

Hnat, John J - DNR

---

**From:** Ken Ebbott <kebbott@fehr-graham.com>  
**Sent:** Monday, November 05, 2018 3:57 PM  
**To:** Ellenbecker, Michael J - DNR  
**Cc:** Ken Ebbott; Hnat, John J - DNR; 'Tom Schafer'  
**Subject:** Concrete Disposal at Former Drycleaning Site, Shorewood Queensway Cleaners BRRTS # 02-41-552089  
**Attachments:** Table 2 TCLP and Total VOC Results.pdf; Conc and Asph Volumes.pdf; 2018\_1023 17-1124 F4A - PROP CONC DISP.pdf

Michael,

### Introduction

I have sent a Remedial Action Plan to J. Hnat of the DNR SE District for his review and approval / input, along with the DNR review fees. It is for a drycleaning facility that has closed, and there are high levels of PCE in the soil and groundwater under the building and off-site to the north in an alley.

J. Hnat recommended I get in touch with you for clarification on the handling and disposal of the concrete / asphalt materials at the Property. We plan to demolish the building, then excavate and landfill as much contaminant mass as possible, followed by groundwater monitoring.

J. Hnat recommended I ask you to review and approve the plan for the concrete and asphalt handling during this project. The treated soil and the direct excavation and landfill soil approvals will be provided by J. Hnat separately.

### Objective

I need to obtain landfill approval for three waste streams- Concrete, untreated soil, and treated soil. Approval for the proposed handling of the concrete and asphalt is being pursued in this submittal. As you know, the landfill will require a letter indicating DNR approval of the material.

### Treatment Plan

The plan for this cleanup is very similar to the Bay Towel Site in Green Bay that we did in late 2016 / early 2017, if you recall. At that site, we used Fenton's Reagent and BAM to mix with soil using a backhoe, and the work was stopped due to freezing conditions. Upon spring thaw, we were able to finish mixing and discard the soil. We plan to do a similar process at this site in Shorewood using Fenton's and BAM-but I do NOT want to repeat generating even 30 CY bricks of frozen treated soil, so we will get this set up and begin active remediation in the spring of 2019.

Here is an excerpt related to the concrete handling from the Remedial Action Plan that has been sent to J Hnat in July and is in review:

"As noted in Section 2.1.2 above, three waste streams and the quantities estimated for removal to the landfill include (Table 3):

- Concrete containing any detectable level of VOCs, 151 tons to the landfill. An additional 235 tons of concrete from both the 4300 Oakland address and the 1808 Marion Street residential structure demolition, plus 24 tons of asphalt are anticipated to be removed and taken to an off-site recycling facility. The concrete and asphalt quantity calculations are shown in Appendix E. "

### Data

Five samples of the concrete from the 4300 Oakland Avenue property have been obtained, from borings A, B, C, E, and M. The samples were obtained during geoprobe site characterization drilling using a hammer drill to pulverize the concrete, then 10 ml was retained in a syringe and placed in methanol for preservation, per lab procedures. Total VOCs was analyzed.

Four of these concrete samples, from borings A, C, E, and M, were also retained for analysis of TCLP VOCs, which involved sampling a 4-ounce jar of the pulverized concrete for the laboratory to conduct the TCLP extraction, prior to analysis for VOCs. A copy of the laboratory analytical reports is attached for these samples.

Attached is a table showing the laboratory analytical results for the totals and the TCLP results, and the attached Figure 4A shows the sample locations, concrete total VOC results, and the excavation limits for the proposed dig in Plan View. It documents that all the soil TCLP results are below the TCLP criteria for hazardous waste characterization, and total VOC levels are far below direct contact threshold values.

#### Volume of Material

Also attached is a table showing the calculated volume of concrete and asphalt from the planned remedial excavation, and how we propose to handle the materials. Although the excavation of contaminated soil will be limited to the 4300 Oakland Avenue Property and the alley to the immediate north, we will demolish the building on the adjacent parcel (1808 Marion Street) to help with redevelopment.

Due to the presence of PCE in the concrete floor at all tested locations, and the passing of the TCLP test for all analyzed concrete floor samples, we proposed to landfill the entire building concrete floor. The concrete floor of the entire 4300 Oakland Avenue former drycleaner building will be landfilled, as well as the concrete pad located immediately east of the building. In addition, there is a partial basement we anticipate has a concrete floor at a depth of approximately five feet below grade, and that concrete will also be landfilled. A total of 76 cubic yards, or 151 tons of concrete, will be hauled to a licensed subtitle D landfill in Wisconsin for proper disposal.

Concrete from the rest of the building demolition (vertical footings, small area of concrete from the boiler room) will be recycled - that total is 110 tons.

Asphalt outside the building will also be recycled.

Off-site concrete will also be recycled- including the demolition of the residence to the east at 1808 Marion Street (119 tons), and the surficial concrete around well MW-5 to the north in the alley (6 tons).

#### Justification

The total VOC and TCLP results from the areas where drycleaning solvent was handled extensively for the entire duration of the 45-plus years of drycleaning operations is documented in the sample results from borings A, B, and E. The results indicate PCE is present, but not above direct contact threshold values, and the TCLP results indicate the concrete is not characteristically hazardous. Based on these results, we feel sampling has been performed at the most likely places for detection of hazardous levels of PCE in concrete, and none is present.

To be conservative, we propose to landfill the entire building floor, even in areas where PCE was not likely handled, and the concrete pad immediately outside to the east of the building, as there may have been delivery or drum storage of PCE in this rear portion of the building.

Concrete from the vertical building footing is not expected to contain PCE, nor is concrete from the purely residential building to the east at 1808 Marion Street. We don't believe sampling is needed for these materials.

Similarly, off-site to the north, removed concrete near well MW-5 will not be tested, as the source of contamination at well 5 is from horizontal groundwater migration, and there is no surface source of PCE that would have been present in this area that would contaminated the surficial concrete in the alley.

#### Approval

Please provide approval for the proposed handling of the concrete from this remedial action, with landfill disposal at a subtitle D facility, so we can get landfill approval and proceed with the project arrangements.

If further sampling is requested to document proper handling of the materials we propose to recycle, we can pursue samples during the remedial action, with temporary stockpiling of concrete or asphalt pending receipt of results. The important approval needed at this time is the ability to landfill concrete, as waste profiles will need WDNR approval to be finalized.

Let me know if you have any questions or comments on this information, or need further details.

Thanks,

Ken

KENDRICK EBBOTT, PG | Branch Manager  
Fehr Graham | Engineering & Environmental

909 North 8<sup>th</sup> Street, Suite 101  
Sheboygan, Wisconsin 53081  
P: 920.453.0700  
C: 920.980.4231  
[fehr-graham.com](http://fehr-graham.com)



**Table 2**  
**Soil Analytical Results: Total and TCLP Values for VOCs**  
 Shorewood Queensway Cleaners  
 4300 N. Oakland Ave., Shorewood, WI 53211  
 BRRISH 02-41-552089

Sample ID	Date	Depth	Description	Saturated (S) or Unsaturated (U)	PID Reading	Notes	PRE-EXCAVATION RESULTS FROM BORINGS																	
							Hazardous Characteristic = TCLP Regulatory Level (ug/L)	Land Disposal Restriction Level = sum of PCE + TCE + VC (ug/kg)	Contained Out Values (Ind Direct Contact Levels) (ug/kg)	Non-Ind Direct Contact Level (ug/kg)	A		B		C		E		H		J		M	
											1/16/18	1/16/18	1/15/18	1/16/18	1/16/18	1/15/18	1/16/18	1/15/18	1/16/18	1/15/18	1/16/18	1/15/18		
											0-0.5'	2-3'	2-3'	0-0.5'	8-9'	0-0.5'	8-9'	7'	0-0.5'	5-6'	0-0.5'	5-6'		
											CONC.	CLAY	CLAY	CONC.	CLAY	CONC.	CLAY	CLAY	CONC.	CLAY	CONC.	CLAY		
TOTAL Tetrachloroethene (PCE)	ug/kg	60,000	153,000	33,000	542	45,800	69,900	517	46,100	2,120	5,160	27,300	402	81,000										
TCLP Tetrachloroethene (PCE)	ug/L	700			13	770	1,100	5.9 J	140	29	39	520	<5.0	850										
TOTAL Trichloroethene (TCE)	ug/kg		8810	1,300	<25.0	<200	<250	<25.0	<200	<25.0	129	<132	<25.0	<500										
TCLP Trichloroethene (TCE)	ug/L	500			<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	3.6 J	<3.3	<3.3	<6.6										
TOTAL Vinyl Chloride	ug/kg		2080	67	<25.0	<200	<250	<25.0	<200	<25.0	<25.0	<25.0	<25.0	<500										
TCLP Vinyl Chloride	ug/L	200			<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<3.5										
TCLP Benzene	ug/L	500			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10										
TCLP Carbon Tetrachloride	ug/L	500			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10										
TCLP Chlorobenzene	ug/L	100,000			<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<10										
TCLP Chloroform	ug/L	6,000			<25	<25	<25	<5.0	<5.0	<5.0	<5.0	<5.0	<25	<50										
TCLP 1,2-Dichloroethane	ug/L	500			<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<3.4										
TCLP 1,1-Dichloroethene	ug/L	700			<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<8.2										
TCLP 2-Butanone (MEK)	ug/L	200,000			<30	<30	<30	<30	<30	47 J	<30	<30	<30	<60										

**Exceedance Highlights:**  
 BOLD Red font indicates individual or cumulative DC RCL  
 \*B1\*: Cumulative exceedance (HI > 1), even though no  
*Italic Red font indicates GW RCL Exceedance per DNR*

**Notes:**  
 BOLD = Exceeds Regulatory Levels  
 NS = No standard established  
 -- = Not analyzed for parameter  
 NR = Not Reported  
 RCL = Residual Contaminant Level  
 DC = Direct Contact  
 Landfill = Can landfill directly upon excavation  
 Treat = Requires treatment and retesting prior to landfill disposal

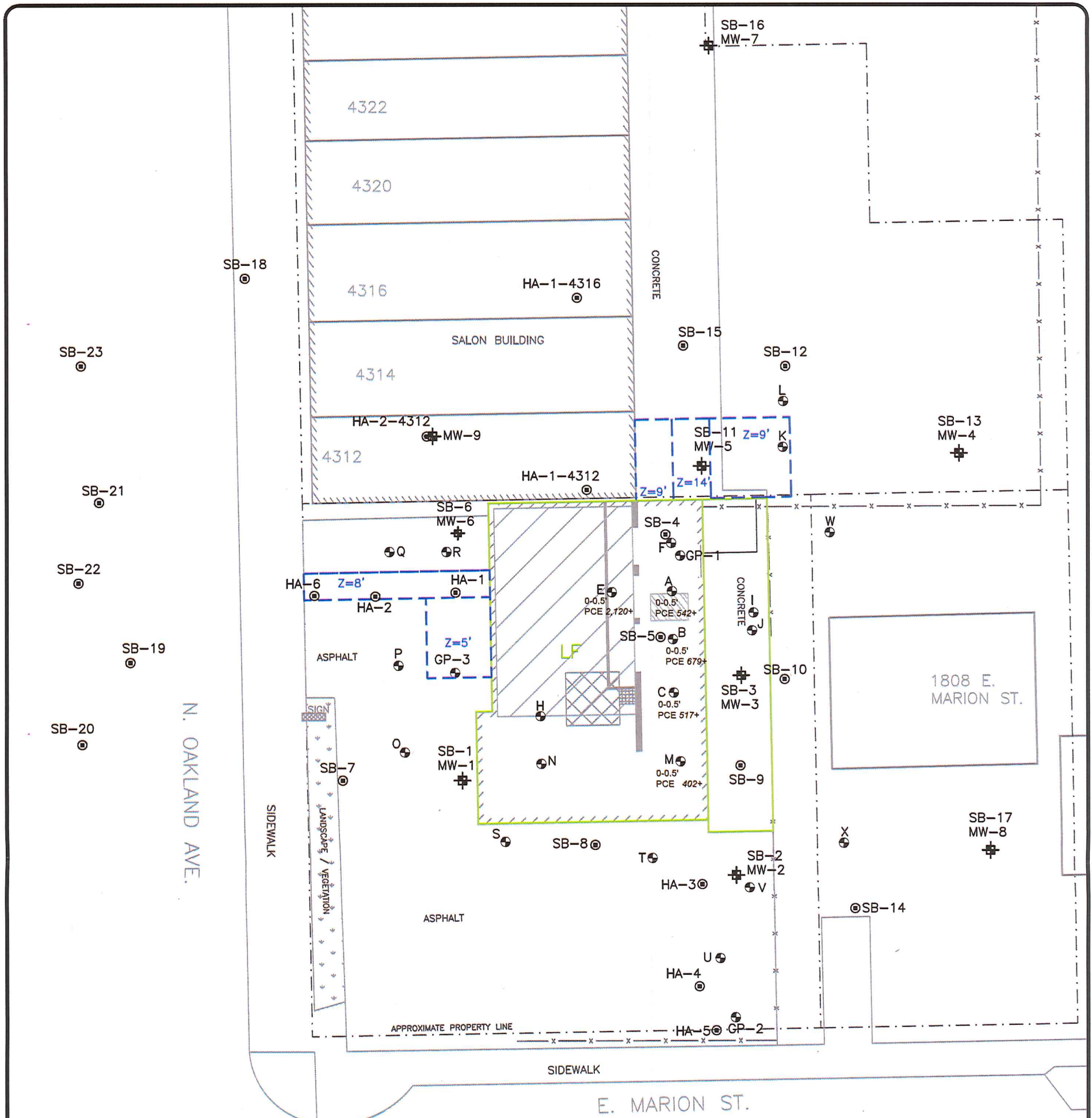
Shorewood Queensway Cleaners, 4300 Oakland Avenue, Shorewood  
**CONCRETE AND ASPHALT LANDFILL AND RECYCLE**

<b>CONCRETE FLOORS AND FORMER BASEMENT FLOOR</b>								
Borings	Map Area	Handling	E/W (ft)	N/S (ft)	Depth (ft)	Cubic Yards	Tons	Total (tons)
A, B, C, E, M	Building Floor	LANDFILL	40	58	0.5	43	86	151
Outside East Pad		LANDFILL	12	62	0.5	14	28	
Basement Floor after use for treated soil	NW	LANDFILL	25	40	0.5	19	37	
							<b>TOTAL CONC LANDFILL (tons):</b>	<b>151</b>

<b>CONCRETE FOOTINGS, 1808 Marion, and Alley to North</b>								
Borings	Map Area	Handling	E/W (ft)	N/S (ft)	Depth (ft)	Cubic Yards	Tons	Total (tons)
Orig Bldg Footprint	NW Bldg	Recycle	50	90	5	26	52	116
Boiler Room Footprint	Center	Recycle	20	22	3	5	9	
Rest of Bldg Footprint		Recycle	57	75	5	24	49	
Alley W to building basement wall	N of site in Alley	Recycle	10	15	0.5	3	6	
1808 Marion Basement		Recycle	41	30	0.5	23	46	119
1808 Basement Walls		Recycle	1	142	7	37	74	
							<b>TOTAL CONC RECYCLE (tons):</b>	<b>235</b>

<b>ASPHALT 1808 Marion and Alley to North</b>								
Alley W to building basement wall	N of site in Alley	Recycle	5	15	0.5	1	3	11
Alley W to building basement wall	N of site in Alley	Recycle	15	15	0.5	4	8	
<b>ASPHALT 4300 Oakland</b>								
Utility line path to Oakland	HA-1 to HA-6	Recycle	35	5	0.5	3	6	13
W of bldg	GP-3	Recycle	12	15	0.5	3	7	

<b>TOTAL ASPHALT RECYCLE (tons)</b>	<b>24</b>
-------------------------------------	-----------

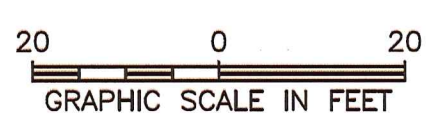
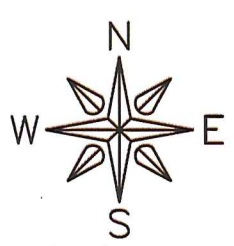


### LEGEND

- ⊙ SOIL BORING (ENVIROFORENSICS)
- ⊕ MONITORING WELL / SOIL BORING (ENVIROFORENSICS)
- ⊕ SOIL BORING (ALPHA TERRA ~ FEHR GRAHAM)
- x- FENCE LINE
- LF CONCRETE TO BE LANDFILLED UPON REMOVAL
- Z=9' EXCAVATION LIMITS BEYOND BUILDING FOOTPRINT: CONCRETE/ASPHALT TO BE RECYCLED
- FORMER DRY CLEANING MACHINE
- BASEMENT
- BOILER ROOM
- SMOKE STACK

- 0-1' SAMPLE DEPTH
- PCE TETRACHLOROETHENE (ug/kg)
- TCE TRICHLOROETHENE (ug/kg)
- cis cis-1,2-DICHLOROETHENE (ug/kg)
- DCP 1,2-DICHLOROPROPANE (ug/kg)
- CF CHLOROFORM (ug/kg)
- ND NO DETECT
- ITALICS+* EXCEEDS GROUNDWATER PATHWAY RCL
- BOLD++** EXCEEDS NON-INDUSTRIAL DIRECT CONTACT (0-4') RCL
- ITALICS/BOLD++* EXCEEDS BOTH GW & DIRECT CONTACT RCL

NOTE: ALL SAMPLES ARE PULVERIZED CONCRETE AND ALL PASSED TCLP CRITERIA (NON-HAZARDOUS)



<b>FEHR GRAHAM</b> ENGINEERING & ENVIRONMENTAL SHOREWOOD QUEENSWAY CLEANERS 4300 N. OAKLAND AVE. SHOREWOOD, WI 53211 DRWN:MKH DATE:03/01/17 APPD:KE	ILLINOIS IOWA WISCONSIN	TITLE: <b>PROPOSED CONCRETE DISPOSAL &amp; CHEMISTRY</b> BRRTS: 02-41-552089 JOB NO.: 17-1124 PLOT DATE: 10/23/18
	FIGURE: <b>4A</b>	