000	390,000	604,000	12,800	9,290	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11,000	12,300	ND
6107-DUP-2 (SG-9)	9/24/2010	243,000	10,600	995	ND	ND	ND	637	ND	416	ND	ND	798	ND	ND	ND	612	1,030	ND	4,840	ND	1,380	223	193	317
Target Soil Gas Screening Level (Industrial)		2,100	6,100	NE	260,000	2,800	140,000,000	1,600	22,000,000	3,100,000	220,000	NE	26,000,000	NE	NE	NE	NE	3,100,000	26,000	13,000,000	NE	22,000,000	31,000	NE	440,000
Target Soil Gas Screening Level (Residential)		410	1,200	NE	63,000	160	32,000,000	310	5,200,000	730,000	52,000	NE	6,300,000	NE	NE	NE	NE	730,000	5,200	3,100,000	NE	5,200,000	7,300	NE	100,000

Notes:
Units in micrograms per cubic meter = ug/m3
Shaded bluevalues exceed U.S. E.P.A.'s Target Residenital Soil Gas Screening Level Table 2 - May 2010
Shaded orange values exceed U.S. E.P.A.'s Target Industrial Soil Gas Screening Level Table 2 - May 2010
Bolded values are above detection limits
ND = Concentration below laboratory detection limits
NE = Screening level not established

TABLE 5
SUB-SLAB ANALYTICAL RESULTS
1808 E. Marion St.
Shorewood, WI.

Residential							
Sampling Identification	**Date Sampled**	**Tetrachloroethene (µg/m3)**	**Trichloroethene (µg/m3)**	**Acetone (µg/m3)**	**n-Hexane (µg/m3)**	**Methylene Chloride (µg/m3)**	**Toluene (µg/m3)**
6107-SSV-1808-1	**5/6/2011**	**13.2**	**22.9**	**104**	**16.2**	**81.8**	**35.8**
6107-SSV-1808-2	**5/6/2011**	< 39.5	< 15.5	**767**	**50.6**	**453**	**36.5**
Sub-slab Vapor Screening Level		**41**	**120**	**320,000**	**730**	**520**	**5,200**

OK OK

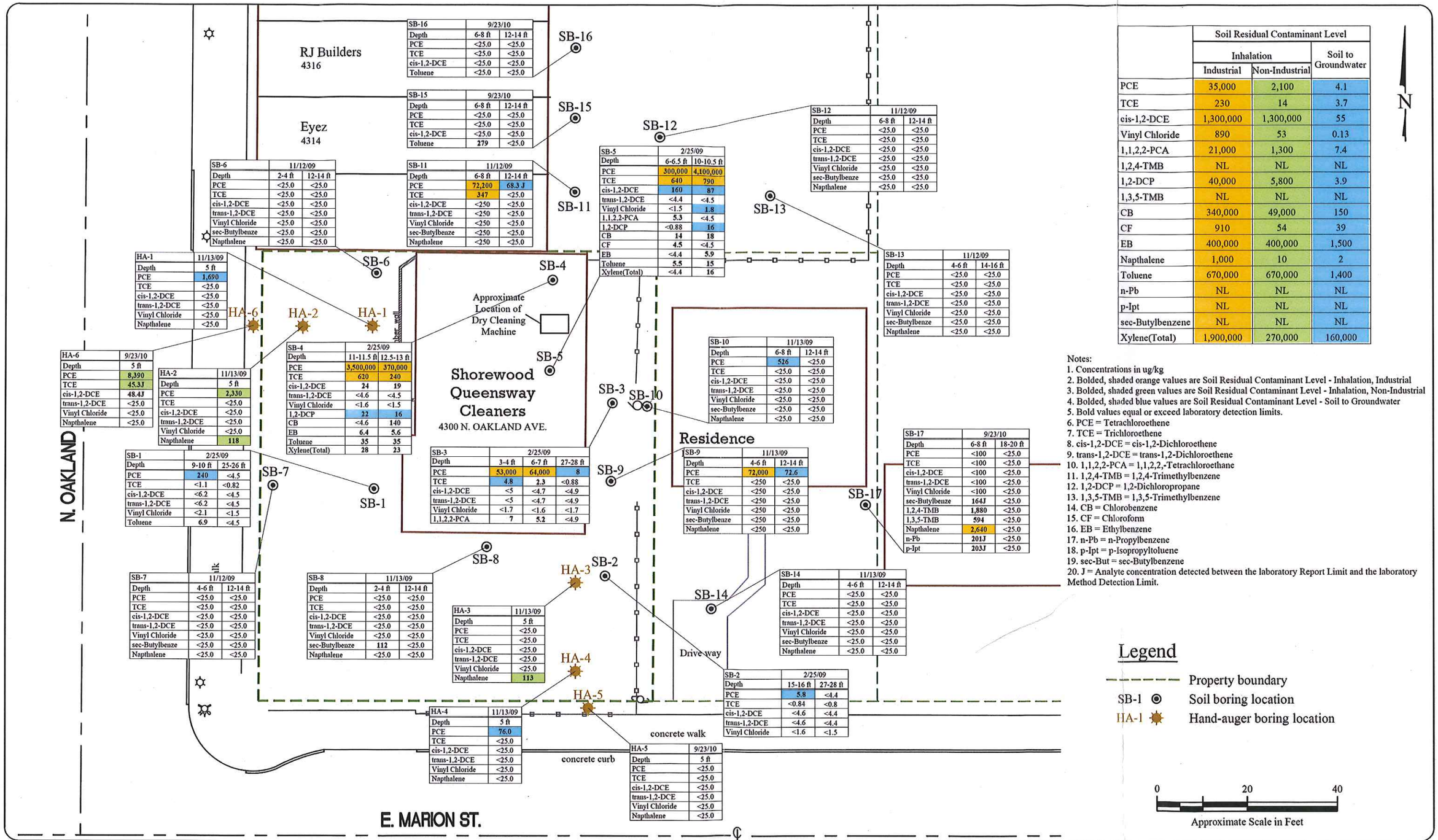
Notes:
Units in micrograms per cubic meter = ug/m3
Sub-slab vapor screening level is from U.S. E.P.A.'s Regional Screening Levels (RSL's) Table 2c, updated November 2010

TABLE 6
SUB-SLAB ANALYTICAL RESULTS
Aunt Peg's Oakland, LLC
4312-34 N. Oakland Ave.
Shorewood, WI

Commercial																					
Sampling Identification	**Date Sampled**	**Tetrachloroethene (µg/m3)**	**Trichloroethene (µg/m3)**	**cis-1,2-Dichloroethene (µg/m3)**	**trans-1,2-Dichloroethene (µg/m3)**	**Vinyl chloride (µg/m3)**	**Acetone (µg/m3)**	**Benzene (µg/m3)**	**2-Butanone (µg/m3)**	**Carbon Disulfide (µg/m3)**	**Ethyl Acetate (µg/m3)**	**Ethylbenzene (µg/m3)**	**4-Ethyltoluene (µg/m3)**	**n-Heptane (µg/m3)**	**n-Hexane (µg/m3)**	**2-Hexanone (µg/m3)**	**Methylene Chloride (µg/m3)**	**Propylene (µg/m3)**	**Toluene (µg/m3)**	**1,2,4-Trimethylbenzene (µg/m3)**	**1,3,5-Trimethylbenzene (µg/m3)**	**Xylenes (µg/m3)**
6107-SSV-PEG-1	**5/6/2011**	**866,000**	**15,100**	**8,860**	< 871	< 559*	**43,200**	< 699*	< 645	< 677	< 785	< 946	< 2,690	< 892	< 774	< 892	< 763	< 376	< 828	< 2,690*	< 2,690	< 1,890
6107-SSV-PEG-2	**5/6/2011**	**4,100**	**146**	**86.8**	< 2.5	< 1.6	**357**	< 2.0	**37.3**	**7.40**	**9.00**	**7.30**	**17.0**	**14.5**	**70.6**	**10.5**	**103**	**179**	**79.1**	**64.3**	**20.4**	**51.4**
6107-SSV-PEG-3	**5/6/2011**	<376*,¥	< 148	< 218	< 218	< 140	**7,740**	< 175*	< 161	**305**	< 196	< 237	< 672	< 223	**786**	< 223	< 191	**13,200**	< 207	< 672*	< 672	< 473
Sub-slab Vapor Screening Level		**210**	**610**	**NL**	**2,600**	**280**	**1,400,000**	**160**	**220,000**	**31,000**	**NL**	**490**	**NL**	**NL**	**31,000**	**1,300**	**2,600**	**130,000**	**220,000**	**310**	**NL**	**4,400**

Notes:
Units in micrograms per cubic meter = ug/m3
Sub-slab vapor screening level is from U.S. E.P.A.'s Regional Screening Levels (RSL's) Table 2c, updated November 2010
NL = No established screening level
* = Indicates elevated reporting limit due to sample dilution at laboratory
¥ = Analyte was evaluated to one half of the reporting limit (188 ug/m3) with no detections

FIGURES



SB-16	9/23/10	
Depth	6-8 ft	12-14 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
Toluene	<25.0	<25.0

SB-15	9/23/10	
Depth	6-8 ft	12-14 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
Toluene	279	<25.0

SB-6	11/12/09	
Depth	2-4 ft	12-14 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
trans-1,2-DCE	<25.0	<25.0
Vinyl Chloride	<25.0	<25.0
sec-Butylbenze	<25.0	<25.0
Napthalene	<25.0	<25.0

SB-11	11/12/09	
Depth	6-8 ft	12-14 ft
PCE	72,200	68.3 J
TCE	347	<25.0
cis-1,2-DCE	<250	<25.0
trans-1,2-DCE	<250	<25.0
Vinyl Chloride	<250	<25.0
sec-Butylbenze	<250	<25.0
Napthalene	<250	<25.0

SB-5	2/25/09	
Depth	6-6.5 ft	10-10.5 ft
PCE	300,000	4,100,000
TCE	640	790
cis-1,2-DCE	160	87
trans-1,2-DCE	<4.4	<4.5
Vinyl Chloride	<1.5	1.8
1,1,2,2-PCA	5.3	<4.5
1,2-DCP	<0.88	16
CB	14	18
CF	4.5	<4.5
EB	<4.4	5.9
Toluene	5.5	15
Xylene(Total)	<4.4	16

SB-12	11/12/09	
Depth	6-8 ft	12-14 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
trans-1,2-DCE	<25.0	<25.0
Vinyl Chloride	<25.0	<25.0
sec-Butylbenze	<25.0	<25.0
Napthalene	<25.0	<25.0

SB-13	11/12/09	
Depth	4-6 ft	14-16 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
trans-1,2-DCE	<25.0	<25.0
Vinyl Chloride	<25.0	<25.0
sec-Butylbenze	<25.0	<25.0
Napthalene	<25.0	<25.0

HA-1	11/13/09
Depth	5 ft
PCE	1,690
TCE	<25.0
cis-1,2-DCE	<25.0
trans-1,2-DCE	<25.0
Vinyl Chloride	<25.0
Napthalene	<25.0

HA-6	9/23/10
Depth	5 ft
PCE	8,390
TCE	45.3J
cis-1,2-DCE	48.4J
trans-1,2-DCE	<25.0
Vinyl Chloride	<25.0
Napthalene	<25.0

HA-2	11/13/09
Depth	5 ft
PCE	2,330
TCE	<25.0
cis-1,2-DCE	<25.0
trans-1,2-DCE	<25.0
Vinyl Chloride	<25.0
Napthalene	118

SB-4	2/25/09	
Depth	11-11.5 ft	12.5-13 ft
PCE	3,500,000	370,000
TCE	620	240
cis-1,2-DCE	24	19
trans-1,2-DCE	<4.6	<4.5
Vinyl Chloride	<1.6	<1.5
1,2-DCP	22	16
CB	<4.6	140
EB	6.4	5.6
Toluene	35	35
Xylene(Total)	28	23

SB-10	11/13/09	
Depth	6-8 ft	12-14 ft
PCE	526	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
trans-1,2-DCE	<25.0	<25.0
Vinyl Chloride	<25.0	<25.0
sec-Butylbenze	<25.0	<25.0
Napthalene	<25.0	<25.0

SB-1	2/25/09	
Depth	9-10 ft	25-26 ft
PCE	240	<4.5
TCE	<1.1	<0.82
cis-1,2-DCE	<6.2	<4.5
trans-1,2-DCE	<6.2	<4.5
Vinyl Chloride	<2.1	<1.5
Toluene	6.9	<4.5

SB-3	2/25/09		
Depth	3-4 ft	6-7 ft	27-28 ft
PCE	53,000	64,000	8
TCE	4.8	2.3	<0.88
cis-1,2-DCE	<5	<4.7	<4.9
trans-1,2-DCE	<5	<4.7	<4.9
Vinyl Chloride	<1.7	<1.6	<1.7
1,1,2,2-PCA	7	5.2	<4.9

SB-9	11/13/09	
Depth	4-6 ft	12-14 ft
PCE	72,000	72.6
TCE	<250	<25.0
cis-1,2-DCE	<250	<25.0
trans-1,2-DCE	<250	<25.0
Vinyl Chloride	<250	<25.0
sec-Butylbenze	<250	<25.0
Napthalene	<250	<25.0

SB-17	9/23/10	
Depth	6-8 ft	18-20 ft
PCE	<100	<25.0
TCE	<100	<25.0
cis-1,2-DCE	<100	<25.0
trans-1,2-DCE	<100	<25.0
Vinyl Chloride	<100	<25.0
sec-Butylbenze	164J	<25.0
1,2,4-TMB	1,880	<25.0
1,3,5-TMB	594	<25.0
Napthalene	2,640	<25.0
n-Pb	201J	<25.0
p-Ipt	203J	<25.0

SB-7	11/12/09	
Depth	4-6 ft	12-14 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
trans-1,2-DCE	<25.0	<25.0
Vinyl Chloride	<25.0	<25.0
sec-Butylbenze	<25.0	<25.0
Napthalene	<25.0	<25.0

SB-8	11/13/09	
Depth	2-4 ft	12-14 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
trans-1,2-DCE	<25.0	<25.0
Vinyl Chloride	<25.0	<25.0
sec-Butylbenze	112	<25.0
Napthalene	<25.0	<25.0

HA-3	11/13/09
Depth	5 ft
PCE	<25.0
TCE	<25.0
cis-1,2-DCE	<25.0
trans-1,2-DCE	<25.0
Vinyl Chloride	<25.0
Napthalene	113

SB-14	11/13/09	
Depth	4-6 ft	12-14 ft
PCE	<25.0	<25.0
TCE	<25.0	<25.0
cis-1,2-DCE	<25.0	<25.0
trans-1,2-DCE	<25.0	<25.0
Vinyl Chloride	<25.0	<25.0
sec-Butylbenze	<25.0	<25.0
Napthalene	<25.0	<25.0

SB-2	2/25/09	
Depth	15-16 ft	27-28 ft
PCE	5.8	<4.4
TCE	<0.84	<0.8
cis-1,2-DCE	<4.6	<4.4
trans-1,2-DCE	<4.6	<4.4
Vinyl Chloride	<1.6	<1.5

HA-4	11/13/09
Depth	5 ft
PCE	76.0
TCE	<25.0
cis-1,2-DCE	<25.0
trans-1,2-DCE	<25.0
Vinyl Chloride	<25.0
Napthalene	<25.0

HA-5	9/23/10
Depth	5 ft
PCE	<25.0
TCE	<25.0
cis-1,2-DCE	<25.0
trans-1,2-DCE	<25.0
Vinyl Chloride	<25.0
Napthalene	<25.0

	Soil Residual Contaminant Level		
	Inhalation		Soil to Groundwater
	Industrial	Non-Industrial	
PCE	35,000	2,100	4.1
TCE	230	14	3.7
cis-1,2-DCE	1,300,000	1,300,000	55
Vinyl Chloride	890	53	0.13
1,1,2,2-PCA	21,000	1,300	7.4
1,2,4-TMB	NL	NL	NL
1,2-DCP	40,000	5,800	3.9
1,3,5-TMB	NL	NL	NL
CB	340,000	49,000	150
CF	910	54	39
EB	400,000	400,000	1,500
Napthalene	1,000	10	2
Toluene	670,000	670,000	1,400
n-Pb	NL	NL	NL
p-Ipt	NL	NL	NL
sec-Butylbenzene	NL	NL	NL
Xylene(Total)	1,900,000	270,000	160,000

Notes:
1. Concentrations in ug/kg
2. Bolded, shaded orange values are Soil Residual Contaminant Level - Inhalation, Industrial
3. Bolded, shaded green values are Soil Residual Contaminant Level - Inhalation, Non-Industrial
4. Bolded, shaded blue values are Soil Residual Contaminant Level - Soil to Groundwater
5. Bold values equal or exceed laboratory detection limits.
6. PCE = Tetrachloroethene
7. TCE = Trichloroethene
8. cis-1,2-DCE = cis-1,2-Dichloroethene
9. trans-1,2-DCE = trans-1,2-Dichloroethene
10. 1,1,2,2-PCA = 1,1,2,2,-Tetrachloroethane
11. 1,2,4-TMB = 1,2,4-Trimethylbenzene
12. 1,2-DCP = 1,2-Dichloropropane
13. 1,3,5-TMB = 1,3,5-Trimethylbenzene
14. CB = Chlorobenzene
15. CF = Chloroform
16. EB = Ethylbenzene
17. n-Pb = n-Propylbenzene
18. p-Ipt = p-Isopropyltoluene
19. sec-But = sec-Butylbenzene
20. J = Analyte concentration detected between the laboratory Report Limit and the laboratory Method Detection Limit.

Legend

- Property boundary
- SB-1 — Soil boring location
- HA-1 — Hand-auger boring location

0 20 40
Approximate Scale in Feet

No.	Date	Revision	Approved

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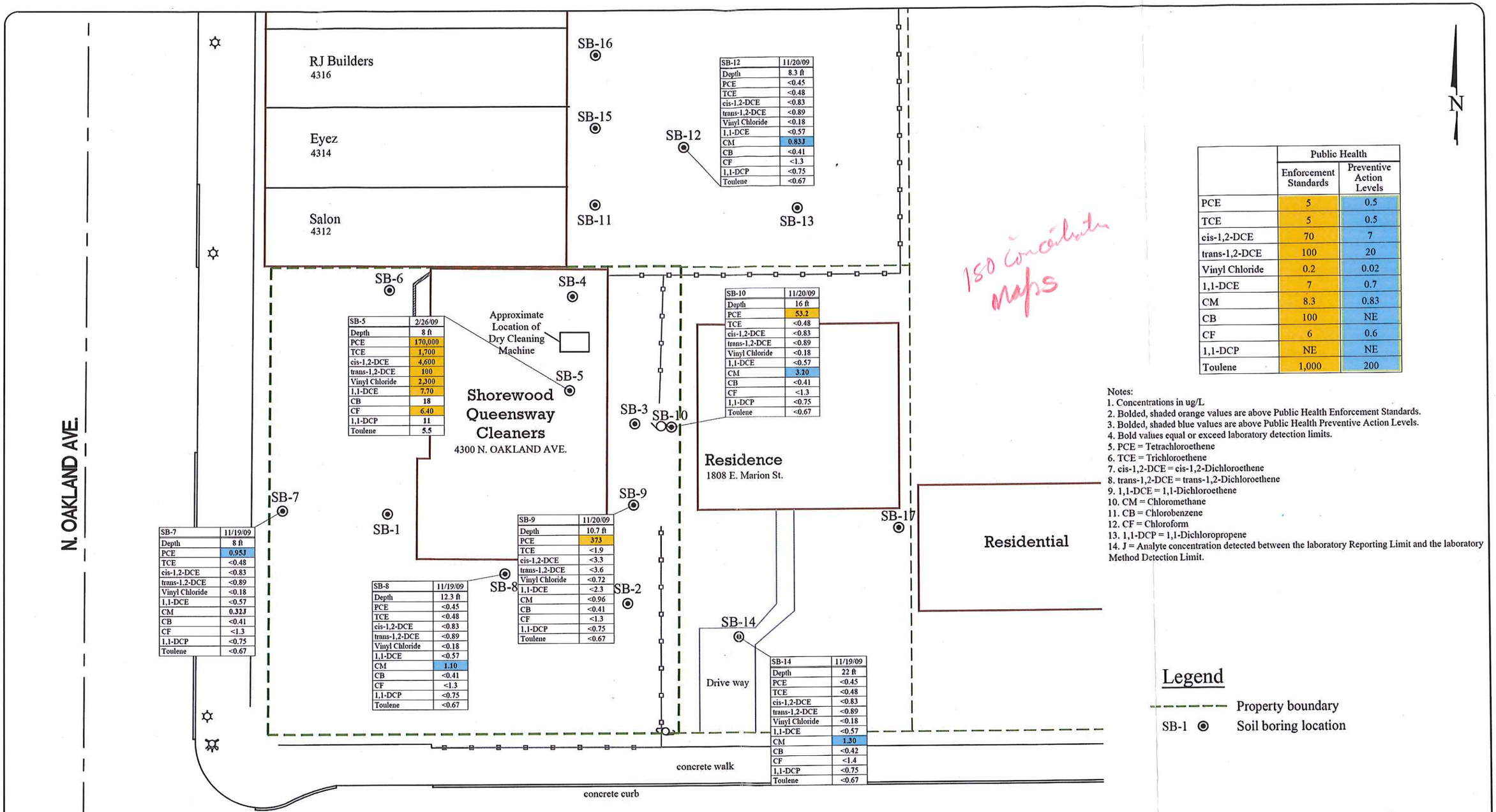
DWG file:	61310-10

COMPREHENSIVE SOIL ANALYTICAL RESULTS
Shorewood Queensway Cleaners
4300 N. Oakland Avenue
Shorewood, WI

Figure 1
Project 6107



SB-12	11/20/09
Depth	8.3 ft
PCE	<0.45
TCE	<0.48
cis-1,2-DCE	<0.83
trans-1,2-DCE	<0.89
Vinyl Chloride	<0.18
1,1-DCE	<0.57
CM	0.83J
CB	<0.41
CF	<1.3
1,1-DCP	<0.75
Toulene	<0.67

SB-5	2/26/09
Depth	8 ft
PCE	170,000
TCE	1,700
cis-1,2-DCE	4,600
trans-1,2-DCE	100
Vinyl Chloride	2,300
1,1-DCE	7.70
CB	18
CF	6.40
1,1-DCP	11
Toulene	5.5

SB-10	11/20/09
Depth	16 ft
PCE	53.2
TCE	<0.48
cis-1,2-DCE	<0.83
trans-1,2-DCE	<0.89
Vinyl Chloride	<0.18
1,1-DCE	<0.57
CM	3.20
CB	<0.41
CF	<1.3
1,1-DCP	<0.75
Toulene	<0.67

SB-7	11/19/09
Depth	8 ft
PCE	0.95J
TCE	<0.48
cis-1,2-DCE	<0.83
trans-1,2-DCE	<0.89
Vinyl Chloride	<0.18
1,1-DCE	<0.57
CM	0.32J
CB	<0.41
CF	<1.3
1,1-DCP	<0.75
Toulene	<0.67

SB-9	11/20/09
Depth	10.7 ft
PCE	373
TCE	<1.9
cis-1,2-DCE	<3.3
trans-1,2-DCE	<3.6
Vinyl Chloride	<0.72
1,1-DCE	<2.3
CM	<0.96
CB	<0.41
CF	<1.3
1,1-DCP	<0.75
Toulene	<0.67

SB-8	11/19/09
Depth	12.3 ft
PCE	<0.45
TCE	<0.48
cis-1,2-DCE	<0.83
trans-1,2-DCE	<0.89
Vinyl Chloride	<0.18
1,1-DCE	<0.57
CM	1.10
CB	<0.41
CF	<1.3
1,1-DCP	<0.75
Toulene	<0.67

SB-14	11/19/09
Depth	22 ft
PCE	<0.45
TCE	<0.48
cis-1,2-DCE	<0.83
trans-1,2-DCE	<0.89
Vinyl Chloride	<0.18
1,1-DCE	<0.57
CM	1.30
CB	<0.42
CF	<1.4
1,1-DCP	<0.75
Toulene	<0.67

150 Concentration maps

	Public Health	
	Enforcement Standards	Preventive Action Levels
PCE	5	0.5
TCE	5	0.5
cis-1,2-DCE	70	7
trans-1,2-DCE	100	20
Vinyl Chloride	0.2	0.02
1,1-DCE	7	0.7
CM	8.3	0.83
CB	100	NE
CF	6	0.6
1,1-DCP	NE	NE
Toulene	1,000	200

Notes:
1. Concentrations in ug/L
2. Bolded, shaded orange values are above Public Health Enforcement Standards.
3. Bolded, shaded blue values are above Public Health Preventive Action Levels.
4. Bold values equal or exceed laboratory detection limits.
5. PCE = Tetrachloroethene
6. TCE = Trichloroethene
7. cis-1,2-DCE = cis-1,2-Dichloroethene
8. trans-1,2-DCE = trans-1,2-Dichloroethene
9. 1,1-DCE = 1,1-Dichloroethene
10. CM = Chloromethane
11. CB = Chlorobenzene
12. CF = Chloroform
13. 1,1-DCP = 1,1-Dichloropropene
14. J = Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit.

Legend

Property boundary

SB-1 Soil boring location

0 20 40

Approximate Scale in Feet

No.	Date	Revision	Approved

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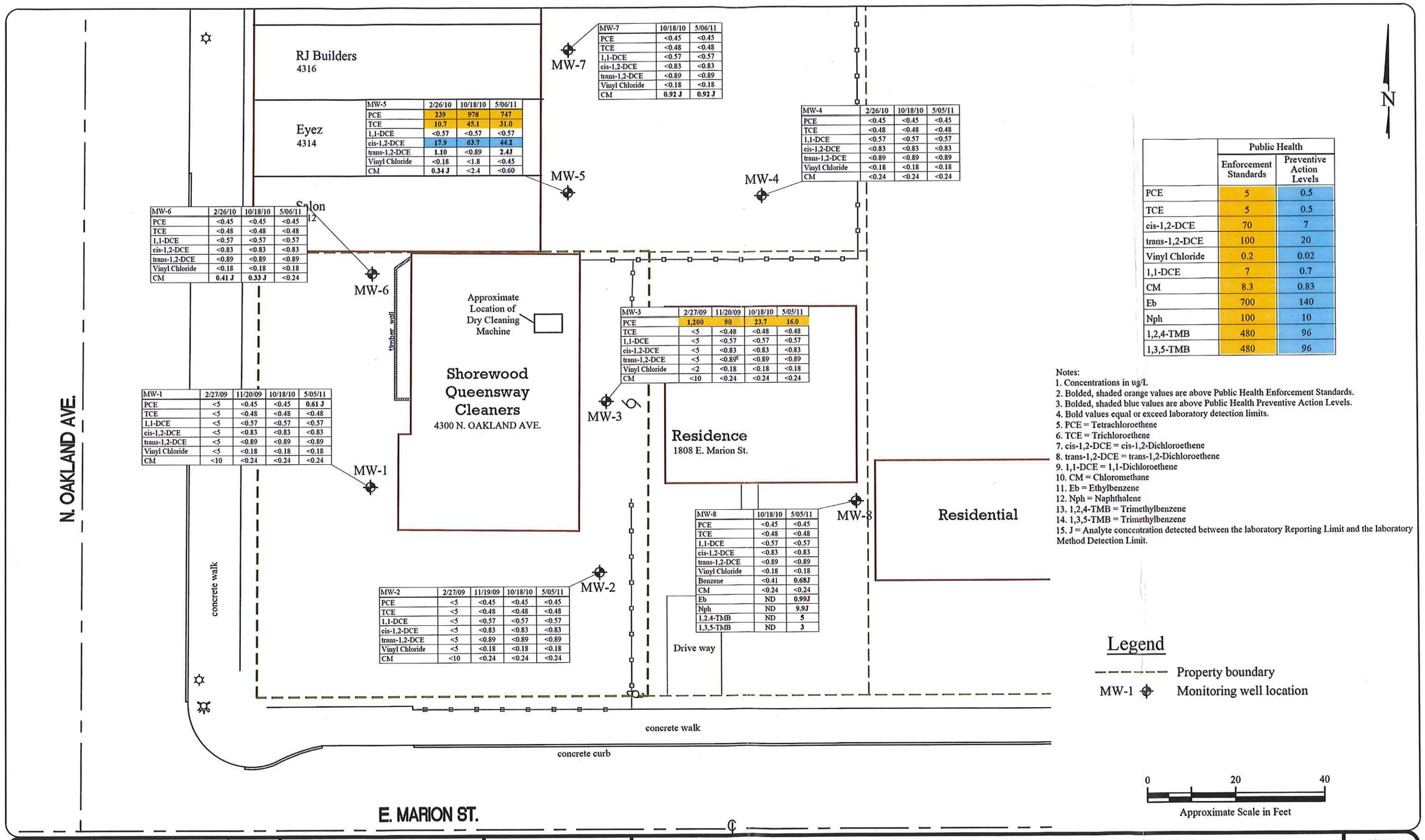
GRAB GROUNDWATER ANALYTICAL RESULTS

Shorewood Queensway Cleaners
4300 N. Oakland Avenue
Shorewood, WI

Figure 2

Project 6107



MW-7	10/18/10	5/06/11
PCE	<0.45	<0.45
TCE	<0.48	<0.48
1,1-DCE	<0.57	<0.57
cis-1,2-DCE	<0.83	<0.83
trans-1,2-DCE	<0.89	<0.89
Vinyl Chloride	<0.18	<0.18
CM	**0.92 J**	**0.92 J**

MW-5	2/26/10	10/18/10	5/06/11
PCE	**239**	**978**	**747**
TCE	**10.7**	**45.1**	**31.0**
1,1-DCE	<0.57	<0.57	<0.57
cis-1,2-DCE	**17.9**	**63.7**	**44.2**
trans-1,2-DCE	**1.10**	<0.89	**2.4J**
Vinyl Chloride	<0.18	<1.8	<0.45
CM	**0.34 J**	<2.4	<0.60

MW-4	2/26/10	10/18/10	5/05/11
PCE	<0.45	<0.45	<0.45
TCE	<0.48	<0.48	<0.48
1,1-DCE	<0.57	<0.57	<0.57
cis-1,2-DCE	<0.83	<0.83	<0.83
trans-1,2-DCE	<0.89	<0.89	<0.89
Vinyl Chloride	<0.18	<0.18	<0.18
CM	<0.24	<0.24	<0.24

MW-6	2/26/10	10/18/10	5/06/11
PCE	<0.45	<0.45	<0.45
TCE	<0.48	<0.48	<0.48
1,1-DCE	<0.57	<0.57	<0.57
cis-1,2-DCE	<0.83	<0.83	<0.83
trans-1,2-DCE	<0.89	<0.89	<0.89
Vinyl Chloride	<0.18	<0.18	<0.18
CM	**0.41 J**	**0.33 J**	<0.24

MW-3	2/27/09	11/20/09	10/18/10	5/05/11
PCE	**1,200**	**90**	**23.7**	**16.0**
TCE	<5	<0.48	<0.48	<0.48
1,1-DCE	<5	<0.57	<0.57	<0.57
cis-1,2-DCE	<5	<0.83	<0.83	<0.83
trans-1,2-DCE	<5	<0.89[R]	<0.89	<0.89
Vinyl Chloride	<2	<0.18	<0.18	<0.18
CM	<10	<0.24	<0.24	<0.24

MW-1	2/27/09	11/20/09	10/18/10	5/05/11
PCE	<5	<0.45	<0.45	**0.61 J**
TCE	<5	<0.48	<0.48	<0.48
1,1-DCE	<5	<0.57	<0.57	<0.57
cis-1,2-DCE	<5	<0.83	<0.83	<0.83
trans-1,2-DCE	<5	<0.89	<0.89	<0.89
Vinyl Chloride	<5	<0.18	<0.18	<0.18
CM	<10	<0.24	<0.24	<0.24

MW-2	2/27/09	11/19/09	10/18/10	5/05/11
PCE	<5	<0.45	<0.45	<0.45
TCE	<5	<0.48	<0.48	<0.48
1,1-DCE	<5	<0.57	<0.57	<0.57
cis-1,2-DCE	<5	<0.83	<0.83	<0.83
trans-1,2-DCE	<5	<0.89	<0.89	<0.89
Vinyl Chloride	<5	<0.18	<0.18	<0.18
CM	<10	<0.24	<0.24	<0.24

MW-8	10/18/10	5/05/11
PCE	<0.45	<0.45
TCE	<0.48	<0.48
1,1-DCE	<0.57	<0.57
cis-1,2-DCE	<0.83	<0.83
trans-1,2-DCE	<0.89	<0.89
Vinyl Chloride	<0.18	<0.18
Benzene	<0.41	**0.68J**
CM	<0.24	<0.24
Eb	ND	**0.99J**
Nph	ND	**9.9J**
1,2,4-TMB	ND	**5**
1,3,5-TMB	ND	**3**

	Public Health	
	Enforcement Standards	Preventive Action Levels
PCE	5	0.5
TCE	5	0.5
cis-1,2-DCE	70	7
trans-1,2-DCE	100	20
Vinyl Chloride	0.2	0.02
1,1-DCE	7	0.7
CM	8.3	0.83
Eb	700	140
Nph	100	10
1,2,4-TMB	480	96
1,3,5-TMB	480	96

Notes:
1. Concentrations in ug/L
2. Bolded, shaded orange values are above Public Health Enforcement Standards.
3. Bolded, shaded blue values are above Public Health Preventive Action Levels.
4. Bold values equal or exceed laboratory detection limits.
5. PCE = Tetrachloroethene
6. TCE = Trichloroethene
7. cis-1,2-DCE = cis-1,2-Dichloroethene
8. trans-1,2-DCE = trans-1,2-Dichloroethene
9. 1,1-DCE = 1,1-Dichloroethene
10. CM = Chloromethane
11. Eb = Ethylbenzene
12. Nph = Naphthalene
13. 1,2,4-TMB = Trimethylbenzene
14. 1,3,5-TMB = Trimethylbenzene
15. J = Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit.

Legend

Property boundary

MW-1 Monitoring well location

0 20 40

Approximate Scale in Feet

No.	Date	Revision	Approved

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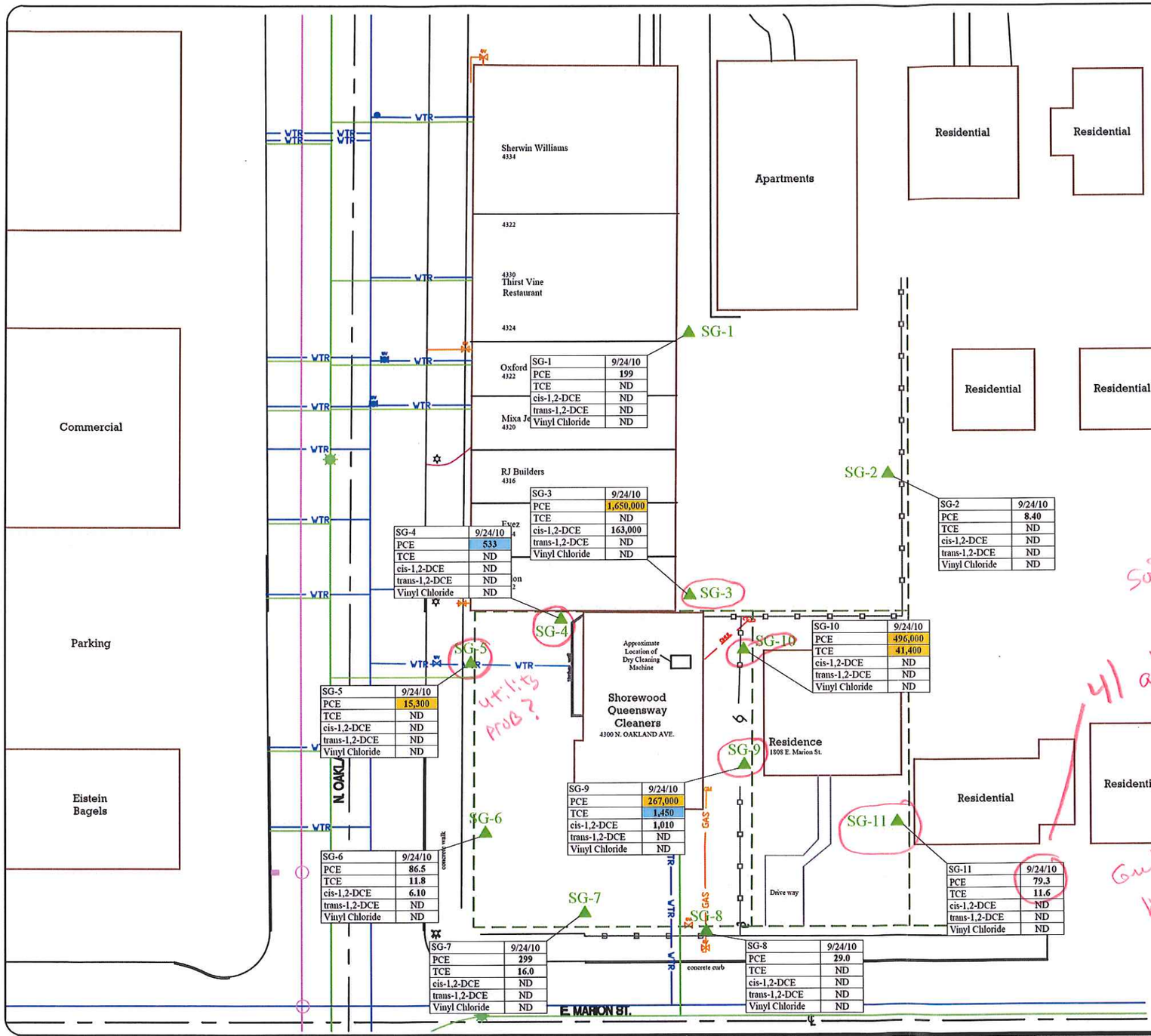
GROUNDWATER MONITORING WELL ANALYTICAL RESULTS
Shorewood Queensway Cleaners
4300 N. Oakland Avenue
Shorewood, WI

Figure
3
Project
6107



Analyte (ug/m^3)	Target Soil Gas Screening Levels	
	Industrial	Residential
PCE 210	2,100	410
TCE	6,100	1,200
cis-1,2-DCE	NA	NA
trans-1,2-DCE	260,000	63,000
VC	2,800	160

Notes:
1. Bold, shaded orange values exceed RISC Industrial Default Closure Levels
2. Bold, shaded blue values exceed RISC Residential Default Closure Levels
3. Bold values equal or exceed laboratory detection limits
4. Results not shown are below laboratory detection limits
5. Results reported in micrograms per cubic meter = ug/m^3
6. PCE = Tectrachloroethene
7. TCE = Trichloroethene
8. cis-1,2-DCE = cis-1,2-Dichloroethene
9. trans-1,2-DCE = trans-1,2-Dichloroethene
10. VC = Vinyl Chloride
11. ND = Not Detected
12. NA = Not Available
13. All soils gas points were screened from 6.5-7 feet below ground surface (ft. bgs.)

No.	Date	Revision	Approved

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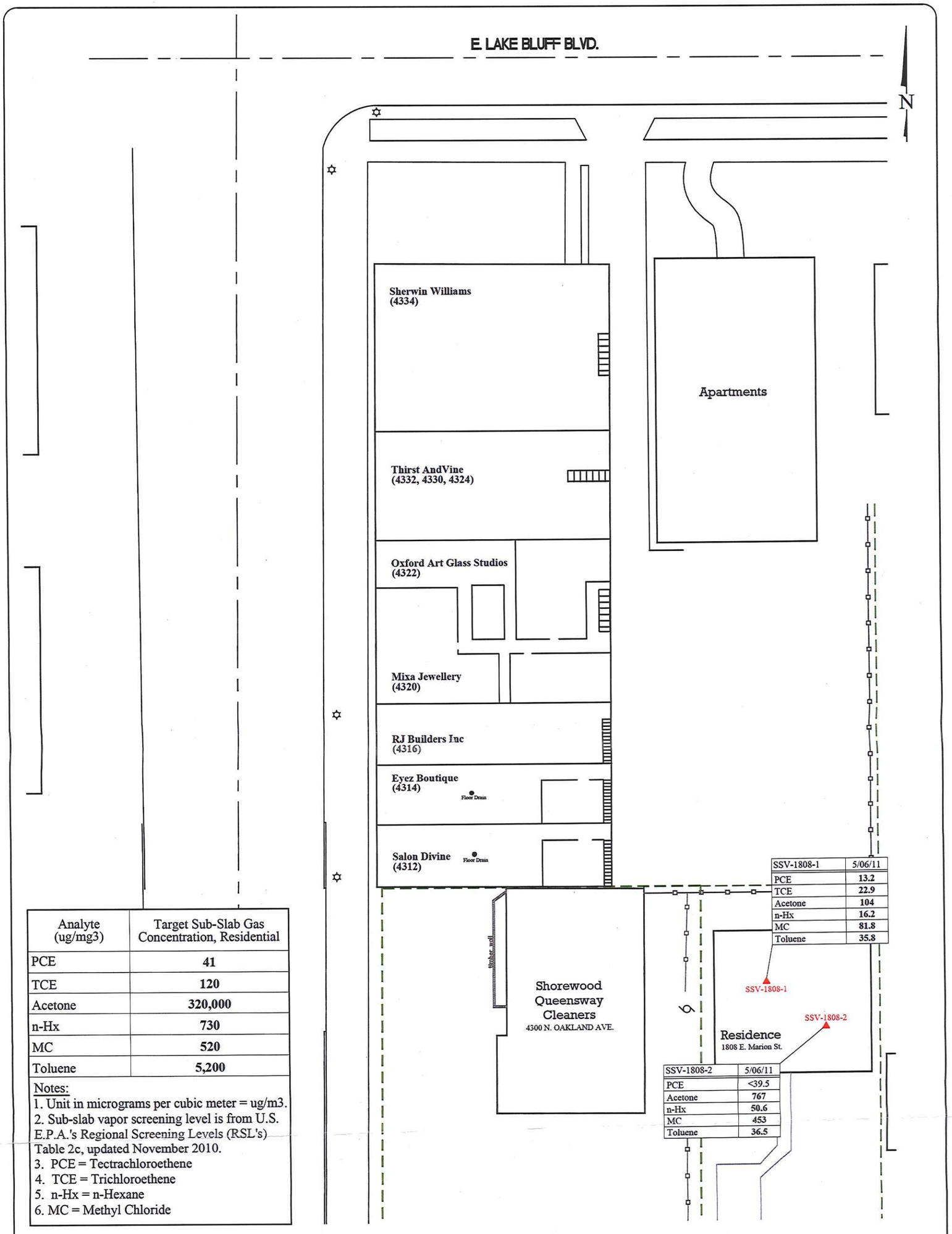
DWG file:	60714-10

SOIL GAS RESULTS
Shorewood Queensway Cleaners
4300 N. Oakland Avenue
Shorewood, WI

Figure
4
Project
6107



Analyte (ug/mg3)	Target Sub-Slab Gas Concentration, Residential
PCE	**41**
TCE	**120**
Acetone	**320,000**
n-Hx	**730**
MC	**520**
Toluene	**5,200**

Notes:
1. Unit in micrograms per cubic meter = ug/m3.
2. Sub-slab vapor screening level is from U.S. E.P.A.'s Regional Screening Levels (RSL's) Table 2c, updated November 2010.
3. PCE = Tectrachloroethene
4. TCE = Trichloroethene
5. n-Hx = n-Hexane
6. MC = Methyl Chloride

Legend

0 25 50
Approximate Scale in Feet

Fence line

SSV-1808-1 ▲ Sub-slab sample location

No.	Date	Revision	Approved

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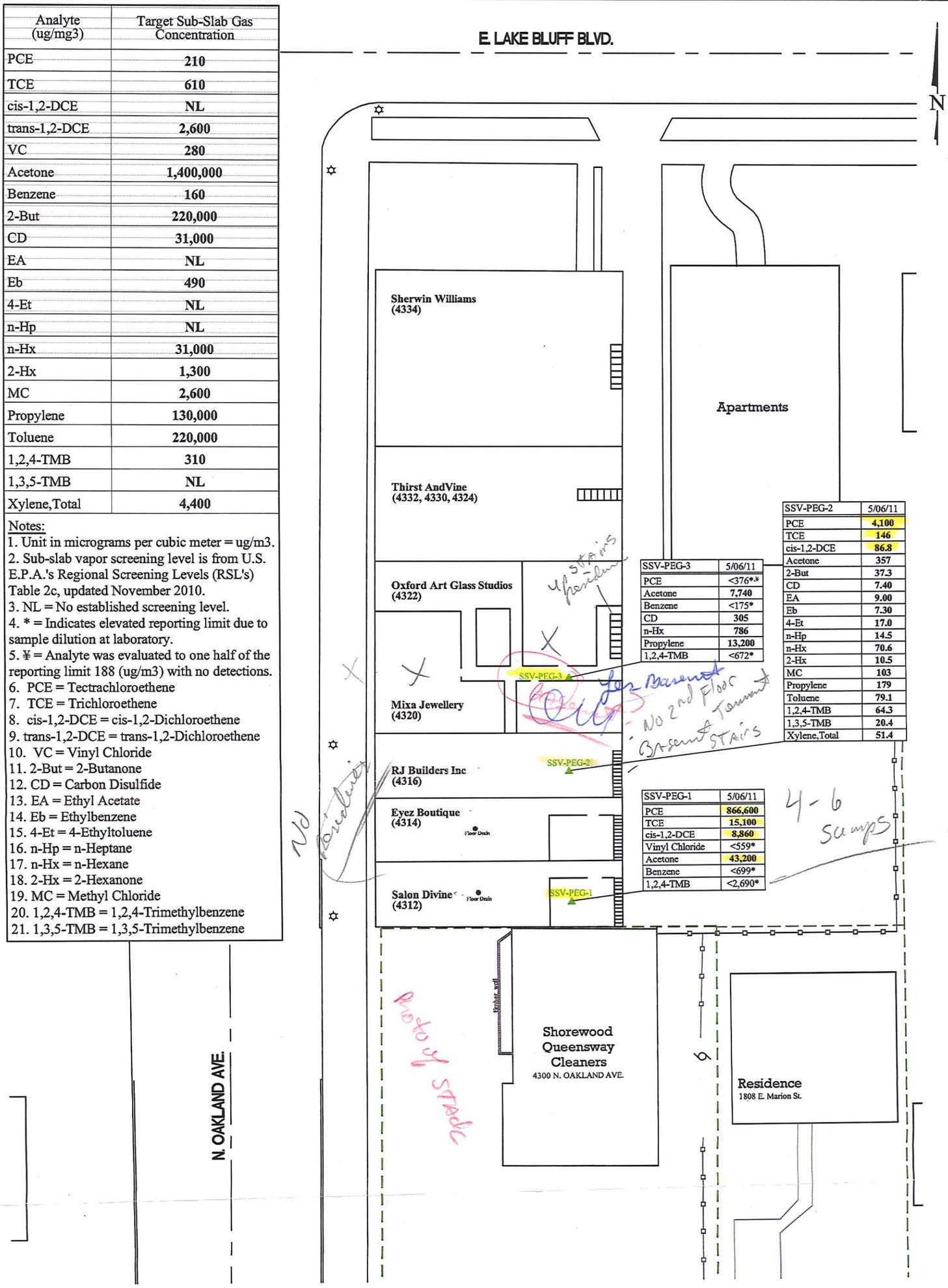
SUB-SLAB VAPOR ANALYTICAL RESULTS
Amelia Betzhold
1808 E. Marion St.
Shorewood, Wisconsin

Figure 5
Project 6107

Analyte (ug/mg3)	Target Sub-Slab Gas Concentration
PCE	210
TCE	610
cis-1,2-DCE	NL
trans-1,2-DCE	2,600
VC	280
Acetone	1,400,000
Benzene	160
2-But	220,000
CD	31,000
EA	NL
Eb	490
4-Et	NL
n-Hp	NL
n-Hx	31,000
2-Hx	1,300
MC	2,600
Propylene	130,000
Toluene	220,000
1,2,4-TMB	310
1,3,5-TMB	NL
Xylene,Total	4,400

Notes:
1. Unit in micrograms per cubic meter = ug/m3.
2. Sub-slab vapor screening level is from U.S. E.P.A.'s Regional Screening Levels (RSL's) Table 2c, updated November 2010.
3. NL = No established screening level.
4. * = Indicates elevated reporting limit due to sample dilution at laboratory.
5. ¥ = Analyte was evaluated to one half of the reporting limit 188 (ug/m3) with no detections.
6. PCE = Tectrachloroethene
7. TCE = Trichloroethene
8. cis-1,2-DCE = cis-1,2-Dichloroethene
9. trans-1,2-DCE = trans-1,2-Dichloroethene
10. VC = Vinyl Chloride
11. 2-But = 2-Butanone
12. CD = Carbon Disulfide
13. EA = Ethyl Acetate
14. Eb = Ethylbenzene
15. 4-Et = 4-Ethyltoluene
16. n-Hp = n-Heptane
17. n-Hx = n-Hexane
18. 2-Hx = 2-Hexanone
19. MC = Methyl Chloride
20. 1,2,4-TMB = 1,2,4-Trimethylbenzene
21. 1,3,5-TMB = 1,3,5-Trimethylbenzene



Legend

0 25 50
Approximate Scale in Feet

Fence line

SSV-PEG-1 ▲ Sub-slab sample location

No.	Date	Revision	Approved

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SUB-SLAB VAPOR ANALYTICAL RESULTS
Aunt Peg Oakland LLC
4312-4334 N. Oakland Avenue
Shorewood, Wisconsin

Figure 6
Project 6107