



February 3, 2021

Mr. Isaac Ross, Hydrogeologist
Wisconsin Department of Natural Resources
GEF 2 Central Office
P.O. Box 7921
Madison, WI 53707-7921

**Subject: Work Scope and Request for DERF Change Order
Former Packard Way Cleaners
3650-3652 E. Barnard Avenue
Cudahy, Wisconsin 53110
BRRTS# 02-41-515150**

Dear Mr. Ross:

During 2018 through 2020, EnviroForensics, LLC (EnviroForensics) performed interim remedial actions at the above property (Site) and collected additional subsurface data to define the extent of impacts. This work was previously funded by insurance. However, the insurance funding was exhausted, and further work is required. The work involves reporting the interim action and the subsurface investigations performed during 2018 through 2020 period. There is also some additional investigative work to be completed to define the extent of impacts in all media. We included a work scope for those proposed investigations and an associated cost estimate. We are requesting your approval of the proposed work scope and costs under the Dry Cleaner Environmental Response Fund (DERF).

Work Scope

Reporting

A report needs to be generated supplemental to the original Site Investigation Report that will provide the details of the interim remedial actions performed at the Site and the details of post-remedial investigations, including all of the data. Additional off-site data was collected to determine the extent of soil and groundwater impacts outside of the source area. The report

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will also include data generated from the proposed investigations provided below to close the gaps in soil, vapor, and groundwater data. The follow-up report will also have a groundwater monitoring plan to assess post-remedial conditions.

Additional Investigative Work

Figures 1 and 2 illustrate the extent of soil and groundwater impacts, respectively. **Tables 1** includes the results of laboratory analysis of all soil samples collected to date, including post-excavation wall and floor sample results. **Tables 2 and 3** include the results of groundwater monitoring well samples and grab water samples collected from temporary wells set in soil borings, respectively. **Table 4** includes the results of all sub-slab vapor and indoor/outdoor air collected to date. The delineation of soil and groundwater impacts is complete except to the east in groundwater flow direction. We propose to close this data gap by soil sampling at the location of SB-125 shown in red on attached **Figure 1**. One new groundwater monitoring well, MW-11, will be installed at this location following soil sampling. The well construction will be a 2-inch diameter polyvinyl chloride with a ten-foot long screened section with a size of 0.10-inch slot size. The well will be installed following NR 141 but will have a shortened filter pack seal due to the very shallow water table, which resides between 2-4 feet below ground surface. The new well will be developed and sampled once for reporting purposes. As mentioned above, the report will include an updated groundwater monitoring plan.

Figure 1 presents the Site building and at 3654 E. Barnard Avenue locations, which have vapor mitigation sub-slab depressurization systems. Additional vapor intrusion investigations were planned for residences nearby the source area. However, gaining access has been problematic for several properties in the past. On November 28, 2018, EnviroForensics provided a status update to the WDNR regarding past attempts to gain access to other properties for investigative sampling. In response, the WDNR sent final access requests on January 18, 2019, to the properties located at 3648 E. Barnard, 3663 E. Squire, and 3677 E. Squire. 3663 E. Squire allowed access to install a monitoring well.

Due to access issues, WDNR agreed to use vapor intrusion data collected at 3659 E, Squire Ave. to screen in or out additional properties along Squire Ave. The property at 3659 E. Squire has been sampled twice with no vapor risks identified. Because 3659 E. Squire was below screening levels, access requests to neighboring properties for vapor intrusion sampling were not sent. Since 3663 E. Squire granted access, we propose to conduct vapor intrusion sampling at this property, if allowed by the property owner. Three (3) events are budgeted, two (2) events in the heating months, and one (1) event in the non-heating months.

Cost Summary

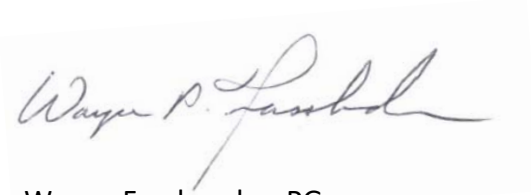
The cost to perform the above work is summarized below. Detailed cost breakdown sheets are attached, which provide anticipated work hours for project staff and their associated billing rates. The previous consultants submitted past DERF claims. We attached an updated 4400-214D DERF Form is attached to include past DERF claim reimbursement amounts to keep track of WDNR approved amounts and claims amounts accurately.

<u>Task</u>	<u>Consultant</u>	<u>Subcontractor</u>
Work Scoping	\$3,735.00	
Field Investigations (includes access with City of Cudahy)	\$8,950.50	\$5,022.72
Data Evaluation & Reporting	\$10,531.00	
Project Coordination & Management	\$3,064.10	

The total cost requested in this change order is \$31,303.32.

If you have any questions or require additional information, please do not hesitate to contact us at (262) 290-4001.

Sincerely,
EnviroForensics, LLC



Wayne Fassbender, PG
Senior Project Manager
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Rob Hoverman, PG
Regional Director
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Attachments

TABLE 1
SOIL ANALYTICAL RESULTS

Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Boring Identification	Date Sampled	Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	n-Butylbenzene	Naphthalene	Xylene (total)
Industrial RCL ¹			145,000	8,410	2,340,000	1,850,000	1,190,000	219,000	293,000	108,000	24,100	3,570,000
Non-Industrial RCL ¹			33,000	1,300	156,000	1,560,000	320,000	219,000	293,000	108,000	5,520	818,000
Soil to Goundwater RCL ¹			4.5	3.6	41.2	62.6	5	1,378	NE	NE	658.2	3,960
HB1	7/20/2004	0-1.5	2,460	2,070	67	<28	<22	<36	<36	<40	NA	NA
TW1	7/20/2004	0.5-2	11,100	210	<35	<28	<22	<35	<35	<40	NA	NA
		4.5-5	21,500	538	<33	<28	<22	51	51	<40	NA	NA
TW2	7/20/2004	2-3.5	70	<34	<34	<28	<22	35	35	<40	NA	NA
B10/TW3	8/23/2004	6-8	<35	<35	<35	<28	<22	<35	<35	<40	NA	NA
		10-12	<32	<32	<32	<28	<22	<32	<32	<40	NA	NA
B11	8/23/2004	10-12	<32	<32	<32	<28	<22	<32	<32	<40	NA	NA
		14-16	<32	<32	<32	<28	<22	<32	<32	<40	NA	NA
B12	8/23/2004	2-4	37,701	<34	<34	<28	<22	<34	<34	<40	NA	NA
		8-10	1,430	309	<33	<28	<22	<33	<33	<40	NA	NA
B13/TW4	8/23/2004	2-4	6,850	199	<35	<28	<22	<35	<35	<40	NA	NA
		6-8	26,400	1,720	<34	<28	<22	<34	<34	<40	NA	NA
B14/TW5	8/23/2004	2-4	1,360	<37	<37	<28	<22	<37	<37	<40	NA	NA
		6-8	4,480	75	<32	<28	<22	<32	<32	<40	NA	NA
B15	8/23/2004	6-8	704	50	<35	<28	<22	<35	<35	<40	NA	NA
		10-12	<36	1,070	<36	<28	<22	<36	<36	<40	NA	NA
B16/TW6	8/23/2004	6-8	<36	<36	<36	<28	<22	<36	<36	<40	NA	NA
		10-12	<37	<37	<37	<28	<22	<37	<37	<40	NA	NA
B17/TW7	1/19/2006	6-8	<25	<25	<25	<28	<22	<25	<25	<40	NA	NA
B18/TW8	1/19/2006	2-4	2,710	<25	<25	<28	<22	<25	<25	<40	NA	NA
		6-8	2,720	133	<25	<28	<22	<25	<25	<40	NA	NA
B19/TW9	1/19/2006	2-4	<25	<25	<25	<28	<22	<25	<25	<40	NA	NA
B20/TW10	1/19/2006	2-4	660	<25	<25	<28	<22	<25	<25	<40	NA	NA
		6-8	1,850	<25	<25	<28	<22	<25	<25	<40	NA	NA
B21/TW11	1/19/2006	2-4	780	<25	<25	<28	<22	<25	<25	<40	NA	NA
		4-6	314	<25	<25	<28	<22	<25	<25	<40	NA	NA
B22/TW12	8/8/2006	2-4	<25	<25	<25	<28	<22	<25	<25	<40	NA	NA
		4-6	<25	<25	<25	<28	<22	<25	<25	<40	NA	NA
B23/TW13	8/8/2006	2-4	98	<25	<25	<28	<22	<25	<25	<40	NA	NA
		4-6	58 J	<25	<25	<28	<22	<25	<25	<40	NA	NA
B24/TW14	8/8/2006	4-6	<25	<25	<25	<28	<22	<25	<25	<40	NA	NA
B25/TW15	6/15/2007	2-4	211	<25	<25	<28	<22	<25	<25	<40	NA	NA
		4-6	510	<25	<25	<28	<22	<25	<25	<40	NA	NA
B26/TW16	8/29/2008	2-4	<18	<20	<24	<28	<22	<20	<20	<40	NA	NA
		4-6	<18	<20	<24	<28	<22	<20	<20	<40	NA	NA
B27/TW17	7/30/2010	6-8	<18	<50	<44	<28	<22	<73	<73	<40	NA	NA
B28/TW18	7/30/2010	4-6	<53	<50	<44	<28	<22	<73	<73	<40	NA	NA
SB-101	05/13/15	4	6,600	49 J	<21	<28	<22	<78	<78	<40	NA	<99
	05/13/15	10	3,600	224	<21	<28	<22	<78	<78	<40	NA	<80
	05/13/15	12	3,700	400	<21	<28	<22	<78	<78	<40	NA	<99
SB-102	05/13/15	2	1,910	<42	<21	<28	<22	<78	<78	<40	NA	<99
	05/13/15	6	5,100	110 J	<21	<28	<22	<78	<78	<40	NA	<80
	05/13/15	18	<54	<42	<21	<28	<22	<78	<78	<40	NA	<80
	05/13/15	40	<54	<42	<21	<28	<22	<78	<78	<40	NA	<99
SB-103	05/13/15	12	1,300	77 J	<21	<28	<22	<78	<78	<40	NA	<99
SB-104	05/13/15	2	410	<42	<21	<28	<22	86 J	86 J	<40	NA	<99
	05/13/15	8	170	<42	<21	<28	<22	<78	<78	<40	NA	<99
SB-105	05/13/15	2	<54	<42	<21	<28	<22	<78	<78	<40	NA	<99
	05/13/15	4	<54	<42	<21	<28	<22	<78	<78	<40	NA	<99
	05/13/15	8	<54	<42	<21	<28	<22	<78	<78	<40	NA	<99
SB-106	05/13/15	10	2,170	640	33 J	<28	<22	<78	<78	<40	NA	<99
	05/13/15	14	3,600	700	29.7 J	<28	<22	<78	<78	<40	NA	<99
	05/13/15	30	<54	<42	<21	<28	<22	<78	<78	<40	NA	<99

TABLE 1
SOIL ANALYTICAL RESULTS

Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Boring Identification	Date Sampled	Depth	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	n-Butylbenzene	Naphthalene	Xylene (total)
Industrial RCL ¹			145,000	8,410	2,340,000	1,850,000	1,190,000	219,000	293,000	108,000	24,100	3,570,000
Non-Industrial RCL ¹			33,000	1,300	156,000	1,560,000	320,000	219,000	293,000	108,000	5,520	818,000
Soil to Goundwater RCL ¹			4.5	3.6	41.2	62.6	5	1,378	NE	NE	658.2	3,960
WS-1	12/7/2017	5-6	<32	2,740	960	104	<22	<25	<25	49 J	<40.5	<116
		9-10	<32	4,400	278	41 J	<22	<25	<25	<40	NA	<116
WS-2	12/7/2017	2-3	2,180	<41	<32	<28	<22	<25	<25	<40	NA	<116
		9-10	570	410	<32	<28	<22	<25	<25	<40	NA	<116
WS-3	12/7/2017	0-1	5,400	85 J	<32	<28	<22	<25	<25	<40	NA	<116
		9-10	<32	80 J	<32	<28	<22	<25	<25	<40	NA	<116
WS-4	12/7/2017	8-9	1,670	290	59 J	<28	<22	<25	<25	<40	NA	<116
		9-10	320	127 J	<32	<28	<22	<25	<25	<40	NA	<116
WS-5	12/7/2017	5-6	14,500	77 J	<32	<28	<22	<25	<25	<40	NA	<116
		9-10	36 J	<41	<32	<28	<22	<25	<25	<40	NA	<116
WS-6	12/7/2017	6-7	2,060	<41	<32	<28	<22	<25	<25	<40	NA	<116
		9-10	41 J	68 J	<32	<28	<22	<25	<25	<40	NA	<116
WS-7	12/7/2017	6-7	2,420	46 J	<32	<28	<22	<25	<25	<40	NA	<116
		9-10	790	74 J	<32	<28	<22	<25	<25	<40	NA	<116
WS-8	12/7/2017	3-4	<32	<41	<32	<28	<22	<25	<25	<40	NA	<116
WS-9	12/7/2017	0-1	4,900	172	<32	<28	<22	<25	<25	<40	NA	<116
		5-6	<32	<41	<32	<28	<22	<25	<25	<40	NA	<116
WS-10	12/7/2017	0-1	2,560	1,650	93 J	115	29.3	<25	<25	<40	NA	<116
WS-11	12/7/2017	1-2	17,700	1,590	38 J	<28	28.9	<25	<25	<40	NA	<116
		5-6	420	<41	<32	<28	<22	<25	<25	<40	NA	<116
SB-107	10/11/18	1-2	126	<41	<32	<28	<22	<25	<25	<40	NA	<116
		3-4	74 J	<41	<32	<28	<22	<25	<25	<40	NA	<116
SB-108	10/11/18	0-1	4,900	295	<32	<28	<22	<25	<25	<40	NA	<116
		1-2	990	390	<32	<28	<22	<25	<25	<40	NA	<116
SB-109	10/11/18	0-1	36,000	191	52 J	<28	<22	<25	<25	<40	NA	<116
		3-4	1,870	<41	<32	<28	<22	<25	<25	<40	NA	<116
SB-110	10/11/18	2-3	117	<41	<32	<28	<22	<25	<25	<40	NA	<116
		3-4	64 J	<41	<32	<28	<22	<25	<25	<40	NA	<116
SB-111	02/14/19	3-4	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-112	02/14/19	0-2	<32	<41	<32	<28	<22	99	41 J	<40	680	133
		4-6	100 J	<41	<32	<28	<22	<25	<32	<40	216 J	<116
SB-113	02/14/19	0-2	6,300	<41	<32	<28	<22	<25	<32	<40	<94	<116
		4-6	490	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-114	02/14/19	0-2	14,700	58 J	<32	<28	<22	<25	<32	<40	<94	<116
SB-115	02/14/19	0-2	71,000	316	55 J	<28	<22	<25	<32	<40	<94	<116
SB-116	02/14/19	0-2	27,200	67 J	<32	<28	<22	<25	<32	<40	<94	<116
		2-4	13,600	245	134	<28	<22	<25	<32	<40	<94	<116
SB-117	02/14/19	0-2	5,100	<41	<32	<28	<22	35 J	<32	<40	<94	<116
		2-4	3,900	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-118	06/03/20	4-5	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-119	06/03/20	4-5	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116
		7-8	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116
		9-10	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-120	06/03/20	1-2	2,950	330	<32	<28	<22	<25	<32	<40	<94	<116
		5-6	850	<41	<32	<28	<22	<25	<32	<40	<94	<116
		12-13	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116
		16-17	72 J	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-122	06/03/20	10-11	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-123	06/03/20	2-3	50 J	<41	<32	<28	<22	<25	<32	<40	<94	<116
SB-124	06/03/20	2-3	<32	<41	<32	<28	<22	<25	<32	<40	<94	<116

Notes:

Residual contaminant level are based on US EPA Soil Screening Levels (September 2018)

Samples analyzed using EPA SW-846 Method 8260 with Prep Method 5030B

All concentrations reported in units of micrograms per kilogram (µg/kg)

Bolded and Shaded green values exceed the WDNR generic Non-Industrial Residual Contaminant Levels

Bolded and Shaded blue values exceed the WDNR generic Soil to Groundwater Residual Contaminant Levels

Gray Shaded value indicates soil was excavated during August 2018

Bolded values are above detection limits

J = Concentration is less than the reporting limit but greater than the method detection limit.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS

Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Monitoring Well Identification	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
Public Health Enforcement Standard		5	5	70	100	0.2
Public Health Preventive Action Limit		0.5	0.5	7	20	0.02
TW1	9/9/2004	36	3.0	ND	ND	ND
	9/9/2004'	39	3.3	ND	ND	ND
	1/20/2006	24	2.35	ND	ND	ND
	8/8/2006	28.3	1.9	ND	ND	ND
	6/11/2015	5.1	1.12 J	<0.45	<0.54	<0.17
	1/31/2018	4.1	0.74 J	<0.37	<0.34	<0.2
TW2	11/20/2018	47	3.5	1.5	<0.34	<0.2
	9/9/2004	2.1	5.0	ND	ND	ND
	1/20/2006	<0.45	<0.37	ND	ND	ND
	8/8/2006	1.9	0.69 J	ND	ND	ND
	6/11/2015	<0.74	<0.47	2.58	<0.54	<0.17
	1/31/2018	0.83 J	<0.3	2.09	<0.34	<0.2
TW3	11/21/2018	12.4	1.45	6.6	<0.34	<0.2
	9/9/2004	6.9	5.9	ND	ND	ND
	1/20/2006	64	10.9	ND	ND	ND
TW4	8/8/2006	29.9	10.2	ND	ND	ND
	9/9/2004	890	220	ND	ND	ND
	1/20/2006	313	52	ND	ND	ND
TW5	8/8/2006	820	105	ND	ND	ND
	9/9/2004	140	4.6	ND	ND	ND
TW6	9/9/2004	2.4	26	ND	ND	ND
	1/20/2006	1.17 J	32	ND	ND	ND
	8/8/2006	3.3	28	ND	ND	ND
TW7	1/20/2006	<0.45	<0.37	ND	ND	ND
TW8	1/20/2006	49	4.6	ND	ND	ND
	8/8/2006	300	22.7	ND	ND	ND
TW9	1/20/2006	1.41	12.7	ND	ND	ND
	8/8/2006	1.22	22.3	ND	ND	ND
TW10	1/20/2006	195	13.2	ND	ND	ND
	8/8/2006	182	<3.9	ND	ND	ND
TW11	1/20/2006	6.4	<0.37	ND	ND	ND
	1/20/2006	0.62 J	33	ND	ND	ND
	8/8/2006	43	0.44 J	ND	ND	ND
TW12	8/8/2006	14	2.01	ND	ND	ND
TW13	8/8/2006	1.83	<0.39	ND	ND	ND
TW14	8/8/2006	<0.37	<0.39	ND	ND	ND
TW16	9/19/2008	<0.5	<0.47	ND	ND	ND
TW17	8/13/2010	<0.43	<0.39	ND	ND	ND
TW18	8/13/2010	0.47 J	<0.39	ND	ND	ND
3650 Barnard Ave Basement Sump	9/8/2005	740	11	ND	ND	ND
	12/7/2017	3,700	51 J	21.5 J	<0.54	<0.17
3654 Barnard Ave Basement Sump	8/29/2006	11.5	0.79 J	ND	ND	ND
MW-1	6/15/2015	5.4	1.91	27.8	1.12 J	3.6
	9/27/2016	118	27	46	2.68	4.3
	1/5/2017	104	21	39	1.71	1.36
	1/31/2018	91	13.4	26.4	1.58	1.16
	11/21/2018	95	15.6	34	1.71	1.38
MW-2	6/15/2015	25.2	146	65	<5.4	<1.7
	9/27/2016	192	1,040	410	25.6	14.5
	1/5/2017	158	760	320	16.6 J	6.2
	1/31/2018	138	660	370	19.9	6.4 J
MW-2/R	8/13/2018	Abandoned				
	11/21/2018	28.5	890	440	23	4.8 J

TABLE 2
GROUNDWATER ANALYTICAL RESULTS

Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Monitoring Well Identification	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
Public Health Enforcement Standard		5	5	70	100	0.2
Public Health Preventive Action Limit		0.5	0.5	7	20	0.02
MW-3	6/15/2015	52	5.9	0.57 J	<0.54	<0.17
	9/27/2016	175	10.6	<0.45	<0.54	<0.17
	1/5/2017	178	9.1	<0.45	<0.54	<0.17
	1/31/2018	150	7.4	0.68 J	<0.34	<0.2
	8/13/2018	Abandoned				
MW-4	6/15/2015	<0.74	<0.47	<0.45	<0.54	<0.17
	9/27/2016	1.21 J	1.3 J	<0.45	<0.54	<0.17
	1/4/2017	0.81 J	<0.47	<0.45	<0.54	<0.17
	1/31/2018	0.81 J	<0.3	<0.37	<0.34	<0.2
	11/20/2018	2.18	0.37 J	<0.37	<0.34	<0.2
MW-5	6/15/2015	<0.74	<0.47	<0.45	<0.54	<0.17
	9/27/2016	<0.49	<0.47	<0.45	<0.54	<0.17
	1/4/2017	<0.49	<0.47	<0.45	<0.54	<0.17
	1/31/2018	<0.38	<0.3	<0.37	<0.34	<0.2
	11/20/2018	<0.38	<0.3	<0.37	<0.34	<0.2
MW-6/TW15	6/15/2007	470	25.3	ND	ND	ND
	5/13/2015	246	17.2	6.8	<0.54	<0.17
	9/27/2016	360	22.6	5.1	<0.54	<0.17
	1/5/2017	320	14.3 J	<0.45	<0.54	<0.17
	1/31/2018	232	12.2	<3.7	<3.4	<2
	11/21/2018	221	20.5	5.6	<0.34	<0.2
MW-7/TW10	1/20/2006	195	13.2	ND	ND	ND
	8/8/2006	182	<3.9	ND	ND	ND
	5/13/2015	56	2.95	1.45	<0.54	<0.17
	9/27/2016	26.8	<0.47	<0.45	<0.54	<0.17
	1/5/2017	94	1.77	<0.45	<0.54	<0.17
	1/31/2018	86	1.62	<0.37	<0.34	<0.2
	11/21/2018	66	0.72 J	<0.37	<0.34	<0.2
MW-8	11/21/2018	360	6.4	<0.37	<0.34	<0.2
MW-9	3/5/2019	32	2.47	1.2	<0.34	<0.2
MW-10	3/5/2019	7.3	<0.3	<0.37	<0.34	<0.2
PZ-1	6/15/2015	<0.74	<0.47	<0.45	<0.54	<0.17
	9/27/2016	<0.49	<0.47	<0.45	<0.54	<0.17
	1/4/2017	<0.49	<0.47	<0.45	<0.54	<0.17
	1/31/2018	0.42 J	<0.3	<0.37	<0.34	<0.2
	11/20/2018	0.44 J	<0.3	<0.37	<0.34	<0.2
PZ-2	6/15/2015	9.9	7.9	1.44	<0.54	<0.17
	9/27/2016	8.8	3.6	<0.45	<0.54	<0.17
	1/4/2017	8.3	3.6	0.54 J	<0.54	<0.17
	1/31/2018	6.9	2.03	<0.37	<0.34	<0.2
	8/13/2018	Abandoned				
PZ-2R	11/20/2018	0.74 J	0.38 J	<0.37	<0.34	<0.2

Notes:

Samples analyzed for VOCs according to EPA Method 8260

Only detected compounds are listed

All concentrations reported in micrograms per liter (µg/L)

Bolded values are above method detection limits

Bolded and orange shaded values are above Public Health Enforcement Standard

Bolded and blue shaded values are above Public Health Preventive Action Limit

J = Analyte concentration detected between the Method Detection Limit and Reporting Limit

ND = Not Detected

TABLE 3
GRAB GROUNDWATER ANALYTICAL RESULTS

Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Sample Identification	Sample Date	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
Public Health Enforcement Standard		5	5	70	100	0.2
Public Health Preventive Action Limit		0.5	0.5	7	20	0.02
SB-111-W	2/15/2019	<0.38	<0.3	<0.37	<0.34	<0.2
SB-118-W	6/11/2020	<0.33	<0.47	<0.39	<0.37	<0.2
	8/18/2020	<0.33	<0.47	<0.39	<0.37	<0.2
SB-119-W	6/11/2020	2.02	<0.47	<0.39	<0.37	<0.2
	8/18/2020	47	<0.47	<0.39	<0.37	<0.2
SB-120-W	6/11/2020	0.53 J	<0.47	<0.39	<0.37	<0.2
	8/18/2020	5.7	<0.47	<0.39	<0.37	<0.2
SB-121-W	6/11/2020	1.61	<0.47	<0.39	<0.37	<0.2
	8/18/2020	4.8	<0.47	<0.39	<0.37	<0.2
SB-122-W	6/11/2020	<0.33	<0.47	<0.39	<0.37	<0.2
	8/18/2020	<0.33	<0.47	<0.39	<0.37	<0.2

Notes:

Samples analyzed for VOCs according to EPA Method 8260

Only detected compounds are listed

All concentrations reported in micrograms per liter (µg/L)

Bolded values are above method detection limits

Bolded and orange shaded values are above Public Health Enforcement Standard

Bolded and blue shaded values are above Public Health Preventive Action Limit

TABLE 4
VAPOR INTRUSION ANALYTICAL RESULTS

Packard Way, Ltd.
3650-3652 East Barnard Avenue
Cudahy, WI

Sample Address	Consultant	Sample Identification	Sample Location	Applicable Criteria	Sample Duration	Date Sampled	Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	
INDOOR/OUTDOOR AIR SAMPLES												
Residential Vapor Action Level							42	2.1	NE	NE	1.7	
3650-3652 East Barnard Avenue	Northern Environmental	Basement Air	Basement	Residential	24-Hour	8/2/2005	150	<3.6	<2.6	<2.6	<1.7	
					24-Hour	10/10/2005	29	<3.6	<2.6	<2.6	<1.7	
		24-Hour	1/20/2006		<5.4	<4.2	<3.1	<3.1	<2.0			
	EnviroForensics	6306-3650-3652 E. Barnard Ave-IA-B	1st Floor		24-Hour	3/5/2019	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3650-3652 E. Barnard Ave-IA-1			24-Hour	3/5/2019	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3650-3652 E. Barnard Ave-IA-2	2nd Floor		24-Hour	3/5/2019	<3.19	<1.07	<19.8	<39.6	<1.28	
6306-3650-3652 E. Barnard Ave-OA	Outdoors	Not Applicable	24-Hour	3/5/2019	<3.19	<1.07	<19.8	<39.6	<1.28			
3658 East Barnard Avenue	EnviroForensics	6306-3658-IA-B	Basement	Not Applicable	24-Hour	7/15/2015	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3658-IA-1	1st Floor		24-Hour	7/15/2015	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3658-IA-2	2nd Floor		24-Hour	7/15/2015	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3658-OA	Outdoors		24-Hour	7/15/2015	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3659 E. Squire Ave-IA-B	Basement		24-Hour	10/12/2018	11.9	<1.07	<19.8	<39.6	<1.28	
3659 East Squire Avenue	EnviroForensics	6306-3659 E. Squire Ave-IA-B	Basement	Residential	24-Hour	3/5/2019	<3.19	<1.07	<19.8	<39.6	<1.28	
					24-Hour	10/12/2018	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3659 E. Squire Ave-IA-1	1st Floor		24-Hour	3/5/2019	<3.19	<1.07	<19.8	<39.6	<1.28	
					24-Hour	10/12/2018	<3.19	<1.07	<19.8	<39.6	<1.28	
		6306-3659 E. Squire Ave-OA	Outdoors		24-Hour	10/12/2018	<3.19	<1.07	<19.8	<39.6	<1.28	
SUB-SLAB VAPOR SAMPLES												
Residential Vapor Risk Screening Level							1,400	70	NE	NE	57	
Small Commercial Vapor Risk Screening Level							6,000	290	NE	NE	930	
3648 East Barnard Avenue	Northern Environmental	3648 East Barnard Avenue	Basement	Residential	Grab	9/9/2004	ND	ND	ND	ND	ND	
3650-3652 East Barnard Avenue	Northern Environmental	VP1	Basement	Residential	Grab	9/9/2004	2,400	45	<5.6	<5.6	<3.6	
					Grab	9/9/2004	1,200,000	26,000	<2,700	<2,700	<1,800	
		24-Hour			8/2/2005	26	110	260	80	4.8		
		24-Hour			10/10/2005	<5.9	8.4	6.1	<3.5	<2.2		
	24-Hour	1/20/2006			<6.1	<4.8	<3.5	<3.5	<2.3			
	EnviroForensics	VP3			6306-3650-3652 E. Barnard Ave-SSV-1	Grab	9/9/2004	170,000	4,000	1,200	<94	<240
						Grab	3/5/2019	30.7	2.63	<19.8	<39.6	<1.28
		6306-3650-3652 E. Barnard Ave-SSV-2			Grab	3/5/2019	2,690	1,260	182	<39.6	<1.28	
3654 East Barnard Avenue		Northern Environmental	VP4	Basement	Residential	Grab	9/9/2004	480	29	ND	ND	ND
3658 East Barnard Avenue	EnviroForensics	6306-3658-SSV-1	Basement	Residential	Grab	7/16/2015	<31.9	<10.7	<19.8	<39.6	<1.28	
		6306-3658-SSV-2			Grab	7/16/2015	<31.9	<10.7	<19.8	<39.6	<1.28	
3659 East Squire Avenue	EnviroForensics	6306-3659 E. Squire Ave-SSV-1	Basement	Residential	Grab	10/12/2018	187	14.5	<19.8	<39.6	<1.28	
					Grab	3/5/2019	18.2	5.16	<19.8	<39.6	<1.28	

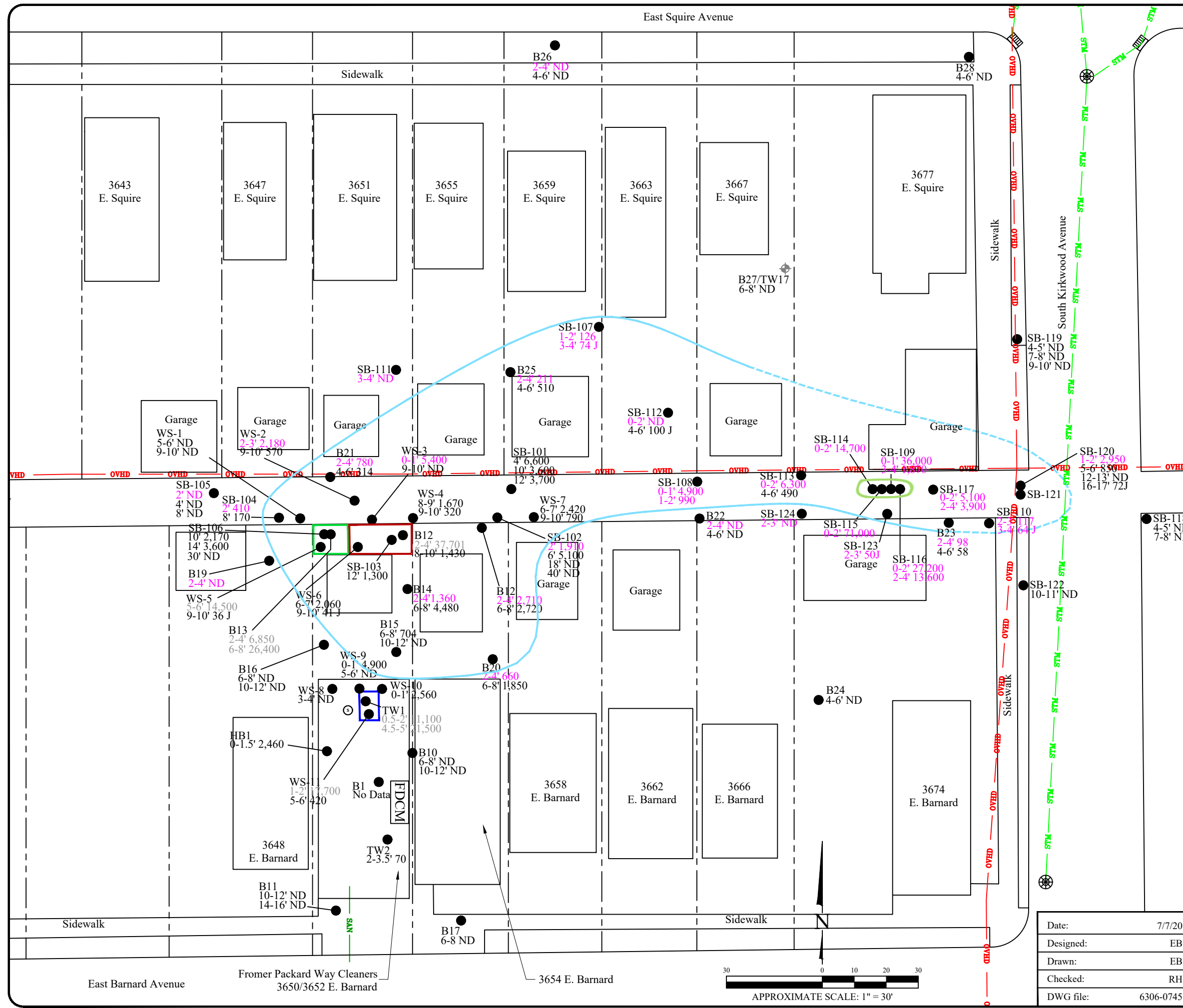
Notes:

Results reported in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)
 Samples analyzed according to EPA Method TO-15
 Vapor Risk Screening/Action Levels are calculated in accordance with WDNR Publication RR-800 and associated guidance documents
 IA = Indoor Air
 OA = Outdoor Air
 SSV = Sub-slab vapor

Bolded values are above detection limits

Bolded and Blue shaded concentrations exceed the applicable residential screening level

NE = Screening/action level not established



Legend

- Soil sample location
- - - Property boundary
- STM — Underground storm utility line
- SAN — Underground sanitary utility line
- OVHD — Over head electrical utility line
- ☐ Catch Basin
- ⊗ Manhole
- ⊙ Sump
- ☐ FDCM ☐ Former dry cleaning machine location
- 5 Soil PCE concentration (µg/kg) < 4 feet bgs exceeding MTG
- 5 Soil PCE concentration (µg/kg) > 4 feet bgs
- 5 Soil PCE concentration (µg/kg) excavated
- Excavation area to 5 feet bgs
- Excavation area to 6 feet bgs
- Excavation area to 8 feet bgs
- Extent of PCE in soil exceeding the Soil to Groundwater RCL (4.5 µg/kg)
- Extent of PCE in soil exceeding the Non-Industrial RCL (33,000 µg/kg)
- - - Dashed boundaries are inferred

Analytes	Soil Residual Containment Level (RCL)		
	Industrial	Non-Industrial	Soil to Groundwater
PCE	145,000	33,000	4.5

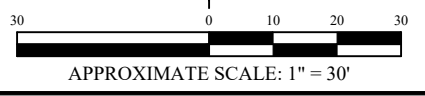
- Notes:
- Results reported in micrograms per kilogram = ug/kg
 - All soil greater than 4 feet bgs are compared to groundwater standards (all basement samples considered >4 feet bgs)
 - J = Estimated concentration above the method detection limit and below the reporting limit
 - PCE = Tetrachloroethene
 - MTG = Migration to groundwater
 - ND = PCE not detected
 - bgs = below ground surface
 - WS = Waste sample location (EnviroForensics)
 - SB = Soil boring location (EnviroForensics)
 - HB/TW = Hand auger location (Others)
 - B = Soil boring location (Others)

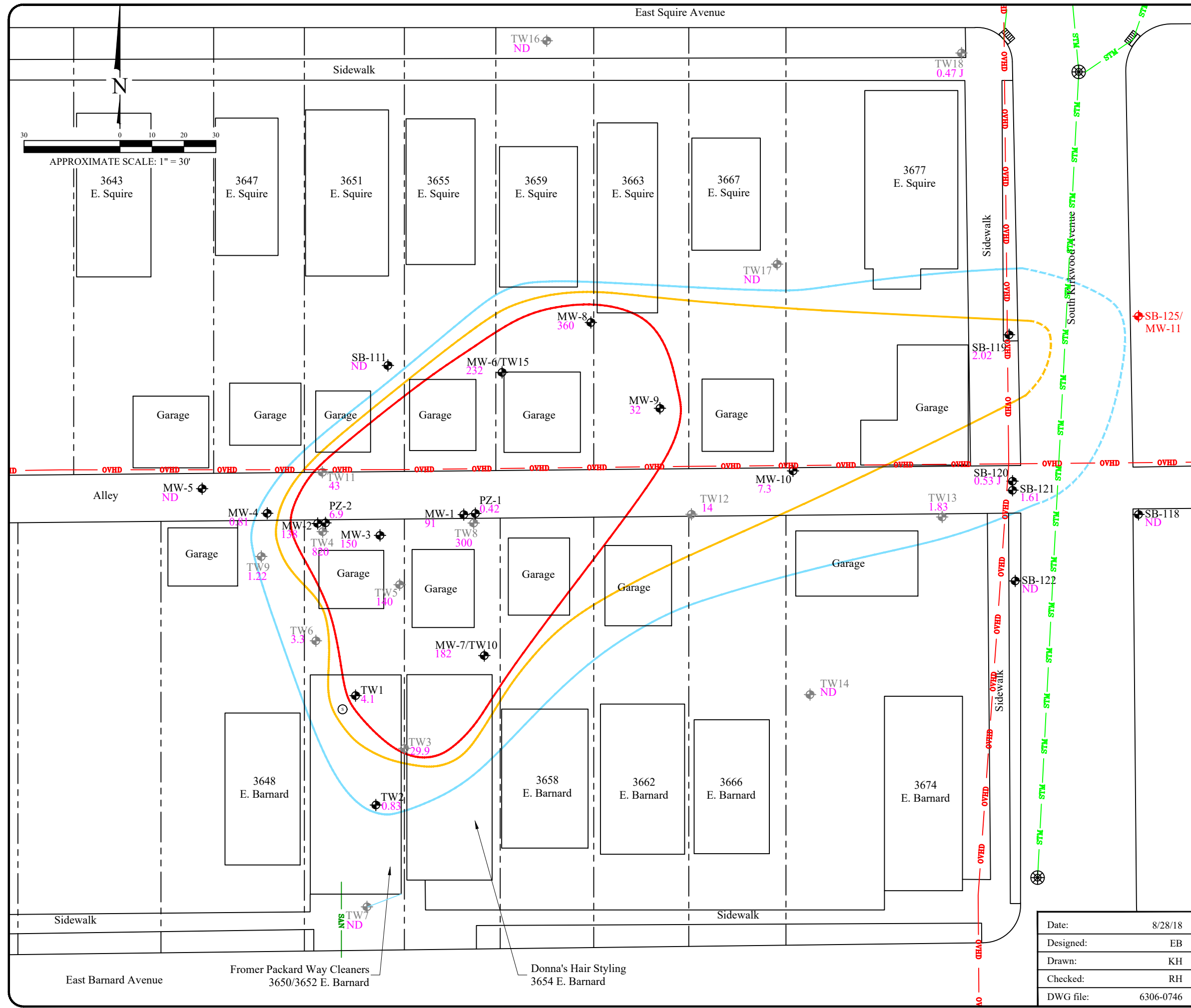
PCE ANALYTICAL RESULTS MAP

Former Packard Way Cleaners
3650/3652 East Barnard Avenue
Cudahy, Wisconsin

Date:	7/7/20	Figure	1
Designed:	EB	Project	6306
Drawn:	EB		
Checked:	RH		
DWG file:	6306-0745		

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Legend

- MW-1 Monitoring well location (EnviroForensics)
- TW16 Abandoned Temporary well location (By Others)
- 14 Groundwater PCE concentration (ug/L)
- Property boundary
- STM Underground storm utility line
- SAN Underground sanitary utility line
- OVHD Over head electrical utility line
- Catch Basin
- Manhole
- Sump
- FDCM Former dry cleaning machine location
- Extent of PCE in groundwater exceeding the Public Health Preventive Action Level (0.5 ug/L)
- Extent of PCE in groundwater exceeding the Public Health Enforcement Standard (5 ug/L)
- Extent of PCE in groundwater exceeding the Proposed Enforcement Standard (20 ug/L)
- Dashed boundaries are inferred
- Proposed monitoring well location

EXTENT OF PCE IN GROUNDWATER

Former Packard Way Cleaners
3650/3652 East Barnard Avenue
Cudahy, Wisconsin

Date:	8/28/18
Designed:	EB
Drawn:	KH
Checked:	RH
DWG file:	6306-0746

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Figure	2
Project	6306

East Barnard Avenue

Fromer Packard Way Cleaners
3650/3652 E. Barnard

Donna's Hair Styling
3654 E. Barnard



TABLE 1
COST ESTIMATE
 Former Packard Way Cleaners
 3650/3652 E. Barnard Avenue, Cudahy, Wisconsin; BRRS #02-41-515150

TASK	LABOR COSTS	SUB- CONTRACTOR COSTS	DIRECT COSTS	PHASE COST
Phase 100a				
Work Scoping Document	\$3,735.00	\$0.00	\$0.00	\$3,735.00
Phase 101a				
Field Investigations	\$7,590.00	\$5,022.72	\$1,360.50	\$13,973.22
Phase 101b				
Data Evaluation & Reporting	\$10,500.00	\$0.00	\$31.00	\$10,531.00
Phase 101c				
Project Coordination & Management	\$3,060.00	\$0.00	\$4.10	\$3,064.10
TOTAL	\$24,885.00	\$5,022.72	\$1,395.60	\$31,303.32

Project Title:
 Project Number/Name:
 Date:

Former Packard Way Cleaners
 6306
 9/14/2020; BRRTS #02-41-515150



Phase 100a Work Scoping Document						
Labor - Office/Reporting	Price	Unit	# Units		Subtotal	Task Total
Principal	\$200.00	hr			\$0.00	
Director	\$175.00	hr			\$0.00	
Sr Project Manager	\$155.00	hr			\$0.00	
Sr Professional	\$155.00	hr	23.0		\$3,565.00	
Project Manager	\$130.00	hr			\$0.00	
Project Professional	\$130.00	hr			\$0.00	
Staff Professional-Office	\$120.00	hr			\$0.00	
Staff Professional-Field	\$120.00	hr			\$0.00	
Field Professional	\$95.00	hr			\$0.00	
Drafting	\$85.00	hr	2.0		\$170.00	
Admin	\$65.00	hr			\$0.00	
Compliance Specialist					\$0.00	
Vapor Intrusion Specialist					\$0.00	
Health and Safety Specialist					\$0.00	
		hr			\$0.00	
					\$3,735.00	\$3,735.00
PHASE TOTAL						\$3,735.00

Project Title: Former Packard Way Cleaners
 Project Number/Name: 6306
 Date: 9/14/2020; BRRTS #02-41-515150



Phase 101a Field Investigations						
Labor						
	Price	Unit	# Units		Subtotal	Task Total
Sr Professional	\$155.00	hr	6.0		\$930.00	
Project Manager	\$130.00	hr			\$0.00	
Project Professional	\$130.00	hr	8.0		\$1,040.00	
Staff Professional-Office	\$120.00	hr	12.0		\$1,440.00	
Staff Professional-Field	\$120.00	hr			\$0.00	
Field Professional	\$95.00	hr	44.0		\$4,180.00	
					\$7,590.00	\$7,590.00
Contractors/Consultants						
	Price	Unit	# Units	Markup	Subtotal	Task Total
Utility Locate	\$350.00	LS	1.0	1.00	\$350.00	
Driller	\$1,700.00	LS	1.0	1.00	\$1,700.00	
Surveyor	\$500.00	LS	1.0	1.00	\$500.00	
Waste Disposal	\$200.00	LS	2.0	1.00	\$400.00	
					\$2,950.00	\$2,950.00
Contractor/Consultant - Laboratory						
	Price	Unit	# Units	Markup	Subtotal	
Soil VOC 8260 dry wt	\$71.93	ea	1.0	1.00	\$71.93	
Soil VOC 8260 dry wt QA/QC	\$71.93	ea		1.00	\$0.00	
GW VOC 8260	\$71.93	ea	1.0	1.00	\$71.93	
GW VOC 8260 QA/QC	\$71.93	ea	1.0	1.00	\$71.93	
Air TO-15 -- Soil Gas		ea		1.00	\$0.00	
Air TO-15 -- Sub-Slab	\$40.00	ea	6.0	1.00	\$240.00	
Air TO-15 -- Indoor Air	\$110.00	ea	6.0	1.00	\$660.00	
Air - Individual Certification	\$50.00	ea	9.0	1.00	\$450.00	
Air - Batch Certification	\$35.00	LS	3.0	1.00	\$105.00	
Trip Blank VOCs 8260	\$71.93	ea	1.0	1.00	\$71.93	
Air TO-15-Outdoor Air	\$110.00	ea	3.0	1.00	\$330.00	
					\$2,072.72	\$2,072.72
Direct Costs - Chargeable Equipment Expense						
	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Subtotal	
Vehicles	\$ 20.00		\$ 130.00	4	\$ 520.00	
Meters			\$ 165.00	0.5	\$ 82.50	
			\$ 175.00	0.5	\$ 87.50	
	\$ 10.00	\$ 1.00			\$ 10.00	
			\$ 30.00	\$ 0.50	\$ 15.00	
	\$ 15.00	\$ 1.00			\$ 15.00	
Other			\$ 170.00	0.5	\$ 85.00	
	\$ 4.50	3			\$ 13.50	
	\$ 75.00	2			\$ 150.00	
	\$ 40.00	2			\$ 80.00	
Safety			\$ 50.00	4	\$ 200.00	
	\$ 0.40	30			\$ 12.00	
Production	\$ 15.00	6			\$ 90.00	
					\$1,360.50	\$1,360.50
PHASE TOTAL						\$13,973.22

Project Title:
 Project Number/Name:
 Date:

Former Packard Way Cleaners
 6306
 9/14/2020; BRRTS #02-41-515150



Phase 101b Data Evaluation & Reporting							
	Labor - Office/Reporting	Price	Unit	# Units		Subtotal	Task Total
	Principal	\$200.00	hr			\$0.00	
	Director	\$175.00	hr			\$0.00	
	Sr Project Manager	\$155.00	hr			\$0.00	
	Sr Professional	\$155.00	hr	12.0		\$1,860.00	
	Project Manager	\$130.00	hr			\$0.00	
	Project Professional	\$130.00	hr	40.0		\$5,200.00	
	Staff Professional-Office	\$120.00	hr	8.0		\$960.00	
	Staff Professional-Field	\$120.00	hr			\$0.00	
	Field Professional	\$95.00	hr	8.0		\$760.00	
	Drafting	\$85.00	hr	12.0		\$1,020.00	
	Admin	\$65.00	hr	2.0		\$130.00	
	Vapor Intrusion Specialist	\$155.00	hr	2.0		\$310.00	
	Health and Safety Specialist	\$130.00	hr	2.0		\$260.00	
			hr			\$0.00	
						\$10,500.00	\$10,500.00
	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Subtotal	
Production	1 Inch Binder	\$ 9.00					
	2 Inch Binder	\$ 12.00					
	3 Inch Binder	\$ 15.00					
	4 Inch Binder	\$ 22.00					
	Binder Tabs (Set of 8)	\$ 5.00					
	Color Copies	\$ 0.40	40			\$ 16.00	
	B/W Copies	\$ 0.25					
	Document - Format/Sending	\$ 15.00	1			\$ 15.00	
	Report CD Copy	\$ 5.00					
						\$31.00	\$31.00
PHASE TOTAL							\$10,531.00

Project Title:
 Project Number/Name:
 Date:

Former Packard Way Cleaners
 6306
 9/14/2020; BRRTS #02-41-515150



Phase 101c Project Coordination & Management							
Labor - Office/Reporting		Price	Unit	# Units		Subtotal	Task Total
	Principal	\$200.00	hr			\$0.00	
	Director	\$175.00	hr			\$0.00	
	Sr Project Manager	\$155.00	hr			\$0.00	
	Sr Professional	\$155.00	hr	8.0		\$1,240.00	
	Project Manager	\$130.00	hr	14.0		\$1,820.00	
	Project Professional	\$130.00	hr			\$0.00	
	Staff Professional-Office	\$120.00	hr			\$0.00	
	Staff Professional-Field	\$120.00	hr			\$0.00	
	Field Professional	\$95.00	hr			\$0.00	
	Drafting	\$85.00	hr			\$0.00	
	Admin	\$65.00	hr			\$0.00	
	Compliance Specialist					\$0.00	
	Vapor Intrusion Specialist					\$0.00	
	Health and Safety Specialist					\$0.00	
			hr			\$0.00	
						\$3,060.00	\$3,060.00
Direct Costs - Chargeable Equipment Expense		Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Subtotal	
Production	1 Inch Binder	\$ 9.00					
	2 Inch Binder	\$ 12.00					
	3 Inch Binder	\$ 15.00					
	4 Inch Binder	\$ 22.00					
	Binder Tabs (Set of 8)	\$ 5.00					
	Color Copies	\$ 0.40	4			\$ 1.60	
	B/W Copies	\$ 0.25	10			\$ 2.50	
	Document - Format/Sending	\$ 15.00					
	Report CD Copy	\$ 5.00					
						\$4.10	\$4.10
PHASE TOTAL							\$3,064.10