

FID# 246100470  
BRTS# 02-46-560212

State of Wisconsin  
Department of Natural Resources  
dnr.wi.gov

### Notification For Hazardous Substance Discharge (Non-Emergency Only)

Form 4400-225 (05/12) Page 1 of 2

**Emergency Discharges / Spills should be reported via the 24-Hour Hotline: 1-800-943-0003**

**Notice: Hazardous substance discharges must be reported immediately** according to s. 292.11 Wis. Stats. Non-emergency hazardous substance discharges may be reported by telefaxing or e-mailing a completed report to the Department, or calling or visiting a Department office in person. If you choose to notify the Department by telefax or by email, you should use this form to be sure that all necessary information is included. However, use of this form is not mandatory. Under s. 292.99, Wis. Stats., the penalty for violating the reporting requirements of ch. 292 Wis. Stats., shall be no less than \$10 nor more than \$5000 for each violation. Each day of continued violation is a separate offense. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than program administration. However, information submitted on this form may also be made available to requesters under Wisconsin's Open Records Law (ss. 19.31 - 19.39, Wis. Stats.).

Confirmatory laboratory data should be included with this form, to assist the DNR in processing this Hazardous Substance Release Notification.

Complete this form. **TYPE or PRINT LEGIBLY.** NOTIFY appropriate DNR region (see next page) **IMMEDIATELY** upon discovery of a potential release from (check one):

- Underground Petroleum Storage Tank System (additional information may be required for Item 6 below)
- Aboveground Petroleum Storage Tank System
- Dry Cleaner Facility
- Other - Describe: \_\_\_\_\_

ATTN DNR: **R & R Program Associate Vicky Stovall** Date DNR Notified: **3/15/2013**

#### 1. Discharge Reported By

Name <b>Tom Sweet</b>	Firm <b>MORAINE ENVIRONMENTAL, INC.</b>	Phone No. (include area code) <b>262-377-9060</b>
Mailing Address <b>1402 7th Avenue, Grafton, WI 53024-2350</b>	Email Address <b>moraine@rfecorp.com</b>	

#### 2. Site Information

Name of site at which discharge occurred. Include local name of site/business, not responsible party name, unless a residence/vacant property.  
**Quality Cleaners**

Location: Include street address, not P.O. Box. If no street address, describe as precisely as possible, i.e., 1/4 mile NW of CTHs 60 & 123 on E side of CTH 60.  
**1226 11th Avenue**

Municipality: (City, Village, Township) Specify municipality in which the site is located, not mailing address/city.  
**Grafton, Wisconsin 53024**

County: <b>Ozaukee</b>	Legal Description: <b>SW 1/4 NW 1/4 Sec 24 Tn 10N Range 21</b>	WTM: <input checked="" type="checkbox"/> E <input type="checkbox"/> W <input type="checkbox"/> X
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#### 3. Responsible Party (RP) and/or RP Representative

Responsible Party Name: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary.

**Barbara + Gerald Kuehl**

- Reported in compliance with s. 292.11(2), Wis. Stats., by a local government exempt from liability under s. 292.11(9)(e), Wis. Stats.
- For more information see <http://dnr.wi.gov/org/aw/r/r/lu/liability.htm>.

Contact Person Name (if different) <b>SAME</b>	Phone Number <b>262-377-6260</b>	Email Address Home Phone <b>262-675-2989</b>
Mailing Address <b>5350 Cascade Drive</b>	City <b>West Bend</b>	State ZIP Code <b>WI 53095</b>

Property owner if Different From RP: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary.

Contact Person Name (if different)	Phone Number	Email Address	
Mailing Address	City	State	ZIP Code

(continued)

FID# 246166470  
BRYTS# 02-46-560212

State of Wisconsin  
Department of Natural Resources  
dnr.wi.gov

### Notification For Hazardous Substance Discharge (Non-Emergency Only)

Form 4400-225 (05/12) Page 2 of 2

#### 4. Hazardous Substance Information

Identify hazardous substance discharged (check all that apply):

- VOC's
- PAH's
- Metals (specify): \_\_\_\_\_
- Arsenic
- Chromium
- Cyanide
- Lead
- PCB's
- Diesel
- Fuel Oil
- Gasoline
- Hydraulic Oil
- Jet Fuel
- Mineral Oil
- Waste Oil
- Petroleum-Unknown Type
- PERC (Dry Cleaners)
- RCRA Hazardous Waste
- Leachate
- Fertilizer
- Pesticide/Herbicide/Insecticide(s)
- Other (specify): \_\_\_\_\_
- Unknown

#### 5. Impacts to the Environment Information

Enter "K" for known/confirmed or "P" for potential for all that apply.

- Air Contamination
- Co-Contamination (Petroleum & Non-Petroleum)
- Contamination Within 1 Meter of Bedrock
- Contaminated Private Well
- Contaminated Public Well
- Contamination in Fractured Bedrock
- Sanitary Sewer Contamination
- Contamination in Right of Way
- Fire Explosion Threat
- Free Product
- Groundwater Contamination
- Off-Site Contamination
- Other (specify): \_\_\_\_\_
- Soil Contamination
- Storm Sewer Contamination
- Surface Water Contamination
- Within 100 ft of Private Well
- Within 1000 ft of Public Well

Contamination was discovered as a result of:

- Tank closure assessment
- Site assessment
- Other - Describe: \_\_\_\_\_
- Date: \_\_\_\_\_ Date: 2/21/2013 Date: \_\_\_\_\_

Lab results:  Lab results will be faxed upon receipt  Lab results are attached

Additional Comments: Include a brief description of immediate actions taken to halt the release and contain or cleanup hazardous substances that have been discharged.

*None. Additional Interior and Exterior Boring (2 walls Estair) to complete Seeping information*

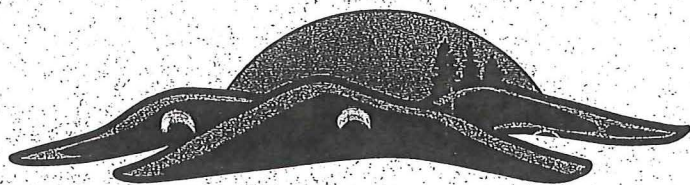
#### 6. Federal Energy Act Requirements (Section 9002(d) of the Solid Waste Disposal Act (SWDA))

For all confirmed releases from UST's occurring after 9/30/2007 please provide the following information:

- |   |  |  |   |
|---|--|--|---|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> Tank</li> <li><input type="checkbox"/> Piping</li> <li><input type="checkbox"/> Dispenser</li> <li><input type="checkbox"/> Submersible Turbine Pump</li> <li><input type="checkbox"/> Delivery Problem</li> <li><input type="checkbox"/> Other (specify): _____</li> <li><input type="checkbox"/> Does not apply.</li> </ul> | <p style="text-align: center;"><b>Source</b></p> | <ul style="list-style-type: none"> <li><input type="checkbox"/> Spill</li> <li><input type="checkbox"/> Overfill</li> <li><input type="checkbox"/> Corrosion</li> <li><input type="checkbox"/> Physical or Mechanical Damage</li> <li><input type="checkbox"/> Installation Problem</li> <li><input type="checkbox"/> Other (does not fit any of above)</li> <li><input type="checkbox"/> Unknown</li> </ul> | <p style="text-align: center;"><b>Cause</b></p> |
|---|--|--|---|

Contact information to report non-emergency releases in DNR's five regions are as follows:

- Northeast Region (FAX: 920-662-5197); Attention -- R&R Program Associate: DNRRRNER@wisconsin.gov**  
Brown, Calumet, Door, Fond du Lac (except City of Waupun - see South Central Region), Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, Sheboygan, Waupaca, Waushara, Winnebago counties
- Northern Region (FAX: 715-623-6773); Attention -- R&R Program Associate: DNRRRNOR@wisconsin.gov**  
Ashland, Barron, Bayfield, Burnett, Douglas, Forest, Florence, Iron, Langlade, Lincoln, Oneida, Polk, Price, Rusk, Sawyer, Taylor, Vilas, Washburn counties
- South Central Region (FAX: 608-273-5610); Attention -- R&R Program Associate: DNRRRSCR@wisconsin.gov**  
Columbia, Dane, Dodge, Fond du Lac (City of Waupun only), Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, Sauk, Walworth counties
- Southeast Region (FAX: 414-263-8550); Attention -- R&R Program Associate: DNRRRSER@wisconsin.gov**  
Kenosha, Milwaukee, Ozaukee, Racine, Washington, Waukesha counties
- West Central Region (FAX: 715-839-6076); Attention -- R&R Program Associate: DNRRRWCR@wisconsin.gov**  
Adams, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, Jackson, Juneau, LaCrosse, Marathon, Monroe, Pepin, Pierce, Portage, St. Croix, Trempealeau, Vernon, Wood counties



Moraine Environmental, Inc.

Design • Engineer • Construct

M/S

March 11, 2013

Project Reference No. 5701/5718

Joel Dykstra  
Port Washington State Bank  
206 N. Franklin Street  
Port Washington, WI 53074

**RE: Transaction Screen Assessment  
and Initial Subsurface Investigation Report  
Quality Cleaners, 1226 11<sup>th</sup> Avenue  
Grafton, WI 53024**

**COPY**

Dear Joel:

Moraine Environmental, Inc. (Moraine) has prepared this letter report to summarize the findings of our Transaction Screen Assessment (TSA) and Preliminary Subsurface Investigation conducted at the above referenced building and property. One copy of this report has previously been emailed to your office and the office of Bruk Thompson, the real estate broker for the seller. The TSA was conducted in substantial conformance with the American Society for Testing and Materials (ASTM) Standard E 1528 - 06 "Standard Practice for Environmental Site Assessments: Transaction Screen Process". In addition, the Phase II Subsurface Investigation has been conducted with generally – accepted industry standards of practice and consisting of a scope of work that would be considered reasonable and sufficient to identify the presence and nature of a release.

The overall objective of the TSA was to determine if Potential Environmental Concerns (PEC's) exist in connection with the property. PEC's, as defined by ASTM, include the presence or likely presence of hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release. This includes any release of any hazardous substances or petroleum products into structures on the property or into the soil, groundwater or surface water of the property. The term includes hazardous substances and petroleum products even under conditions in compliance with the law. This term is not intended to include de minimis conditions that do not generally present a material risk to human health or the environment and would not be the subject of an enforcement action if brought to the attention of the appropriate authorities. Conditions determined to be de minimis are not potential environmental concerns.

In general, the TSA process included the following:

- A review of regulatory environmental database records.



- An inspection of the subject property and surrounding properties.
- Interview of the current property owner and completion of an environmental questionnaire by the owner.
- Preparation of this letter report.

### **Introduction and Background**

The building is occupied with a dry cleaner, beauty salon and barber shop. The building is believed to have been constructed in the 1950s and was first occupied by the Village of Grafton post office.

Mr. Bruk Thompson, listing agent, accompanied Mr. Zoy Begos of Moraine during the site reconnaissance on February 13, 2013. Mr. Gerald Kuehl the owner of Quality Cleaners business, building, and property completed an environmental questionnaire.

### **Area and Site Description**

Land uses in the immediate area of the subject property include:

- Commercial property is to the north
- Commercial properties are to the south
- Parking lot and commercial properties to the east.
- 11<sup>th</sup> Avenue is to the west.

The subject property is accessible from 11<sup>th</sup> Avenue along a concrete-paved driveway on the south side of the subject site. **Figure 1** presents a color aerial photograph of the facility and surrounding area.

### **Building Inspection, Interviews and Transaction Screen Questionnaire**

#### **Exterior Observations**

The building is situated in a commercial and residential area of the Village of Grafton. The building is situated on the northwest portion of the site with asphalt/concrete surface to the south and east of the building.

The facility has natural gas and electric provided by WE Energies Municipal water and sewerage service is provided by the Village of Grafton.

No evidence of drums, tanks or other containers that could contain petroleum products or hazardous substances was noted in the area surrounding the building.

No discolored surface areas or stressed vegetation were noted during inspection of the exterior grounds. No pits, ponds, lagoons or containers that could hold petroleum products or hazardous substances were observed on the grounds, or along property lines of adjoining properties.

### **Interior Observations**

As previously stated, the subject site is occupied by a barber shop, beauty shop and dry cleaner.

The dry cleaner has one single unit used for cleaning/drying. Associated solvent tanks/drums containing tetrachloroethene (PCE) are situated along the south east wall (corner) of the building. Active dry cleaning operations have not occurred on the property for the past 6+ months. However, the owner did indicate that dry cleaning operations had been conducted on-site for the past approximate 25 years.

There were no potential environmental concerns observed within the two other business units occupied by the barber shop or beauty salon.

The ASTM Environmental Questionnaire for the subject property, which was completed by Mr. Gerald Kuehl, is provided in **Appendix A**. There were items of environmental concern identified in the Environmental Questionnaire, mainly associated with the past dry cleaner operations.

Based on the Environmental Questionnaire and site observations, there are PEC's identified in connection with the subject property.

### **Environmental Database Records**

Moraine utilized the services of the ERS – Environmental Record Search (ERS) to provide environmental database records from Federal and State regulatory agencies for the subject property and sites within a maximum one-mile radius of the subject site. A copy of the ERS report is provided in **Appendix B**. Detailed definitions are also included in the appendix.

ERS did not identify the subject site address within any of the database listings. Other nearby locations with environmental listings include the following:

Grafton Dry Cleaners/OL Tyme, 1229 11<sup>th</sup> Avenue, formally located across the street to the west, is listed as having a Surface Control, Environmental Repair Program (ERP) and Solid and Hazardous Waste Management Generator (SHWIMS) site located approximately 0.02 miles west of the subject site. The WDNR BRRTS website indicates this site is a "closed" ERP site with chlorinated VOC soil impacts and potential groundwater impacts. This site is not listed on the GIS database for residual soil or groundwater impacts. Based on its "closed" ERP status with no groundwater

impacts confirmed, this site likely does not pose an environmental concern to the subject site.

Silk Screen Specialists, 1231 11<sup>th</sup> Avenue is listed as a SHWIMS site located approximately 0.04 miles northwest of the subject site.

Blanks Truck Repair, 1302 11<sup>th</sup> Avenue is listed as an Underground Storage Tank (UST) site located approximately 0.05 miles south of the subject site. Based on its distance this site likely does not pose an environmental concern to the subject site.

Mobil Oil, 1117 Washington Street is listed as a Leaking Underground Storage Tank (LUST), UST, Aboveground Storage Tank Site (AST) and Surface Controls site located approximately 0.06 miles north of the subject site. Based on its distance and "Closed" LUST status, this site likely does not pose an environmental concern to the subject site.

### **Limited Subsurface Investigation**

Based on the fact that the subject site has been an active dry cleaner for the past approximate 25 years, Moraine recommended a limited subsurface investigation to determine if a release has ever occurred associated with the dry cleaning operations.

On February 21, 2013, Moraine's subcontractor, Horizon Construction & Exploration (Horizon) advanced three soil borings (B-1 thru B-3) ranging in depth from 2 feet below ground surface (bgs) to 6 feet bgs. A site layout depicting the soil boring locations is included in **Appendix C**.

Soil classification information was included on each soil boring log (**Appendix D**). Each soil sample was field-screened for volatile organic compounds (VOCs) utilizing a Photoionization detector instrument (PID). PID readings are noted on each soil boring log. Groundwater was not encountered in any of the soil borings conducted. Bedrock was encountered at approximately 6 feet bgs. Upon completion of the soil borings, each boring was abandoned with bentonite chips to seal the boring.

Select soil samples were submitted to Pace Analytical (PACE) for analysis of VOCs. A copy of the analytical report is included in **Appendix E**. The soil sample analytical results indicated that tetrachloroethene (PCE) was detected at concentrations of 68,700 micrograms per kilogram (ug/kg) within B-1 and a low level result of 63.0J ug/kg within boring B-2. There were no other concentrations of VOCs within the soil samples collected from B-1 through B-3. The "J" indicates the concentration is just above the analytical instruments detection level and cannot be 100% confirmed, due to the low level concentration.

The WDNR's Residual Contaminant Level (RCL) for protection of the groundwater pathway for PCE is **4.5 ug/kg** in the soil. Thus, the sub slab soil analysis result of **68,700 ug/kg**, significantly exceeds the WDNR established standard.

## Conclusions and Recommendations

In summary, the past use of the subject site as a dry cleaner is a potential environmental concern.

Therefore, a limited subsurface investigation was conducted on February 21, 2013, to determine if soil and/or groundwater quality had been adversely affected by any potential dry cleaner solvent release.

The analytical results indicate concentrations of PCE within the subsurface soil beneath the building and potentially within the bedrock and groundwater to the rear (east) of the building. Bedrock was encountered at approximately 6 feet bgs. Groundwater was not encountered within the top 6 feet of each soil boring advanced, thus it cannot be determined from the information collected to date, if groundwater has been affected.

Therefore, based on the above confirmation of environmental release, Moraine has identified one Potential Environmental Concern. **It is the opinion of the Environmental Professional preparing this report, that additional investigation is warranted and required.**

**Moraine recommends that the release (PCE within subsurface soil) be reported to the Wisconsin Department of Natural Resources (WDNR) by the property owner.** Reporting of this release is a requirement of the State of Wisconsin spills statute. Moraine can do the reporting to the WDNR with the owners permission.

The property owner will have to investigate the extent of the tetrachloroethene (PCE) release to the soils beneath the building. In addition, since fractured bedrock is located six feet below grade, drilling of the bedrock to determine if groundwater is impacted by the release will be required. Estimated costs to complete the follow up investigation to determine the extent of soil impacts and if groundwater has been impacted are as follows:

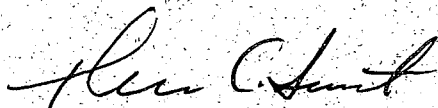
- Interior Sub Slab Building Soils Investigation.....\$2,500.00  
(Seven Cored borings to 6' below ground surface)
- Exterior Bedrock Drilling.....\$7,000.00  
(Three bedrock borings converted to groundwater monitoring wells)
- Laboratory Analysis for the above.....\$1,275.00  
Soils – Fourteen soil samples (two per boring) @ \$75.00 each (\$1,050.00)  
Groundwater – Three groundwater samples @ \$75.00 each (\$225.00)
- Prepare Summary Report with CADD maps, analytical tables, and support documentation.....\$3,000.00
- Senior Project Management/Principal.....\$2,000.00  
Not to Exceed Total for above Work Scope..... \$15,775.00



Although Moraine representatives don't have a crystal ball, the fact that the dry cleaning business only operated for approximately 25 years with a newer style single unit cleaning machine, it is possible that the release of PCE has only impacted sub slab soils and not the fractured bedrock affecting groundwater.

Please contact us at (262) 377-9060 with any questions regarding this report. Moraine would like to discuss the best case/worst case scenario with the owners. Thank you for the opportunity to assist you with this project.

Sincerely,  
**Moraine Environmental, Inc.**



Thomas C. Sweet  
President

Cc: [Bruk.Thompson@cbexchange.com](mailto:Bruk.Thompson@cbexchange.com)



Quality Cleaners  
1226 11<sup>th</sup> Avenue  
Grafton, Wisconsin 53024

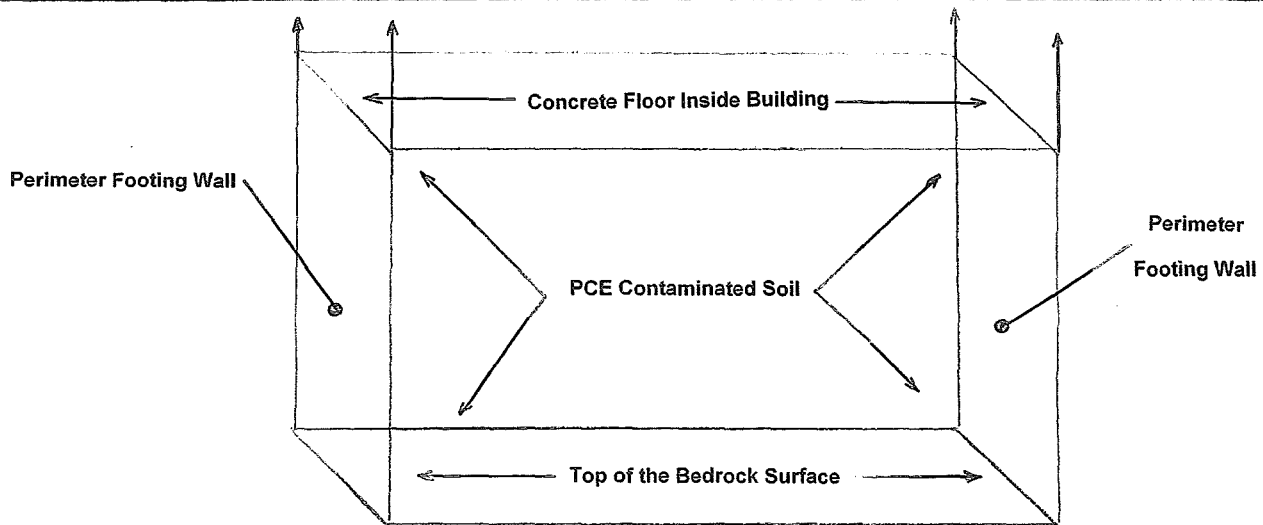
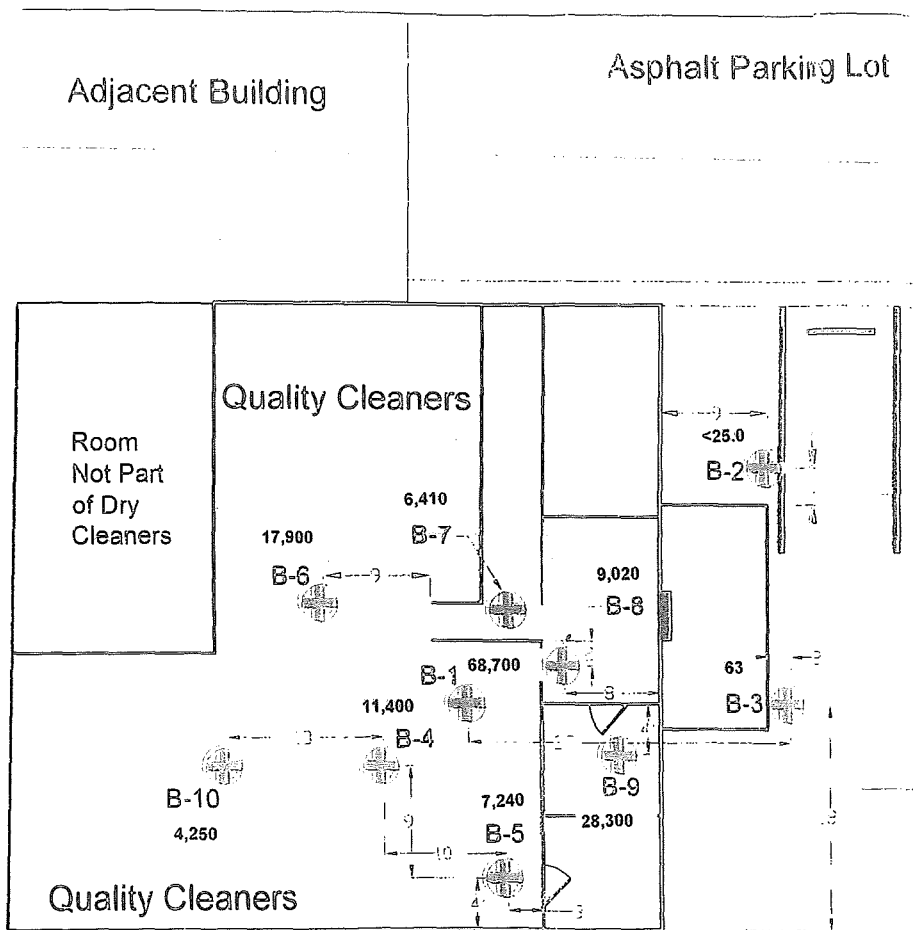
Project Reference No. 5735

April 9, 2013

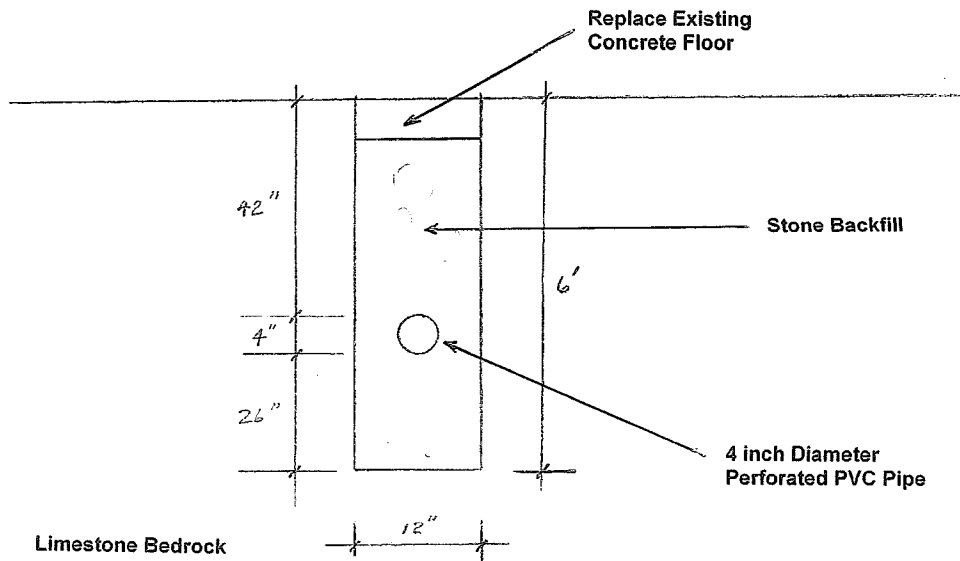
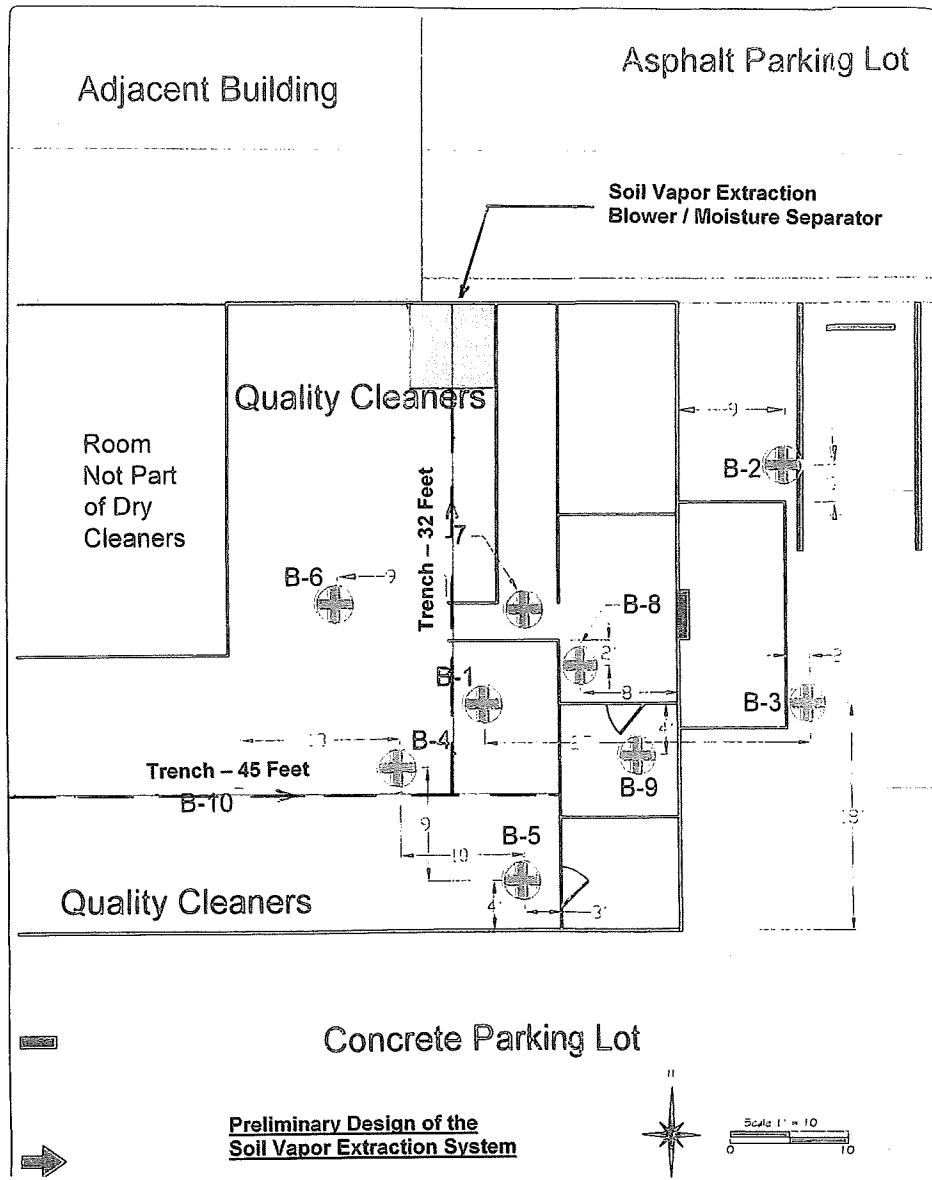
### **Project Status Meeting**

- The radius of influence of a horizontal trench vapor extraction system is a function of the soil type and the air permeability of the soil. The radius of influence can range from 15 feet for a silty clay soil to as much as 50 feet for a sand or gravel soil.
- With the permeable soils at the Quality Cleaners property, we can expect a radius of influence of 20 feet or more. The proposed trench layout will accommodate a 20 foot radius of influence.
- Use 4 inch diameter PVC collection pipe to reduce friction in the air flow in the pipe.
- Install the 4-inch diameter pipe at 42 inches below ground surface to be below the frost zone.
- PCE is a listed hazardous waste under NR 600 of the Wisconsin Administrative Code. Contaminated soil will be excavated from the trench which contains the soil vapor extraction system pipe. Soil contaminated with PCE, if excavated from the ground, is a hazardous waste due to the mixture rule. The mixture rule states that if a listed hazardous waste is mixed with a non-hazardous waste (i.e., the soil beneath the Quality Cleaners site), the resultant mixture is by definition a hazardous waste.
- The hazardous waste mixture rule would make site cleanups at dry cleaning sites very expensive, as the excavated soil would have to be managed as a hazardous waste. Management of the excavated soil as a hazardous waste would require treatment of the soil (i.e., stabilization of the soil) following by disposal as a special waste in a WDNR licensed landfill site. The other option, since we do not have any hazardous waste landfills in Wisconsin, is to transport the soil to Michigan for disposal at a hazardous waste landfill in that state. Either of these two options is very expensive.
- To address the problem of cleanups at dry cleaning sites, the WDNR allows for the "contained out" rule. The "contained out" rule allows the contaminated soil to be managed as a non-hazardous waste (i.e., special waste) if the material meets certain health based standards. With WDNR approval of the "contained out" provision for the excavated soil, it can be disposed in a solid waste landfill in southeast Wisconsin.

- The soils beneath the Quality Cleaners building are clay, silt and sand. With WDNR approval, these soils could be mixed on-site and placed back into the trench around the vapor extraction system pipe. Some additional sand or gravel could be added to the soil mixture if it was not coarse grained enough to provide for adequate air flow into the extraction pipe. This technique would minimize the quantity of soil that must be transported off-site for disposal.
- Excavate 1-foot wide trench to minimize the volume of contaminated soil which will have to be disposed in a landfill. With a trench dimension of 6 feet deep and 1 foot wide, the total volume of soil to be excavated is 17 cubic yards or an estimated 25.5 tons. At a cost of \$60.00 per ton for transport of this soil to Waste Management (assuming we get the contained out provision) and for disposal, the cost for this soil is  $25.5 \text{ tons} \times \$60.00 \text{ per ton} = \$1,530.00$ .
- Total trench length is 77 feet.
- Will need pilot test to determine the air flow rate.
- Discharge air at north side of building.



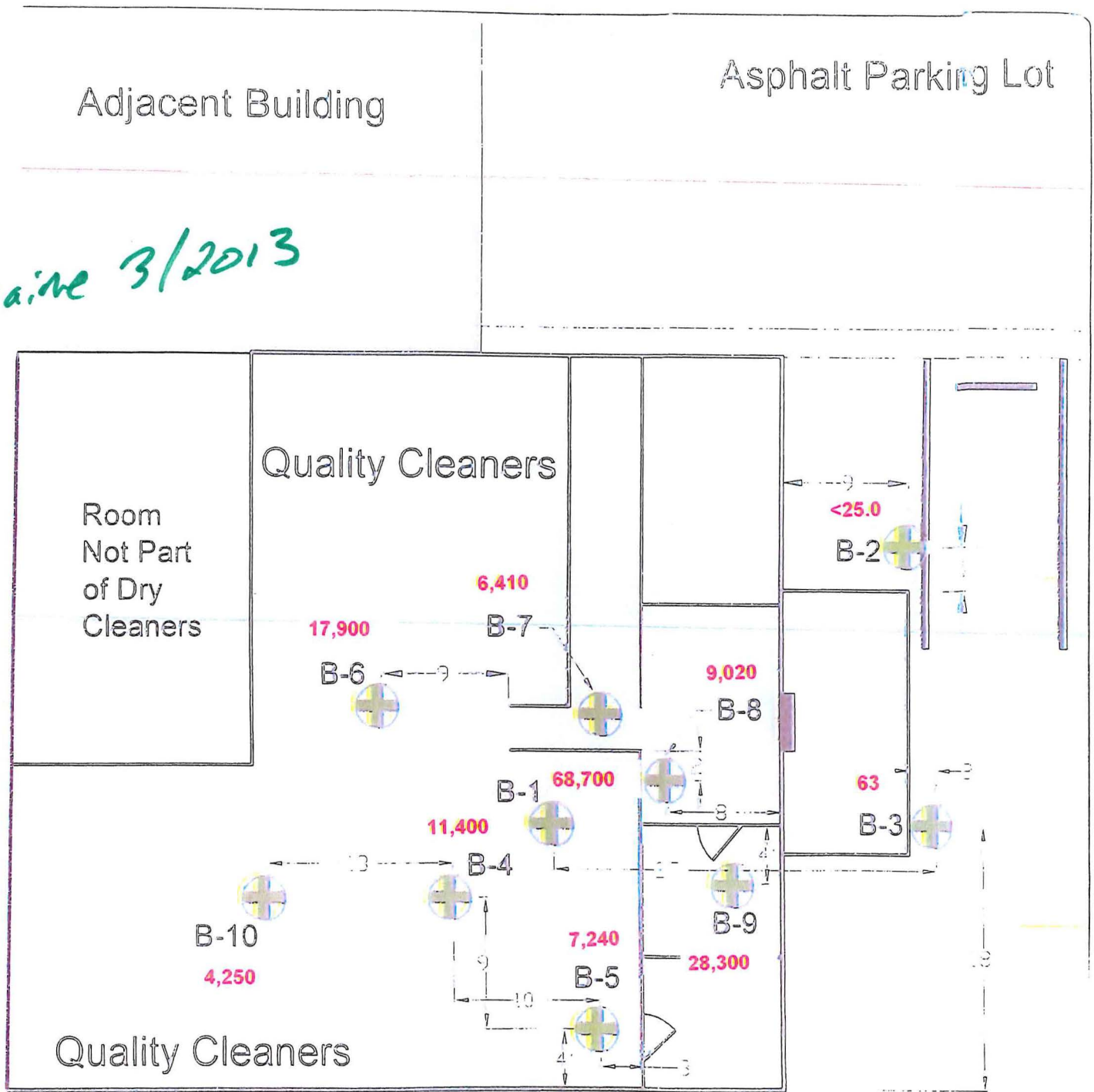
**Cross-Section of PCE Contaminated Soil**



**Preliminary Design of the Soil Vapor Extraction Trench System**

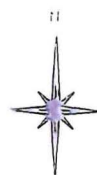


Moraine 3/2013

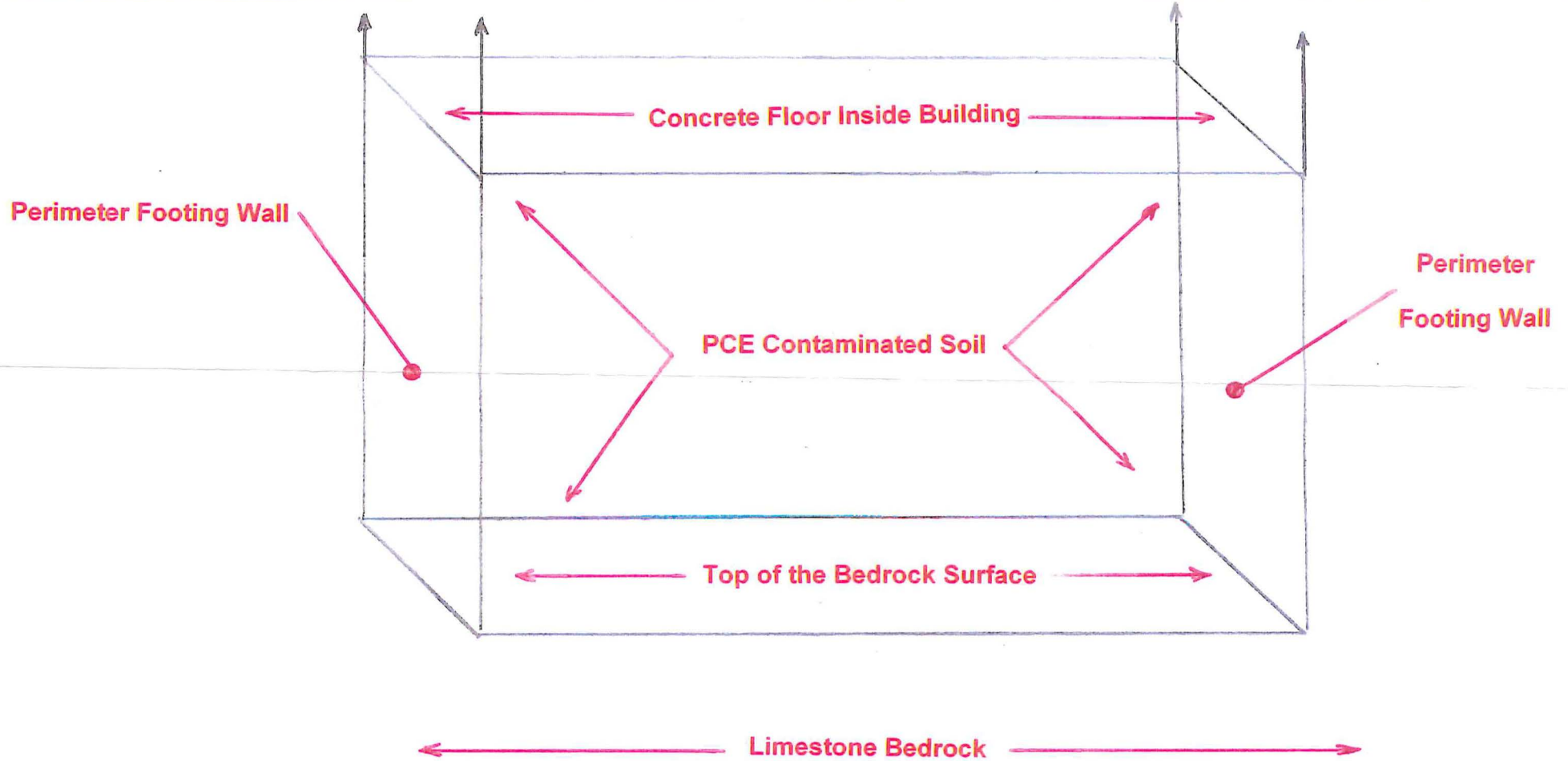


Concrete Parking Lot

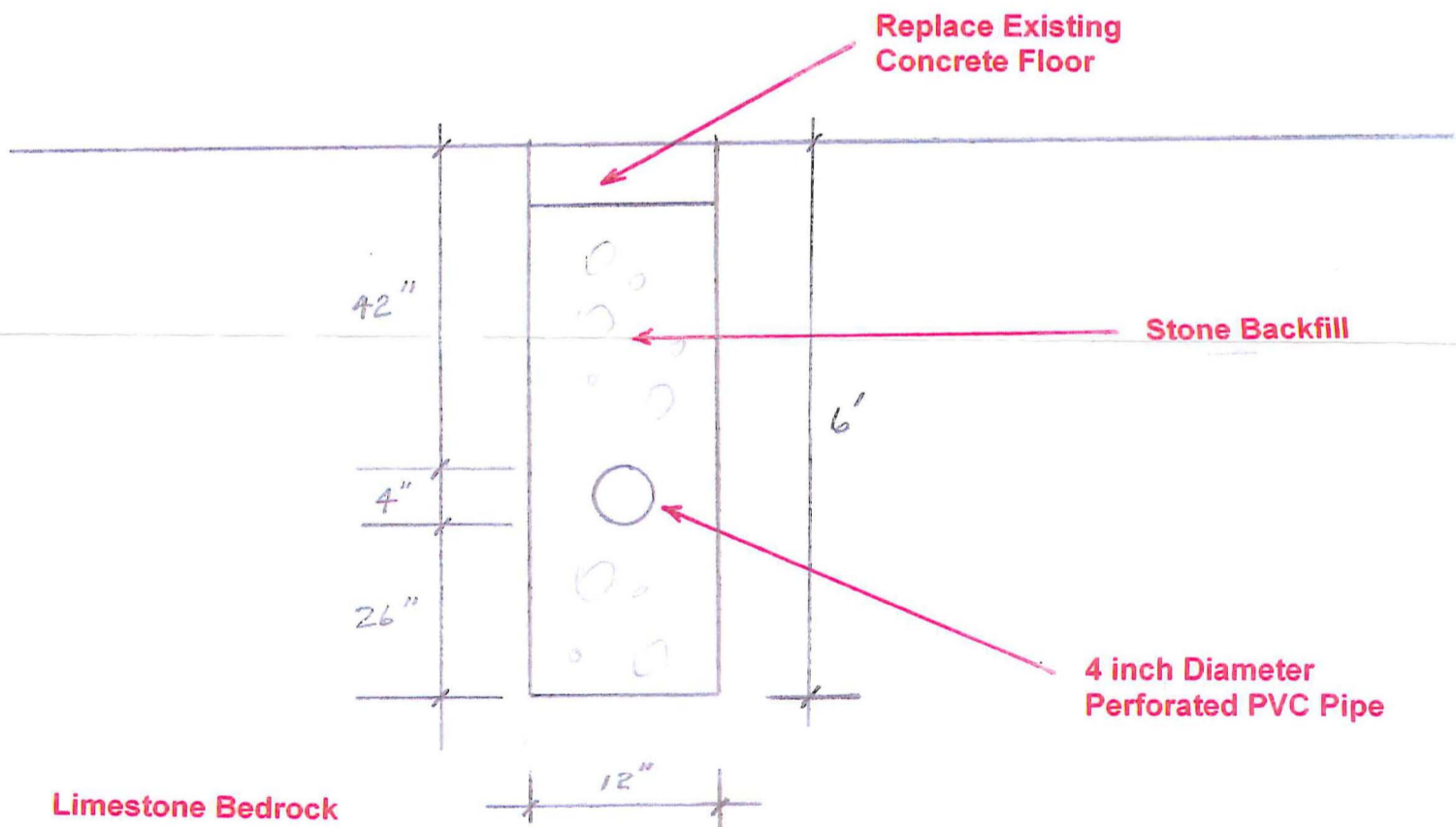
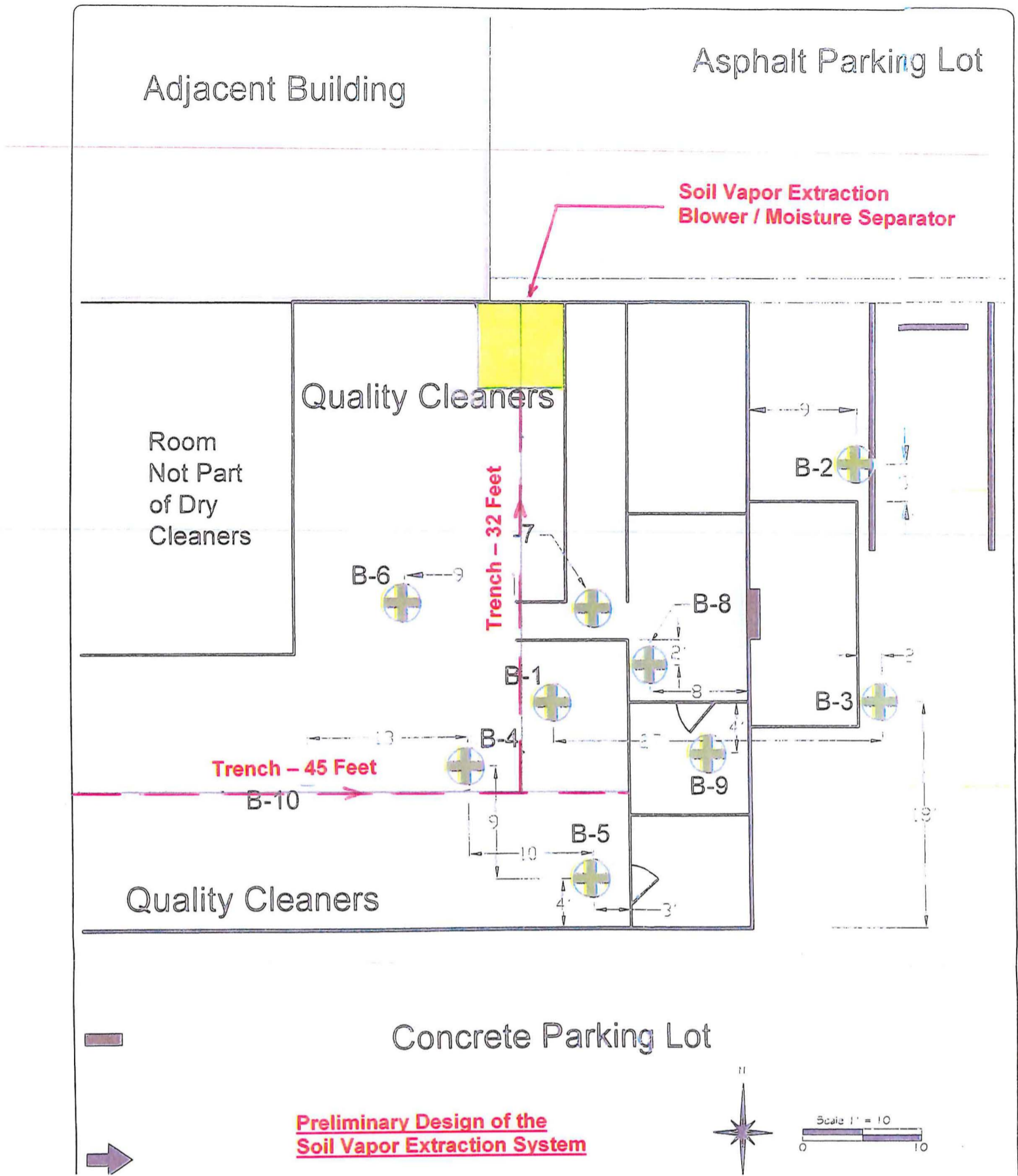
11,400 = PCE Concentration in the Soil in parts-per-billion



Scale 1" = 10'



Cross-Section of PCE Contaminated Soil



**Preliminary Design of the Soil Vapor Extraction Trench System**

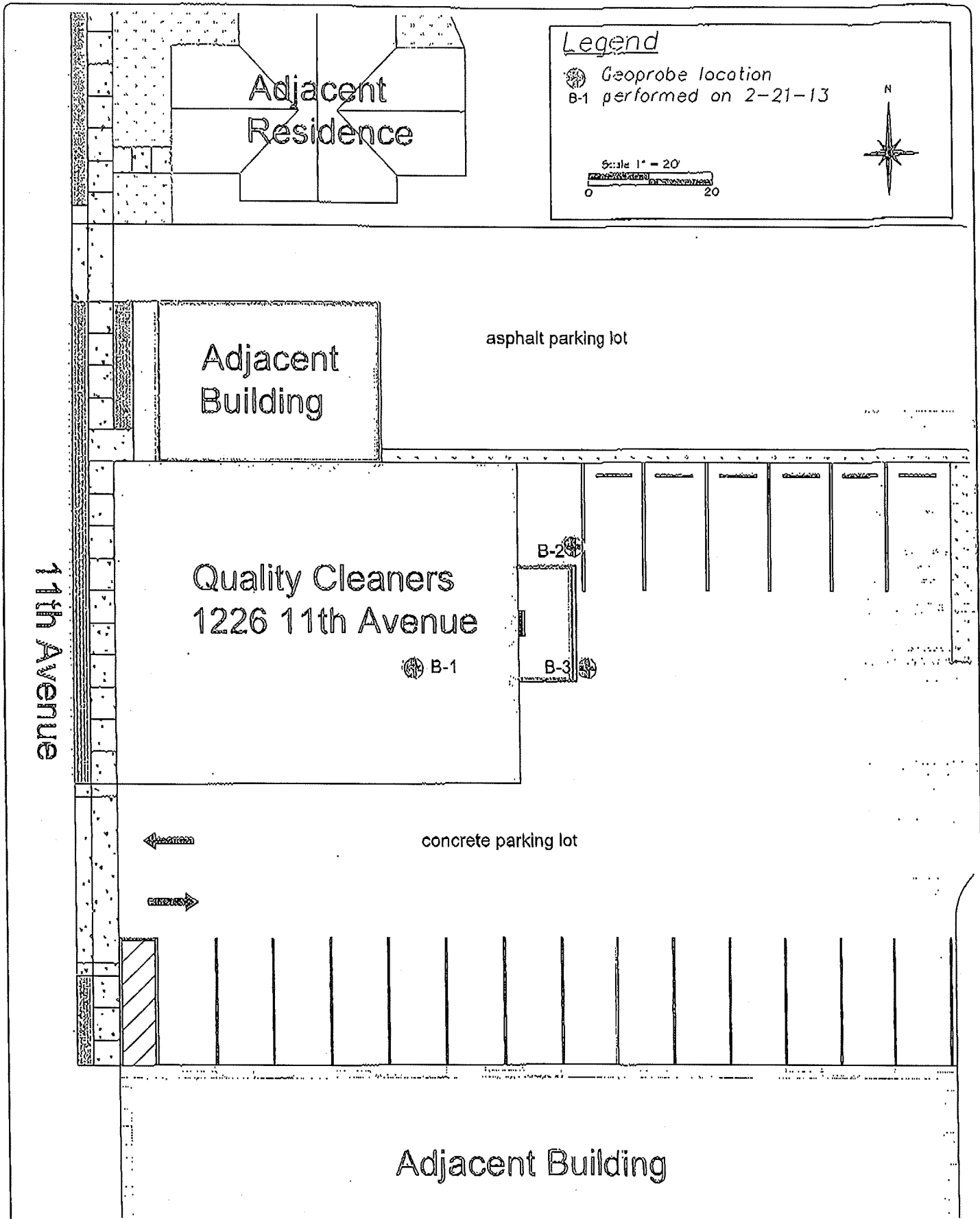
**MyDNR** **SEARCH** WISCONSIN DNR ENVIRONMENTAL SITE REGISTER

Facility	Contacts	Billing	Maintenance	Exit ESR	Esr Help
<b>Edit Facility</b>					
* Name:	Quality Cleaners		FID:	246166470	
* Location Address:	1226 11th Ave		* Mobile Facility:	No <input checked="" type="checkbox"/>	
* City:	Grafton		Where Seq No:	241304028	
* State:	Wisconsin <input checked="" type="checkbox"/>	Zip: 53024	Pending Changes:	0	
* County:	Ozaukee <input checked="" type="checkbox"/>		Last Update User Id:	Stovav	
Region:	Southeast Region <input checked="" type="checkbox"/>		Last Update Date:	03/18/2013	
Country:	USA		Env Fee Balance:	\$ .00	
Phone: (xxx)xxx-xxxx	<input type="text"/>	Ext: <input type="text"/>	Last Billed Date:		
* Sub Type:	Private <input checked="" type="checkbox"/>		Bill Hold:	N	
<input type="button" value="Save"/> <input type="button" value="Reset"/> <input type="button" value="Naming Standards"/> <input type="button" value="Back"/> <span style="float: right;">New facility added</span>					


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ESR version 2013.02.19  
 Produced by: Wisconsin Department of Natural Resources, Science Services  
 For problems with the application please contact: [michael.kvitrud@wisconsin.gov](mailto:michael.kvitrud@wisconsin.gov)



Legend

 Geoprobe location  
B-1 performed on 2-21-13

Scale 1" = 20'

0 20

N

Scale 1" = 20'

Revised by CTS

Revised: 3-12-13

Project file: Matex5715710 Working.dwg

\*Note: Depiction prepared from field measurements.

FIGURE 2  
SITE PLAN

QUALITY CLEANERS  
1226 11TH AVENUE  
GRAFTON, WISCONSIN

Moraine Environmental, Inc.  
Environmental Management Services



1452 W. Avenue G, Waukegan, WI 53191-1888  
608.277.1177 FAX 608.277.2965





Pace Analytical Services, Inc.  
1241 Bellevue Street - Suite 9  
Green Bay, WI 54302  
(920)469-2436

March 06, 2013

Tom Sweet  
Moraine Environmental, Inc.  
1402 7th Avenue  
Grafton, WI 530242330

RE: Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

Dear Tom Sweet:

Enclosed are the analytical results for sample(s) received by the laboratory on February 23, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,

Steven Mieczko

steve.mieczko@pacelabs.com  
Project Manager

Enclosures



**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, Inc..



Pace Analytical Services, Inc.  
1241 Bellevue Street - Suite 9  
Green Bay, WI 54302  
(920)469-2436

### CERTIFICATIONS

Project: 6718 QUALITY CLEANERS  
Pace Project No.: 4074280

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**Green Bay Certification IDs**

1241 Bellevue Street, Green Bay, WI 54302  
Florida/NELAP Certification #: E87948  
Illinois Certification #: 200050  
Kentucky Certification #: 82  
Louisiana Certification #: 04168  
Minnesota Certification #: 055-999-334

New York Certification #: 11888  
North Dakota Certification #: R-150  
South Carolina Certification #: 83008001  
US Dept of Agriculture #: S-76505  
Wisconsin Certification #: 405132750

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### REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street, Suite 9  
Green Bay, WI 54302  
(920) 469-2436

## SAMPLE SUMMARY

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
4074280001	B-1	Solid	02/21/13 00:00	02/23/13 09:15
4074280002	B-2 6'	Solid	02/21/13 00:00	02/23/13 09:15
4074280003	B-3 5'	Solid	02/21/13 00:00	02/23/13 09:15

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE ANALYTE COUNT

Project: 5718 QUALITY CLEANERS

Pace Project No.: 4074280

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4074280001	B-1	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4074280002	B-2 6'	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
4074280003	B-3 5'	EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

Sample: B-1 Lab ID: 4074280001 Collected: 02/21/13 00:00 Received: 02/23/13 09:15 Matrix: Solid  
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260		Preparation Method: EPA 5035/5030B					
Benzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	71-43-2	W
Bromobenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	108-86-1	W
Bromochloromethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	74-97-5	W
Bromodichloromethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-27-4	W
Bromoform	<259	ug/kg	600	259	10	02/28/13 06:32	03/01/13 11:45	75-25-2	W
Bromomethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	74-83-9	W
n-Butylbenzene	<404	ug/kg	600	404	10	02/28/13 06:32	03/01/13 11:45	104-51-8	W
sec-Butylbenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	135-98-8	W
tert-Butylbenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	98-06-6	W
Carbon tetrachloride	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	56-23-5	W
Chlorobenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	108-90-7	W
Chloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-00-3	W
Chloroform	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	67-68-3	W
Chloromethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	74-87-3	W
2-Chlorotoluene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	95-49-8	W
4-Chlorotoluene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	106-43-4	W
1,2-Dibromo-3-chloropropane	<823	ug/kg	2500	823	10	02/28/13 06:32	03/01/13 11:45	98-12-8	W
Dibromochloromethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	124-48-1	L2,W
1,2-Dibromoethane (EDB)	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	106-93-4	W
Dibromomethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	74-95-3	W
1,2-Dichlorobenzene	<444	ug/kg	600	444	10	02/28/13 06:32	03/01/13 11:45	95-50-1	W
1,3-Dichlorobenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	541-73-1	W
1,4-Dichlorobenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	106-46-7	W
Dichlorodifluoromethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-71-8	W
1,1-Dichloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-34-3	W
1,2-Dichloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	107-06-2	W
1,1-Dichloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-35-4	W
cis-1,2-Dichloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	156-59-2	W
trans-1,2-Dichloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	156-60-5	W
1,2-Dichloropropane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	78-87-5	W
1,3-Dichloropropane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	142-28-9	W
2,2-Dichloropropane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	594-20-7	W
1,1-Dichloropropene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	863-58-6	W
cis-1,3-Dichloropropene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	10061-01-5	W
trans-1,3-Dichloropropene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	10061-02-6	W
Diisopropyl ether	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	108-20-3	W
Ethylbenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	100-41-4	W
Hexachloro-1,3-butadiene	<264	ug/kg	600	264	10	02/28/13 06:32	03/01/13 11:45	87-88-3	W
Isopropylbenzene (Cumene)	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	98-82-8	W
p-Isopropyltoluene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	99-87-6	W
Methylene Chloride	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-09-2	W
Methyl-tert-butyl ether	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	1634-04-4	W
Naphthalene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	91-20-3	W
n-Propylbenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	103-65-1	W
Styrene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	100-42-5	W

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5718 QUALITY CLEANERS

Pace Project No.: 4074280

Sample: B-1 Lab ID: 4074280001 Collected: 02/21/13 00:00 Received: 02/23/13 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260 Preparation Method: EPA 8035/5030B							
1,1,1,2-Tetrachloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	630-20-6	W
1,1,2,2-Tetrachloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	79-34-5	W
Tetrachloroethene	68700	ug/kg	676	282	10	02/28/13 06:32	03/01/13 11:45	127-18-4	
Toluene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	108-88-3	W
1,2,3-Trichlorobenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	87-61-6	W
1,2,4-Trichlorobenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	120-82-1	W
1,1,1-Trichloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	71-55-8	W
1,1,2-Trichloroethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	79-00-5	W
Trichloroethene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	79-01-6	W
Trichlorofluoromethane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-89-4	W
1,2,3-Trichloropropane	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	98-18-4	W
1,2,4-Trimethylbenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	95-63-6	W
1,3,5-Trimethylbenzene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	108-67-8	W
Vinyl chloride	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	75-01-4	W
m&p-Xylene	<500	ug/kg	1200	500	10	02/28/13 06:32	03/01/13 11:45	179601-23-1	W
o-Xylene	<250	ug/kg	600	250	10	02/28/13 06:32	03/01/13 11:45	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	97 %		57-130		10	02/28/13 06:32	03/01/13 11:45	1868-53-7	
Toluene-d8 (S)	88 %		54-133		10	02/28/13 06:32	03/01/13 11:45	2037-26-5	
4-Bromofluorobenzene (S)	78 %		49-130		10	02/28/13 06:32	03/01/13 11:45	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	11.2 %		0.10	0.10	1		02/25/13 11:38		



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## ANALYTICAL RESULTS

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

Sample: B-2 6' Lab ID: 4074280002 Collected: 02/21/13 00:00 Received: 02/23/13 09:15 Matrix: Solid  
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-27-4	W
Bromoform	<25.9	ug/kg	60.0	25.9	1	02/28/13 06:32	03/01/13 11:22	75-25-2	W
Bromomethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	74-83-9	W
n-Butylbenzene	<40.4	ug/kg	60.0	40.4	1	02/28/13 06:32	03/01/13 11:22	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	98-06-6	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	108-90-7	W
Chloroethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-00-3	W
Chloroform	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	106-43-4	W
1,2-Dibromo-3-chloropropane	<82.3	ug/kg	250	82.3	1	02/28/13 06:32	03/01/13 11:22	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	124-48-1	L2,W
1,2-Dibromoethane (EOB)	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	108-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	74-95-3	W
1,2-Dichlorobenzene	<44.4	ug/kg	60.0	44.4	1	02/28/13 06:32	03/01/13 11:22	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	108-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	107-06-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	100-41-4	W
Hexachloro-1,3-butadiene	<26.4	ug/kg	60.0	26.4	1	02/28/13 06:32	03/01/13 11:22	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	99-87-6	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	91-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	103-65-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	100-42-5	W

Date: 03/06/2013 02:32 PM

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5718 QUALITY CLEANERS

Pace Project No.: 4074280

Sample: B-2 6' Lab ID: 4074280002 Collected: 02/21/13 00:00 Received: 02/23/13 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List		Analytical Method: EPA 8260		Preparation Method: EPA 5035/5030B					
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	630-20-8	W
1,1,1,2-Tetrachloroethane	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	79-34-5	W
Tetrachloroethene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	127-18-4	W
Toluene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	108-88-3	W
1,2,3-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	87-61-6	W
1,2,4-Trichlorobenzene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	120-82-1	W
1,1,1-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	71-55-8	W
1,1,2-Trichloroethane	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	79-00-5	W
Trichloroethene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	79-01-8	W
Trichlorofluoromethane	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-89-4	W
1,2,3-Trichloropropane	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	96-18-4	W
1,2,4-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	95-63-6	W
1,3,5-Trimethylbenzene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	108-67-8	W
Vinyl chloride	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	75-01-4	W
m&p-Xylene	<50.0 ug/kg		120	50.0	1	02/28/13 06:32	03/01/13 11:22	179601-23-1	W
o-Xylene	<25.0 ug/kg		60.0	25.0	1	02/28/13 06:32	03/01/13 11:22	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	78 %		57-130		1	02/28/13 06:32	03/01/13 11:22	1868-53-7	
Toluene-d8 (S)	86 %		54-133		1	02/28/13 06:32	03/01/13 11:22	2037-26-5	
4-Bromofluorobenzene (S)	74 %		49-130		1	02/28/13 06:32	03/01/13 11:22	460-00-4	
Percent Moisture		Analytical Method: ASTM D2974-87							
Percent Moisture	13.5 %		0.10	0.10	1		02/25/13 11:38		

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## REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9  
Green Bay, WI 54302  
(920)489-2438

## ANALYTICAL RESULTS

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

Sample: B-3 S' Lab ID: 4074280003 Collected: 02/21/13 00:00 Received: 02/23/13 09:15 Matrix: Solid  
Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Benzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	71-43-2	W
Bromobenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	108-86-1	W
Bromochloromethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	74-97-5	W
Bromodichloromethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-27-4	W
Bromoform	<25.9	ug/kg	60.0	25.9	1	03/04/13 12:00	03/05/13 21:24	75-25-2	W
Bromomethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	74-83-9	W
n-Butylbenzene	<40.4	ug/kg	60.0	40.4	1	03/04/13 12:00	03/05/13 21:24	104-51-8	W
sec-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	135-98-8	W
tert-Butylbenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	98-06-8	W
Carbon tetrachloride	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	56-23-5	W
Chlorobenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	108-90-7	W
Chloroethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-00-3	W
Chloroform	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	67-66-3	W
Chloromethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	74-87-3	W
2-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	95-49-8	W
4-Chlorotoluene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	106-43-4	W
1,2-Dibromo-3-chloropropane	<82.3	ug/kg	250	82.3	1	03/04/13 12:00	03/05/13 21:24	96-12-8	W
Dibromochloromethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	124-48-1	W
1,2-Dibromoethane (EDB)	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	106-93-4	W
Dibromomethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	74-95-3	W
1,2-Dichlorobenzene	<44.4	ug/kg	60.0	44.4	1	03/04/13 12:00	03/05/13 21:24	95-50-1	W
1,3-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	541-73-1	W
1,4-Dichlorobenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	106-46-7	W
Dichlorodifluoromethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-71-8	W
1,1-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-34-3	W
1,2-Dichloroethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	107-08-2	W
1,1-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-35-4	W
cis-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	156-59-2	W
trans-1,2-Dichloroethene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	156-60-5	W
1,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	78-87-5	W
1,3-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	142-28-9	W
2,2-Dichloropropane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	594-20-7	W
1,1-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	563-58-6	W
cis-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	10061-01-5	W
trans-1,3-Dichloropropene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	10061-02-6	W
Diisopropyl ether	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	108-20-3	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	100-41-4	W
Hexachloro-1,3-butadiene	<26.4	ug/kg	60.0	26.4	1	03/04/13 12:00	03/05/13 21:24	87-68-3	W
Isopropylbenzene (Cumene)	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	98-82-8	W
p-Isopropyltoluene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	99-87-6	W
Methylene Chloride	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-09-2	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	1634-04-4	W
Naphthalene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	81-20-3	W
n-Propylbenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	103-85-1	W
Styrene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	100-42-5	W

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## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 5718 QUALITY CLEANERS

Pace Project No.: 4074280

Sample: B-3 5' Lab ID: 4074280003 Collected: 02/21/13 00:00 Received: 02/23/13 09:15 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	830-20-6	W
1,1,2,2-Tetrachloroethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	79-34-6	W
Tetrachloroethene	83.0	ug/kg	79.5	33.1	1	03/04/13 12:00	03/05/13 21:24	127-18-4	
Toluene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	108-88-3	W
1,2,3-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	87-61-6	W
1,2,4-Trichlorobenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	120-82-1	W
1,1,1-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	71-55-6	W
1,1,2-Trichloroethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	79-00-5	W
Trichloroethene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	79-01-6	W
Trichlorofluoromethane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-69-4	W
1,2,3-Trichloropropane	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	96-18-4	W
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	108-67-8	W
Vinyl chloride	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	75-01-4	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	03/04/13 12:00	03/05/13 21:24	178601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	03/04/13 12:00	03/05/13 21:24	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	92 %		57-130		1	03/04/13 12:00	03/05/13 21:24	1868-53-7	
Toluene-d8 (S)	98 %		54-133		1	03/04/13 12:00	03/05/13 21:24	2037-26-6	
4-Bromofluorobenzene (S)	84 %		49-130		1	03/04/13 12:00	03/05/13 21:24	460-00-4	
<b>Percent Moisture</b>	Analytical Method: ASTM D2974-87								
Percent Moisture	24.5 %		0.10	0.10	1		02/25/13 11:38		





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## QUALITY CONTROL DATA

Project: 5718 QUALITY CLEANERS  
Paca Project No.: 4074280

QC Batch: MSV/18707 Analysis Method: EPA 8260  
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List  
Associated Lab Samples: 4074280001, 4074280002

METHOD BLANK: 754520 Matrix: Solid

Associated Lab Samples: 4074280001, 4074280002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,1-Dichloroethane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,1-Dichloroethene	ug/kg	<25.0	60.0	02/28/13 09:22	
1,1-Dichloropropene	ug/kg	<25.0	60.0	02/28/13 09:22	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
1,2-Dibromo-3-chloropropane	ug/kg	<82.3	250	02/28/13 09:22	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	02/28/13 09:22	
1,2-Dichlorobenzene	ug/kg	<44.4	60.0	02/28/13 09:22	
1,2-Dichloroethane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,2-Dichloropropane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
1,3-Dichloropropane	ug/kg	<25.0	60.0	02/28/13 09:22	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
2,2-Dichloropropane	ug/kg	<25.0	60.0	02/28/13 09:22	
2-Chlorotoluene	ug/kg	<25.0	60.0	02/28/13 09:22	
4-Chlorotoluene	ug/kg	<25.0	60.0	02/28/13 09:22	
Benzene	ug/kg	<25.0	60.0	02/28/13 09:22	
Bromobenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
Bromochloromethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Bromodichloromethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Bromoform	ug/kg	<25.9	60.0	02/28/13 09:22	
Bromomethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Carbon tetrachloride	ug/kg	<25.0	60.0	02/28/13 09:22	
Chlorobenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
Chloroethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Chloroform	ug/kg	<25.0	60.0	02/28/13 09:22	
Chloromethane	ug/kg	<25.0	60.0	02/28/13 09:22	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	02/28/13 09:22	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	02/28/13 09:22	
Dibromochloromethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Dibromomethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Diisopropyl ether	ug/kg	<25.0	60.0	02/28/13 09:22	
Ethylbenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
Hexachloro-1,3-butadiene	ug/kg	<28.4	60.0	02/28/13 09:22	
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	02/28/13 09:22	

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## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

METHOD BLANK: 754520

Matrix: Solid

Associated Lab Samples: 4074280001, 4074280002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/kg	<50.0	120	02/28/13 09:22	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	02/28/13 09:22	
Methylene Chloride	ug/kg	<25.0	60.0	02/28/13 09:22	
n-Butylbenzene	ug/kg	<40.4	60.0	02/28/13 09:22	
n-Propylbenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
Naphthalene	ug/kg	<25.0	60.0	02/28/13 09:22	
o-Xylene	ug/kg	<25.0	60.0	02/28/13 09:22	
p-Isopropyltoluene	ug/kg	<25.0	60.0	02/28/13 09:22	
sec-Butylbenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
Styrene	ug/kg	<25.0	60.0	02/28/13 09:22	
tert-Butylbenzene	ug/kg	<25.0	60.0	02/28/13 09:22	
Tetrachloroethene	ug/kg	<25.0	60.0	02/28/13 09:22	
Toluene	ug/kg	<25.0	60.0	02/28/13 09:22	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	02/28/13 09:22	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	02/28/13 09:22	
Trichloroethene	ug/kg	<25.0	60.0	02/28/13 09:22	
Trichlorofluoromethane	ug/kg	<25.0	60.0	02/28/13 09:22	
Vinyl chloride	ug/kg	<25.0	60.0	02/28/13 09:22	
4-Bromofluorobenzene (S)	%	100	49-130	02/28/13 09:22	
Dibromofluoromethane (S)	%	101	57-130	02/28/13 09:22	
Toluene-d8 (S)	%	106	54-133	02/28/13 09:22	

LABORATORY CONTROL SAMPLE &amp; LCSD: 754521

754522

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2270	2430	91	97	70-130	7	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2130	2160	85	86	70-130	1	20	
1,1,2-Trichloroethane	ug/kg	2500	2140	2170	86	87	70-130	2	20	
1,1-Dichloroethane	ug/kg	2500	2220	2170	89	87	70-130	2	20	
1,1-Dichloroethane	ug/kg	2500	2130	2240	85	90	64-130	5	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2230	2390	89	95	68-130	7	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	1720	1790	89	72	50-150	4	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2200	2320	88	93	70-130	5	20	
1,2-Dichlorobenzene	ug/kg	2500	2230	2250	89	90	70-130	1	20	
1,2-Dichloroethane	ug/kg	2500	2770	2900	111	116	70-130	4	20	
1,2-Dichloropropane	ug/kg	2500	2310	2370	93	95	70-130	2	20	
1,3-Dichlorobenzene	ug/kg	2500	2320	2340	93	94	70-130	1	20	
1,4-Dichlorobenzene	ug/kg	2500	2290	2340	91	94	70-130	2	20	
Benzene	ug/kg	2500	2860	2880	114	115	70-130	1	20	
Bromodichloromethane	ug/kg	2500	1870	1960	75	78	70-130	6	20	
Bromoform	ug/kg	2500	1600	1750	64	70	63-130	9	20	
Bromomethane	ug/kg	2500	2110	2220	84	89	41-142	5	20	
Carbon tetrachloride	ug/kg	2500	2150	2120	86	85	70-130	1	20	
Chlorobenzene	ug/kg	2500	2270	2350	91	94	70-130	3	20	
Chloroethane	ug/kg	2500	2390	2430	96	97	57-130	2	20	

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## QUALITY CONTROL DATA

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

LABORATORY CONTROL SAMPLE & LCS#		754521		754522							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Chloroform	ug/kg	2500	2240	2330	90	93	70-130	4	20		
Chloromethane	ug/kg	2500	2370	2500	95	100	57-130	5	20		
cis-1,2-Dichloroethene	ug/kg	2500	2250	2270	90	91	70-130	1	20		
cis-1,3-Dichloropropene	ug/kg	2500	1840	1890	73	76	70-130	3	20		
Dibromochloromethane	ug/kg	2500	1740	1850	69	74	70-130	6	20	LO	
Dichlorodifluoromethane	ug/kg	2500	2090	2150	84	86	31-150	3	20		
Ethylbenzene	ug/kg	2500	2280	2310	91	92	65-137	1	20		
Isopropylbenzene (Cumene)	ug/kg	2500	2390	2430	96	97	70-130	2	20		
m&p-Xylene	ug/kg	5000	4570	4660	91	93	64-139	2	20		
Methyl-tert-butyl ether	ug/kg	2500	2060	2290	82	92	69-130	11	20		
Methylene Chloride	ug/kg	2500	2250	2350	90	94	70-130	4	20		
o-Xylene	ug/kg	2500	2440	2480	98	99	63-135	1	20		
Styrene	ug/kg	2500	2230	2270	89	91	69-130	2	20		
Tetrachloroethene	ug/kg	2500	2260	2210	90	88	70-130	2	20		
Toluene	ug/kg	2500	2360	2320	95	93	70-130	2	20		
trans-1,2-Dichloroethene	ug/kg	2500	2230	2320	89	93	70-130	4	20		
trans-1,3-Dichloropropene	ug/kg	2500	1910	2000	76	80	70-130	5	20		
Trichloroethene	ug/kg	2500	2430	2450	97	98	70-130	1	20		
Trichlorofluoromethane	ug/kg	2500	1990	2120	80	85	50-150	6	20		
Vinyl chloride	ug/kg	2500	2320	2460	93	98	57-130	6	20		
4-Bromofluorobenzene (S)	%				96	104	49-130				
Dibromofluoromethane (S)	%				92	103	57-130				
Toluene-d8 (S)	%				98	104	54-133				

Date: 03/06/2013 02:32 PM

## REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9  
Green Bay, WI 54302  
(920) 469-2436

## QUALITY CONTROL DATA

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

QC Batch: MSV18732 Analysis Method: EPA 8260  
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List  
Associated Lab Samples: 4074280003

METHOD BLANK: 756030 Matrix: Solid  
Associated Lab Samples: 4074280003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,1,1-Trichloroethane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,1,2,2-Tetrachloroethane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,1,2-Trichloroethane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,1-Dichloroethane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,1-Dichloroethene	ug/kg	<25.0	60.0	03/05/13 19:07	
1,1-Dichloropropene	ug/kg	<25.0	60.0	03/05/13 19:07	
1,2,3-Trichlorobenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
1,2,3-Trichloropropane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,2,4-Trichlorobenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
1,2,4-Trimethylbenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
1,2-Dibromo-3-chloropropane	ug/kg	<82.3	250	03/05/13 19:07	
1,2-Dibromoethane (EDB)	ug/kg	<25.0	60.0	03/05/13 19:07	
1,2-Dichlorobenzene	ug/kg	<44.4	60.0	03/05/13 19:07	
1,2-Dichloroethane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,2-Dichloropropane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,3,5-Trimethylbenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
1,3-Dichlorobenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
1,3-Dichloropropane	ug/kg	<25.0	60.0	03/05/13 19:07	
1,4-Dichlorobenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
2,2-Dichloropropane	ug/kg	<25.0	60.0	03/05/13 19:07	
2-Chlorotoluene	ug/kg	<25.0	60.0	03/05/13 19:07	
4-Chlorotoluene	ug/kg	<25.0	60.0	03/05/13 19:07	
Benzene	ug/kg	<25.0	60.0	03/05/13 19:07	
Bromobenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
Bromochloromethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Bromodichloromethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Bromoform	ug/kg	<25.9	60.0	03/05/13 19:07	
Bromomethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Carbon tetrachloride	ug/kg	<25.0	60.0	03/05/13 19:07	
Chlorobenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
Chloroethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Chloroform	ug/kg	<25.0	60.0	03/05/13 19:07	
Chloromethane	ug/kg	<25.0	60.0	03/05/13 19:07	
cis-1,2-Dichloroethene	ug/kg	<25.0	60.0	03/05/13 19:07	
cis-1,3-Dichloropropene	ug/kg	<25.0	60.0	03/05/13 19:07	
Dibromochloromethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Dibromomethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Dichlorodifluoromethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Diisopropyl ether	ug/kg	<25.0	60.0	03/05/13 19:07	
Ethylbenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
Hexachloro-1,3-butadiene	ug/kg	<26.4	60.0	03/05/13 19:07	
Isopropylbenzene (Cumene)	ug/kg	<25.0	60.0	03/05/13 19:07	

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## REPORT OF LABORATORY ANALYSIS

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(920)489-2436

## QUALITY CONTROL DATA

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

METHOD BLANK: 756030

Matrix: Solid

Associated Lab Samples: 4074280003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/kg	<60.0	120	03/05/13 19:07	
Methyl-tert-butyl ether	ug/kg	<25.0	60.0	03/05/13 19:07	
Methylene Chloride	ug/kg	<25.0	60.0	03/05/13 19:07	
n-Butylbenzene	ug/kg	<40.4	60.0	03/05/13 19:07	
n-Propylbenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
Naphthalene	ug/kg	<25.0	60.0	03/05/13 19:07	
o-Xylene	ug/kg	<25.0	60.0	03/05/13 19:07	
p-Isopropyltoluene	ug/kg	<25.0	60.0	03/05/13 19:07	
sec-Butylbenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
Styrene	ug/kg	<25.0	60.0	03/05/13 19:07	
tert-Butylbenzene	ug/kg	<25.0	60.0	03/05/13 19:07	
Tetrachloroethene	ug/kg	<25.0	60.0	03/05/13 19:07	
Toluene	ug/kg	<25.0	60.0	03/05/13 19:07	
trans-1,2-Dichloroethene	ug/kg	<25.0	60.0	03/05/13 19:07	
trans-1,3-Dichloropropene	ug/kg	<25.0	60.0	03/05/13 19:07	
Trichloroethene	ug/kg	<25.0	60.0	03/05/13 19:07	
Trichlorofluoromethane	ug/kg	<25.0	60.0	03/05/13 19:07	
Vinyl chloride	ug/kg	<25.0	60.0	03/05/13 19:07	
4-Bromofluorobenzene (S)	%	90	49-130	03/05/13 19:07	
Dibromofluoromethane (S)	%	94	57-130	03/05/13 19:07	
Toluene-d8 (S)	%	99	54-133	03/05/13 19:07	

LABORATORY CONTROL SAMPLE &amp; LCSD: 756031

756032

Parameter	Units	Spike Conc.	LCSD Result	LCSD Result	LCSD % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2410	2720	97	109	70-130	12	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2210	2240	88	90	70-130	2	20	
1,1,2-Trichloroethane	ug/kg	2500	2350	2380	94	95	70-130	1	20	
1,1-Dichloroethane	ug/kg	2500	2300	2500	92	100	70-130	8	20	
1,1-Dichloroethene	ug/kg	2500	2160	2400	86	96	64-130	11	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2420	2630	97	105	68-130	8	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2170	2110	87	85	50-150	3	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2300	2340	82	93	70-130	1	20	
1,2-Dichlorobenzene	ug/kg	2500	2210	2290	88	92	70-130	4	20	
1,2-Dichloroethane	ug/kg	2500	2270	2410	91	97	70-130	6	20	
1,2-Dichloropropane	ug/kg	2500	2290	2470	92	99	70-130	7	20	
1,3-Dichlorobenzene	ug/kg	2500	2370	2450	95	98	70-130	4	20	
1,4-Dichlorobenzene	ug/kg	2500	2240	2390	90	95	70-130	6	20	
Benzene	ug/kg	2500	2210	2480	88	99	70-130	12	20	
Bromodichloromethane	ug/kg	2500	2210	2410	89	96	70-130	8	20	
Bromoform	ug/kg	2500	1930	1970	77	79	63-130	2	20	
Bromomethane	ug/kg	2500	2030	2250	81	90	41-142	10	20	
Carbon tetrachloride	ug/kg	2500	2580	2080	102	83	70-130	21	20 R1	
Chlorobenzene	ug/kg	2500	2320	2420	93	97	70-130	4	20	
Chloroethane	ug/kg	2500	2140	2350	86	94	57-130	9	20	

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## REPORT OF LABORATORY ANALYSIS

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(920)469-2436

## QUALITY CONTROL DATA

Project: 5718 QUALITY CLEANERS

Pace Project No.: 4074280

LABORATORY CONTROL SAMPLE & LCSD:		756031	756032							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	% Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Chloroform	ug/kg	2500	2350	2600	94	104	70-130	10	20	
Chloromethane	ug/kg	2500	1850	1940	74	78	57-130	5	20	
cis-1,2-Dichloroethene	ug/kg	2500	2240	2480	89	99	70-130	10	20	
cis-1,3-Dichloropropene	ug/kg	2500	1920	2030	77	81	70-130	5	20	
Dibromochloromethane	ug/kg	2500	2030	2110	81	84	70-130	4	20	
Dichlorodifluoromethane	ug/kg	2500	1300	1500	52	60	31-150	15	20	
Ethylbenzene	ug/kg	2500	2330	2490	93	100	65-137	7	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2370	2490	95	100	70-130	5	20	
m&p-Xylene	ug/kg	5000	4740	5080	95	102	64-139	7	20	
Methyl-tert-butyl ether	ug/kg	2500	2260	2420	90	97	69-130	7	20	
Methylene Chloride	ug/kg	2500	2240	2390	90	96	70-130	6	20	
o-Xylene	ug/kg	2500	2470	2540	99	102	63-135	3	20	
Styrene	ug/kg	2500	2290	2460	92	99	69-130	7	20	
Tetrachloroethene	ug/kg	2500	2280	2450	91	98	70-130	8	20	
Toluene	ug/kg	2500	2400	2570	96	103	70-130	7	20	
trans-1,2-Dichloroethene	ug/kg	2500	2260	2500	91	100	70-130	9	20	
trans-1,3-Dichloropropene	ug/kg	2500	2070	2160	83	87	70-130	4	20	
Trichloroethene	ug/kg	2500	2350	2430	94	97	70-130	3	20	
Trichlorofluoromethane	ug/kg	2500	1980	2220	80	89	50-150	11	20	
Vinyl chloride	ug/kg	2500	1930	2150	77	86	57-130	11	20	
4-Bromofluorobenzene (S)	%				89	94	49-130			
Dibromofluoromethane (S)	%				96	108	57-130			
Toluene-d8 (S)	%				96	103	54-133			

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## REPORT OF LABORATORY ANALYSIS

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(920)469-2436

## QUALITY CONTROL DATA

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

QC Batch: PMST/8234 Analysis Method: ASTM D2974-87  
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture  
Associated Lab Samples: 4074280001, 4074280002, 4074280003

SAMPLE DUPLICATE: 753515

Parameter	Units	4074282001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	7.0	7.0	0	10	



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## QUALIFIERS

Project: 5718 QUALITY CLEANERS  
 Pace Project No.: 4074280

### DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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.

### LABORATORIES

PASI-G Pace Analytical Services - Green Bay

### BATCH QUALIFIERS

Batch: MSV/18709

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/18733

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.

R1 RPD value was outside control limits.

W Non-detect results are reported on a wet weight basis.



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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 5718 QUALITY CLEANERS  
Pace Project No.: 4074280

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4074280001	B-1	EPA 5035/5030B	MSV/18707	EPA 8260	MSW/18709
4074280002	B-2 6'	EPA 5035/5030B	MSV/18707	EPA 8260	MSW/18709
4074280003	B-3 5'	EPA 5035/5030B	MSV/18732	EPA 8260	MSW/18733
4074280001	B-1	ASTM D2974-87	PMST/8234		
4074280002	B-2 6'	ASTM D2974-87	PMST/8234		
4074280003	B-3 5'	ASTM D2974-87	PMST/8234		

(Please Print Clearly)

Company Name: **MORaine Environmental**  
 Branch/Location: **Grafton, WI**  
 Project Contact: **TOM SWEET**  
 Phone: **(262) 377-9060**  
 Project Number: **5718**  
 Project Name: **Quality Cleaners**  
 Project State: **WI**  
 Sampled By (Print): **DAW FISHER**  
 Sampled By (Sign): *[Signature]*



UPPER MIDWEST REGION  
 MN: 612-607-1700 WI: 920-469-2435

4074280

### CHAIN OF CUSTODY

\*Preservation Codes  
 A=Acids B=HCL C=H2SO4 D=HNO3 E=DY Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

FILTERED?  
(YES/NO)  
 PRESERVATION  
(CODE)\*

ANALYTES	N		N									
	F	A										
VOCS												
Dry Weight												

Quote #: **4074280**  
 Mail To Contact: **TOM SWEET**  
 Mail To Company: **MORaine Environmental**  
 Mail To Address: **1402 7th Ave Grafton, WI 53024**  
 Invoice To Contact:  
 Invoice To Company:  
 Invoice To Address:  
 Invoice To Phone: **(262) 377-9060**  
 CLIENT COMMENTS  
 LAB COMMENTS (Lab Use Only)  
 Profile #  
 1-402 7th Ave; 1-40 mL F

Data Package Options (billable)  
 EPA Level III  
 EPA Level IV  
 MS/MSD  
 On your sample (billable)  
 NOT needed on your sample  
 Matrix Codes  
 A = Air W = Water  
 B = Etob DW = Drinking Water  
 C = Osewosal GW = Ground Water  
 D = Oil SW = Surface Water  
 S = Soil WAW = Waste Water  
 SL = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	ANALYTES	F	A					
		DATE	TIME									
001	B-1	1/21/13		S	X	X						
002	B-2 6 feet	1/21/13		S	X	X						
003	B-3 5 feet	1/21/13		S	X	X						

Rush Turnaround Time Requested - Prelims (Rush TAT subject to approval/surcharge)  
 Date Needed: **2/21/13**  
 Relinquished By: *[Signature]* Date/Time: **2/21/13**  
 Received By: *[Signature]* Date/Time: **2/22/13 10:30**  
 Trans: Prelim Rush Results by (complete what you want):  
 Relinquished By: *[Signature]* Date/Time: **2/21/13 1300**  
 Received By: *[Signature]* Date/Time: **2/22/13 0915**  
 Email #1:  
 Email #2:  
 Telephone:  
 Fax:  
 Samples on HOLD are subject to special pricing and release of liability  
 Relinquished By: Date/Time:  
 Received By: Date/Time:  
 PACE Project No. **4074280**  
 Receipt Temp = **ROF** °C  
 Sample Receipt pH OK / Adjusted  
 Cooler Custody Seal  
 Present / Not Present  
 Intact / Not Intact

03-15-'13 10:52 FROM-Moraine Envir. 1-262-377-9770 T-511 P023/024 F-676

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



**Sample Condition Upon Receipt**

Client Name: Moraine Env Project # 21074200

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

Tracking #: CS Logistics

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

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None Other Poly Bags

Thermometer Used NA Type of Ice:  Wet  Blue  Dry  None  Samples on ice, cooling process has begun.

Cooler Temperature ROE Biological Tissue is Frozen:  yes  no

Temp Blank Present:  yes  no

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

Biota Samples should be received ≤ 0°C.

Comments:

Person examining contents:  
Date: 2-23-13  
Initials: MW

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:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12. no times on COC of samples, 2/23/13
-Includes date/time/ID/Analysis Matrix:	<u>5</u>	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
		Lot # of added preservative
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

Field Data Required? Y / I / N

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

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

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

Date: 2/25/13

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)

## **Attachment D**

### **Site Figure Showing Proposed Soil Boring Locations**



11th Avenue

Adjacent Residence

Adjacent Building

Room Not Part of Dry Cleaners

Quality Cleaners

1226 11th Ave

Quality Cleaners

Concrete Parking Lot

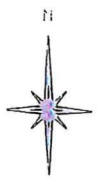
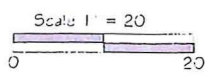
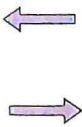
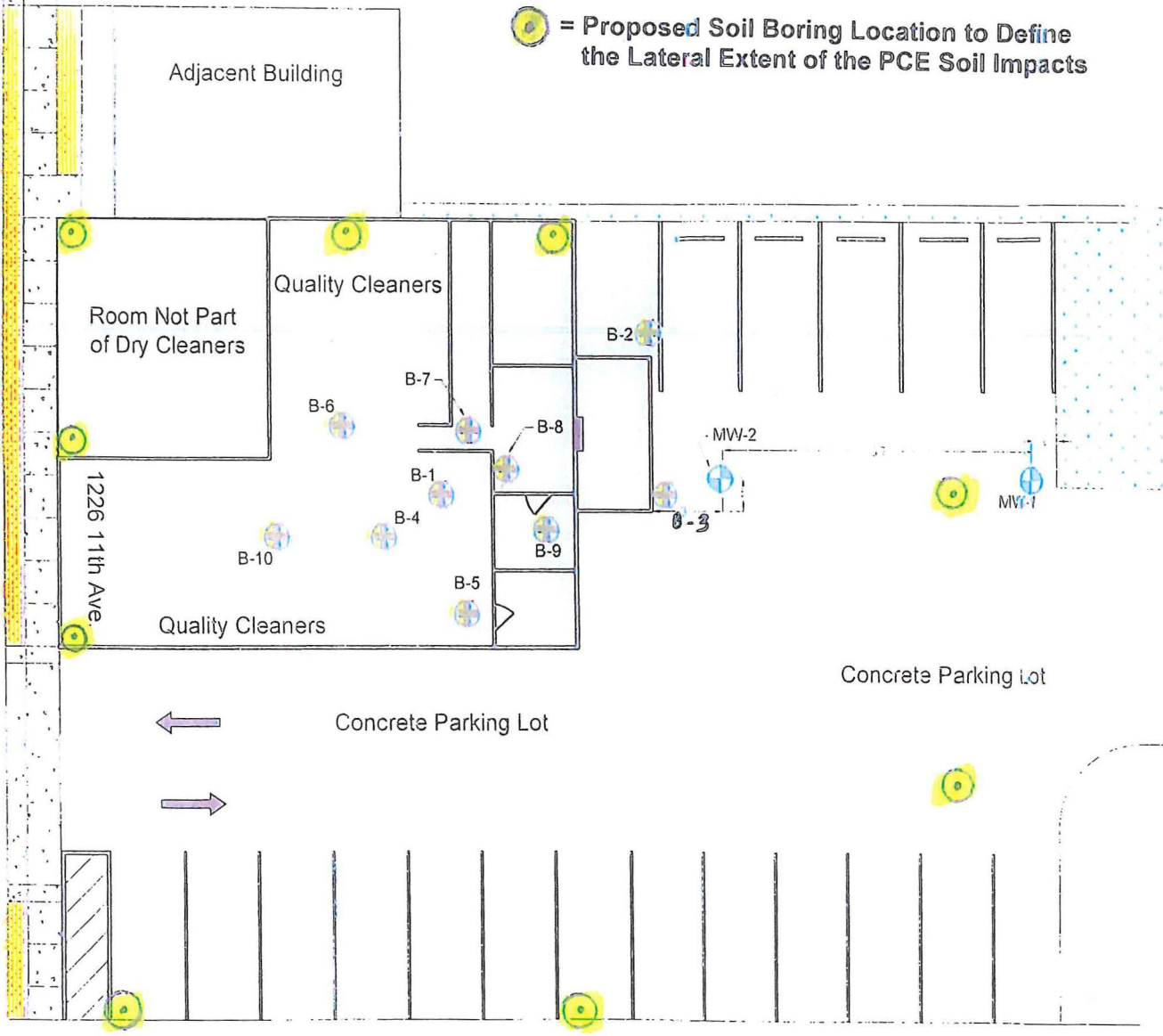
Concrete Parking Lot

Adjacent Building

**Legend**

- B-1 Borehole located on 11th Ave
- B-6 Borehole located on 11th Ave
- MW-1 & MW-2 Monitoring Wells located on 11th Ave

⊙ = Proposed Soil Boring Location to Define the Lateral Extent of the PCE Soil Impacts



Scale 1" = 20'
Revised by CT3
Revision 3-22-13
Project File Name: 07-0733-13-101-001
Client: Quality Cleaners of America

**FIGURE 2**  
SITE PLAN

**QUALITY CLEANERS**  
1226 11TH AVENUE  
GRAFTON, WISCONSIN

Moraine Environmental, Inc.  
Environmental Management Solutions