ENVIRO forensics

May 8, 2009

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Mr. John J. Hnat, P.G.
WDNR
Southeast Region Headquarters
2300 N Dr Martin Luther King, Jr Drive
Milwaukee, WI 53212-3128

Subject: **Site Investigation Report**
Shorewood Queensway Dry Cleaners
4300 N Oakland Avenue
Shorewood, Wisconsin 53211
WDNR BRRTS Activity # 02-41-552089
WDNR FID# 241094590

Dear Mr. Hnat:

On behalf of Shirdon, Inc. d/b/a Shorewood Queensway Dry Cleaners, Environmental Forensic Investigations, Inc. (EnviroForensics) is pleased to submit one (1) hard copy and one (1) electronic CD copy of the *Site Investigation Report* detailing site investigation activities completed at the Shorewood Queensway Dry Cleaners facility located at 4300 N Oakland Avenue in Shorewood, Wisconsin.

If you have any comments or questions, please do not hesitate to contact me.

Respectfully submitted,

Environmental Forensic Investigation, Inc.

Greg R. Zumbaugh, P.E., CHMM
Senior Project Manager

G Zumbaugh @ EnviroForensics.com

Enclosures

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SITE INVESTIGATION REPORT

SHIRDON, INC. d/b/a SHOREWOOD QUEENSWAY DRY CLEANERS
4300 OAKLAND AVENUE
SHOREWOOD, WISCONSIN 53211
WDNR BRRTS Activity # 02-41-552089
WDNR FID # 241094590

May 8, 2009

Prepared For:

Shirdon, Inc. d/b/a Shorewood Queensway Dry Cleaners
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LIMITATIONS

The purpose of a geologic/hydrogeologic study is to reasonably characterize existing site conditions based on the geology/hydrogeology of the area. In performing such a study, a balance must be struck between a reasonable investigation into the site conditions and an exhaustive analysis of each conceivable condition. The following paragraphs discuss the assumptions and parameters under which such a study is conducted.

No investigation is thorough enough to detect every geologic/hydrogeologic condition of interest at a given site. If conditions have not been identified during the study, such a finding should not therefore be construed as a guarantee of the absence of such conditions at the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

We are unable to report on or accurately predict events that may change the site conditions after the described services are performed, whether occurring naturally or caused by external forces. We cannot assume responsibility for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when services were performed.

Geologic/hydrogeologic conditions may exist at the site that cannot be identified solely by visual observation. Where subsurface exploratory work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

EXECUTIVE SUMMARY

Environmental Forensic Investigations, Inc. (EnviroForensics) has prepared this Site Investigation (SI) report on behalf of Shirdon, Inc. d/b/a Shorewood Queensway Dry Cleaners for the Shorewood Queensway Dry Cleaners (Shorewood) facility located at 4300 Oakland Avenue in Shorewood, Wisconsin (Site). The Site is currently a dry cleaning business operated as Shorewood Queensway Cleaners.

Preliminary site investigation activities were conducted by Alpha Terra Science (ATS) in June 2008. One soil sample was collected at approximately 6-18 inches below ground surface (bgs) near the dry cleaning machine. The soil sample yielded a tetrachloroethene (PCE) concentration of 23,100 micrograms per kilogram (ug/kg). EnviroForensics completed additional site investigation (SI) activities in February 2009 to further define the extent of soil contamination, and to determine if groundwater has been impacted. A total of five (5) soil borings were advanced, three (3) of which were converted to groundwater monitoring wells. Two (2) of the five (5) borings were advanced inside the building.

Several soil and groundwater samples collected during the SI field activities yielded contaminant concentrations above Wisconsin Department of Natural Resources action levels. The vertical extent of soil contamination beneath the building has not been delineated due to refusal during drilling activities, but appears to extend from just beneath the concrete floor downward to just below 28 feet bgs (based on sample results from the outside boring locations). The horizontal extent of soil contamination has not been defined at the Site. Groundwater flow direction is to the east. The extent of groundwater contamination has not been defined to the north and east of the Site.

Need soil + GW extent

The data that has been gathered indicates that soil and groundwater have been impacted onsite, and there is the potential for vapor intrusion onsite and at adjacent properties. EnviroForensics believes data gaps should be addressed by conducting further site investigation (FSI) activities. EnviroForensics recommends additional soil and groundwater sampling activities to further define the extent of soil and groundwater contamination. The FSI activities should include the assessment and sampling of potential contaminant migration pathways. Vapor intrusion activities including sub-slab and indoor air sampling activities should be conducted at the Site.

Vapor intrusion on/offsite

① Soil + GW extent
② migration pathways
③ Vapor - sub-slab + indoor Air + offsite residences
④ Piezometers

1.0 INTRODUCTION

Environmental Forensic Investigations, Inc. (EnviroForensics) has prepared this Site Investigation (SI) report on behalf of Shirdon, Inc. d/b/a Shorewood Queensway Dry Cleaners for the Shorewood Queensway Dry Cleaners (Shorewood) facility located at 4300 Oakland Avenue in Shorewood, Wisconsin (Site). This SI report follows guidelines for investigations and reporting set forth in the Wisconsin Department of Natural Resources (WDNR) NR 700 rule series and other State of Wisconsin rules.

The data that has been gathered indicates that soil and groundwater have been impacted onsite, and there is the potential for vapor intrusion onsite and at adjacent properties. EnviroForensics believes data gaps should be addressed by conducting further site investigation (FSI) activities. EnviroForensics recommends additional soil and groundwater sampling activities to further define the extent of soil and groundwater contamination. The FSI activities should include the assessment and sampling of potential contaminant migration pathways. Vapor intrusion activities including sub-slab and indoor air sampling activities should be conducted at the Site.

Soil contaminant concentrations have been compared to Residual Contaminant Levels (RCLs): Inhalation – Industrial, Inhalation – Non-Industrial, and Soil-to-Groundwater. Soil RCLs were calculated using the EPA Soil Screening Level Website http://risk.lsd.ornl.gov/epa/ssl1.htm. Copies of the results generated by the website are provided in Appendix A. Groundwater contaminant concentrations have been compared to Public Health Enforcement Standards (PHESs) and Public Health Preventive Action Levels (PHPALs).

1.1 Project Identification

The Site is located at 4300 Oakland Avenue in Shorewood, Wisconsin, 53211 in Milwaukee County. The location of the Site is depicted in Figure 1. The Site owner is Shirdon, Inc. d/b/a Shorewood Queensway Dry Cleaners, with telephone number (414) 962-5150. The Site is currently a dry cleaning business operated as Shorewood Queensway Cleaners.

Figure 2 depicts the general layout of the Site property including Site features. The Site consists of asphalt parking areas, and a building containing a dry cleaning business (Shorewood). The Site is bound by a residence to the east, E. Marion Street followed by an apartment building and a UPS Store to the south, N. Oakland Avenue followed by Einstein Bagels to the west, and a shopping center containing a beauty salon business to the north. The area surrounding the Site consists of residential and commercial properties.

Utility locations noted during the Site reconnaissance include water, sewer, natural gas, telephone, and electrical lines. Utilities are depicted in Figure 2.

1.2 Overview of Current Contamination Conditions

Alpha Terra Science (ATS) conducted preliminary site investigation activities on June 13, 2008. ATS advanced one hand-auger soil boring (HA-1) inside the building near the dry cleaning machine. One soil sample was collected from HA-1 at approximately 6-18 inches below ground surface (bgs). The soil sample yielded a tetrachloroethene (PCE) concentration of 23,100 micrograms per kilogram (ug/kg). The WDNR was notified on July 8, 2008 of the discovered release. Based on the results of the preliminary site investigation, the major contaminants of concern at the property appear to be PCE and its chemical breakdown products.

The site investigations performed by EnviroForensics were completed to further define the extent of soil contamination, and to determine if groundwater has been impacted. A detailed description of the investigation and its findings are presented below.

2.0 SITE BACKGROUND

2.1 Site History

The Site building has been used as a dry cleaning operation since the 1970's. PCE has historically been used, and is currently used, as a dry cleaning solvent at the Site.

2.2 Geographic Information

The site is located in the Southwest ¼ of Section 3, Township 7 North, Range 22 East, in the Village of Shorewood, Milwaukee County, Wisconsin. The elevation is approximately 691 feet above mean sea level (msl). The topography at the Site is gently sloping to the west. Lake Michigan is located approximately 0.6 miles to the east of the Site and the Milwaukee River is located approximately 1.5 miles to the west of the Site.

2.3 Geologic Information

Shorewood Queensway Cleaners, located at 4300 Oakland Avenue in Shorewood, Wisconsin is found in a gently undulating plain, without prominent relief, sloping eastward towards Lake Michigan. Lake Michigan is less than a mile from the Site location. The Site is found to be located in the Kewaunee clay loam soil type according to the Soil Survey of Milwaukee County, Wisconsin issued in 1916.

The surface soil of the Kewaunee clay loam consists of a grayish-red or reddish-brown clay loam from 3 to 6 inches deep, containing a fair percentage of organic matter and varying quantities of sand. The subsoil is a red, sticky, compact clay loam, which continues throughout the 3-foot section and contains varying quantities of limestone fragments and gravel. The Kewaunee clay loam occurs as a continuous body, lying mainly between the Milwaukee River and Lake Michigan.

The soils of the Kewaunee series are red to reddish brown, and the subsoil is red. The series is derived from red glacial material, probably reworked after deposition in a lake. The topography varies from undulating to rolling, and drainage is good.

According to the Bedrock Geology map of Wisconsin by M.G. Mudrey, B.A. Brown and J.K. Greenberg (1982), the depths to the bedrock at Milwaukee and the surrounding areas are approximately 100 to 300 feet below ground surface (bgs). The bedrock is overlained by glacial

drift, alluvial and lacustrine formations. Devonian dolomite, limestone and shale are found in Milwaukee and surrounding areas. In addition to Devonian formation, Silurian dolomite which includes Cayugan, Niagaran and Alexandrian series are found in the Milwaukee area.

There are three aquifers in Milwaukee County and much of Wisconsin, namely: sand and gravel deposits with unconsolidated glacial drift of Pleistocene age, Niagara dolomite of Silurian age, and sandstone of Cambrian-Ordovician age (Foley et al. 1953). The Cambrin-Ordovician aquifer system has been the most important source of water for Milwaukee area. The permeable part of the sandstone aquifer begins with St. Peter sandstone which is 880 feet bgs with a thickness of about 110 feet.

2.4 Preliminary Evaluation of Possible Contaminants of Concern

The primary contaminants of concern (COCs) at this Site are the dry cleaning solvent PCE and its degradation products (including trichloroethene (TCE), cis-1,2-dichloroethene (cis-1,2-DCE), trans-1,2-dichloroethene (trans-1,2-DCE), and vinyl chloride (VC)).

2.5 Preliminary Evaluation of Potential Contaminant Transport Mechanisms

Several COCs present in the soil and groundwater beneath the Site exceed WDNR action levels. Contamination desorbs from the soil and enters the groundwater based upon various factors including the amount of organic matter in the soil and chemical specific properties such as volatility, solubility, and partitioning coefficients. Contamination in the groundwater can also move through soil pore space and into building crawl spaces, basements, and/or indoors. Contamination in the groundwater will follow natural preferential pathways such as high permeability sands, and will generally move in the direction of groundwater flow. Contaminants may also follow anthropogenic preferential pathways such as underground utility trenches. Utility trenches that presently exist on Site are water and gas lines, as depicted in Figure 2.

3.0 INVESTIGATION RESULTS

3.1 Scope

EnviroForensics performed additional SI activities to further delineate soil and groundwater impacts at the Site. The field investigation was performed in three stages. Soil and groundwater samples were collected during SI activities. The locations of the soil borings and monitoring wells are provided in Figure 3. Boring logs are provided in Appendix B.

The first phase of the investigation was conducted February 25-26, 2009 and included:

- Clearing underground utilities in all soil boring location areas;
- Drilling and sampling of 5 direct-push soil borings (SB-1 through SB-5);
- Collection of a total of 11 soil and 1 grab groundwater samples from the direct-push borings for laboratory analysis;
- Converting 3 of the direct-push borings to monitoring wells;
- Laboratory chemical analysis of the 11 soil and 1 grab groundwater samples for volatile organic compounds (VOCs) using EPA Method 8260;
- Developing the 3 new monitoring wells; and
- Containerizing soil cuttings and water collected during the site activities on-site in 55-gallon DOT approved drums for purposes of later offsite disposal.

The second phase was completed on February 27, 2009 and included:

- Collecting static water levels from the 3 monitoring wells installed;
- Purging the monitoring wells, and collecting 1 groundwater sample from each of the 3 wells;
- Laboratory chemical analysis of the groundwater samples for VOCs using EPA Method 8260; and

- Containerizing purge water collected during the site activities on-site in 55-gallon, DOT approved drums for purposes of later offsite disposal.

The third phase was completed on April 3, 2009 and included:

- Conducting land survey of all of the monitoring wells and direct-push boring locations.

3.2 Methods

3.2.1 Direct-Push Borings

Direct-push soil borings (SB-1 through SB-5) were advanced using a truck mounted hydraulic GeoProbe® system and 2.25-inch diameter dual-tube sampler to provide data on the subsurface conditions and potential migration pathways of contaminants. Boring locations were marked and utility clearance was obtained prior to drilling. The borehole drilling and sampling activities were performed by On-site Environmental Services, Inc. (OES) of Sun Prairie, under subcontract to EnviroForensics. EnviroForensics observed all field activities, prepared boring logs and other field documentation, and handled and containerized all samples for analyses.

3.2.2 Soil Sampling

Direct-push soil samples were collected in 4-foot length, 1.125-inch inner diameter (ID) vinyl acetate plastic sample sleeves, sampled and logged. New disposable latex gloves were worn by the field geologist and new plastic sleeves were inserted into the sample probe for each sample. The sample sleeves were placed on plastic and the cutting tool decontaminated between samples for the remainder of the sampling. Decontamination of the sample probe and hand-auger bucket occurred between each sample, and the push rods were decontaminated between each borehole. Headspace screening was conducted on soil samples to identify the presence of volatile organic compounds. Field screening was conducted using a MiniRAE 2000 photoionization detector (PID) on representative soil samples. Screening was conducted at approximately one-foot or two-foot depth intervals. The PID readings were then recorded on the soil boring logs. Soil borings were continuously logged in accordance with the United Soil Classification System (USCS).

Two (2) soil samples were collected from each boring for laboratory analysis. One (1) sample was collected at the depth of the highest PID reading or, if no elevated PID readings were encountered, at the same depth interval as the highest PID reading found in the nearest boring location. A second sample was collected at a deeper depth where no contamination was suspected based upon PID readings and visual/olfactory information, or at the bottom of the boring. A duplicate soil sample (SB3-6-7) was collected from boring SB-3 for purposes of quality assurance and quality control (QA/QC). Additional sample volume was also collected from SB-3 for matrix spike & matrix spike duplicate (MS/MSD) analysis.

Soil samples for laboratory analysis were collected in laboratory supplied clean four-ounce sample jars with Teflon-lined lids and two five-gram Terra-core sample vials preserved in sodium bisulfate and one five-gram Terra-core sample preserved in methanol. Soil samples were placed in a cooler on ice, and submitted to Microbac Laboratories, Inc. (Microbac) located in Indianapolis, Indiana under chain-of-custody for analysis of VOCs using EPA Method 8260.

Following soil sampling activities each borehole was backfilled with activated bentonite chips and topped off with a asphalt, concrete, or topsoil to match the existing surface.

The investigation-derived material (soil cuttings, equipment decontamination water, and purge water) was contained in labeled United States Department of Transportation (US DOT) 17H-rated drums, or equivalent for characterization and offsite disposal at a later date.

3.2.3 Groundwater Sampling

EnviroForensics collected 1 grab groundwater sample direct-push boring SB-5 only. Three (3) of the direct-push borings were converted to groundwater monitoring wells, and groundwater samples were collected from the wells. The fifth boring (SB-4) did not yield sufficient groundwater to collect a sample. The grab groundwater samples were collected utilizing a direct-push screen driven into the saturated soil zone to be sampled. After the screen was set, groundwater was purged from the temporary well screen using disposable tubing and a check valve. Groundwater quality parameters included: pH, specific conductance, temperature, turbidity were not analyzed during the purging process due to the limited availability of groundwater. Approximately one (1) borehole volume of groundwater was purged prior to collecting the grab groundwater sample. The grab groundwater sample was collected directly from the effluent tubing into 40 milliliter (ml) sample vials pre-acidified in hydrochloric acid. The groundwater sample jars were placed in a cooler on ice, and submitted to Microbac under chain-of-custody for analysis of VOCs using EPA Method 8260.

Following sample collection, all tooling was removed and the borehole was backfilled with activated bentonite chips and was topped off with topsoil or asphalt. Purge water was stored onsite in DOT 17H-rated drums until disposed.

3.2.4 Monitoring Wells

3.2.4.1 Well Installation

Three (3) groundwater monitoring wells (MW-1 through MW-3) were installed for purposes of determining groundwater quality and hydrogeologic conditions at the Site. The drilling and well installation activities were performed by OES, under subcontract to EnviroForensics. EnviroForensics observed all field activities, and prepared monitoring well construction diagrams and other field documentation. Monitoring well construction diagrams are provided in Appendix C.

The three (3) direct-push soil borings SB-1, SB-2, and SB-3 were converted to monitoring wells MW-1, MW-2, and MW-3, respectively.

3.2.4.2 Monitoring Well Construction

Three (3) monitoring wells were installed on February 26, 2009 in compliance with applicable regulations. Monitoring wells MW-1, MW-2, and MW-3 were all completed to a depth of 18, 22, and 22 feet below ground surface (bgs), respectively, and constructed with 10 ft of screen each. A summary of monitoring well construction is provided in Table 1. Monitoring well construction diagrams are provided in Appendix C.

Wells were constructed using two-inch ID schedule 40 PVC well casings and two-inch ID, 10-foot long, 0.01-inch, factory slotted, schedule 40 PVC well screens. Joints were flush threaded and provided with chemical resistant O-rings. No adhesives or solvents were used. The filter pack consisted of #5 washed quartz sand and was installed through the augers from the bottom of the well screen to one to two feet above the screen. Bentonite pellets were used to seal the borehole. The bentonite was hydrated down hole. Expandable locking caps were placed on each well casing. The wells were secured with flush mounted, traffic approved, protective covers concreted into place. Expandable locking caps were placed on each well.

3.2.4.3 Monitoring Well Development

Well development was performed on February 26, 2009. Monitoring wells MW-1 and MW-2 were surged and pumped during the development process to remove fines from the sand pack. Development continued until the water ran clear. The investigation-derived waste (purge water) was placed in DOT approved 55 gallon drums pending analysis. Monitoring well MW-3 was not developed due to insufficient water volume.

3 2.4.4 Monitoring Well Sampling

Groundwater sampling was conducted on February 27, 2009; one day after well development activities had been completed.

Water level measurements were collected from the three (3) groundwater-monitoring wells on February 27, 2009 using an electronic water level indicator. The monitoring wells were allowed to equilibrate to atmospheric pressure by removing well lids a minimum of 15 minutes before measuring the water levels.

The water level indicator, which consists of a probe at the end of a teflon-coated wire line, was lowered down the well from a survey mark at the top of the well casing. When the probe contacted the groundwater, an electric current triggered an alarm and a light on the wire line reel. The depth to water was then read off the wire line and recorded on field forms to the nearest 0.01 foot. Static water level measurements are provided in Table 2, and depicted in Figure 4.

Prior to sampling, each monitoring well was purged using the procedure outlined below:

- Static water level was measured to the nearest 0.01 foot.
- Attempts were made to utilize low-flow or micro-purge techniques to purge the three wells. New disposable tubing was lowered into the well and placed near the top of the water column. The tubing was attached to a peristaltic pump and groundwater was pumped at a rate of approximately 300 ml/min.
- Low-flow sampling techniques could not be utilized for any of the monitoring wells because water table drawdown could not be maintained at less than 0.3 feet. As per the groundwater monitoring plan, the wells were instead purged of three well volumes from the top of the water column to remove stagnant water above

the well screen.

- The well casing volume was calculated as follows. Total depth of the well was measured and the well casing volume calculated. The static casing volume was calculated using the following formula:

$$V=\pi r^2 h\ (7.48\ gal/ft^3)$$

where:

V = static volume of water in well (gallons)
r = inner radius of well casing (feet)
h = length of water column (feet)

- The quantity of water produced was measured. Each well was purged of at least three well volumes or until the well went dry. No detergents, soaps, acids, bleaches, or other additives were used to purge the well.

- Aquifer parameters such as pH, specific conductance, temperature, total dissolved solids, turbidity, oxidation reduction potential and dissolved oxygen were measured for each well during purging activities.

- The sample for well MW-3 was collected directly without purging three (3) well volumes, as the well had very little water to purge.

Sample vials used to collect groundwater for VOC analysis were filled completely, forming a positive meniscus and preventing air from remaining in the bottle. A convex, teflon-lined septum was then placed over the positive meniscus to seal the container. After capping, the bottle was inverted and tapped to check for trapped air. Upon collection, all samples were labeled and placed in an ice-chilled cooler under chain of custody control. New nitrile gloves and disposable bailers were used for each monitoring well. Samples were submitted under appropriate chain-of-custody procedures to Microbac Laboratories for analysis of VOCs.

Blind duplicate and trip blank samples were collected during the sampling program for quality assurance/quality control (QA/QC) purposes.

3.2.5 Surveying

Land surveying of the direct push borings, soil gas borings, and monitoring well locations was

performed by Surveying Associates, Inc., located in of Wauwatosa, Wisconsin, under contract to EnviroForensics. Survey data collected included surface elevations for all of the borings, monitoring wells, and various salient property items. A copy of the Survey is provided in Appendix E. The survey results are summarized in Table 3.

3.3 Subsurface Geology Results

The subsurface geology encountered to 41 feet bgs during the SI drilling activities consisted of two (2) general lithological units. These units are best described and understood by reviewing the field soil boring logs that are provided in Appendix B. Cross-sections based on the boring logs are depicted in Figures 5 through Figure 7. A general overview of the subsurface geology is as follows:

3.3.1 Upper Clay Unit

Beneath the thin layer of surface fill, pavement and associated gravel was a reddish brown clay unit. The base of this clay unit was typically encountered at depths of 8 to 11 feet bgs. This clay unit was observed to be moderately plastic, stiff, uniform, moist and contained a little silt and traces fine to medium gravel.

3.3.2 Lower Clay Unit

Below the upper clay unit was a grayish-brown, medium stiff to stiff, moist, clay unit which contained traces of silt and fine to medium gravel. The top of this unit was encountered at depths between 8 to 11 feet bgs. The bottom of this unit was not encountered during this investigation and hence the total thickness of the unit is not known at this time.

3.4 Subsurface Hydrogeology Results

The three (3) monitoring wells were constructed at the Site in order to characterize the contamination in the groundwater and to determine probable contamination migration pathways. All three (3) of the wells were constructed alike with identical materials and screened over similar depths (MW-1 was screened slightly shallower (8-18 ft bgs) than MW-2 and MW-3 (12-22 ft bgs)).

One (1) round of water levels were collected from the three monitoring wells during the SI field activities. During the February 27, 2009 field activities the depth to water (DTW) measurements

in the monitoring wells ranged from 14.16 to 20.99 feet bgs, and the groundwater elevations ranged from 690.32 ft above mean sea level (msl) at MW-1 to 691.52 ft msl at MW-3. Wells MW-1 and MW-3 are approximately 52 feet apart. These measurements were then used to calculate the average shallow groundwater gradient. This data is summarized in Table 3 and graphically depicted in Figure 7. The average calculated gradient and flow direction of the shallow on site groundwater was determined to be approximately 0.023 ft/ft. The estimated groundwater gradient flows to the east.

The data appear to support the general groundwater flow direction summarized in Regional Aquifer Systems of the United States – Aquifers of the Midwestern Area, American Water Resources Association Monograph Series No. 13, p. 39-72 (. Figure 5, "Generalized Water Table in the Chicago-Milwaukee Area," shows a flow toward Lake Michigan for the Site.

3.5 Laboratory Analytical Results

The laboratory analytical results for the soil, grab groundwater, and monitoring well groundwater samples collected during SI activities are summarized in Tables 4, 5, and 6, respectively; and graphically depicted in Figures 8, 9, and 10, respectively. A summary of laboratory QA/QC sample results is provided in Table 7. The laboratory analytical reports are provided in Appendix F.

3.5.1 Soil Analytical Results

A total of ten (10) soil and one (1) duplicate soil samples were collected during the SI field activities. Of these samples a total of eight (8) yielded detectable concentrations of VOCs. The following is a summary of the samples that yielded detectable levels of VOCs above RCLs, and their associated results:

- Soil samples at borings SB-1 and SB-2 yielded PCE concentrations of 240 *u*g/kg, 5.8 *u*g/kg, and 8.0 *u*g/kg respectively, which are above the PCE soil RCL-Soil to Groundwater level of 4.1 *u*g/kg, but below the PCE soil RCL-Inhalation, Non-Industrial level of 2,000 *u*g/kg.

- Shallower soil samples at borings SB-3, SB-4, and SB-5 yielded very high PCE concentrations of 53,000 *u*g/kg, 3,500,000 *u*g/kg, 370,000 *u*g/kg, 300,000 *u*g/kg and 4,100,000 *u*g/kg, which are above the PCE soil RCL-Inhalation, Industrial level of 34,000 *u*g/kg.

- The shallower soil sample at SB-3 yielded a TCE concentration of 4.8 *ug*/kg, which is above the TCE soil RCL-Soil to Groundwater level of 3.7 *ug*/kg, but below the TCE soil RCL-Inhalation, Non-Industrial level of 14 *ug*/kg..

- Soil samples 6107-SB4-11-11.5, 6107-SB4-12.5-13, 6107-SB5-6-6.5 and 6107-SB5-10-10.5 yielded TCE concentrations of 620 *ug*/kg, 240 *ug*/kg, 640 *ug*/kg, and 790 *ug*/kg respectively, which are above the TCE SRC-Inhalation, Industrial level of 230 *ug*/kg.

- Soil samples at SB-5 also yielded cis-1,2-DCE concentrations of 160 *ug*/kg and 87 *ug*/kg, which are above the cis-1,2-DCE soil RCL-Soil to Groundwater level of 55 *ug*/kg, but below the cis-1,2-DCE soil RCL-Inhalation, Non-Industrial level of 1,300,000 *ug*/kg

- Soil samples at SB-4 and SB-5 also yielded 1,2-Dichloropropane concentrations of 22 *ug*/kg, 16 *ug*/kg, and 16 *ug*/kg, which are above the 1,2-Dichloropropane soil RCL-Soil to Groundwater level of 3.9 *ug*/kg, but below the 1,2-Dichloropropane soil RCL-Inhalation, Non-Industrial level of 5,800 *ug*/kg

In summary, the vadose zone extending between 3-12 feet bgs in the vicinity of soil borings SB-3, SB-4, and SB-5 has been impacted with high concentrations of PCE and TCE, and relatively low concentrations of 1,2-DCE and 1,2-Dichloropropane. In contrast, the vadose zone in the vicinity of borings SB-1 and SB-2 have been impacted with relatively minor concentrations of contaminants.

This indicates that contamination generally is present on the north eastern side of the property.

3.5.2 Groundwater Analytical Results

The groundwater samples were collected via two (2) different methods: grab and permanent groundwater monitoring wells. A total of 1 grab, 3 monitoring well, and 1 duplicate monitoring well groundwater samples were collected during the SI field activities.

The grab and only 1 monitoring well groundwater samples yielded detectable concentrations of VOCs. The following is a summary of the samples that yielded detectable levels of VOCs,

above Public Health Preventive Action Levels (PHPALs) and Public Health Enforcement Standards (PHESs), and their associated results:

- The grab groundwater sample at boring SB-5 yielded PCE, TCE, 1,1-Dichloroethene, cis-1,2-DCE, trans-1,2-DCE, VC, and chloroform concentrations of 170,000 *ug*/l, 1,700 *ug*/l, 7.7 *ug*/l, 4,600 *ug*/l, 100 *ug*/l, 230 *ug*/l, and 6.4 *ug*/l which are all above respective PHPALs of 0.5 *ug*/l, 0.5 *ug*/l, 0.7 *ug*/l, 7 *ug*/l, 20 *ug*/l, 0.02 *ug*/l, and 0.6 *ug*/l, and are also above respective PHESs of 5 *ug*/l, 5 *ug*/l, 7 *ug*/l, 70 *ug*/l, 100 *ug*/l,0.2 *ug*/l, and 6 *ug*/l.

- Monitoring well sample MW-3 yielded a PCE concentration of 1,200 *ug*/l, which is above the PHPAL of 0.5 *ug*/l and the PHES of 5 *ug*/l.

3.5.3 Quality Assurance/Quality Control (QA/QC) Sample Analytical Results

During the SI field activities, 1 duplicate soil sample, one 1 duplicate monitoring well groundwater sample and 1 trip blank sample were collected. The duplicate soil sample identification was 6107-SB3-6-7 and was a duplicate of soil sample 6107-SB3-3-4. Soil sample 6107-SB3-6-7 was also analyzed for MS/MSD purposes. The groundwater duplicate sample identification was 6107-MW4 and was a duplicate of groundwater sample 6107-MW2. Groundwater sample 6107-MW4 was also analyzed for matrix MS/MSD purposes. The duplicate samples have a false sample identification and collection time, which makes the samples "blind" to the analytical laboratory. The duplicate samples were collected with the original samples using the same sampling procedures.

To measure the precision of field sampling activities, relative percent difference (RPD) were calculated for the blind duplicate sample as follows:

RPD is defined as:

$$RPD = \frac{(C_1 - C_2) \times 100\ \%}{(C_1 + C_2)/2}$$

where C_1 and C_2 are the larger and smaller of the two duplicate values, respectively.

Field duplicate RPD goals are defined as within 25 percent for detections of chemicals in both samples at concentrations greater then the lowest standard used to define the laboratory

calibration curve. The lowest standard on the laboratory calibration curve shall be run at the MDL. Due to the inherent nature of duplicate soil sampling RPDs may vary more than 25 percent, as is the case with the soil and duplicate soil sample. The RPD for PCE in the soil and duplicate soil sample is within range (18.8%), while the RPD for TCE and 1,1,1,2-Tetrachloroethane are not in range (70.4% and 29.5%, respectively). The RPD for the monitoring well groundwater and groundwater duplicate samples are within the criteria.

The soil and groundwater sample trip blanks did not yield any VOCs above the laboratory detection limits.

Soil sample 6107-SB3-6-7 and groundwater sample 6107-MW1 were analyzed for MS/MSD purposes. The MS/MSD results are within criteria.

Overall the data is considered acceptable for the intended use.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Several soil samples collected during the SI field activities yielded COCs concentrations above WDNR RCLs. Based on the results of SI activities, it appears that the onsite soils have been impacted above RCLs by chemicals associated with the on-Site use and management of the dry cleaning solvent PCE. The highest contaminant concentrations appear to be located beneath the building near the former dry cleaning machine. The highest concentration of PCE was detected in boring SB-5 at approximately 10 feet bgs. The highest concentrations of PCE and other COCs appear to be at approximately 9-11 feet bgs. The vertical extent of soil contamination beneath the building has not been delineated due to refusal during drilling activities, but appears to extend from just beneath the concrete floor downward to just below 28 feet bgs (based on sample results from SB-1, SB-2 and SB-3). The horizontal extent of soil contamination has not been defined at the Site, but the data indicate that contamination is generally present on the northeastern portion of the property. Additional investigation activities are required to further define the vertical and horizontal extents of COCs contamination in soil.

Grab and monitoring well groundwater samples yielded concentrations of COCs above WDNR action levels. The highest detected levels of PCE and other COCs in groundwater were detected beneath the building near the dry cleaning machine at boring SB-5. The highest concentration of PCE detected in monitoring well samples was at MW-3, located to the east of the suspected contaminant source area. The horizontal extent of groundwater contamination has not been delineated at the Site. Based on the SI groundwater level measurements, the groundwater analytical results, and regional groundwater flow-direction direction information, groundwater appears to flow from west to east across the Site. Additional investigation activities are required to further define the horizontal extent of COCs contamination in groundwater and to verify local groundwater flow direction.

Potential contaminant migration pathways (e.g., utility lines) should be verified and soil and/or groundwater samples should be collected along these potential preferential pathways.

A potential for inhalation exposure is present via the vapor intrusion pathway for onsite receptors. The potential for vapor intrusion should be investigated further to determine if the inhalation exposure pathway is complete.

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION SUMMARY
Site Investigation Report
Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

Monitoring Well I.D.	Top of Casing Elevation (ft msl)	Ground Elevation (ft msl)	Total Depth (ft bgs)	Screened Interval (ft bgs)	Drilling Method	Drilling Contractor	Date Installed
MW-1	689.79	690.32	18	8-18	H.S.A.	On-Site Environmental	2/26/09
MW-2	690.90	691.43	22	12-22	H.S.A.	On-Site Environmental	2/26/09
MW-3	690.99	691.52	22	12-22	H.S.A.	On-Site Environmental	2/26/09

Notes:

All wells 2-inch diameter

ft. bgs = feet below ground surface

ft msl = feet above mean sea level

TABLE 2
STATIC WATER LEVEL DATA
Site Investigation Report
Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

WELL I.D.	TOC ELEVATION	2/27/2009	
		DTW	WL
MW-1	**689.79**	14.16	675.63
MW-2	**690.90**	20.99	669.91
MW-3	**690.99**	21.50	669.49

All values are in feet
DTW = depth to water, below top of casing (TOC)
WL = water level elevation, in feet above mean sea level (MSL)
TOC = Top of Casing

TABLE 3
LAND SURVEY DATA
Site Investigation Report
Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

Description	Northing	Easting	Elevation
SB-1			690.32
SB-2			691.43
SB-3			691.52
SB-4			691.03
SB-5			691.05
MW-1 GRND			690.32
MW-1 PVC			689.79
MW-2 GRND			691.43
MW-2 PVC			690.90
MW-3 GRND			691.52
MW-3 PVC			690.99

Survey performed by Benchmark Land Services, Inc.

TABLE 4
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS

Site Investigation Report
Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

ppb

Sample Location	Soil Residual Contaminant Level - Inhalation, Industrial	Soil Residual Contaminant Level - Inhalation, Non-Industrial	Soil Residual Contaminant Level - Soil to Groundwater	SB-1	SB-1	SB-2	SB-2	SB-3	SB-3	SB-3	SB-4	SB-4	SB-5	SB-5
Sample ID				6107-SB1-9-10	6107-SB1-25-26	6107-SB2-15-16	6107-SB2-27-28	6107-SB3-3-4	6107-SB3-6-7	6107-SB3-27-28	6107-SB4-11-11.5	6107-SB4-12.5-13	6107-SB5-6-6.5	6107-SB5-10-10.5
Sample Date				2/25/2009	2/25/2009	2/25/2009	2/25/2009	2/25/2009	2/25/2009	2/25/2009	2/25/2009	2/25/2009	2/25/2009	2/25/2009
Sample Time				13:50	14:40	11:50	12:20	9:30	9:50	10:30	16:00	16:20	17:20	17:45
Sample Depth (ft)				9	25	15	27	3	6	27	11	12.5	6	10
VOCs (ug/kg)														
Tetrachloroethene	34,000	2,000	4.1	**240**	<4.5	**5.8**	<4.4	***53,000***	***64,000***	**8.0**	***3,500,000***	***370,000***	***300,000***	***4,100,000***
Trichloroethene	230	14	3.7	<1.1[a]	<0.82[a]	<0.84[a]	<0.8[a]	4.8[b]	2.5[b]	<0.88[a]	***620***	***240***	***640***	***790***
cis-1,2-Dichloroethene	1,300,000	1,300,000	55	<6.2	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	23	10	100	87
trans-1,2-Dichloroethene	3,200,000	3,200,000	98	<6.2	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	<4.6	<4.5	<4.4	<4.5
Vinyl Chloride	890	53	0.13	**<2.1[a]**	**<1.5[a]**	**<1.6[a]**	**<1.5[a]**	**<1.7[a]**	**<1.6[a]**	**<1.7[a]**	**<1.6[a]**	**<1.5[a]**	**<1.5[a]**	**1.8[b]**
1,1,1,2-Tetrachloroethane	21,000	1,300	7.4	<6.2	<4.5	<4.6	<4.4	7.0	5.2	<4.9	<4.6	<4.5	5.3	<4.5
1,2-Dichloropropane	40,000	5,800	3.9	<1.2[a]	<0.91[a]	<0.93[a]	<0.88[a]	<1.0[a]	<0.93[a]	<0.98[a]	**22**	**16**	<0.88[a]	**16**
Chlorobenzene	340,000	49,000	150	<6.2	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	<4.6	140	14	18
Ethylbenzene	400,000	400,000	1,500	<6.2	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	6.4	5.6	<4.4	5.9
Toluene	670,000	670,000	1,400	6.9	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	35	35	5.5	15
Xylene	1,900,000	270,000	160,000	<6.2	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	28	23	<4.4	16
4-Methyl-2-Pentanone	54,000,000	7,700,000	1,700	<6.2	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	6.3	5.1	<4.4	<4.5
Chloroform	910	54	39	<6.2	<4.5	<4.6	<4.4	<5.0	<4.7	<4.9	<4.6	<4.5	4.5	<4.5

Notes:
Samples analyzed using EPA SW-846 Method 8260
ug/kg = micrograms per kilogram
VOCs = Volatile Organic Compounds
Bolded values are above Soil Residual Contaminant Level - Inhalation, Industrial
Bolded and Shaded values are above Soil Residual Contaminant Level - Soil to Groundwater
[a] Laboratory Method Detection Limit reported instead of the laboratory Reporting Limit
[b] Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit
All Soil Residual Contaminant Levels were calculated using the EPA Soil Screening Level Website http://risk.lsd.ornl.gov/epa/ssl1.htm

TABLE 5
DETECTED ANALYTICAL RESULTS FOR VOCS AND TPH IN GROUNDWATER

Site Investigation Report
Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

Sample Location	Public Health Enforcement Standards (ug/l)	Public Health Preventive Action Level (ug/l)	SB-5
Sample ID			6107-SB5-8W
Sample Date			2/26/2009
Sample Time			12:00
Sample Depth (ft)			8
VOCs (ug/l)			
Tetrachloroethene	**5**	**0.5**	**170,000**
Trichloroethene	**5**	**0.5**	**1,700**
1,1-Dichloroethene	**7**	**0.7**	**7.7**
cis-1,2-Dichloroethene	**70**	**7**	**4,600**
trans-1,2-Dichloroethene	**100**	**20**	**100**
Vinyl Chloride	**0.2**	**0.02**	**230**
Chlorobenzene	**100**[a]	**N.E.**	18
Chloroform	**6**	**0.6**	**6.4**
1,1-Dichloropropene	**N.E.**[b]	**N.E.**	11
Toluene	**1,000**	**200**	5.5

Notes:
[a]EPA Maximum Contaminant Level (MCL)
[b]On EPA's Drinking Water Contaminant Candidate List
N.E. = Not Established
Samples analyzed using EPA SW-846 Method 8260 with Prep Method 5030B
ug/l = micrograms per liter
VOCs = Volatile Organic Compounds
Bolded values are above Public Health Preventive Action Level
Bolded and Shaded values are above Public Health Enforcement Standards

TABLE 6
SUMMARY OF MONITORING WELL SAMPLE ANALYTICAL RESULTS
Site Investigation Report
Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

- East Property Line

Sample Location	Public Health Enforcement Standards (ug/l)	Public Health Preventive Action Level (ug/l)	MW-1	MW-2	MW-3
Sample ID			6107-MW1	6107-MW2	6107-MW3
Sample Date			2/27/2009	2/27/2009	2/27/2009
Volatile Organic Compounds (ug/L)					
Tetrachloroethene	**5**	**0.5**	<5	<5	**1,200**
Trichloroethene	**5**	**0.5**	<5	<5	<5
cis-1,2-Dichloroethene	**70**	**7**	<5	<5	<5
trans-1,2-Dichloroethene	**100**	**20**	<5	<5	<5
Vinyl chloride	**0.2**	**0.02**	<2	<2	<2

Notes:
Units in micrograms per liter = ug/L = parts per billion = ppb for VOCs and SVOCs
Bolded values are above Public Health Preventive Action Level
Bolded and Shaded values are above Public Health Enforcement Standards

TABLE 7
SUMMARY OF LABORATORY QA/QC SAMPLE ANALYTICAL RESULTS
Site Investigation Report
Shorewood Queensway Dry Cleaners
Shorewood, Wisconsin

Sample ID	RISC	RISC	Trip Blank	Trip Blank	MW-4
Sample Type	Residential	Industrial	Trip Blank	Trip Blank	Duplicate of MW-2
Sample Date	Default Closure	Default Closure	2/25/2009	2/27/2009	2/27/2009
Analytes					
Volatile Organic Compounds (ug/L)					
Tetrachloroethene	**55**	**5**	<5	<5	<5
Trichloroethene	**7.2**	**5**	<5	<5	<5
cis-1,2-Dichloroethene	**1000**	**70**	<5	<5	<5
trans-1,2-Dichloroethene	**2000**	**100**	<5	<5	<5
Vinyl chloride	**4**	**2**	<2	<2	<2

Notes:

All Sample results reported in micrograms per Liter = µg/L = parts per billion = ppb
Bolded values exceed IDEM RISC Residential Default Closure Levels
For soil QA/QC sample results, see Table 5.

FIGURES

No.	Date	Revision	Approved

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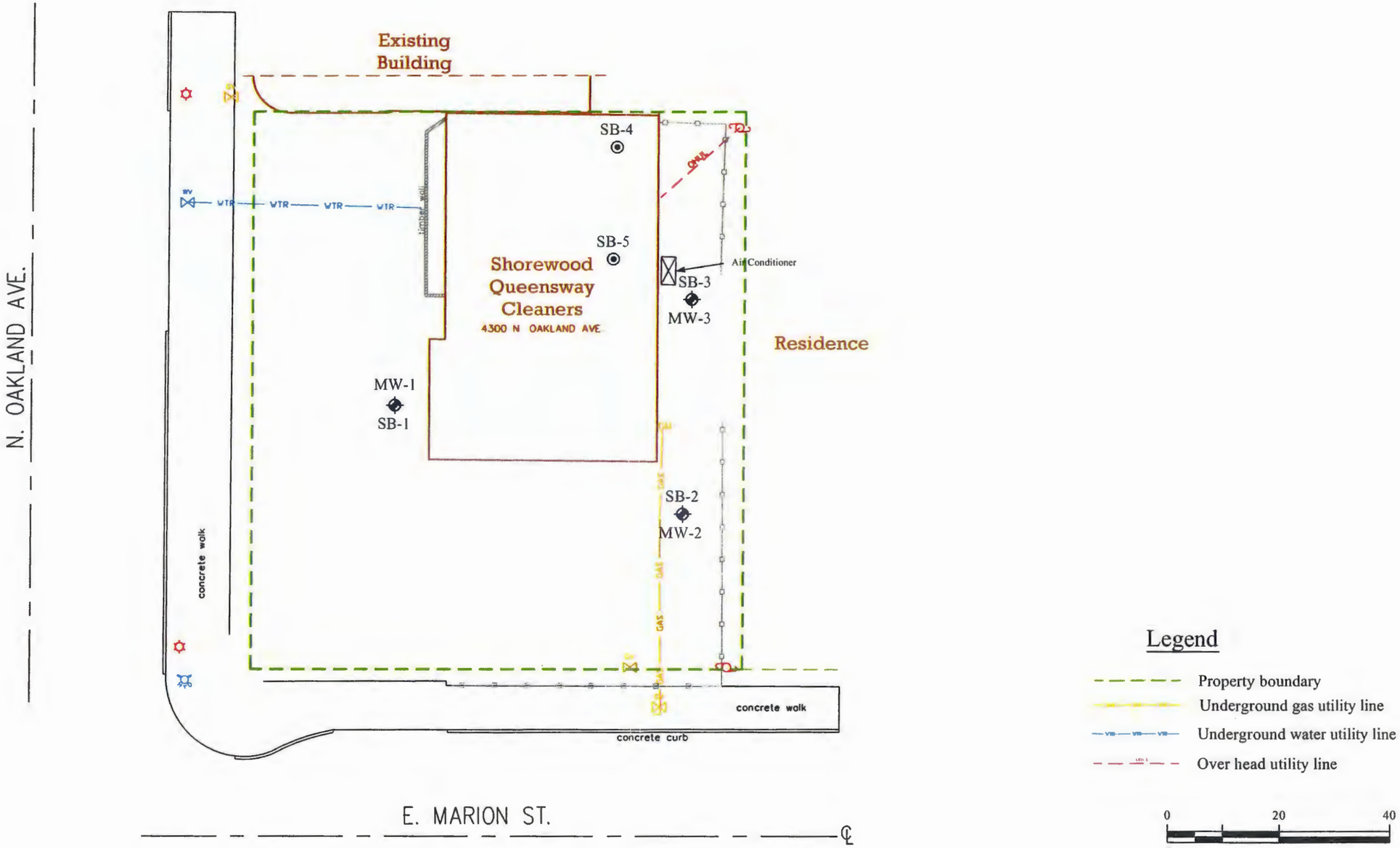
SITE LOCATION MAP
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure
1
Project
6107



Legend

- Property boundary
- Underground gas utility line
- Underground water utility line
- Over head utility line

0 20 40

Approximate Scale in Feet

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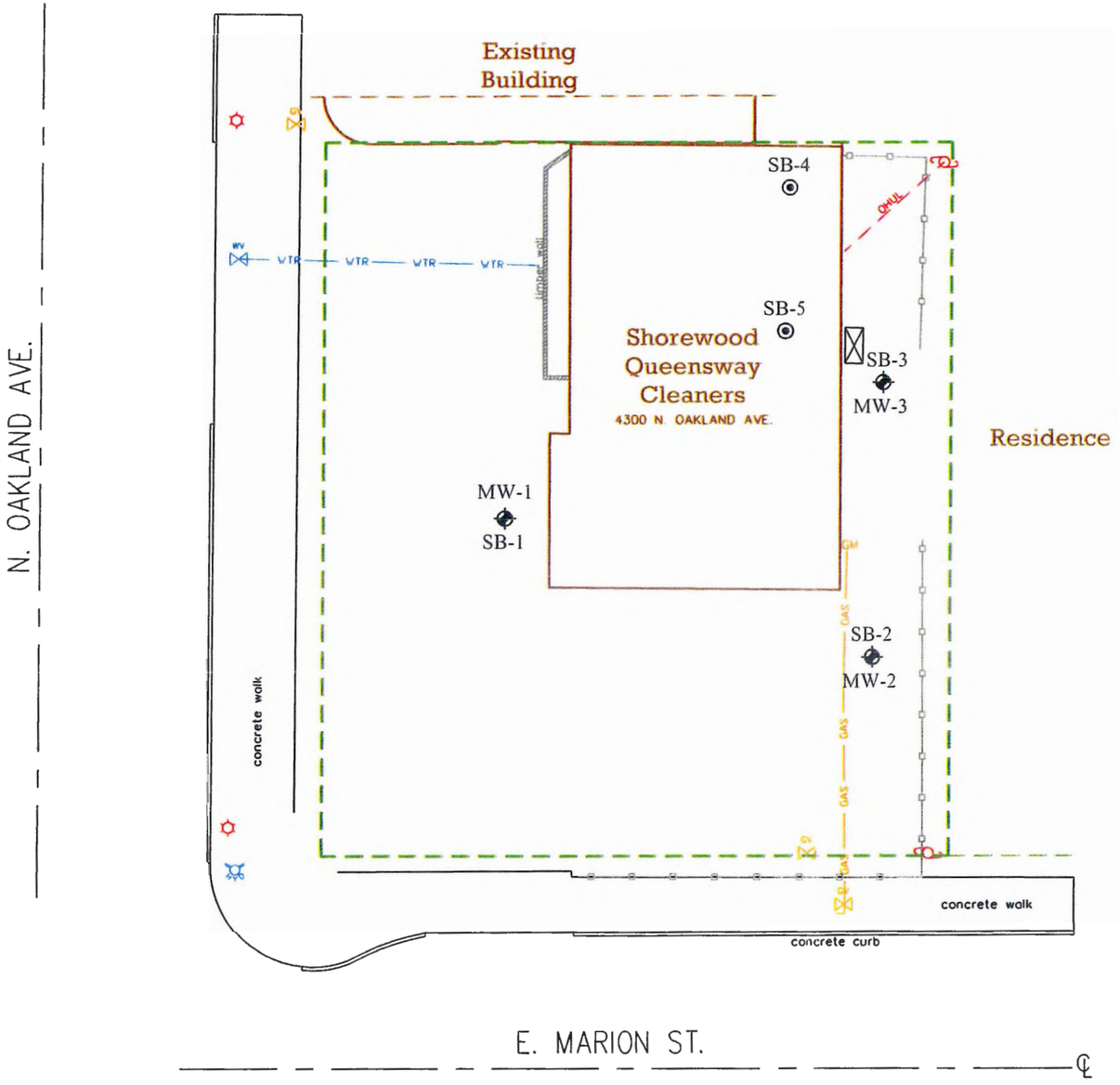
SITE FEATURES MAP

Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure 2

Project 6107



Legend

- Property boundary
- SB-4 ⊙ Soil boring location
- MW-2 ✦ Monitoring well location

0 20 40

Approximate Scale in Feet

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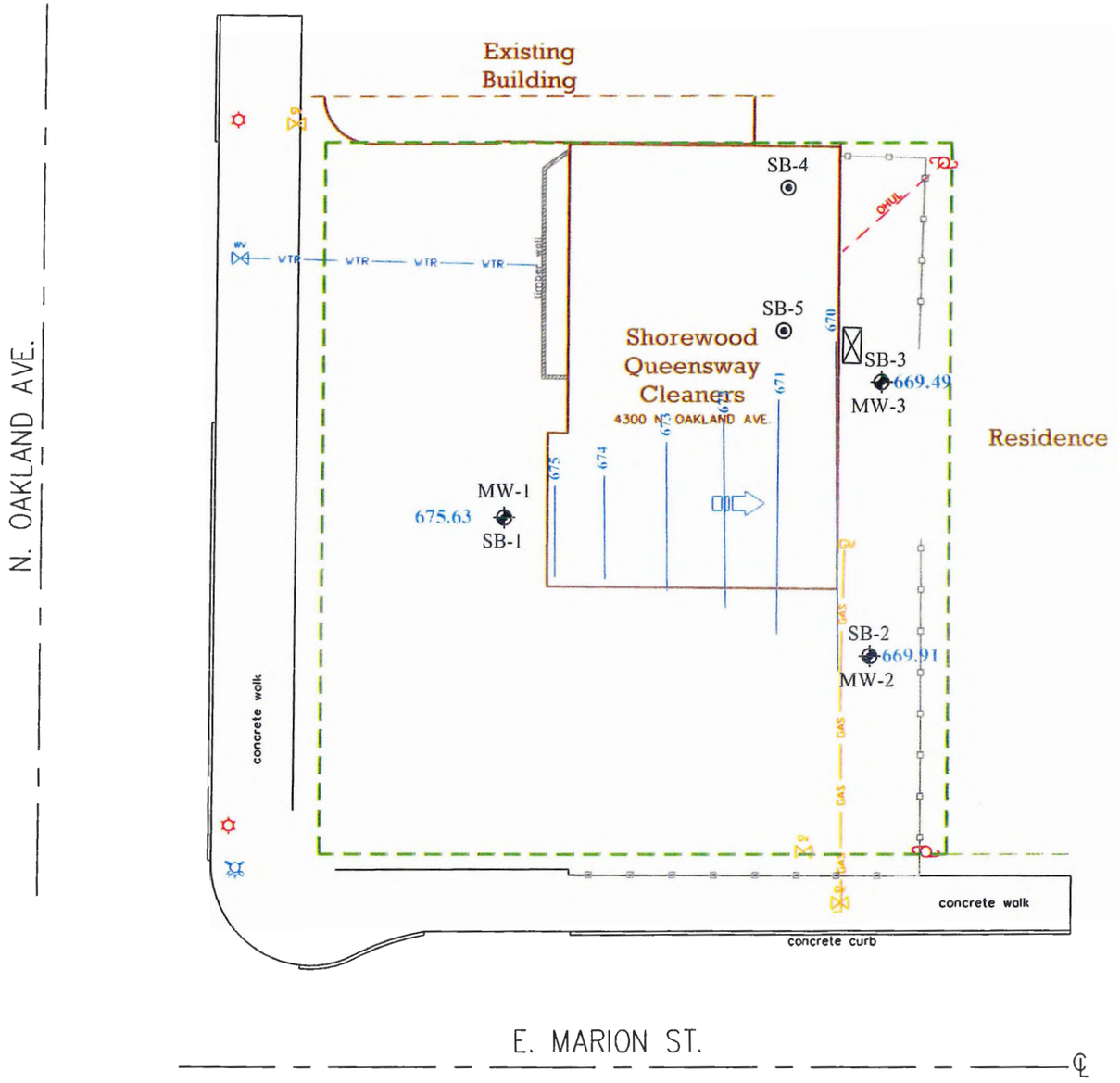
SOIL BORING AND MONITORING WELL LOCATION MAP
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood. WI

Figure 3

Project 6107



N

Legend

- 670 — Groundwater elevation contour
- 675.63 — Groundwater elevation
- Approximate groundwater flow direction
- MW-2 — Monitoring well location

0 20 40

Approximate Scale in Feet

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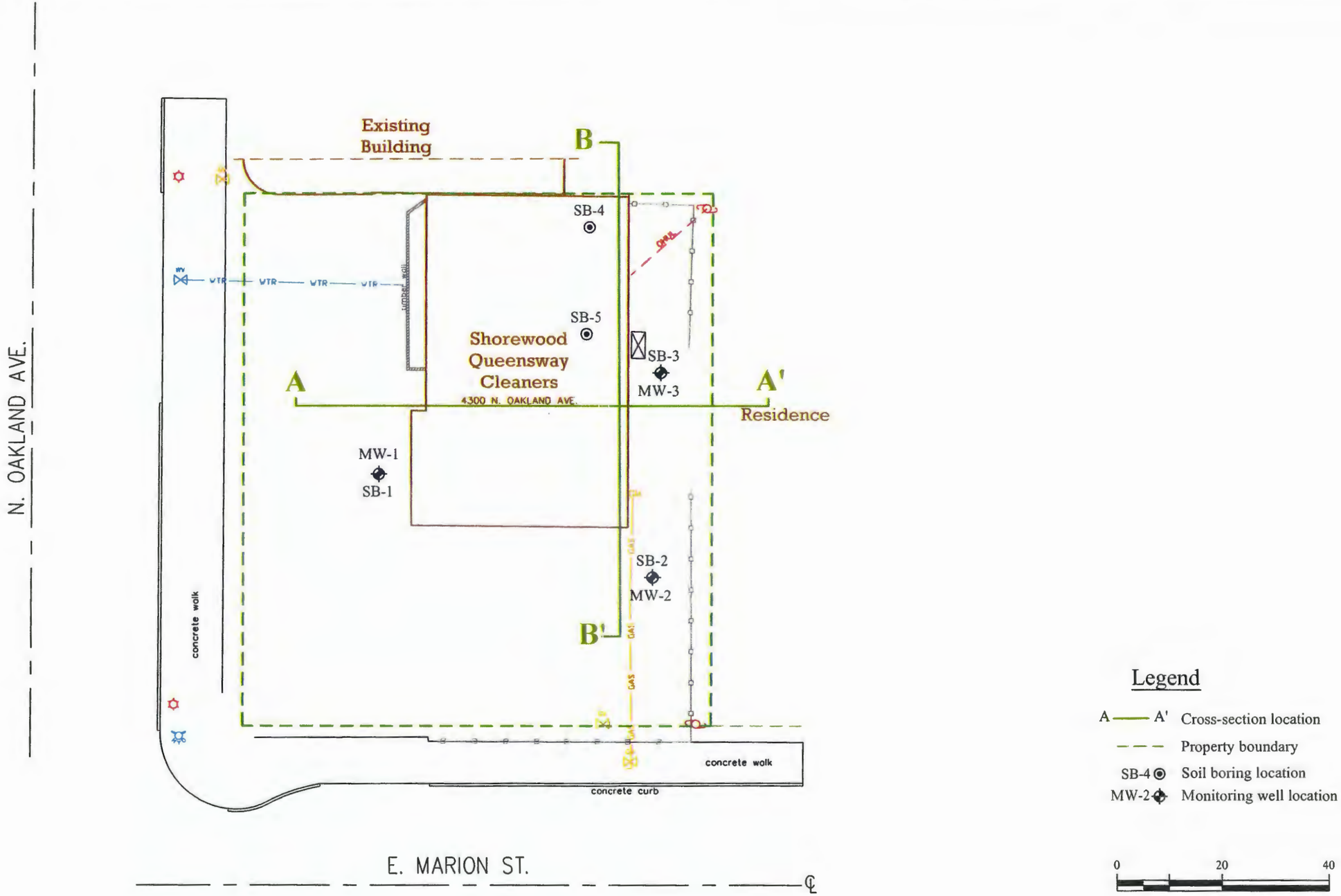
GROUNDWATER CONTOUR MAP

Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure
4
Project
6107



Legend

- A —— A' Cross-section location
- – – – Property boundary
- SB-4 ◉ Soil boring location
- MW-2 ◆ Monitoring well location

0 20 40

Approximate Scale in Feet

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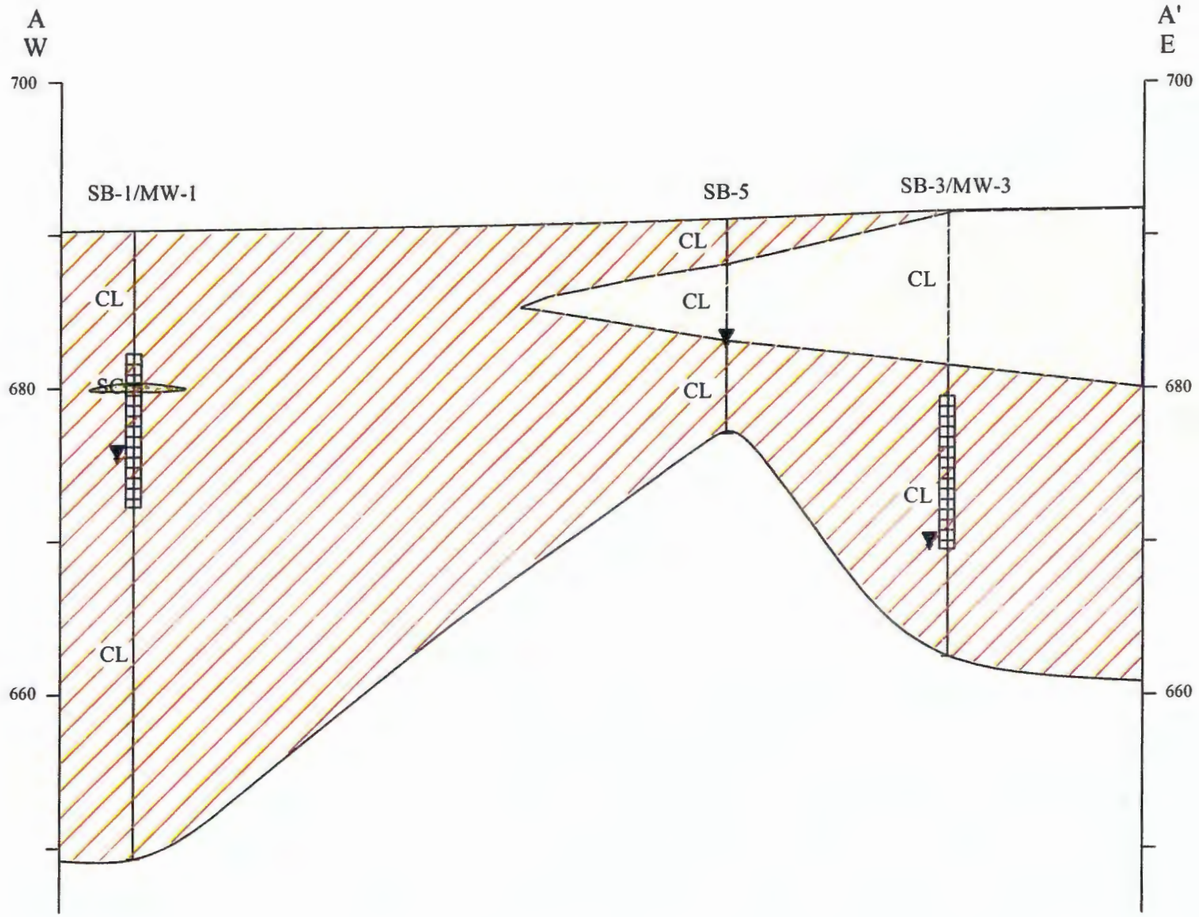
GEOLOGIC CROSS-SECTION LOCATION MAP
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure
5
Project
6107



Legend:

- Reddish brown Clay
- Grayish Brown Clay
- Clayey Sand
- Groundwater Elevation

Notes:

CL Clay
SC Poorly grded sand with clay
All the points are projected

0 10 20

Approximate scale in feet

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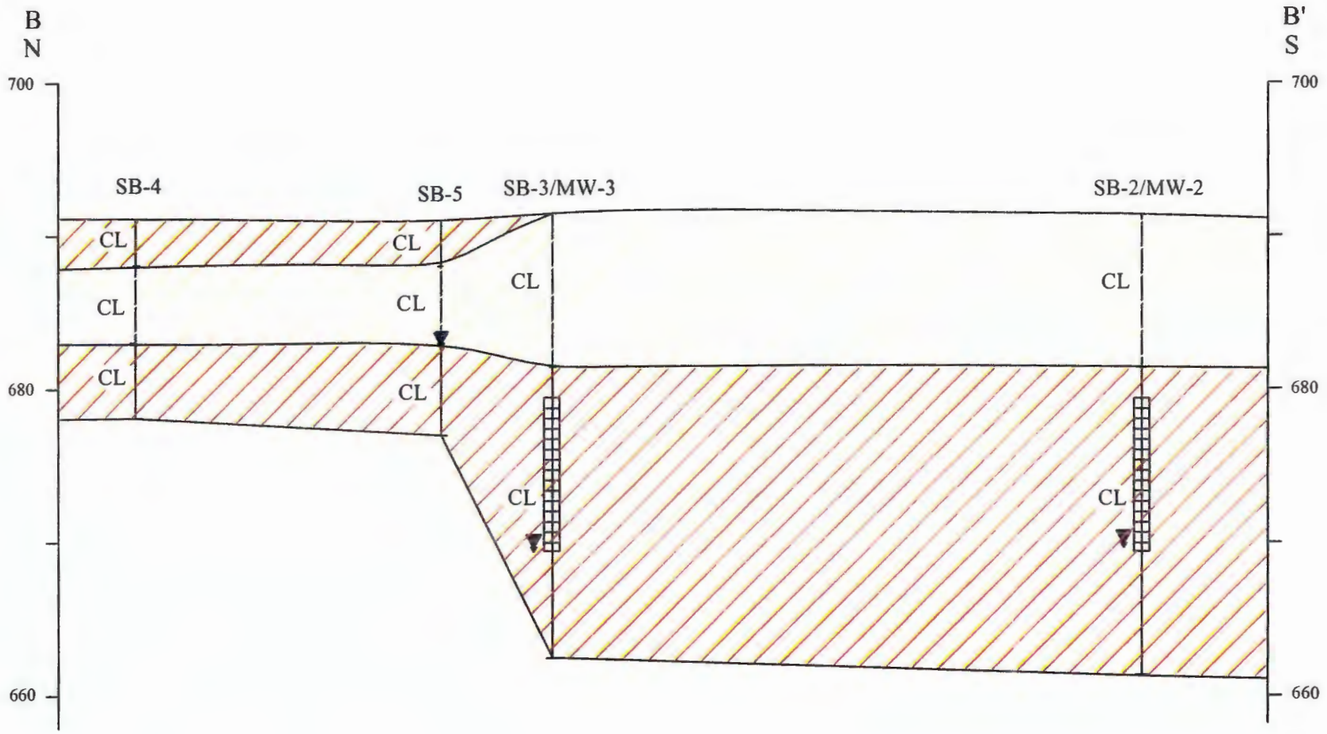
GEOLOGICAL CROSS SECTION A-A'
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure
6
Project
6107



Legend:

- Reddish brown Clay
- Grayish Brown Clay
- Groundwater Elevation

Notes:

CL Clay
All the points are projected

0 10 20
Approximate scale in feet

No.	Date	Revision	Approved

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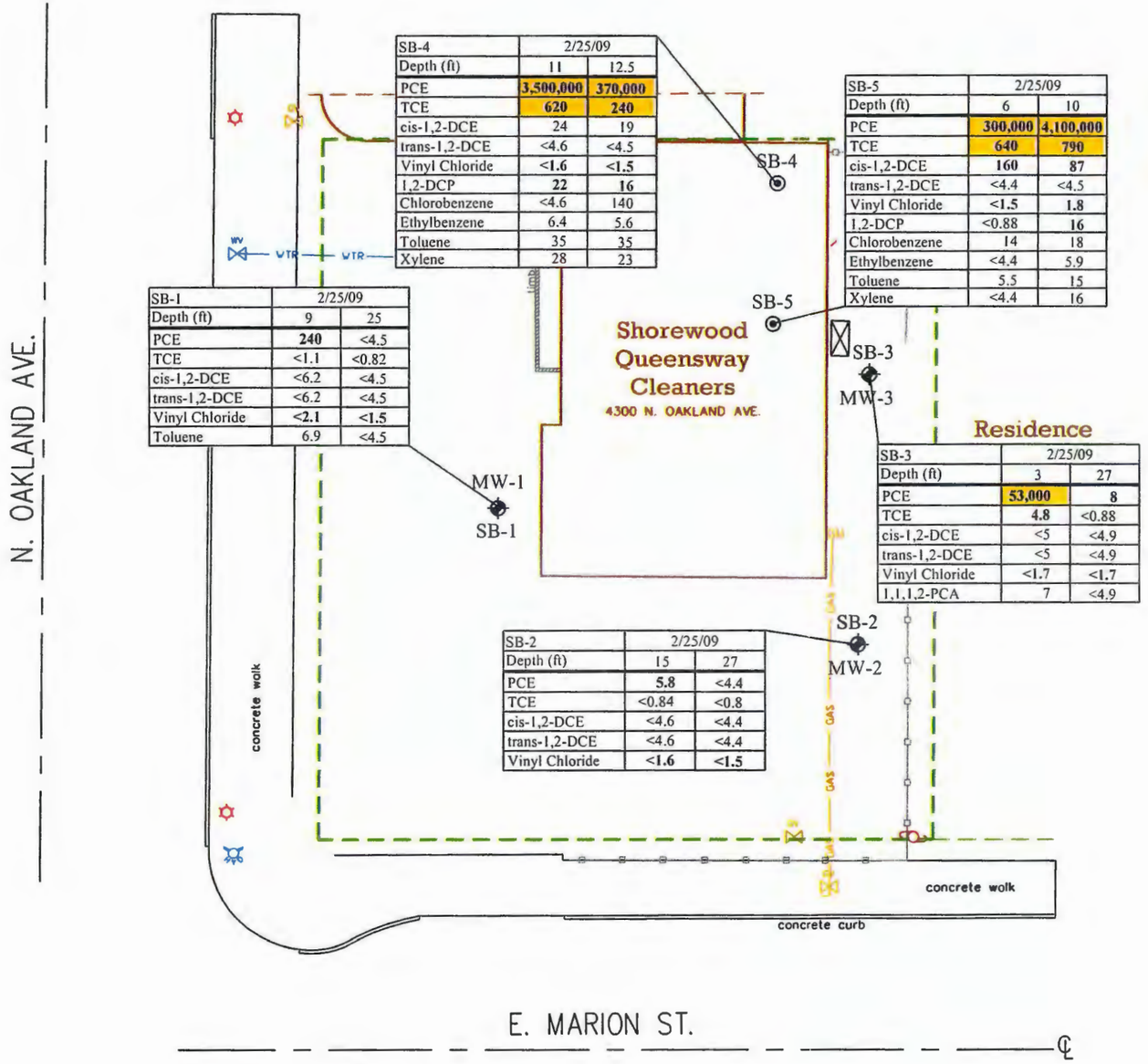
GEOLOGICAL CROSS SECTION B-B'
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure 7
Project 6107



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

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

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

SB-3	2/25/09	
Depth (ft)	3	27
PCE	**53,000**	**8**
TCE	**4.8**	<0.88
cis-1,2-DCE	<5	<4.9
trans-1,2-DCE	<5	<4.9
Vinyl Chloride	**<1.7**	**<1.7**
1,1,1,2-PCA	7	<4.9

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

	Soil Residual Contaminant Level		
	Inhalation		Soil to Groundwater
	Industrial	Non-Industrial	
PCE	34,000	2,000	4.1
TCE	230	14	3.7
cis-1,2-DCE	1,300,000	1,300,000	55
trans-1,2-DCE	3,200,000	3,200,000	98
Vinyl Chloride	890	53	0.13
1,1,1,2-PCA	21,000	1,300	7.4
1,2-DCP	40,000	5,800	3.9
Chlorobenzene	340,000	49,000	150
Ethylbenzene	400,000	400,000	1,500
Toluene	670,000	670,000	1,400
Xylene	1,900,000	270,000	160,000
Chloroform	910	54	39

Legend

- Property boundary
- SB-4 ◉ Soil boring location

Notes:
1. Concentrations in ug/kg
2. Bolded values are above Soil Residual Contaminant Level - Soil to Groundwater
3. Bolded and shaded values are above Soil Residual Contaminant Level - Inhalation, Industrial
4. ft = feet below ground surface
6. PCE = Tetrachloroethene
7. TCE = Trichloroethene
8. cis-1,2-DCE = cis-1,2-Dichloroethene
9. trans-1,2-DCE = trans-1,2-Dichloroethene
10. 1,1,1,2-PCA = 1,1,2-Tetrachloroethane
11. 1,2-DCP = 1,2-Dichloropropane

0 20 40

Approximate Scale in Feet

No.	Date	Revision	Approved

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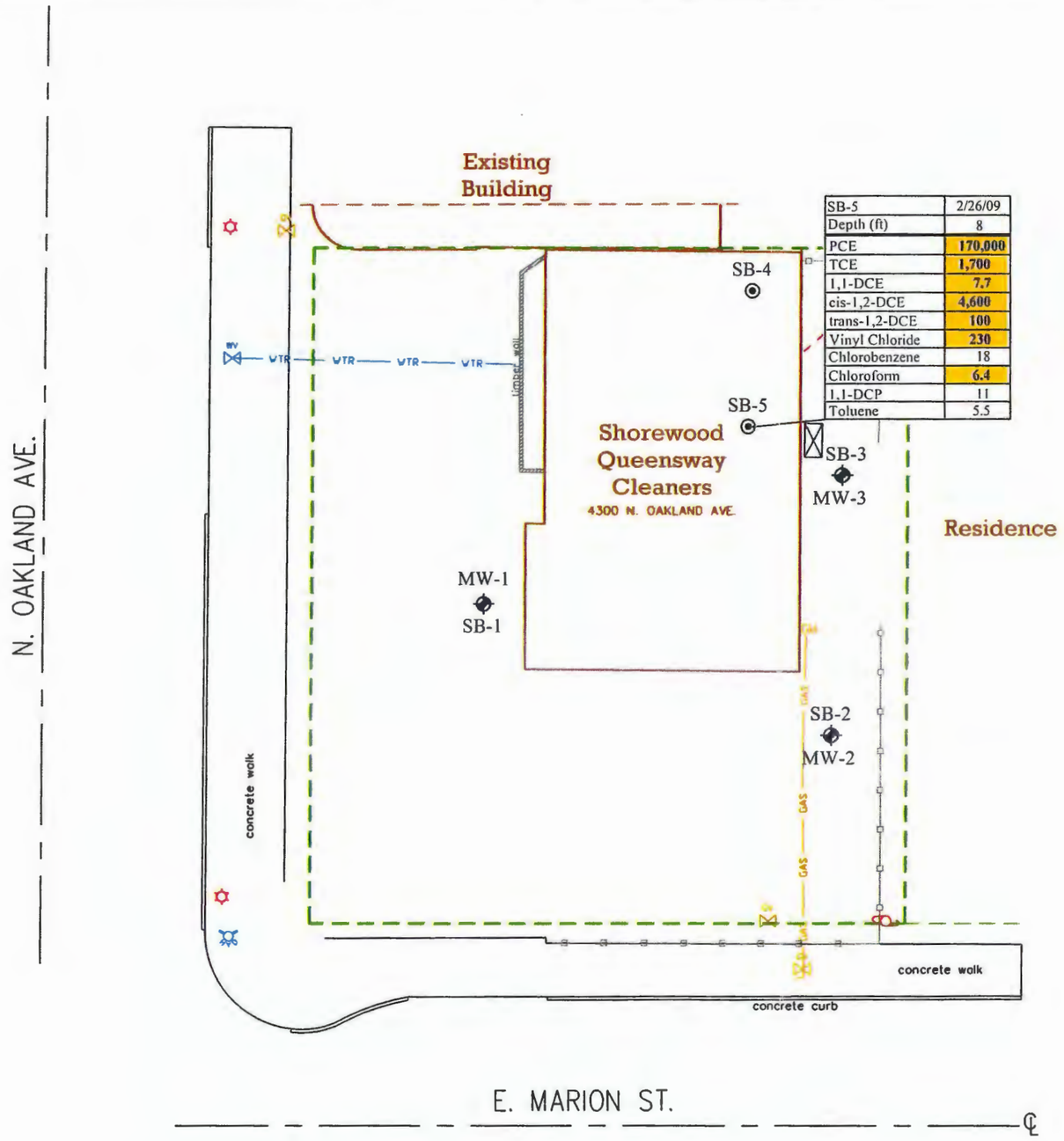
SOIL ANALYTICAL RESULTS
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure 8

Project 6107



SB-5	2/26/09
Depth (ft)	8
PCE	170,000
TCE	1,700
1,1-DCE	7.7
cis-1,2-DCE	4,600
trans-1,2-DCE	100
Vinyl Chloride	230
Chlorobenzene	18
Chloroform	6.4
1,1-DCP	11
Toluene	5.5

	Public Health	
	Enforcement Standards	Preventive Action Level
PCE	5	0.5
TCE	5	0.5
cis-1,2-DCE	70	7
trans-1,2-DCE	100	20
Vinyl Chloride	0.2	0.02
1,1-DCE	7	0.7
Chlorobenzene	100	--
Chloroform	6	0.6
1,1-DCP	--	--
Toluene	1,000	200

Legend

- Property boundary
- SB-4 ◉ Soil boring location

Notes:
1. Concentrations in ug/L
2. Bolded and shaded values are above Public Health Enforcement Standards
3. ft = feet below ground surface
4. PCE = Tetrachloroethene
5. TCE = Trichloroethene
6. cis-1,2-DCE = cis-1,2-Dichloroethene
7. trans-1,2-DCE = trans-1,2-Dichloroethene
8. 1,1-DCE = 1,1-Dichloroethene
9. 1,2-DCP = 1,2-Dichloropropane

0 20 40
Approximate Scale in Feet

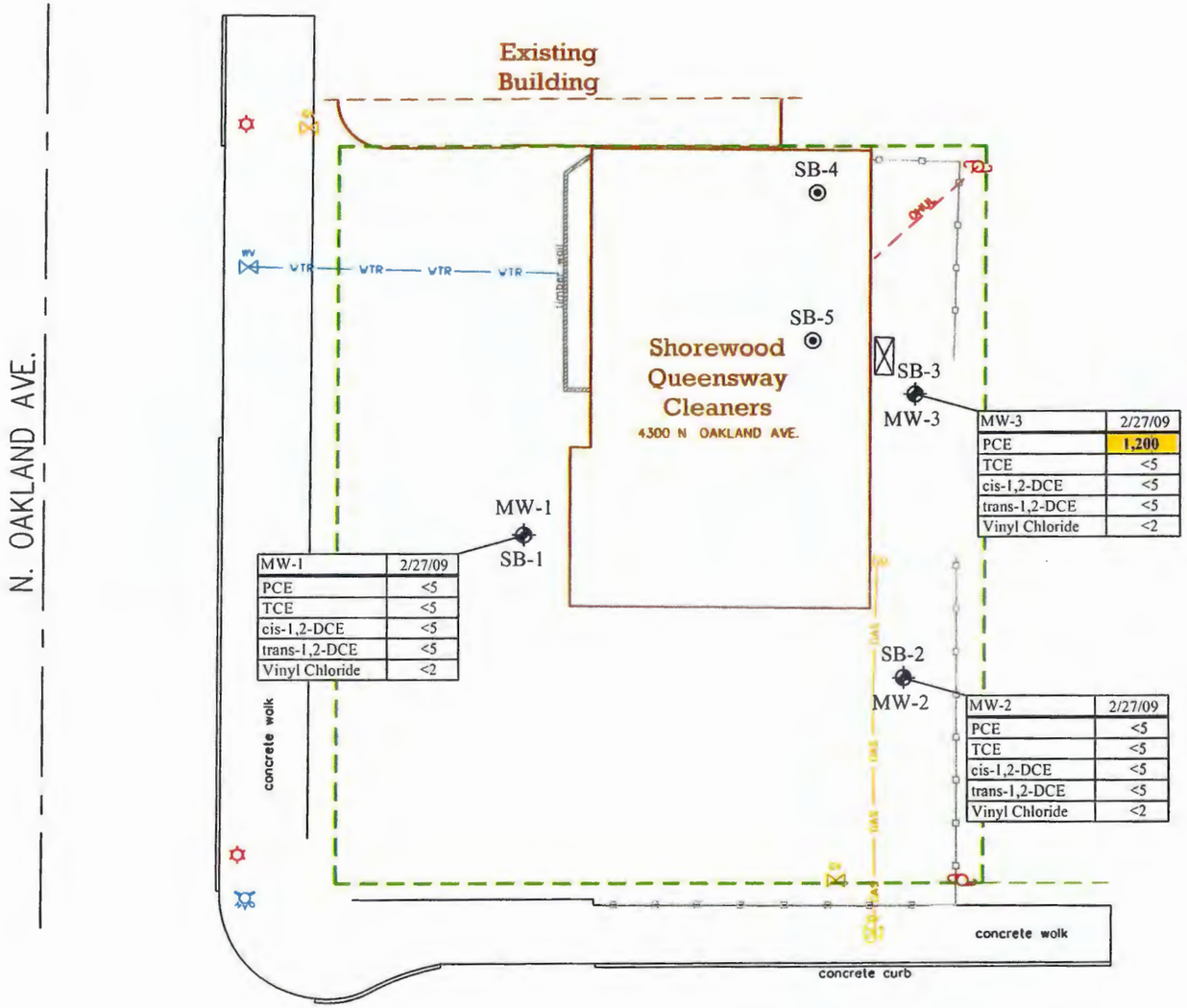
No.	Date	Revision	Approved

ENVIRO forensics
ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.
1060 N Capitol Ave, Suite E230 • Indianapolis, IN 46204
EnviroForensics.com

Date:	4/16/09
Designed:	HR
Drawn:	HR
Checked:	GZ
DWG file:	19359-09

GRAB GROUNDWATER ANALYTICAL RESULTS
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure
9
Project
6107



	Public Health	
	Enforcement Standards	Preventive Action Level
PCE	5	0.5
TCE	5	0.5
cis-1,2-DCE	70	7
trans-1,2-DCE	100	20
Vinyl Chloride	0.2	0.02

Legend

- Property boundary
- MW-2 Monitoring well location

Notes:
1. Concentrations in ug/L
2. Bolded and shaded value are above Public Health Enforcement Standards
3. PCE = Tetrachloroethene
4. TCE = Trichloroethene
5. cis-1,2-DCE = cis-1,2-Dichloroethene
6. trans-1,2-DCE = trans-1,2-Dichloroethene

0 20 40
Approximate Scale in Feet

No.	Date	Revision	Approved

ENVIRO
ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.
1060 N Capitol Ave, Suite E230 • Indianapolis, IN 46204
EnviroForensics.com

Date:	4/16/09
Designed:	HR
Drawn:	HR
Checked:	GZ
DWG file:	19359-09

MONITORING WELL ANALYTICAL RESULTS
Site Investigation Report
Shorewood Queensway Cleaners
4300 N. Oakland Avenue; Shorewood, WI

Figure 10
Project 6107

APPENDIX A

Calculated Soil Residual Contaminant Concentrations

Soil Screening Guidance for Chemicals

Equation Values for Inhalation of Volatiles

Volatilization Factor Parameter	Value	Soil Saturation Concentration Parameter	Value	Noncarcinogenic Parameter	Value	Carcinogenic Parameter	Vali
Surface Area (acres)	0.5			Target Hazard Quotient (unitless)	0.2	Target Risk (unitless)	1.0E 7
City (climate zone)	Minneapolis (V)			Exposure Duration (yr)	30	Exposure Duration (yr)	30
Q/C (g/m^2-s per kg/m^3)	93.77358			Exposure Frequency (day/yr)	350	Exposure Frequency (day/yr)	350
Fraction organic carbon (unitless)	0.006	Fraction organic carbon (unitless)	0.006			Average Lifetime (yr)	70
Dry soil bulk density (g/cm^3)	1.5	Dry soil bulk density (g/cm^3)	1.5				
Soil particle density (g/cm^3)	2.65	Soil particle density (g/cm^3)	2.65				
Water-filled soil porosity (L_{water}/L_{soil})	0.2	Water-filled soil porosity (L_{water}/L_{soil})	0.2				
Exposure interval (s)	9.5e08						

Soil Screening Levels for Inhalation of Volatiles (mg/kg)

Analyte	Cas Number	Inhalation RfC	Inhalation Unit Risk	Volatilization Factor	Soil Saturation Concentration	Noncarcinogenic	Carcinogen
Chlorobenzene	108907	2.0E-02 b,c		1.2E+04	6.9E+02	4.9E+01	
Chloroform	67663		2.3E-05 a	5.1E+03	3.1E+03		5.4E-02
Dichloroethylene, 1,2-cis-	156592			5.6E+03	1.3E+03		
Dichloroethylene, 1,2-trans-	156605			4.4E+03	3.2E+03		
Dichloropropane, 1,2-	78875	4.0E-03 a		6.9E+03	1.2E+03	5.8E+00	
Ethylbenzene	100414	1.0E+00 a		1.0E+04	4.0E+02	2.1E+03	
Tetrachloroethane, 1,1,1,2-	630206		7.4E-06 a	3.9E+04	6.6E+03		1.3E+00
Tetrachloroethylene	127184	6.0E-01 v	5.8E-07 v	4.8E+03	2.4E+02	6.0E+02	2.0E+00
Toluene	108883	5.0E+00 a		7.5E+03	6.7E+02	7.8E+03	
Trichloroethylene	79016	4.0E-02 v	1.1E-04 v	6.1E+03	1.3E+03	5.1E+01	1.4E-02
Vinyl Chloride	75014	1.0E-01 a	8.8E-06 a	1.9E+03	1.2E+03	4.0E+01	5.3E-02
Xylene, Mixture	1330207	1.0E-01 a		1.3E+04		2.7E+02	

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Soil Screening Guidance for Chemicals

Equation Values for Inhalation of Volatiles

Volatilization Factor Parameter	Value	Soil Saturation Concentration Parameter	Value	Noncarcinogenic Parameter	Value	Carcinogenic Parameter	Val
Surface Area (acres)	0.5			Target Hazard Quotient (unitless)	0.2	Target Risk (unitless)	1.0E 7
City (climate zone)	Minneapolis (V)			Exposure Duration (yr)	30	Exposure Duration (yr)	30
Q/C (g/m^2-s per kg/m^3)	93.77358			Exposure Frequency (day/yr)	350	Exposure Frequency (day/yr)	350
Fraction organic carbon (unitless)	0.006	Fraction organic carbon (unitless)	0.006			Average Lifetime (yr)	70
Dry soil bulk density (g/cm^3)	1.5	Dry soil bulk density (g/cm^3)	1.5				
Soil particle density (g/cm^3)	2.65	Soil particle density (g/cm^3)	2.65				
Water-filled soil porosity (L_{water}/L_{soil})	0.2	Water-filled soil porosity (L_{water}/L_{soil})	0.2				
Exposure interval (s)	9.5e08						

Soil Screening Levels for Inhalation of Volatiles (mg/kg)

Analyte	Cas Number	Inhalation RfC	Inhalation Unit Risk	Volatilization Factor	Soil Saturation Concentration	Noncarcinogenic	Carcinogen
Methyl Isobutyl Ketone	108101	3.0E+00 [a]		1.2E+04	3.3E+03	7.7E+03	

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Soil Screening Guidance for Chemicals

Equation Values for Inhalation of Volatiles

Volatilization Factor Parameter	Value	Soil Saturation Concentration Parameter	Value	Noncarcinogenic Parameter	Value	Carcinogenic Parameter	Val
Surface Area (acres)	0.5			Target Hazard Quotient (unitless)	1	Target Risk (unitless)	1.0E 6
City (climate zone)	Minneapolis (V)			Exposure Duration (yr)	25	Exposure Duration (yr)	25
Q/C (g/m^2-s per kg/m^3)	93.77358			Exposure Frequency (day/yr)	250	Exposure Frequency (day/yr)	250
Fraction organic carbon (unitless)	0.006	Fraction organic carbon (unitless)	0.006			Average Lifetime (yr)	70
Dry soil bulk density (g/cm^3)	1.5	Dry soil bulk density (g/cm^3)	1.5				
Soil particle density (g/cm^3)	2.65	Soil particle density (g/cm^3)	2.65				
Water-filled soil porosity (L_{water}/L_{soil})	0.2	Water-filled soil porosity (L_{water}/L_{soil})	0.2				
Exposure interval (s)	9.5e08						

Soil Screening Levels for Inhalation of Volatiles (mg/kg)

Analyte	Cas Number	Inhalation RfC	Inhalation Unit Risk	Volatilization Factor	Soil Saturation Concentration	Noncarcinogenic	Carcinogen
Chlorobenzene	108907	2.0E-02 b,c		1.2E+04	6.9E+02	3.4E+02	
Chloroform	67663		2.3E-05 a	5.1E+03	3.1E+03		9.1E-01
Dichloroethylene, 1,2-cis-	156592			5.6E+03	1.3E+03		
Dichloroethylene, 1,2-trans-	156605			4.4E+03	3.2E+03		
Dichloropropane, 1,2-	78875	4.0E-03 a		6.9E+03	1.2E+03	4.0E+01	
Ethylbenzene	100414	1.0E+00 a		1.0E+04	4.0E+02	1.5E+04	
Tetrachloroethane, 1,1,1,2-	630206		7.4E-06 a	3.9E+04	6.6E+03		2.1E+01
Tetrachloroethylene	127184	6.0E-01 v	5.8E-07 v	4.8E+03	2.4E+02	4.2E+03	3.4E+01
Toluene	108883	5.0E+00 a		7.5E+03	6.7E+02	5.5E+04	
Trichloroethylene	79016	4.0E-02 v	1.1E-04 v	6.1E+03	1.3E+03	3.6E+02	2.3E-01
Vinyl Chloride	75014	1.0E-01 a	8.8E-06 a	1.9E+03	1.2E+03	2.8E+02	8.9E-01
Xylene, Mixture	1330207	1.0E-01 a		1.3E+04		1.9E+03	

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Soil Screening Guidance for Chemicals

Equation Values for Inhalation of Volatiles

Volatilization Factor Parameter	Value	Soil Saturation Concentration Parameter	Value	Noncarcinogenic Parameter	Value	Carcinogenic Parameter	Val
Surface Area (acres)	0.5			Target Hazard Quotient (unitless)	1	Target Risk (unitless)	1.0E 6
City (climate zone)	Minneapolis (V)			Exposure Duration (yr)	25	Exposure Duration (yr)	25
Q/C (g/m^2-s per kg/m^3)	93.77358			Exposure Frequency (day/yr)	250	Exposure Frequency (day/yr)	250
Fraction organic carbon (unitless)	0.006	Fraction organic carbon (unitless)	0.006			Average Lifetime (yr)	70
Dry soil bulk density (g/cm^3)	1.5	Dry soil bulk density (g/cm^3)	1.5				
Soil particle density (g/cm^3)	2.65	Soil particle density (g/cm^3)	2.65				
Water-filled soil porosity (L_{water}/L_{soil})	0.2	Water-filled soil porosity (L_{water}/L_{soil})	0.2				
Exposure interval (s)	9.5e08						

Soil Screening Levels for Inhalation of Volatiles (mg/kg)

Analyte	Cas Number	Inhalation RfC	Inhalation Unit Risk	Volatilization Factor	Soil Saturation Concentration	Noncarcinogenic	Carcinogen
Methyl Isobutyl Ketone	108101	3.0E+00 [a]		1.2E+04	3.3E+03	5.4E+04	

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Soil Screening Guidance for Chemicals

Equation Values for Soil to Ground Water

Partitioning Equation Parameter	Value
Dilution factor (unitless)	4
Fraction organic carbon in soil (unitless)	0.001
Water-filled soil porosity (L_{water}/L_{soil})	0.2
Dry soil bulk density (kg/L)	1.5
Soil particle density (kg/L)	2.65

Soil Screening Levels for Soil to Ground Water (mg/kg)

Analyte	Cas Number	Ground Water Concentration* (mg/L)	Ground Water Concentration Source	Soil Screening Level
Acephate	30560191	3.9E-02	HBL	
Chlorobenzene	108907	4.0E-01	MCLG	1.5E-01
Dichloropropane, 1,2-	78875	2.0E-02	MCL	3.9E-03
Ethylbenzene	100414	2.8E+00	MCLG	1.5E+00
Toluene	108883	4.0E+00	MCLG	1.4E+00
Xylene, Mixture	1330207	2.9E+01	HBL	1.6E+01

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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Soil Screening Guidance for Chemicals

Equation Values for Soil to Ground Water

Partitioning Equation Parameter	Value
Dilution factor (unitless)	2
Fraction organic carbon in soil (unitless)	0.001
Water-filled soil porosity (L_{water}/L_{soil})	0.2
Dry soil bulk density (kg/L)	1.5
Soil particle density (kg/L)	2.65

Soil Screening Levels for Soil to Ground Water (mg/kg)

Analyte	Cas Number	Ground Water Concentration* (mg/L)	Ground Water Concentration Source	Soil Screening Level
Chloroform	67663	2.0E-01	MCL	3.9E-02
Tetrachloroethane, 1,1,1,2-	630206	6.6E-03	HBL	7.4E-03
Tetrachloroethylene	127184	1.0E-02	MCL	4.1E-03
Trichloroethylene	79016	1.0E-02	MCL	3.7E-03

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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Soil Screening Guidance for Chemicals

Equation Values for Soil to Ground Water

Partitioning Equation Parameter	Value
Dilution factor (unitless)	0.2
Fraction organic carbon in soil (unitless)	0.001
Water-filled soil porosity (L_{water}/L_{soil})	0.2
Dry soil bulk density (kg/L)	1.5
Soil particle density (kg/L)	2.65

Soil Screening Levels for Soil to Ground Water (mg/kg)

Analyte	Cas Number	Ground Water Concentration* (mg/L)	Ground Water Concentration Source	Soil Screenin Level
Vinyl Chloride	75014	4.0E-04	MCL	1.3E-04

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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Soil Screening Guidance for Chemicals

Equation Values for Soil to Ground Water

Partitioning Equation Parameter	Value
Dilution factor (unitless)	4
Fraction organic carbon in soil (unitless)	0.001
Water-filled soil porosity (L_{water}/L_{soil})	0.2
Dry soil bulk density (kg/L)	1.5
Soil particle density (kg/L)	2.65

Soil Screening Levels for Soil to Ground Water (mg/kg)

Analyte	Cas Number	Ground Water Concentration* (mg/L)	Ground Water Concentration Source	Soil Screening Level
Methyl Isobutyl Ketone	108101	1.2E+01	HBL	1.7E+00

*Ground Water Concentration=Ground Water Concentration Source × Dilution Factor

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APPENDIX B

Boring Log Forms

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

cility/Project Name	License/Permit/Monitoring Number	Boring Number
Shorewood Queensway Cleaners		SB-1

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: HARI Last Name: REGUPATHY Firm:	2/25/2009 (m m d d y y y y)	2/26/2009 (m m d d y y y y)	Geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
AA000			_____ Feet MSL	690.32 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☒) or Boring Location ☐
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat ° ' "
Long ° ' "

Local Grid Location
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	MILWAUKEE	41	Shorewood WI

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			0.0 - 0.0 0.0 - 0.5	(0-0.5') Asphalt & Gravel Fill.	FI									
			0.5 - 2.0		CL									
			2.0 - 4.0		CL									
			4.0 - 6.0		CL									
			6.0 - 7.0		CL			0.4						
			7.0 - 8.0		CL			0.8						
			8.0 - 9.0		CL			0.4						
			9.0 - 10.0	(0.5'-10') Brown CLAY, trace Silt and fine Gravel, moderately plastic, stiff, uniform, moist	CL			1.1						
			10.0 - 10.5	(10'-10.5') Brown CLAYEY SAND, little Silt, some fine to medium Gravel loose, well graded, uniform, wet.	SC			0.5						

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Facility/Project Name: Shorewood Queensway Cleaners
Boring No. : SB-1

License/Project/Monitoring No. :
WI Unique Well No. : AA000

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			10	10.5 - 11.0	CL			0.4						
			11	11.0 - 12.0	CL			0.6						
			12	12.0 - 13.0	CL			0.6						
			13	13.0 - 14.0	CL			0.8						
			14	14.0 - 15.0	CL			0.3						
			15	15.0 - 16.0	CL			2.2						
			16	16.0 - 17.0	CL			3.4						
			17	17.0 - 18.0	CL			1.7						
			18	18.0 - 19.0	CL			1.8						
			19	19.0 - 20.0	CL			2.3						
			20	20.0 - 21.0	CL			2.7						
			21	21.0 - 22.0	CL			3						
			22	22.0 - 23.0	CL			3.7						
			23	23.0 - 24.0	CL			3.2						
			24	24.0 - 25.0	CL			3.8						
			25	25.0 - 26.0	CL			3.2						
			26	26.0 - 27.0	CL			3.3						
			27	27.0 - 28.0	CL			3.4						
			28	28.0 - 29.0	CL			3.3						
			29	29.0 - 29.75	CL			3.3						
			30											

Facility/Project Name: Shorewood Queensway Cleaners
Boring No. : SB-1

License/Project/Monitoring No. :
WI Unique Well No. : AA000

Sample: Liner and Type	Sample: Length Act. & Recovered (in.)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
			30	29.75 - 30.0 (10.5'-30') Brown CLAY, trace Silt and fine Gravel, moderately plastic, stiff, uniform, moist	CL			3.8						
				30.0 - 36.0 (30'-36') Brown, CLAY, trace fine Gravel, highly plastic, stiff, uniform, moist.	CL			3.2						
			31											
			32											
			33											
			34											
			35											
			36	36.0 - 36.75 (36.5'-36.75') little fine Sand	CL									
				36.75 - 41.0 (36.75'-41') Brown, CLAY, trace fine Gravel, highly plastic, stiff, uniform, moist.	CL									
			37											
			38											
			39											
			40											
			41											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

Page 1 of _____

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Shorewood Queensway Cleaners		SB-2

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: HARI Last Name: REGUPATHY Firm:	2/25/2009	2/25/2009	Geoprobe 6600

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _		_____ Feet MSL	691.43 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane _____ N, _____ E
NW 1/4 of SW 1/4 of Section _____, T _____ N, R _____
Lat _° 0 ' 0.0 "
Long _° 0 ' 0.0 "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	MILWAUKEE	41	Shorewood

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	0.0 - 0.17 (0-2")Asphalt	FI									
				0.17 - 1.0	CL									
			1	1.0 - 2.5	CL									
			2											
				2.5 - 3.0	CL									
			3	3.0 - 4.0	CL			0.2						
			4	4.0 - 5.0	CL			0.4						
			5	5.0 - 6.0	CL			0.4						
			6	6.0 - 7.0	CL			0.6						
			7	7.0 - 8.0	CL			1.1						
			8	8.0 - 9.0	CL			1						
			9	9.0 - 10.0 (2"-10') Reddish brown CLAY, little Silt, trace fine to medium Gravel, moderately plastic, stiff, uniform, moist.	CL			0.9						
			10	10.0 - 11.0	CL			1.9						
			11	11.0 - 14.0	CL			0.8						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file s form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. ...rsonally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Facility/Project Name: Shorewood Queensway Cleaners
Boring No. : SB-2

License/Project/Monitoring No. :
WI Unique Well No. :

Sample										Soil Properties					
Number and Type	Length Att. & Recovered (in.)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			12											
			13											
			14	14.0 - 15.0	CL			0.8						
			15	15.0 - 16.0	CL			1.8						
			16	16.0 - 17.0	CL			2.4						
			17	17.0 - 18.0	CL			1.2						
			18	18.0 - 20.0	CL			1.2						
			19											
			20	20.0 - 21.0	CL			1.4						
			21	21.0 - 22.0	CL			0.9						
			22	22.0 - 23.0	CL			0.9						
			23	23.0 - 25.0	CL			0.9						
			24											
			25	25.0 - 27.0	CL			1.4						
			26											
			27	27.0 - 28.0	CL			2.3						
			28	28.0 - 29.5	CL			0.5						
			29											
			30	29.5 - 30.0 (10'-30') Grayish brown CLAY, trace Silt, trace fine to medium Gravel, highly plastic, soft, uniform, little moist.	CL			0.5						

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ 789

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Shorewood Queensway Cleaners		SB-3

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: HARI Last Name: REGUPATHY Firm:	2/25/2009 (m m d d y y y y)	2/25/2009 (m m d d y y y y)	Geoprobe 6600

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _		_____ Feet MSL	691.52 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat _____ ' 0.0 "
Long _____ ' 0.0 "

Local Grid Location
☐ N ☐ E
_____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	MILWAUKEE	41	Shorewood

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	0.0 - 0.17 (0'-2") Asphalt	FI			9.7						
			1	0.17 - 3.0	CL			17						
			2											
			3	3.0 - 5.0	CL			11.1						
			4											
			5	5.0 - 6.0	CL			1.9						
			6	6.0 - 7.0	CL			3						
			7	7.0 - 8.0	CL			3						
			8	8.0 - 9.0	CL			2.1						
			9	9.0 - 10.0 (2'-10') Reddish brown CLAY, little Silt, trace fine to medium Gravel, moderately plastic, stiff, uniform, moist.	CL			0.9						
			10	10.0 - 11.0	CL									
			11	11.0 - 13.0	CL									
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Facility/Project Name: Shorewood Queensway Cleaners
Boring No. : SB-3

License/Project/Monitoring No. :
WI Unique Well No. :

Sample										Soil Properties					
[redacted] and Type	Length Au. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			12											
			13	13.0 - 14.0	CL									
			14	14.0 - 15.0	CL			1.0						
			15	15.0 - 17.0	CL			0.3						
			16											
			17	17.0 - 19.0	CL									
			18											
			19	19.0 - 21.0	CL			0.7						
			20											
			21	21.0 - 23.0	CL			0.2						
			22											
			23	23.0 - 25.0	CL			0.3						
			24											
			25	25.0 - 26.0	CL			0.1						
			26	26.0 - 28.0	CL			0.2						
			27											
			28	28.0 - 29.0 (10'-29') Grayish brown CLAY, trace Silt, trace fine to medium Gravel, hidhtly plastic, soft to medium stiff, uniform, moist.	CL			0.1						
			29											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ 789

Page 1 of _____

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Shorewood Queensway Cleaners		SB-4

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: HARI Last Name: REGUPATHY Firm:	2/25/2009 (m m d d y y y y)	2/25/2009 (m m d d y y y y)	Geoprobe 6600

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _		_____ Feet MSL	691.03 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____

Lat _ 0 ' 0.0 "
Long _ 0 ' 0.0 "

Local Grid Location
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	MILWAUKEE	41	Shorewood

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	0.0 - 0.25 (0'-3") Concrete	FI									
				0.25 - 1.0	CL			7.3						
			1	1.0 - 2.0	CL			14.5						
			2	2.0 - 3.0 (3"-3') Grayish brown CLAY, some Silt, moderately plastic, stiff, uniform, moist.	CL			12.6						
			3	3.0 - 4.0	CL			16.5						
			4	4.0 - 5.0	CL			68						
			5	5.0 - 6.0	CL			114						
			6	6.0 - 7.0	CL			49.2						
			7	7.0 - 8.0 (3'-8') Reddish brown CLAY, little Silt, moderately plastic, meidum stiff, uniform, moist.	CL			70.1						
			8	8.0 - 9.0	CL			49						
			9	9.0 - 10.0	CL			38.7						
			10	10.0 - 11.0	CL			323						
			11	11.0 - 11.25	CL			1225						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

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Facility/Project Name: Shorewood Queensway Cleaners
Boring No. : SB-4

License/Project/Monitoring No. :
WI Unique Well No. :

Sample										Soil Properties					
Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
				11.25 - 11.5	CL			2638						
				11.5 - 12.0	CL			58.9						
			12	12.0 - 12.5	CL			12.6						
				12.5 - 13.0 (8'-13') Gray/brown CLAY, trace Silt, trace fine to medium Gravel, plastic, soft to medium stiff, uniform, moist.	CL			18						
			13											

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ 789

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
Shorewood Queensway Cleaners		SB-5

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: HARI Last Name: REGUPATHY Firm:	2/25/2009	2/25/2009	Geoprobe 6600

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _		_____ Feet MSL	691.05 Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☒
State Plane _____ N, _____ E
_____ 1/4 of _____ 1/4 of Section _____, T _____ N, R _____
Lat. _ _ ° _ _ ' 0.0 "
Lon. _ _ ° _ _ ' 0.0 "
Local Grid Location
_____ Feet ☐ N ☐ S _____ Feet ☐ E ☐ W

Facility ID	County	County Code	Civil Town/City/ or Village
	MILWAUKEE	41	Shorewood

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
			0	0.0 - 0.25 (0'-3") Concrete	FI									
				0.25 - 1.0	CL			62.3						
			1	1.0 - 2.0	CL			34						
			2	2.0 - 3.0 (3"-3') Grayish brown CLAY, some Silt, trace fine to medium Gravel, medium stiff, uniform, moist.	CL			25.6						
			3	3.0 - 4.0	CL			43.8						
			4	4.0 - 5.0	CL			40.1						
			5	5.0 - 6.0	CL			47.3						
			6	6.0 - 7.0	CL			65.1						
			7	7.0 - 8.0 (3'-8') Reddish brown CLAY, little Silt, moderately plasti, medium stiff, uniform, moist.	CL			68						
			8	8.0 - 9.0	CL			116						
			9	9.0 - 10.0	CL			193						
			10	10.0 - 11.0	CL			152						
			11	11.0 - 12.0	CL			72.3						
			12											

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

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Facility/Project Name: Shorewood Queensway Cleaners
Boring No. : SB-5

License/Project/Monitoring No. :
WI Unique Well No. :

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Soil Properties: Moisture Content	Soil Properties: Liquid Limit	Soil Properties: Plasticity Index	Soil Properties: P 200	RQD/ Comments
				12.0 - 13.0	CL			89.9						
			13	13.0 - 14.0 (8'-14') Grayish brown CLAY, trace Silt, trace fine to medium Gravel, highly plastic, soft to medium stiff, uniform, moist.	CL			10.1						
			14											

APPENDIX C

Monitoring Well Construction Diagrams

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Shorewood Queensway Cleaners	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-3
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. ° 0 ' 0 " Long. ° 0 ' 0 " or	Wis. Unique Well No.: MW3 / DNR Well ID No.:
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 12/6/2009 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec. _____, T. _____ N, R. _____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Tony / Onsite Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation 691.52 ft. MSL
B. Well casing, top elevation 690.99 ft. MSL
C. Land surface elevation 690.99 ft. MSL
D. Surface seal, bottom _____ ft. MSL or 1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☒ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Hollow Stem Auger
Other ☐

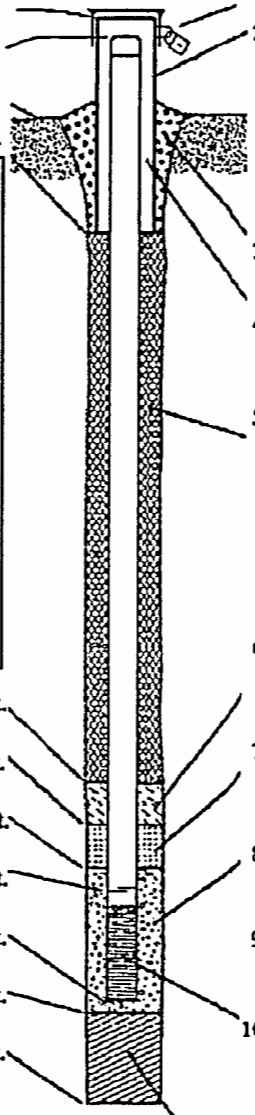
15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or 1 ft.
F. Fine sand, top _____ ft. MSL or 8 ft.
G. Filter pack, top _____ ft. MSL or 10 ft.
H. Screen joint, top _____ ft. MSL or 12 ft.
I. Well bottom _____ ft. MSL or 22 ft.
J. Filter pack, bottom _____ ft. MSL or 22 ft.
K. Borehole, bottom _____ ft. MSL or 30 ft.
L. Borehole, diameter 8 in.
M. O.D. well casing 2 in.
N. I.D. well casing 2 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: ___ in.
b. Length: ___ ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☐ 30
Concrete ☐ 01
Portland Cement Surface Seal Other ☐
4. Material between well casing and protective pipe:
Bentonite ☐ 30
Sand Other ☐
5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☒ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☐ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite chips ☐ 32
c. Medium Bentonite Chips _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. #4000 fine Sand
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. #5 Quartz Sand
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐
10. Screen material: 2 inch ID sch. 40 PVC Flush Th
a. Screen type: Factory cut ☐ 11
Continuous slot ☐ 01
10 slot Other ☐
b. Manufacturer _____
c. Slot size: ___ in.
d. Slotted length: ___ ft.
11. Backfill material (below filter pack): None ☐ 14
Natural Cave-in Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

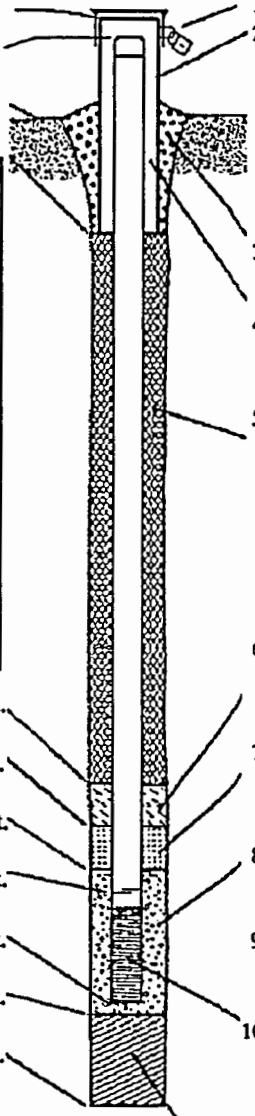
State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Shorewood Queensway Cleaners	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-2
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. 43° 0' 0" Long. 88° 0' 0" or	Wis. Unique Well No.: MW2 / DNR Well ID No.:
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 2/2/06/2009 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec. _____, T. _____ N, R. _____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Tony / Onsite Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number:



A. Protective pipe, top elevation 691.43 ft. MSL

B. Well casing, top elevation 690.9 ft. MSL

C. Land surface elevation 691.43 ft. MSL

D. Surface seal, bottom ft. MSL or 1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☒ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Hollow Stem Auger Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top ft. MSL or 1 ft.

F. Fine sand, top ft. MSL or 8 ft.

G. Filter pack, top ft. MSL or 10 ft.

H. Screen joint, top ft. MSL or 12 ft.

I. Well bottom ft. MSL or 22 ft.

J. Filter pack, bottom ft. MSL or 22 ft.

K. Borehole, bottom ft. MSL or 30 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2 in.

N. I.D. well casing 2 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: ___ in.
b. Length: ___ ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☐ 01
Portland Cement Surface Seal Other ☐

4. Material between well casing and protective pipe:
Bentonite ☐ 30
Sand Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☒ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☐ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite chips ☐ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. #4000 fine sand
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #5 Quartz Sand
b. Volume added _____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐

10. Screen material: 2 inch ID sch. 40 PVC Flush Th
a. Screen type: Factory cut ☐ 11
Continuous slot ☐ 01
2 inch ID, sch. 40 PVC, flush thre Other ☐
b. Manufacturer _____
c. Slot size: ___ in.
d. Slotted length: ___ ft.

11. Backfill material (below filter pack): None ☐ 14
Natural Cave-in Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

State of Wisconsin
Department of Natural Resources

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐ _____

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Shorewood Queensway Cleaners	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-1
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☒ Lat. 0 ' 0 " Long. 0 ' 0 " or	Wis. Unique Well No.: MW1 / DNR Well ID No.:
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 2/2/6/2009 (m m d d y y y y)
Type of Well: Well Code 11 / mw	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec. _____, T. _____ N, R. _____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Tony / Onsite Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____

A. Protective pipe, top elevation 690.32 ft. MSL

B. Well casing, top elevation 689.79 ft. MSL

C. Land surface elevation 690.32 ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☒ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☐ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Hollow Stem Auger Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or 1 ft.

F. Fine sand, top _____ ft. MSL or 5 ft.

G. Filter pack, top _____ ft. MSL or 6 ft.

H. Screen joint, top _____ ft. MSL or _____ ft.

I. Well bottom _____ ft. MSL or 18 ft.

J. Filter pack, bottom _____ ft. MSL or 18 ft.

K. Borehole, bottom _____ ft. MSL or 41 ft.

L. Borehole, diameter 8 in.

M. O.D. well casing 2 in.

N. I.D. well casing 2 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: _____ in.
b. Length: _____ ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30 / Concrete ☐ 01 / Other ☐ _____
Portland Cement Surface Seal

4. Material between well casing and protective pipe: Bentonite ☐ 30 / Other ☐ _____
Sand

5. Annular space seal: a. Granular/Chipped Bentonite ☐ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☒ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☐ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☐3/8 in. ☐1/2 in. Bentonite chips ☐ 32
c. Medium Bentonite Chips _____ Other ☐ _____

7. Fine sand material: Manufacturer, product name & mesh size
a. #4000 fine sand
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #5 Quartz Sand
b. Volume added _____ ft^3

9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____

10. Screen material: 2 inch ID Sch. 40 PVC Flush Th___
a. Screen type: Factory cut ☐ 11 / Continuous slot ☐ 01 / Other ☐ _____
10 Slot
b. Manufacturer _____
c. Slot size: ___ in.
d. Slotted length: ____ ft.

11. Backfill material (below filter pack): None ☐ 14 / Other ☐ _____
Natural Cave-in

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	EnviroForensics

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

APPENDIX D

Well Sampling Forms

ENVIROFORENSICS

FIELD SAMPLING DATA FORM

11875 Dublin Blvd. Suite A-200, Dublin, California 94568
T:925/551-7272 F: 925/551-7464

PROJECT NAME 6107 Well/Surface Station I.D. MW-1

LOCATION/ADDRESS _____ Sample Designation 6107-mw1

PROJECT NO. 6107 Date 2/27/09

CLIENT/CONTACT _____

WATER LEVEL MEASUREMENTS:

Water Level (MSL):_____ Feet below reference elevation 14.16 Date 2/27/09 Time_____

WELL EVACUATION: Well Depth 17.97 feet Well Diameter 2 inches Casing Volume 0.62 gallons
Depth to Top of Screen ____ feet

Total No. of Casing Volumes: 3 Total Gallons Removed 1.8 Elapsed Time_____

Factor * Water Column Height Equals Gallons	
Factor	Diameter
0.163	2" Well
0.653	4" Well
1.469	6" Well

WELL EVACUATION METHOD: Peristaltic pump X Submersible Pump _____ Bailer _____ Other _____
Non-Dedicated Equipment Identification _____

FIELD WATER QUALITY TESTS:

Casing Volume	pH	Specific Conductance (umhos/cm)	Temperature (°C)	Turbidity (NTU)	Dissolved Oxgen (DO)	Oxidation-Reduction Potential (ORP)	DTW (ft. below TOC)	Time
300ml/min	7.04	1555	10.0	480	1.6	183	14.95	7:30 78
300 ml/min	7.23	1575	10.1	165	5.6	183	15.45	7:35 79
300ml/min	7.19	1556	10.9	58	1.3	181	15.75	7:40 77
300 ml/min	7.20	1565	11.0	28	1.7	180	16.01	7:50 78
300ml/min	7.21	1558	11.2	20.1	1.8	181	16.53	7:55 77

TD

SAMPLING: Date 2/27/09 Time 8:10

Sample Analysis	Volume	Container Type	Number of Containers	Preservative

Collected MS/MSD

SAMPLING METHOD: Stainless Steel Bailer _____ Teflon Bailer _____ Grab _____ Other Disp. bailer

EQUIPMENT DECONTAMINATION PROCEDURES:

DECONTAMINATION METHOD: ☐ Non Phosphatic detergent wash/distilled water rinse ☐ Hot pressure wash/steam cleaning
☐ Methanol rinse

NOTES: Purged 3.5 gal of water before sampling.

ENVIRO forensics

FIELD SAMPLING DATA FORM

11875 Dublin Blvd. Suite A-200, Dublin, California 94568
T:925/551-7272 F: 925/551-7464

PROJECT NAME 6107 Well/Surface Station I.D. MW-2

LOCATION/ADDRESS _____ Sample Designation _____

PROJECT NO. _____ Date 2/27/09

CLIENT/CONTACT 6107

WATER LEVEL MEASUREMENTS:

Water Level (MSL):_____ Feet below reference elevation 20.99 Date 2/27/09 Time _____

WELL EVACUATION:

Well Depth 21.98 feet Well Diameter 2 inches Casing Volume 0.16 gallons

Depth to Top of Screen _____ feet

Total No. of Casing Volumes: 3 Total Gallons Removed 0.48 Elapsed Time _____

Factor * Water Column Height Equals Gallons	
Factor	Diameter
0.163	2" Well
0.653	4" Well
1.469	6" Well

WELL EVACUATION METHOD: Peristaltic pump X Submersible Pump _____ Bailer _____ Other _____

Non-Dedicated Equipment Identification _____

FIELD WATER QUALITY TESTS:

Casing Volume	pH	Specific Conductance (umhos/cm)	Temperature	Turbidity (NTU)	Dissolved Oxgen (DO)	Oxidation-Reduction Potential (ORP)	DTW (ft. below TOC)	Time
300 ml/min	7.08	711	8.8	>1000	0.9	89	21.27	8:15
"	7.96	700	9.9	163.5	0.9	85	21.38	8:20
"	7.34	717	10.4	203	1.2	79	21.49	8:25
"	7.00	730	10.5	178	1.6	72	21.80	8:30
"	6.98	733	10.6	182	1.5	70	21.90	8:35

SAMPLING:

Date 2/27/09 Time 9:15

Sample Analysis	Volume	Container Type	Number of Containers	Preservative

Collected Duplicate G107-MW4

SAMPLING METHOD: Stainless Steel Bailer _____ Teflon Bailer _____ Grab _____ Other Disp. bailer.

EQUIPMENT DECONTAMINATION PROCEDURES:

DECONTAMINATION METHOD: ☐ Non Phosphatic detergent wash/distilled water rinse ☐ Hot pressure wash/steam cleaning ☐ Methanol rinse

NOTES: Purged 1.5 gal of water before sampling.

FIELD SAMPLING DATA FORM

11875 Dublin Blvd. Suite A-200, Dublin, California 94568
T:925/551-7272 F: 925/551-7464

PROJECT NAME 6107 Well/Surface Station I.D. MW-3

LOCATION/ADDRESS _____ Sample Designation 6107-MW3

PROJECT NO. 6107 Date 2/27/09

CLIENT/CONTACT _____

WATER LEVEL MEASUREMENTS:

Water Level (MSL):_____ Feet below reference elevation 21.50 Date 2/27/09 Time_____

WELL EVACUATION: Well Depth 21.90 feet Well Diameter 2 inches Casing Volume 0.065 gallons

Depth to Top of Screen ____ feet

Total No. of Casing Volumes: — Total Gallons Removed — Elapsed Time_____

Factor * Water Column Height Equals Gallons	
Factor	Diameter
0.163	2" Well
0.653	4" Well
1.469	6" Well

WELL EVACUATION METHOD: Peristaltic pump X Submersible Pump _____ Bailer _____ Other _____

Non-Dedicated Equipment Identification _____

FIELD WATER QUALITY TESTS:

Casing Volume	pH	Specific Conductance (umhos/cm)	Temperature	Turbidity (NTU)	Dissolved Oxgen (DO)	Oxidation-Reduction Potential (ORP)	DTW (ft. below TOC)	Time

SAMPLING: Date 2/27/09 Time 11:35

Sample Analysis	Volume	Container Type	Number of Containers	Preservative

SAMPLING METHOD: Stainless Steel Bailer _____ Teflon Bailer _____ Grab _____ Other peristaltic pump Tubing

EQUIPMENT DECONTAMINATION PROCEDURES:

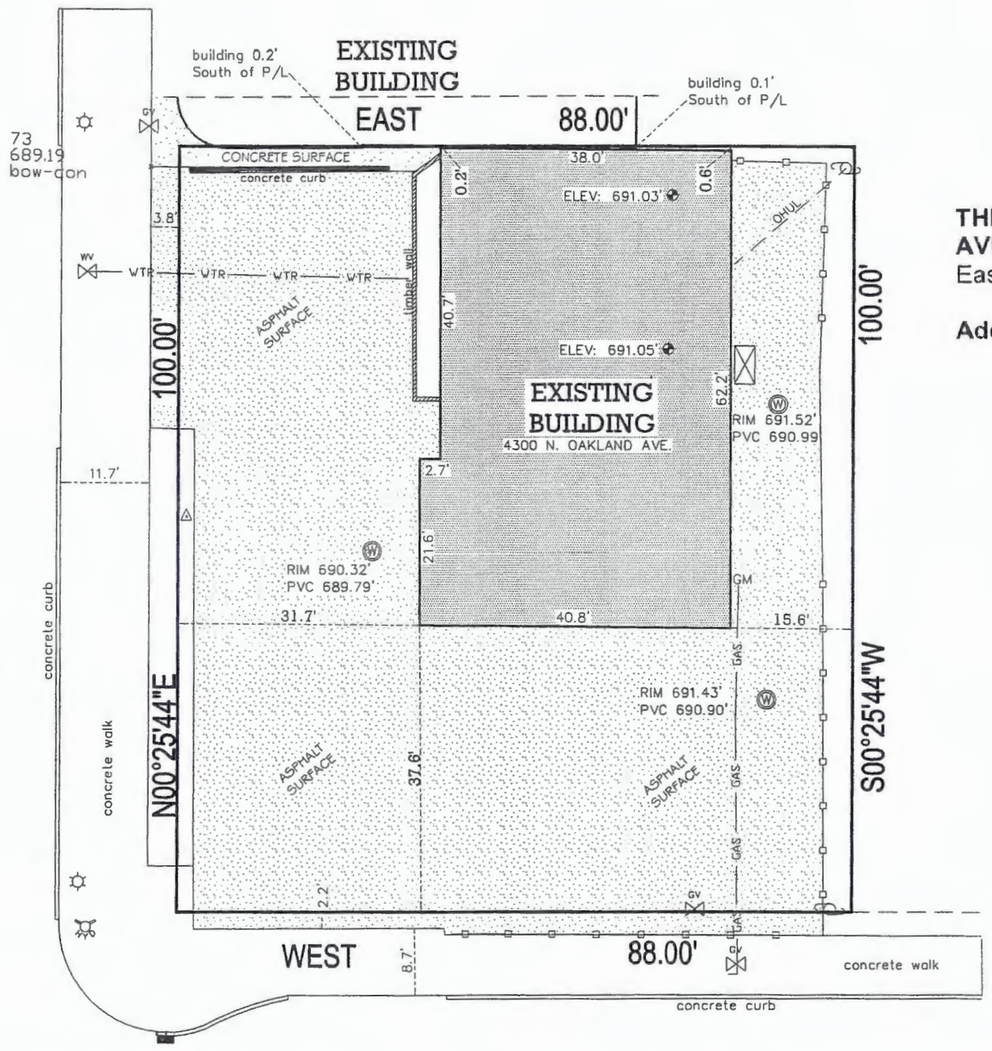
DECONTAMINATION METHOD: ☐ Non Phosphatic detergent wash/distilled water rinse ☐ Hot pressure wash/steam cleaning ☐ Methanol rinse

NOTES: Collected only the sample directly without purging as there was not enough water.

APPENDIX E

Site Survey

BENCHMARK FOR ELEVATIONS
FOUND CHISELED CROSS ON HYDRANT
AT 4434 N. OAKLAND AVE.
ELEV: 689.31' (NGVD 1929)



E. MARION ST.
(60' WIDE PUBLIC R.O.W.)

SURVEYING ASSOCIATES, INC.
MEMBER WISCONSIN SOCIETY OF LAND SURVEYORS
AND AMERICAN CONGRESS ON SURVEYING AND MAPPING
2554 N. 100TH STREET
P.O. BOX 26596
WAUWATOSA, WISCONSIN 53226
(414) 257-2212 FAX : (414) 257-2443
WILLIAM J. KARPEN R L S
FREDERICK W. SHIBILSKI R L S

PLAT OF SURVEY

THE WEST 95 FEET OF LOTS 9 AND 10, except the West 7 feet taken for street, **BLOCK 2, OAKLAND AVENUE HEIGHTS,** being a Subdivision of a part of the Southwest ¼ of Section 3, Town 7 North, Range 22 East, in the Village of Shorewood, Milwaukee County, Wisconsin.

Address: 4300 N. Oakland Avenue

LEGEND

- ☼ – DENOTES EXISTING LIGHT
- △ – DENOTES EXISTING SIGN
- ◆ – DENOTES EXISTING SOIL BORING
- Ⓦ – DENOTES EXISTING MONITORING WELL
- GV – DENOTES EXISTING GAS VALVE
- WV – DENOTES EXISTING WATER VALVE
- – DENOTES EXISTING UTILITY POLE
- – DENOTES EXISTING HYDRANT
- OHUL – DENOTES OVERHEAD UTILITY LINES
- – DENOTES EXISTING CATCH BASIN
- WTR – DENOTES EXISTING WATER LINE
- GAS – DENOTES EXISTING GAS LINE
- – DENOTES EXISTING AIR CONDITIONER
- P/L – DENOTES PROPERTY LINE

N
W E
S

SCALE : 1" = 20'

Area of Property = 8,799.7 Sq. Ft.

TO OBTAIN LOCATIONS OR
PARTICIPANTS UNDERGROUND FACILITIES
BEFORE YOU DIG IN WISCONSIN
MEMBER
ONE CALL SYSTEMS INTERNATIONAL
DIGGERS HOTLINE
CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE
WISCONSIN STATUTE 182.0175 (1974)
REQUIRES MIN. 3 WORK DAY
NOTICE BEFORE YOU EXCAVATE
THE LOCATIONS OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UNDERGROUND UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

WISCONSIN FREDERICK W. SHIBILSKI S-1454 WAUWATOSA WI LAND SURVEYOR

Surveyed for: ENVIRONMENTAL FORENSIC INVESTIGATIONS INC.

"I have surveyed the above described property from the legal description furnished by the client named on this survey."
"This survey is made for the use of the present owners of the property, and those who purchase, mortgage, or guarantee the title thereto within one year from date hereof."

NOTE : THIS IS NOT AN ORIGINAL SURVEY UNLESS THIS SEAL IS RED.

WISCONSIN REGISTERED LAND SURVEYOR	APRIL 3, 2009	MCP	JTY	32770
	DATE	FIELD WORK BY	DRAWN BY	JOB NUMBER

Apr 03, 2009 - 8:22am - C:\Drawings\32770\dwg\32770.dwg

APPENDIX F

Laboratory Analytical Reports

March 09, 2009

Greg Zumbaugh
EnviroForensics
1060 North Capitol Avenue
Suite E230
Indianapolis, IN 46204

Work Order No.: ME0903067

RE: 6107 - Shorewood Queenway Cleaners

Dear Greg Zumbaugh:

Microbac Laboratories, Inc. received 12 samples on 3/2/2009 3:45:00 PM for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
Microbac Laboratories, Inc.

Deborah Griffiths
Senior Project Manager

Enclosures

Microbac

WORK ORDER SAMPLE SUMMARY

Date: *Monday, March 09, 2009*

CLIENT: EnviroForensics
Project: 6107 - Shorewood Queenway Cleaners
Lab Order: ME0903067

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0903067-01A	6107 - SB1-9-10		2/25/2009 1:50:00 PM	3/2/2009
ME0903067-02A	6107 - SB1-25-26		2/25/2009 2:40:00 PM	3/2/2009
ME0903067-03A	6107 - SB2-15-16		2/25/2009 11:50:00 AM	3/2/2009
ME0903067-04A	6107 - SB2-27-28		2/25/2009 12:20:00 PM	3/2/2009
ME0903067-05A	6107 - SB3-3-4		2/25/2009 9:30:00 AM	3/2/2009
ME0903067-06A	6107 - SB3-6-7		2/25/2009 9:50:00 AM	3/2/2009
ME0903067-07A	6107 - SB3-27-28		2/25/2009 10:30:00 AM	3/2/2009
ME0903067-08A	6107 - SB4-11-11.5		2/25/2009 4:00:00 PM	3/2/2009
ME0903067-09A	6107 - SB4-12-5-13		2/25/2009 4:20:00 PM	3/2/2009
ME0903067-10A	6107 - SB5-6-6.5		2/25/2009 5:20:00 PM	3/2/2009
ME0903067-11A	6107 - SB5-10-10.5		2/25/2009 5:45:00 PM	3/2/2009
ME0903067-12A	Trip Blank		2/25/2009	3/2/2009

CASE NARRATIVE

Date: *Monday, March 09, 2009*

Client: EnviroForensics
Project: 6107 - Shorewood Queenway Cleaners
Lab Order: ME0903067

The Laboratory Control Sample failure to meet the acceptance criteria for Chloromethane and Vinyl chloride is considered insignificant, as the bias was high yet the related sample concentrations were non-detectable.

Microbac®

ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB1-9-10	*Work Order / ID:*	ME0903067-01
Sample Description:		*Collection Date:*	02/25/09 13:50
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: CLR
Acetone	A	*21*	12	250	J	µg/Kg-dry	1	03/04/09 02:04
Acrolein	A	ND	20	120		µg/Kg-dry	1	03/04/09 02:04
Acrylonitrile	A	ND	16	120		µg/Kg-dry	1	03/04/09 02:04
Benzene	A	*2.7*	1.5	6.2	J	µg/Kg-dry	1	03/04/09 02:04
Bromodichloromethane	A	ND	0.62	6.2		µg/Kg-dry	1	03/04/09 02:04
Bromoform	A	ND	0.87	6.2		µg/Kg-dry	1	03/04/09 02:04
Bromomethane	A	ND	4.5	12		µg/Kg-dry	1	03/04/09 02:04
2-Butanone	A	ND	4.5	12		µg/Kg-dry	1	03/04/09 02:04
Carbon Disulfide	A	ND	2.1	12		µg/Kg-dry	1	03/04/09 02:04
Carbon tetrachloride	A	ND	1.5	6.2		µg/Kg-dry	1	03/04/09 02:04
Chlorobenzene	A	ND	0.74	6.2		µg/Kg-dry	1	03/04/09 02:04
Chloroethane	A	ND	3	12		µg/Kg-dry	1	03/04/09 02:04
Chloroform	A	*1.5*	0.74	6.2	J	µg/Kg-dry	1	03/04/09 02:04
Chloromethane	A	ND	1.9	12		µg/Kg-dry	1	03/04/09 02:04
Dibromochloromethane	A	ND	0.99	6.2		µg/Kg-dry	1	03/04/09 02:04
1,1-Dichloroethane	A	ND	0.87	6.2		µg/Kg-dry	1	03/04/09 02:04
1,2-Dichloroethane	A	ND	1.5	6.2		µg/Kg-dry	1	03/04/09 02:04
1,1-Dichloroethene	A	ND	1.5	6.2		µg/Kg-dry	1	03/04/09 02:04
cis-1,2-Dichloroethene	A	ND	0.99	6.2		µg/Kg-dry	1	03/04/09 02:04
trans-1,2-Dichloroethene	A	ND	1.2	6.2		µg/Kg-dry	1	03/04/09 02:04
1,2-Dichloropropane	A	ND	1.2	6.2		µg/Kg-dry	1	03/04/09 02:04
cis-1,3-Dichloropropene	A	ND	0.99	6.2		µg/Kg-dry	1	03/04/09 02:04
trans-1,3-Dichloropropene	A	ND	0.87	6.2		µg/Kg-dry	1	03/04/09 02:04
Ethylbenzene	A	*2*	0.87	6.2	J	µg/Kg-dry	1	03/04/09 02:04
2-Hexanone	A	ND	3	6.2		µg/Kg-dry	1	03/04/09 02:04
4-Methyl-2-Pentanone	A	ND	2.1	6.2		µg/Kg-dry	1	03/04/09 02:04
Methyl-t-Butyl Ether	A	ND	0.74	6.2		µg/Kg-dry	1	03/04/09 02:04
Methylene chloride	A	ND	11	25		µg/Kg-dry	1	03/04/09 02:04
Styrene	A	ND	0.99	6.2		µg/Kg-dry	1	03/04/09 02:04
1,1,1,2-Tetrachloroethane	A	ND	0.74	6.2		µg/Kg-dry	1	03/04/09 02:04
1,1,2,2-Tetrachloroethane	A	ND	1.7	6.2		µg/Kg-dry	1	03/04/09 02:04
Tetrachloroethene	A	*240*	2	6.2		µg/Kg-dry	1	03/04/09 02:04
Toluene	A	*6.9*	0.87	6.2		µg/Kg-dry	1	03/04/09 02:04
1,1,1-Trichloroethane	A	ND	1.2	6.2		µg/Kg-dry	1	03/04/09 02:04
1,1,2-Trichloroethane	A	ND	0.99	6.2		µg/Kg-dry	1	03/04/09 02:04
Trichloroethene	A	ND	1.1	6.2		µg/Kg-dry	1	03/04/09 02:04
Trichlorofluoromethane	A	ND	4.2	12		µg/Kg-dry	1	03/04/09 02:04
Vinyl Acetate	A	ND	1.9	12		µg/Kg-dry	1	03/04/09 02:04
Vinyl chloride	A	ND	2.1	12		µg/Kg-dry	1	03/04/09 02:04

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB1-9-10	*Work Order / ID:*	ME0903067-01
Sample Description:		*Collection Date:*	02/25/09 13:50
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***2.3***	2	6.2	J	µg/Kg-dry	1	03/04/09 02:04
o-Xylene	A	***ND***	1.1	6.2		µg/Kg-dry	1	03/04/09 02:04
Total Xylenes	A	***ND***	1.1	6.2		µg/Kg-dry	1	03/04/09 02:04
Surr: 4-Bromofluorobenzene	S	78.1	0	40.1-140		%REC	1	03/04/09 02:04
Surr: Dibromofluoromethane	S	99.4	0	77.6-126		%REC	1	03/04/09 02:04
Surr: 1,2-Dichloroethane-d4	S	109	0	76.8-140		%REC	1	03/04/09 02:04
Surr: Toluene-d8	S	111	0	33-194		%REC	1	03/04/09 02:04
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***13***	0.1	0.10		WT%	1	03/03/09 16:38

5713 West 85th Street, Indianapolis, IN 46278 TEL.800.466.5577 TEL.317.872.1375 FAX.317.872.1379

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB1-25-26	*Work Order / ID:*	ME0903067-02
Sample Description:		*Collection Date:*	02/25/09 14:40
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: CLR
Acetone	A	*36*	8.7	180	J	µg/Kg-dry	1	03/04/09 02:36
Acrolein	A	*ND*	14	91		µg/Kg-dry	1	03/04/09 02:36
Acrylonitrile	A	*ND*	12	91		µg/Kg-dry	1	03/04/09 02:36
Benzene	A	*1.6*	1.1	4.5	J	µg/Kg-dry	1	03/04/09 02:36
Bromodichloromethane	A	*ND*	0.45	4.5		µg/Kg-dry	1	03/04/09 02:36
Bromoform	A	*ND*	0.63	4.5		µg/Kg-dry	1	03/04/09 02:36
Bromomethane	A	*ND*	3.3	9.1		µg/Kg-dry	1	03/04/09 02:36
2-Butanone	A	*ND*	3.3	9.1		µg/Kg-dry	1	03/04/09 02:36
Carbon Disulfide	A	*2.2*	1.5	9.1	J	µg/Kg-dry	1	03/04/09 02:36
Carbon tetrachloride	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/04/09 02:36
Chlorobenzene	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/04/09 02:36
Chloroethane	A	*ND*	2.2	9.1		µg/Kg-dry	1	03/04/09 02:36
Chloroform	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/04/09 02:36
Chloromethane	A	*ND*	1.4	9.1		µg/Kg-dry	1	03/04/09 02:36
Dibromochloromethane	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/04/09 02:36
1,1-Dichloroethane	A	*ND*	0.63	4.5		µg/Kg-dry	1	03/04/09 02:36
1,2-Dichloroethane	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/04/09 02:36
1,1-Dichloroethene	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/04/09 02:36
cis-1,2-Dichloroethene	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/04/09 02:36
trans-1,2-Dichloroethene	A	*ND*	0.91	4.5		µg/Kg-dry	1	03/04/09 02:36
1,2-Dichloropropane	A	*ND*	0.91	4.5		µg/Kg-dry	1	03/04/09 02:36
cis-1,3-Dichloropropene	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/04/09 02:36
trans-1,3-Dichloropropene	A	*ND*	0.63	4.5		µg/Kg-dry	1	03/04/09 02:36
Ethylbenzene	A	*0.63*	0.63	4.5	J	µg/Kg-dry	1	03/04/09 02:36
2-Hexanone	A	*ND*	2.2	4.5		µg/Kg-dry	1	03/04/09 02:36
4-Methyl-2-Pentanone	A	*ND*	1.5	4.5		µg/Kg-dry	1	03/04/09 02:36
Methyl-t-Butyl Ether	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/04/09 02:36
Methylene chloride	A	*ND*	7.9	18		µg/Kg-dry	1	03/04/09 02:36
Styrene	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/04/09 02:36
1,1,1,2-Tetrachloroethane	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/04/09 02:36
1,1,2,2-Tetrachloroethane	A	*ND*	1.3	4.5		µg/Kg-dry	1	03/04/09 02:36
Tetrachloroethene	A	*4.1*	1.4	4.5	J	µg/Kg-dry	1	03/04/09 02:36
Toluene	A	*3*	0.63	4.5	J	µg/Kg-dry	1	03/04/09 02:36
1,1,1-Trichloroethane	A	*ND*	0.91	4.5		µg/Kg-dry	1	03/04/09 02:36
1,1,2-Trichloroethane	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/04/09 02:36
Trichloroethene	A	*ND*	0.82	4.5		µg/Kg-dry	1	03/04/09 02:36
Trichlorofluoromethane	A	*ND*	3.1	9.1		µg/Kg-dry	1	03/04/09 02:36
Vinyl Acetate	A	*ND*	1.4	9.1		µg/Kg-dry	1	03/04/09 02:36
Vinyl chloride	A	*ND*	1.5	9.1		µg/Kg-dry	1	03/04/09 02:36

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB1-25-26	*Work Order / ID:*	ME0903067-02
Sample Description:		*Collection Date:*	02/25/09 14:40
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***ND***	1.4	4.5		µg/Kg-dry	1	03/04/09 02:36
o-Xylene	A	***ND***	0.82	4.5		µg/Kg-dry	1	03/04/09 02:36
Total Xylenes	A	***ND***	0.82	4.5		µg/Kg-dry	1	03/04/09 02:36
Surr: 4-Bromofluorobenzene	S	77.6	0	40.1-140		%REC	1	03/04/09 02:36
Surr: Dibromofluoromethane	S	103	0	77.6-126		%REC	1	03/04/09 02:36
Surr: 1,2-Dichloroethane-d4	S	110	0	76.8-140		%REC	1	03/04/09 02:36
Surr: Toluene-d8	S	117	0	33-194		%REC	1	03/04/09 02:36
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***15***	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB2-15-16	*Work Order / ID:*	ME0903067-03
Sample Description:		*Collection Date:*	02/25/09 11:50
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: CLR
Acetone	A	*47*	8.9	190	J	µg/Kg-dry	1	03/04/09 03:08
Acrolein	A	*ND*	15	93		µg/Kg-dry	1	03/04/09 03:08
Acrylonitrile	A	*ND*	12	93		µg/Kg-dry	1	03/04/09 03:08
Benzene	A	*1.2*	1.1	4.6	J	µg/Kg-dry	1	03/04/09 03:08
Bromodichloromethane	A	*ND*	0.46	4.6		µg/Kg-dry	1	03/04/09 03:08
Bromoform	A	*ND*	0.65	4.6		µg/Kg-dry	1	03/04/09 03:08
Bromomethane	A	*ND*	3.3	9.3		µg/Kg-dry	1	03/04/09 03:08
2-Butanone	A	*ND*	3.3	9.3		µg/Kg-dry	1	03/04/09 03:08
Carbon Disulfide	A	*2*	1.6	9.3	J	µg/Kg-dry	1	03/04/09 03:08
Carbon tetrachloride	A	*ND*	1.1	4.6		µg/Kg-dry	1	03/04/09 03:08
Chlorobenzene	A	*ND*	0.56	4.6		µg/Kg-dry	1	03/04/09 03:08
Chloroethane	A	*ND*	2.2	9.3		µg/Kg-dry	1	03/04/09 03:08
Chloroform	A	*1.1*	0.56	4.6	J	µg/Kg-dry	1	03/04/09 03:08
Chloromethane	A	*ND*	1.4	9.3		µg/Kg-dry	1	03/04/09 03:08
Dibromochloromethane	A	*ND*	0.74	4.6		µg/Kg-dry	1	03/04/09 03:08
1,1-Dichloroethane	A	*ND*	0.65	4.6		µg/Kg-dry	1	03/04/09 03:08
1,2-Dichloroethane	A	*ND*	1.1	4.6		µg/Kg-dry	1	03/04/09 03:08
1,1-Dichloroethene	A	*ND*	1.1	4.6		µg/Kg-dry	1	03/04/09 03:08
cis-1,2-Dichloroethene	A	*ND*	0.74	4.6		µg/Kg-dry	1	03/04/09 03:08
trans-1,2-Dichloroethene	A	*ND*	0.93	4.6		µg/Kg-dry	1	03/04/09 03:08
1,2-Dichloropropane	A	*ND*	0.93	4.6		µg/Kg-dry	1	03/04/09 03:08
cis-1,3-Dichloropropene	A	*ND*	0.74	4.6		µg/Kg-dry	1	03/04/09 03:08
trans-1,3-Dichloropropene	A	*ND*	0.65	4.6		µg/Kg-dry	1	03/04/09 03:08
Ethylbenzene	A	*ND*	0.65	4.6		µg/Kg-dry	1	03/04/09 03:08
2-Hexanone	A	*ND*	2.2	4.6		µg/Kg-dry	1	03/04/09 03:08
4-Methyl-2-Pentanone	A	*ND*	1.6	4.6		µg/Kg-dry	1	03/04/09 03:08
Methyl-t-Butyl Ether	A	*ND*	0.56	4.6		µg/Kg-dry	1	03/04/09 03:08
Methylene chloride	A	*ND*	8.1	19		µg/Kg-dry	1	03/04/09 03:08
Styrene	A	*ND*	0.74	4.6		µg/Kg-dry	1	03/04/09 03:08
1,1,1,2-Tetrachloroethane	A	*ND*	0.56	4.6		µg/Kg-dry	1	03/04/09 03:08
1,1,2,2-Tetrachloroethane	A	*ND*	1.3	4.6		µg/Kg-dry	1	03/04/09 03:08
Tetrachloroethene	A	*5.8*	1.5	4.6		µg/Kg-dry	1	03/04/09 03:08
Toluene	A	*2.5*	0.65	4.6	J	µg/Kg-dry	1	03/04/09 03:08
1,1,1-Trichloroethane	A	*ND*	0.93	4.6		µg/Kg-dry	1	03/04/09 03:08
1,1,2-Trichloroethane	A	*ND*	0.74	4.6		µg/Kg-dry	1	03/04/09 03:08
Trichloroethene	A	*ND*	0.84	4.6		µg/Kg-dry	1	03/04/09 03:08
Trichlorofluoromethane	A	*ND*	3.2	9.3		µg/Kg-dry	1	03/04/09 03:08
Vinyl Acetate	A	*ND*	1.4	9.3		µg/Kg-dry	1	03/04/09 03:08
Vinyl chloride	A	*ND*	1.6	9.3		µg/Kg-dry	1	03/04/09 03:08

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB2-15-16	*Work Order / ID:*	ME0903067-03
Sample Description:		*Collection Date:*	02/25/09 11:50
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***ND***	1.5	4.6		µg/Kg-dry	1	03/04/09 03:08
o-Xylene	A	***ND***	0.84	4.6		µg/Kg-dry	1	03/04/09 03:08
Total Xylenes	A	***ND***	0.84	4.6		µg/Kg-dry	1	03/04/09 03:08
Surr: 4-Bromofluorobenzene	S	77.1	0	40.1-140		%REC	1	03/04/09 03:08
Surr: Dibromofluoromethane	S	103	0	77.6-126		%REC	1	03/04/09 03:08
Surr: 1,2-Dichloroethane-d4	S	110	0	76.8-140		%REC	1	03/04/09 03:08
Surr: Toluene-d8	S	116	0	33-194		%REC	1	03/04/09 03:08
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***16***	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB2-27-28	*Work Order / ID:*	ME0903067-04
Sample Description:		*Collection Date:*	02/25/09 12:20
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: CLR
Acetone	A	*42*	8.5	180	J	µg/Kg-dry	1	03/04/09 03:40
Acrolein	A	*ND*	14	88		µg/Kg-dry	1	03/04/09 03:40
Acrylonitrile	A	*ND*	11	88		µg/Kg-dry	1	03/04/09 03:40
Benzene	A	*1.4*	1.1	4.4	J	µg/Kg-dry	1	03/04/09 03:40
Bromodichloromethane	A	*ND*	0.44	4.4		µg/Kg-dry	1	03/04/09 03:40
Bromoform	A	*ND*	0.62	4.4		µg/Kg-dry	1	03/04/09 03:40
Bromomethane	A	*ND*	3.2	8.8		µg/Kg-dry	1	03/04/09 03:40
2-Butanone	A	*ND*	3.2	8.8		µg/Kg-dry	1	03/04/09 03:40
Carbon Disulfide	A	*2.3*	1.5	8.8	J	µg/Kg-dry	1	03/04/09 03:40
Carbon tetrachloride	A	*ND*	1.1	4.4		µg/Kg-dry	1	03/04/09 03:40
Chlorobenzene	A	*ND*	0.53	4.4		µg/Kg-dry	1	03/04/09 03:40
Chloroethane	A	*ND*	2.1	8.8		µg/Kg-dry	1	03/04/09 03:40
Chloroform	A	*ND*	0.53	4.4		µg/Kg-dry	1	03/04/09 03:40
Chloromethane	A	*ND*	1.3	8.8		µg/Kg-dry	1	03/04/09 03:40
Dibromochloromethane	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/04/09 03:40
1,1-Dichloroethane	A	*ND*	0.62	4.4		µg/Kg-dry	1	03/04/09 03:40
1,2-Dichloroethane	A	*ND*	1.1	4.4		µg/Kg-dry	1	03/04/09 03:40
1,1-Dichloroethene	A	*ND*	1.1	4.4		µg/Kg-dry	1	03/04/09 03:40
cis-1,2-Dichloroethene	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/04/09 03:40
trans-1,2-Dichloroethene	A	*ND*	0.88	4.4		µg/Kg-dry	1	03/04/09 03:40
1,2-Dichloropropane	A	*ND*	0.88	4.4		µg/Kg-dry	1	03/04/09 03:40
cis-1,3-Dichloropropene	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/04/09 03:40
trans-1,3-Dichloropropene	A	*ND*	0.62	4.4		µg/Kg-dry	1	03/04/09 03:40
Ethylbenzene	A	*ND*	0.62	4.4		µg/Kg-dry	1	03/04/09 03:40
2-Hexanone	A	*ND*	2.1	4.4		µg/Kg-dry	1	03/04/09 03:40
4-Methyl-2-Pentanone	A	*ND*	1.5	4.4		µg/Kg-dry	1	03/04/09 03:40
Methyl-t-Butyl Ether	A	*ND*	0.53	4.4		µg/Kg-dry	1	03/04/09 03:40
Methylene chloride	A	*ND*	7.7	18		µg/Kg-dry	1	03/04/09 03:40
Styrene	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/04/09 03:40
1,1,1,2-Tetrachloroethane	A	*ND*	0.53	4.4		µg/Kg-dry	1	03/04/09 03:40
1,1,2,2-Tetrachloroethane	A	*ND*	1.2	4.4		µg/Kg-dry	1	03/04/09 03:40
Tetrachloroethene	A	*3.6*	1.4	4.4	J	µg/Kg-dry	1	03/04/09 03:40
Toluene	A	*2.5*	0.62	4.4	J	µg/Kg-dry	1	03/04/09 03:40
1,1,1-Trichloroethane	A	*ND*	0.88	4.4		µg/Kg-dry	1	03/04/09 03:40
1,1,2-Trichloroethane	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/04/09 03:40
Trichloroethene	A	*ND*	0.8	4.4		µg/Kg-dry	1	03/04/09 03:40
Trichlorofluoromethane	A	*ND*	3	8.8		µg/Kg-dry	1	03/04/09 03:40
Vinyl Acetate	A	*ND*	1.3	8.8		µg/Kg-dry	1	03/04/09 03:40
Vinyl chloride	A	*ND*	1.5	8.8		µg/Kg-dry	1	03/04/09 03:40

ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB2-27-28	*Work Order / ID:*	ME0903067-04
Sample Description:		*Collection Date:*	02/25/09 12:20
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	*ND*	1.4	4.4		µg/Kg-dry	1	03/04/09 03:40
o-Xylene	A	*ND*	0.8	4.4		µg/Kg-dry	1	03/04/09 03:40
Total Xylenes	A	*ND*	0.8	4.4		µg/Kg-dry	1	03/04/09 03:40
Surr: 4-Bromofluorobenzene	S	78.4	0	40.1-140		%REC	1	03/04/09 03:40
Surr: Dibromofluoromethane	S	101	0	77.6-126		%REC	1	03/04/09 03:40
Surr: 1,2-Dichloroethane-d4	S	110	0	76.8-140		%REC	1	03/04/09 03:40
Surr: Toluene-d8	S	116	0	33-194		%REC	1	03/04/09 03:40
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	*14*	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB3-3-4	*Work Order / ID:*	ME0903067-05
Sample Description:		*Collection Date:*	02/25/09 09:30
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	ND	9.6	50		µg/Kg-dry	1	03/05/09 03:23
Acrolein	A	ND	16	100		µg/Kg-dry	1	03/05/09 03:23
Acrylonitrile	A	ND	13	100		µg/Kg-dry	1	03/05/09 03:23
Benzene	A	1.7	1.2	5.0	J	µg/Kg-dry	1	03/05/09 03:23
Bromodichloromethane	A	ND	0.5	5.0		µg/Kg-dry	1	03/05/09 03:23
Bromoform	A	ND	0.7	5.0		µg/Kg-dry	1	03/05/09 03:23
Bromomethane	A	ND	3.6	10		µg/Kg-dry	1	03/05/09 03:23
2-Butanone	A	ND	3.6	10		µg/Kg-dry	1	03/05/09 03:23
Carbon Disulfide	A	ND	1.7	10		µg/Kg-dry	1	03/05/09 03:23
Carbon tetrachloride	A	ND	1.2	5.0		µg/Kg-dry	1	03/05/09 03:23
Chlorobenzene	A	3.6	0.6	5.0	J	µg/Kg-dry	1	03/05/09 03:23
Chloroethane	A	ND	2.4	10		µg/Kg-dry	1	03/05/09 03:23
Chloroform	A	1.1	0.6	5.0	Jb	µg/Kg-dry	1	03/05/09 03:23
Chloromethane	A	ND	1.5	10		µg/Kg-dry	1	03/05/09 03:23
Dibromochloromethane	A	ND	0.8	5.0		µg/Kg-dry	1	03/05/09 03:23
1,1-Dichloroethane	A	ND	0.7	5.0		µg/Kg-dry	1	03/05/09 03:23
1,2-Dichloroethane	A	ND	1.2	5.0		µg/Kg-dry	1	03/05/09 03:23
1,1-Dichloroethene	A	ND	1.2	5.0		µg/Kg-dry	1	03/05/09 03:23
cis-1,2-Dichloroethene	A	ND	0.8	5.0		µg/Kg-dry	1	03/05/09 03:23
trans-1,2-Dichloroethene	A	ND	1	5.0		µg/Kg-dry	1	03/05/09 03:23
1,2-Dichloropropane	A	ND	1	5.0		µg/Kg-dry	1	03/05/09 03:23
cis-1,3-Dichloropropene	A	ND	0.8	5.0		µg/Kg-dry	1	03/05/09 03:23
trans-1,3-Dichloropropene	A	ND	0.7	5.0		µg/Kg-dry	1	03/05/09 03:23
Ethylbenzene	A	1.7	0.7	5.0	J	µg/Kg-dry	1	03/05/09 03:23
2-Hexanone	A	ND	2.4	5.0		µg/Kg-dry	1	03/05/09 03:23
4-Methyl-2-Pentanone	A	ND	1.7	5.0		µg/Kg-dry	1	03/05/09 03:23
Methyl-t-Butyl Ether	A	ND	0.6	5.0		µg/Kg-dry	1	03/05/09 03:23
Methylene chloride	A	ND	8.7	20		µg/Kg-dry	1	03/05/09 03:23
Styrene	A	ND	0.8	5.0		µg/Kg-dry	1	03/05/09 03:23
1,1,1,2-Tetrachloroethane	A	7.0	0.6	5.0		µg/Kg-dry	1	03/05/09 03:23
1,1,2,2-Tetrachloroethane	A	ND	1.4	5.0		µg/Kg-dry	1	03/05/09 03:23
Tetrachloroethene	A	53000	900	2800		µg/Kg-dry	500	03/05/09 14:36
Toluene	A	4.2	0.7	5.0	J	µg/Kg-dry	1	03/05/09 03:23
1,1,1-Trichloroethane	A	ND	1	5.0		µg/Kg-dry	1	03/05/09 03:23
1,1,2-Trichloroethane	A	ND	0.8	5.0		µg/Kg-dry	1	03/05/09 03:23
Trichloroethene	A	4.8	0.9	5.0	J	µg/Kg-dry	1	03/05/09 03:23
Trichlorofluoromethane	A	ND	3.4	10		µg/Kg-dry	1	03/05/09 03:23
Vinyl Acetate	A	ND	1.5	10		µg/Kg-dry	1	03/05/09 03:23
Vinyl chloride	A	ND	1.7	10		µg/Kg-dry	1	03/05/09 03:23

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB3-3-4	*Work Order / ID:*	ME0903067-05
Sample Description:		*Collection Date:*	02/25/09 09:30
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***1.9***	1.6	5.0	J	µg/Kg-dry	1	03/05/09 03:23
o-Xylene	A	***ND***	0.9	5.0		µg/Kg-dry	1	03/05/09 03:23
Total Xylenes	A	***ND***	0.9	5.0		µg/Kg-dry	1	03/05/09 03:23
Surr: 4-Bromofluorobenzene	S	85.5	0	40.1-140		%REC	1	03/05/09 03:23
Surr: Dibromofluoromethane	S	98.2	0	77.6-126		%REC	1	03/05/09 03:23
Surr: 1,2-Dichloroethane-d4	S	96.3	0	76.8-140		%REC	1	03/05/09 03:23
Surr: Toluene-d8	S	103	0	33-194		%REC	1	03/05/09 03:23
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***14***	0.1	0.10		WT%	1	03/03/09 16:38

ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB3-6-7	*Work Order / ID:*	ME0903067-06
Sample Description:		*Collection Date:*	02/25/09 09:50
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*9.9*	8.9	47	J	µg/Kg-dry	1	03/05/09 00:07
Acrolein	A	*ND*	15	93		µg/Kg-dry	1	03/05/09 00:07
Acrylonitrile	A	*ND*	12	93		µg/Kg-dry	1	03/05/09 00:07
Benzene	A	*1.3*	1.1	4.7	J	µg/Kg-dry	1	03/05/09 00:07
Bromodichloromethane	A	*ND*	0.47	4.7		µg/Kg-dry	1	03/05/09 00:07
Bromoform	A	*ND*	0.65	4.7		µg/Kg-dry	1	03/05/09 00:07
Bromomethane	A	*ND*	3.4	9.3		µg/Kg-dry	1	03/05/09 00:07
2-Butanone	A	*ND*	3.4	9.3		µg/Kg-dry	1	03/05/09 00:07
Carbon Disulfide	A	*ND*	1.6	9.3		µg/Kg-dry	1	03/05/09 00:07
Carbon tetrachloride	A	*ND*	1.1	4.7		µg/Kg-dry	1	03/05/09 00:07
Chlorobenzene	A	*2.6*	0.56	4.7	J	µg/Kg-dry	1	03/05/09 00:07
Chloroethane	A	*ND*	2.2	9.3		µg/Kg-dry	1	03/05/09 00:07
Chloroform	A	*ND*	0.56	4.7		µg/Kg-dry	1	03/05/09 00:07
Chloromethane	A	*ND*	1.4	9.3		µg/Kg-dry	1	03/05/09 00:07
Dibromochloromethane	A	*ND*	0.74	4.7		µg/Kg-dry	1	03/05/09 00:07
1,1-Dichloroethane	A	*ND*	0.65	4.7		µg/Kg-dry	1	03/05/09 00:07
1,2-Dichloroethane	A	*ND*	1.1	4.7		µg/Kg-dry	1	03/05/09 00:07
1,1-Dichloroethene	A	*ND*	1.1	4.7		µg/Kg-dry	1	03/05/09 00:07
cis-1,2-Dichloroethene	A	*ND*	0.74	4.7		µg/Kg-dry	1	03/05/09 00:07
trans-1,2-Dichloroethene	A	*ND*	0.93	4.7		µg/Kg-dry	1	03/05/09 00:07
1,2-Dichloropropane	A	*ND*	0.93	4.7		µg/Kg-dry	1	03/05/09 00:07
cis-1,3-Dichloropropene	A	*ND*	0.74	4.7		µg/Kg-dry	1	03/05/09 00:07
trans-1,3-Dichloropropene	A	*ND*	0.65	4.7		µg/Kg-dry	1	03/05/09 00:07
Ethylbenzene	A	*1.1*	0.65	4.7	J	µg/Kg-dry	1	03/05/09 00:07
2-Hexanone	A	*ND*	2.2	4.7		µg/Kg-dry	1	03/05/09 00:07
4-Methyl-2-Pentanone	A	*ND*	1.6	4.7		µg/Kg-dry	1	03/05/09 00:07
Methyl-t-Butyl Ether	A	*ND*	0.56	4.7		µg/Kg-dry	1	03/05/09 00:07
Methylene chloride	A	*ND*	8.1	19		µg/Kg-dry	1	03/05/09 00:07
Styrene	A	*ND*	0.74	4.7		µg/Kg-dry	1	03/05/09 00:07
1,1,1,2-Tetrachloroethane	A	*5.2*	0.56	4.7		µg/Kg-dry	1	03/05/09 00:07
1,1,2,2-Tetrachloroethane	A	*ND*	1.3	4.7		µg/Kg-dry	1	03/05/09 00:07
Tetrachloroethene	A	*64000*	1500	4700		µg/Kg-dry	,00(	03/05/09 15:13
Toluene	A	*3.2*	0.65	4.7	J	µg/Kg-dry	1	03/05/09 00:07
1,1,1-Trichloroethane	A	*ND*	0.93	4.7		µg/Kg-dry	1	03/05/09 00:07
1,1,2-Trichloroethane	A	*ND*	0.74	4.7		µg/Kg-dry	1	03/05/09 00:07
Trichloroethene	A	*2.3*	0.84	4.7	J	µg/Kg-dry	1	03/05/09 00:07
Trichlorofluoromethane	A	*ND*	3.2	9.3		µg/Kg-dry	1	03/05/09 00:07
Vinyl Acetate	A	*ND*	1.4	9.3		µg/Kg-dry	1	03/05/09 00:07
Vinyl chloride	A	*ND*	1.6	9.3		µg/Kg-dry	1	03/05/09 00:07

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB3-6-7	*Work Order / ID:*	ME0903067-06
Sample Description:		*Collection Date:*	02/25/09 09:50
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***ND***	1.5	4.7		µg/Kg-dry	1	03/05/09 00:07
o-Xylene	A	***ND***	0.84	4.7		µg/Kg-dry	1	03/05/09 00:07
Total Xylenes	A	***ND***	0.84	4.7		µg/Kg-dry	1	03/05/09 00:07
Surr: 4-Bromofluorobenzene	S	81.6	0	40.1-140		%REC	1	03/05/09 00:07
Surr: Dibromofluoromethane	S	97.9	0	77.6-126		%REC	1	03/05/09 00:07
Surr: 1,2-Dichloroethane-d4	S	109	0	76.8-140		%REC	1	03/05/09 00:07
Surr: Toluene-d8	S	98.2	0	33-194		%REC	1	03/05/09 00:07
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***13***	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB3-27-28	*Work Order / ID:*	ME0903067-07
Sample Description:		*Collection Date:*	02/25/09 10:30
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: NLT
Acetone	A	*32*	9.4	49	Jb	µg/Kg-dry	1	03/06/09 11:16
Acrolein	A	*ND*	15	98		µg/Kg-dry	1	03/06/09 11:16
Acrylonitrile	A	*ND*	13	98		µg/Kg-dry	1	03/06/09 11:16
Benzene	A	*1.3*	1.2	4.9	J	µg/Kg-dry	1	03/06/09 11:16
Bromodichloromethane	A	*ND*	0.49	4.9		µg/Kg-dry	1	03/06/09 11:16
Bromoform	A	*ND*	0.68	4.9		µg/Kg-dry	1	03/06/09 11:16
Bromomethane	A	*ND*	3.5	9.8		µg/Kg-dry	1	03/06/09 11:16
2-Butanone	A	*ND*	3.5	9.8		µg/Kg-dry	1	03/06/09 11:16
Carbon Disulfide	A	*3*	1.7	9.8	J	µg/Kg-dry	1	03/06/09 11:16
Carbon tetrachloride	A	*ND*	1.2	4.9		µg/Kg-dry	1	03/06/09 11:16
Chlorobenzene	A	*ND*	0.59	4.9		µg/Kg-dry	1	03/06/09 11:16
Chloroethane	A	*ND*	2.3	9.8		µg/Kg-dry	1	03/06/09 11:16
Chloroform	A	*1.1*	0.59	4.9	Jb	µg/Kg-dry	1	03/06/09 11:16
Chloromethane	A	*ND*	1.5	9.8		µg/Kg-dry	1	03/06/09 11:16
Dibromochloromethane	A	*ND*	0.78	4.9		µg/Kg-dry	1	03/06/09 11:16
1,1-Dichloroethane	A	*ND*	0.68	4.9		µg/Kg-dry	1	03/06/09 11:16
1,2-Dichloroethane	A	*ND*	1.2	4.9		µg/Kg-dry	1	03/06/09 11:16
1,1-Dichloroethene	A	*ND*	1.2	4.9		µg/Kg-dry	1	03/06/09 11:16
cis-1,2-Dichloroethene	A	*ND*	0.78	4.9		µg/Kg-dry	1	03/06/09 11:16
trans-1,2-Dichloroethene	A	*ND*	0.98	4.9		µg/Kg-dry	1	03/06/09 11:16
1,2-Dichloropropane	A	*ND*	0.98	4.9		µg/Kg-dry	1	03/06/09 11:16
cis-1,3-Dichloropropene	A	*ND*	0.78	4.9		µg/Kg-dry	1	03/06/09 11:16
trans-1,3-Dichloropropene	A	*ND*	0.68	4.9		µg/Kg-dry	1	03/06/09 11:16
Ethylbenzene	A	*0.81*	0.68	4.9	J	µg/Kg-dry	1	03/06/09 11:16
2-Hexanone	A	*ND*	2.3	4.9		µg/Kg-dry	1	03/06/09 11:16
4-Methyl-2-Pentanone	A	*ND*	1.7	4.9		µg/Kg-dry	1	03/06/09 11:16
Methyl-t-Butyl Ether	A	*ND*	0.59	4.9		µg/Kg-dry	1	03/06/09 11:16
Methylene chloride	A	*ND*	8.5	20		µg/Kg-dry	1	03/06/09 11:16
Styrene	A	*ND*	0.78	4.9		µg/Kg-dry	1	03/06/09 11:16
1,1,1,2-Tetrachloroethane	A	*ND*	0.59	4.9		µg/Kg-dry	1	03/06/09 11:16
1,1,2,2-Tetrachloroethane	A	*ND*	1.4	4.9		µg/Kg-dry	1	03/06/09 11:16
Tetrachloroethene	A	*8.0*	1.6	4.9	b	µg/Kg-dry	1	03/06/09 11:16
Toluene	A	*2.5*	0.68	4.9	J	µg/Kg-dry	1	03/06/09 11:16
1,1,1-Trichloroethane	A	*ND*	0.98	4.9		µg/Kg-dry	1	03/06/09 11:16
1,1,2-Trichloroethane	A	*ND*	0.78	4.9		µg/Kg-dry	1	03/06/09 11:16
Trichloroethene	A	*ND*	0.88	4.9		µg/Kg-dry	1	03/06/09 11:16
Trichlorofluoromethane	A	*ND*	3.3	9.8		µg/Kg-dry	1	03/06/09 11:16
Vinyl Acetate	A	*ND*	1.5	9.8		µg/Kg-dry	1	03/06/09 11:16
Vinyl chloride	A	*ND*	1.7	9.8		µg/Kg-dry	1	03/06/09 11:16

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB3-27-28	*Work Order / ID:*	ME0903067-07
Sample Description:		*Collection Date:*	02/25/09 10:30
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **NLT**
m,p-Xylene	A	***ND***	1.6	4.9		µg/Kg-dry	1	03/06/09 11:16
o-Xylene	A	***ND***	0.88	4.9		µg/Kg-dry	1	03/06/09 11:16
Total Xylenes	A	***ND***	0.88	4.9		µg/Kg-dry	1	03/06/09 11:16
Surr: 4-Bromofluorobenzene	S	83.7	0	40.1-140		%REC	1	03/06/09 11:16
Surr: Dibromofluoromethane	S	101	0	77.6-126		%REC	1	03/06/09 11:16
Surr: 1,2-Dichloroethane-d4	S	101	0	76.8-140		%REC	1	03/06/09 11:16
Surr: Toluene-d8	S	117	0	33-194		%REC	1	03/06/09 11:16
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***16***	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB4-11-11.5	*Work Order / ID:*	ME0903067-08
Sample Description:		*Collection Date:*	02/25/09 16:00
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: CLR
Acetone	A	22	8.8	46	J	µg/Kg-dry	1	03/05/09 01:12
Acrolein	A	ND	14	92		µg/Kg-dry	1	03/05/09 01:12
Acrylonitrile	A	ND	12	92		µg/Kg-dry	1	03/05/09 01:12
Benzene	A	2.1	1.1	4.6	J	µg/Kg-dry	1	03/05/09 01:12
Bromodichloromethane	A	ND	0.46	4.6		µg/Kg-dry	1	03/05/09 01:12
Bromoform	A	ND	0.64	4.6		µg/Kg-dry	1	03/05/09 01:12
Bromomethane	A	ND	3.3	9.2		µg/Kg-dry	1	03/05/09 01:12
2-Butanone	A	ND	3.3	9.2		µg/Kg-dry	1	03/05/09 01:12
Carbon Disulfide	A	ND	1.6	9.2		µg/Kg-dry	1	03/05/09 01:12
Carbon tetrachloride	A	ND	1.1	4.6		µg/Kg-dry	1	03/05/09 01:12
Chlorobenzene	A	170	0.55	4.6		µg/Kg-dry	1	03/05/09 01:12
Chloroethane	A	ND	2.2	9.2		µg/Kg-dry	1	03/05/09 01:12
Chloroform	A	ND	0.55	4.6		µg/Kg-dry	1	03/05/09 01:12
Chloromethane	A	ND	1.4	9.2		µg/Kg-dry	1	03/05/09 01:12
Dibromochloromethane	A	ND	0.73	4.6		µg/Kg-dry	1	03/05/09 01:12
1,1-Dichloroethane	A	4.2	0.64	4.6	J	µg/Kg-dry	1	03/05/09 01:12
1,2-Dichloroethane	A	ND	1.1	4.6		µg/Kg-dry	1	03/05/09 01:12
1,1-Dichloroethene	A	4.6	1.1	4.6	J	µg/Kg-dry	1	03/05/09 01:12
cis-1,2-Dichloroethene	A	24	0.73	4.6		µg/Kg-dry	1	03/05/09 01:12
trans-1,2-Dichloroethene	A	ND	0.92	4.6		µg/Kg-dry	1	03/05/09 01:12
1,2-Dichloropropane	A	22	0.92	4.6		µg/Kg-dry	1	03/05/09 01:12
cis-1,3-Dichloropropene	A	ND	0.73	4.6		µg/Kg-dry	1	03/05/09 01:12
trans-1,3-Dichloropropene	A	ND	0.64	4.6		µg/Kg-dry	1	03/05/09 01:12
Ethylbenzene	A	6.4	0.64	4.6		µg/Kg-dry	1	03/05/09 01:12
2-Hexanone	A	ND	2.2	4.6		µg/Kg-dry	1	03/05/09 01:12
4-Methyl-2-Pentanone	A	6.3	1.6	4.6		µg/Kg-dry	1	03/05/09 01:12
Methyl-t-Butyl Ether	A	ND	0.55	4.6		µg/Kg-dry	1	03/05/09 01:12
Methylene chloride	A	ND	8	18		µg/Kg-dry	1	03/05/09 01:12
Styrene	A	ND	0.73	4.6		µg/Kg-dry	1	03/05/09 01:12
1,1,1,2-Tetrachloroethane	A	ND	0.55	4.6		µg/Kg-dry	1	03/05/09 01:12
1,1,2,2-Tetrachloroethane	A	ND	1.3	4.6		µg/Kg-dry	1	03/05/09 01:12
Tetrachloroethene	A	3500000	39000	120000		µg/Kg-dry	5,00	03/06/09 13:50
Toluene	A	35	0.64	4.6		µg/Kg-dry	1	03/05/09 01:12
1,1,1-Trichloroethane	A	ND	0.92	4.6		µg/Kg-dry	1	03/05/09 01:12
1,1,2-Trichloroethane	A	ND	0.73	4.6		µg/Kg-dry	1	03/05/09 01:12
Trichloroethene	A	620	43	240		µg/Kg-dry	50	03/05/09 20:29
Trichlorofluoromethane	A	ND	3.1	9.2		µg/Kg-dry	1	03/05/09 01:12
Vinyl Acetate	A	ND	1.4	9.2		µg/Kg-dry	1	03/05/09 01:12
Vinyl chloride	A	ND	1.6	9.2		µg/Kg-dry	1	03/05/09 01:12

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB4-11-11.5	*Work Order / ID:*	ME0903067-08
Sample Description:		*Collection Date:*	02/25/09 16:00
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***16***	1.5	4.6		µg/Kg-dry	1	03/05/09 01:12
o-Xylene	A	***12***	0.82	4.6		µg/Kg-dry	1	03/05/09 01:12
Total Xylenes	A	***28***	0.82	4.6		µg/Kg-dry	1	03/05/09 01:12
Surr: 4-Bromofluorobenzene	S	84.5	0	40.1-140		%REC	1	03/05/09 01:12
Surr: Dibromofluoromethane	S	95.4	0	77.6-126		%REC	1	03/05/09 01:12
Surr: 1,2-Dichloroethane-d4	S	107	0	76.8-140		%REC	1	03/05/09 01:12
Surr: Toluene-d8	S	127	0	33-194		%REC	1	03/05/09 01:12
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***16***	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB4-12-5-13	*Work Order / ID:*	ME0903067-09
Sample Description:		*Collection Date:*	02/25/09 16:20
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: CLR
Acetone	A	*20*	8.6	45	J	µg/Kg-dry	1	03/05/09 01:45
Acrolein	A	*ND*	14	90		µg/Kg-dry	1	03/05/09 01:45
Acrylonitrile	A	*ND*	12	90		µg/Kg-dry	1	03/05/09 01:45
Benzene	A	*2*	1.1	4.5	J	µg/Kg-dry	1	03/05/09 01:45
Bromodichloromethane	A	*ND*	0.45	4.5		µg/Kg-dry	1	03/05/09 01:45
Bromoform	A	*ND*	0.63	4.5		µg/Kg-dry	1	03/05/09 01:45
Bromomethane	A	*ND*	3.2	9.0		µg/Kg-dry	1	03/05/09 01:45
2-Butanone	A	*ND*	3.2	9.0		µg/Kg-dry	1	03/05/09 01:45
Carbon Disulfide	A	*ND*	1.5	9.0		µg/Kg-dry	1	03/05/09 01:45
Carbon tetrachloride	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/05/09 01:45
Chlorobenzene	A	*140*	0.54	4.5		µg/Kg-dry	1	03/05/09 01:45
Chloroethane	A	*ND*	2.2	9.0		µg/Kg-dry	1	03/05/09 01:45
Chloroform	A	*1*	0.54	4.5	Jb	µg/Kg-dry	1	03/05/09 01:45
Chloromethane	A	*ND*	1.3	9.0		µg/Kg-dry	1	03/05/09 01:45
Dibromochloromethane	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 01:45
1,1-Dichloroethane	A	*3.2*	0.63	4.5	J	µg/Kg-dry	1	03/05/09 01:45
1,2-Dichloroethane	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/05/09 01:45
1,1-Dichloroethene	A	*3.2*	1.1	4.5	J	µg/Kg-dry	1	03/05/09 01:45
cis-1,2-Dichloroethene	A	*19*	0.72	4.5		µg/Kg-dry	1	03/05/09 01:45
trans-1,2-Dichloroethene	A	*ND*	0.9	4.5		µg/Kg-dry	1	03/05/09 01:45
1,2-Dichloropropane	A	*16*	0.9	4.5		µg/Kg-dry	1	03/05/09 01:45
cis-1,3-Dichloropropene	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 01:45
trans-1,3-Dichloropropene	A	*ND*	0.63	4.5		µg/Kg-dry	1	03/05/09 01:45
Ethylbenzene	A	*5.6*	0.63	4.5		µg/Kg-dry	1	03/05/09 01:45
2-Hexanone	A	*ND*	2.2	4.5		µg/Kg-dry	1	03/05/09 01:45
4-Methyl-2-Pentanone	A	*5.1*	1.5	4.5		µg/Kg-dry	1	03/05/09 01:45
Methyl-t-Butyl Ether	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/05/09 01:45
Methylene chloride	A	*ND*	7.8	18		µg/Kg-dry	1	03/05/09 01:45
Styrene	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 01:45
1,1,1,2-Tetrachloroethane	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/05/09 01:45
1,1,2,2-Tetrachloroethane	A	*ND*	1.3	4.5		µg/Kg-dry	1	03/05/09 01:45
Tetrachloroethene	A	*370000*	3700	12000		µg/Kg-dry	,50	03/05/09 21:01
Toluene	A	*35*	0.63	4.5		µg/Kg-dry	1	03/05/09 01:45
1,1,1-Trichloroethane	A	*ND*	0.9	4.5		µg/Kg-dry	1	03/05/09 01:45
1,1,2-Trichloroethane	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 01:45
Trichloroethene	A	*240*	42	230		µg/Kg-dry	50	03/06/09 11:41
Trichlorofluoromethane	A	*ND*	3	9.0		µg/Kg-dry	1	03/05/09 01:45
Vinyl Acetate	A	*ND*	1.3	9.0		µg/Kg-dry	1	03/05/09 01:45
Vinyl chloride	A	*ND*	1.5	9.0		µg/Kg-dry	1	03/05/09 01:45

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB4-12-5-13	*Work Order / ID:*	ME0903067-09
Sample Description:		*Collection Date:*	02/25/09 16:20
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***13***	1.4	4.5		µg/Kg-dry	1	03/05/09 01:45
o-Xylene	A	***9.6***	0.81	4.5		µg/Kg-dry	1	03/05/09 01:45
Total Xylenes	A	***23***	0.81	4.5		µg/Kg-dry	1	03/05/09 01:45
Surr: 4-Bromofluorobenzene	S	83.3	0	40.1-140		%REC	1	03/05/09 01:45
Surr: Dibromofluoromethane	S	96.0	0	77.6-126		%REC	1	03/05/09 01:45
Surr: 1,2-Dichloroethane-d4	S	97.7	0	76.8-140		%REC	1	03/05/09 01:45
Surr: Toluene-d8	S	153	0	33-194		%REC	1	03/05/09 01:45
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***13***	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB5-6-6.5	*Work Order / ID:*	ME0903067-10
Sample Description:		*Collection Date:*	02/25/09 17:20
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	SW5035/8260B		Prep Date/Time:				Analyst: CLR
Acetone	A	*17*	8.5	44	J	µg/Kg-dry	1	03/05/09 02:18
Acrolein	A	*ND*	14	88		µg/Kg-dry	1	03/05/09 02:18
Acrylonitrile	A	*ND*	11	88		µg/Kg-dry	1	03/05/09 02:18
Benzene	A	*1.9*	1.1	4.4	J	µg/Kg-dry	1	03/05/09 02:18
Bromodichloromethane	A	*ND*	0.44	4.4		µg/Kg-dry	1	03/05/09 02:18
Bromoform	A	*ND*	0.62	4.4		µg/Kg-dry	1	03/05/09 02:18
Bromomethane	A	*ND*	3.2	8.8		µg/Kg-dry	1	03/05/09 02:18
2-Butanone	A	*ND*	3.2	8.8		µg/Kg-dry	1	03/05/09 02:18
Carbon Disulfide	A	*ND*	1.5	8.8		µg/Kg-dry	1	03/05/09 02:18
Carbon tetrachloride	A	*ND*	1.1	4.4		µg/Kg-dry	1	03/05/09 02:18
Chlorobenzene	A	*14*	0.53	4.4		µg/Kg-dry	1	03/05/09 02:18
Chloroethane	A	*ND*	2.1	8.8		µg/Kg-dry	1	03/05/09 02:18
Chloroform	A	*4.5*	0.53	4.4	b	µg/Kg-dry	1	03/05/09 02:18
Chloromethane	A	*ND*	1.3	8.8		µg/Kg-dry	1	03/05/09 02:18
Dibromochloromethane	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/05/09 02:18
1,1-Dichloroethane	A	*ND*	0.62	4.4		µg/Kg-dry	1	03/05/09 02:18
1,2-Dichloroethane	A	*ND*	1.1	4.4		µg/Kg-dry	1	03/05/09 02:18
1,1-Dichloroethene	A	*ND*	1.1	4.4		µg/Kg-dry	1	03/05/09 02:18
cis-1,2-Dichloroethene	A	*160*	0.71	4.4		µg/Kg-dry	1	03/05/09 02:18
trans-1,2-Dichloroethene	A	*2.7*	0.88	4.4	J	µg/Kg-dry	1	03/05/09 02:18
1,2-Dichloropropane	A	*ND*	0.88	4.4		µg/Kg-dry	1	03/05/09 02:18
cis-1,3-Dichloropropene	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/05/09 02:18
trans-1,3-Dichloropropene	A	*ND*	0.62	4.4		µg/Kg-dry	1	03/05/09 02:18
Ethylbenzene	A	*1.6*	0.62	4.4	J	µg/Kg-dry	1	03/05/09 02:18
2-Hexanone	A	*ND*	2.1	4.4		µg/Kg-dry	1	03/05/09 02:18
4-Methyl-2-Pentanone	A	*ND*	1.5	4.4		µg/Kg-dry	1	03/05/09 02:18
Methyl-t-Butyl Ether	A	*ND*	0.53	4.4		µg/Kg-dry	1	03/05/09 02:18
Methylene chloride	A	*ND*	7.7	18		µg/Kg-dry	1	03/05/09 02:18
Styrene	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/05/09 02:18
1,1,1,2-Tetrachloroethane	A	*5.3*	0.53	4.4		µg/Kg-dry	1	03/05/09 02:18
1,1,2,2-Tetrachloroethane	A	*ND*	1.2	4.4		µg/Kg-dry	1	03/05/09 02:18
Tetrachloroethene	A	*300000*	4600	14000		µg/Kg-dry	2,50	03/05/09 21:33
Toluene	A	*5.5*	0.62	4.4		µg/Kg-dry	1	03/05/09 02:18
1,1,1-Trichloroethane	A	*ND*	0.88	4.4		µg/Kg-dry	1	03/05/09 02:18
1,1,2-Trichloroethane	A	*ND*	0.71	4.4		µg/Kg-dry	1	03/05/09 02:18
Trichloroethene	A	*640*	52	290		µg/Kg-dry	50	03/06/09 12:13
Trichlorofluoromethane	A	*ND*	3	8.8		µg/Kg-dry	1	03/05/09 02:18
Vinyl Acetate	A	*ND*	1.3	8.8		µg/Kg-dry	1	03/05/09 02:18
Vinyl chloride	A	*ND*	1.5	8.8		µg/Kg-dry	1	03/05/09 02:18

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB5-6-6.5	*Work Order / ID:*	ME0903067-10
Sample Description:		*Collection Date:*	02/25/09 17:20
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	*1.8*	1.4	4.4	J	µg/Kg-dry	1	03/05/09 02:18
o-Xylene	A	*ND*	0.8	4.4		µg/Kg-dry	1	03/05/09 02:18
Total Xylenes	A	*ND*	0.8	4.4		µg/Kg-dry	1	03/05/09 02:18
Surr: 4-Bromofluorobenzene	S	78.8	0	40.1-140		%REC	1	03/05/09 02:18
Surr: Dibromofluoromethane	S	99.1	0	77.6-126		%REC	1	03/05/09 02:18
Surr: 1,2-Dichloroethane-d4	S	98.3	0	76.8-140		%REC	1	03/05/09 02:18
Surr: Toluene-d8	S	121	0	33-194		%REC	1	03/05/09 02:18
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	*14*	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB5-10-10.5	*Work Order / ID:*	ME0903067-11
Sample Description:		*Collection Date:*	02/25/09 17:45
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*14*	8.6	45	J	µg/Kg-dry	1	03/05/09 02:50
Acrolein	A	*ND*	14	90		µg/Kg-dry	1	03/05/09 02:50
Acrylonitrile	A	*ND*	12	90		µg/Kg-dry	1	03/05/09 02:50
Benzene	A	*2.2*	1.1	4.5	J	µg/Kg-dry	1	03/05/09 02:50
Bromodichloromethane	A	*ND*	0.45	4.5		µg/Kg-dry	1	03/05/09 02:50
Bromoform	A	*ND*	0.63	4.5		µg/Kg-dry	1	03/05/09 02:50
Bromomethane	A	*ND*	3.2	9.0		µg/Kg-dry	1	03/05/09 02:50
2-Butanone	A	*ND*	3.2	9.0		µg/Kg-dry	1	03/05/09 02:50
Carbon Disulfide	A	*ND*	1.5	9.0		µg/Kg-dry	1	03/05/09 02:50
Carbon tetrachloride	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/05/09 02:50
Chlorobenzene	A	*18*	0.54	4.5		µg/Kg-dry	1	03/05/09 02:50
Chloroethane	A	*ND*	2.2	9.0		µg/Kg-dry	1	03/05/09 02:50
Chloroform	A	*1.3*	0.54	4.5	Jb	µg/Kg-dry	1	03/05/09 02:50
Chloromethane	A	*ND*	1.3	9.0		µg/Kg-dry	1	03/05/09 02:50
Dibromochloromethane	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 02:50
1,1-Dichloroethane	A	*2.9*	0.63	4.5	J	µg/Kg-dry	1	03/05/09 02:50
1,2-Dichloroethane	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/05/09 02:50
1,1-Dichloroethene	A	*ND*	1.1	4.5		µg/Kg-dry	1	03/05/09 02:50
cis-1,2-Dichloroethene	A	*87*	0.72	4.5		µg/Kg-dry	1	03/05/09 02:50
trans-1,2-Dichloroethene	A	*2.9*	0.9	4.5	J	µg/Kg-dry	1	03/05/09 02:50
1,2-Dichloropropane	A	*16*	0.9	4.5		µg/Kg-dry	1	03/05/09 02:50
cis-1,3-Dichloropropene	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 02:50
trans-1,3-Dichloropropene	A	*ND*	0.63	4.5		µg/Kg-dry	1	03/05/09 02:50
Ethylbenzene	A	*5.9*	0.63	4.5		µg/Kg-dry	1	03/05/09 02:50
2-Hexanone	A	*ND*	2.2	4.5		µg/Kg-dry	1	03/05/09 02:50
4-Methyl-2-Pentanone	A	*ND*	1.5	4.5		µg/Kg-dry	1	03/05/09 02:50
Methyl-t-Butyl Ether	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/05/09 02:50
Methylene chloride	A	*ND*	7.8	18		µg/Kg-dry	1	03/05/09 02:50
Styrene	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 02:50
1,1,1,2-Tetrachloroethane	A	*ND*	0.54	4.5		µg/Kg-dry	1	03/05/09 02:50
1,1,2,2-Tetrachloroethane	A	*ND*	1.3	4.5		µg/Kg-dry	1	03/05/09 02:50
Tetrachloroethene	A	*4100000*	35000	110000		µg/Kg-dry	5,00	03/06/09 13:17
Toluene	A	*15*	0.63	4.5		µg/Kg-dry	1	03/05/09 02:50
1,1,1-Trichloroethane	A	*ND*	0.9	4.5		µg/Kg-dry	1	03/05/09 02:50
1,1,2-Trichloroethane	A	*ND*	0.72	4.5		µg/Kg-dry	1	03/05/09 02:50
Trichloroethene	A	*790*	40	220		µg/Kg-dry	50	03/06/09 12:45
Trichlorofluoromethane	A	*ND*	3	9.0		µg/Kg-dry	1	03/05/09 02:50
Vinyl Acetate	A	*ND*	1.3	9.0		µg/Kg-dry	1	03/05/09 02:50
Vinyl chloride	A	*1.8*	1.5	9.0	J	µg/Kg-dry	1	03/05/09 02:50

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	6107 - SB5-10-10.5	*Work Order / ID:*	ME0903067-11
Sample Description:		*Collection Date:*	02/25/09 17:45
Sample Matrix:	Soil	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS (5035)	Method:	**SW5035/8260B**		Prep Date/Time:				Analyst: **CLR**
m,p-Xylene	A	***11***	1.4	4.5		µg/Kg-dry	1	03/05/09 02:50
o-Xylene	A	***4.9***	0.81	4.5		µg/Kg-dry	1	03/05/09 02:50
Total Xylenes	A	***16***	0.81	4.5		µg/Kg-dry	1	03/05/09 02:50
Surr: 4-Bromofluorobenzene	S	93.1	0	40.1-140		%REC	1	03/05/09 02:50
Surr: Dibromofluoromethane	S	93.5	0	77.6-126		%REC	1	03/05/09 02:50
Surr: 1,2-Dichloroethane-d4	S	93.8	0	76.8-140		%REC	1	03/05/09 02:50
Surr: Toluene-d8	S	154	0	33-194		%REC	1	03/05/09 02:50
PERCENT MOISTURE	Method:	**2540B_18ED**		Prep Date/Time:				Analyst: **BJH**
Percent Moisture	A	***13***	0.1	0.10		WT%	1	03/03/09 16:38

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ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	Trip Blank	*Work Order / ID:*	ME0903067-12
Sample Description:		*Collection Date:*	02/25/09 00:00
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method:	**SW8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*ND*	5.8	50		µg/L	1	03/03/09 17:48
Acrolein	A	*ND*	16	100		µg/L	1	03/03/09 17:48
Acrylonitrile	A	*ND*	13	100		µg/L	1	03/03/09 17:48
Benzene	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
Bromodichloromethane	A	*ND*	0.7	5.0		µg/L	1	03/03/09 17:48
Bromoform	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
Bromomethane	A	*ND*	1.8	10		µg/L	1	03/03/09 17:48
2-Butanone	A	*ND*	3.6	10		µg/L	1	03/03/09 17:48
Carbon Disulfide	A	*ND*	1.7	10		µg/L	1	03/03/09 17:48
Carbon tetrachloride	A	*ND*	1.7	5.0		µg/L	1	03/03/09 17:48
Chlorobenzene	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
Chloroethane	A	*ND*	2.3	10		µg/L	1	03/03/09 17:48
Chloroform	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
Chloromethane	A	*ND*	1	10		µg/L	1	03/03/09 17:48
Dibromochloromethane	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
1,1-Dichloroethane	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
1,2-Dichloroethane	A	*ND*	1.2	5.0		µg/L	1	03/03/09 17:48
1,1-Dichloroethene	A	*ND*	1.7	5.0		µg/L	1	03/03/09 17:48
cis-1,2-Dichloroethene	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
trans-1,2-Dichloroethene	A	*ND*	1.1	5.0		µg/L	1	03/03/09 17:48
1,2-Dichloropropane	A	*ND*	1	5.0		µg/L	1	03/03/09 17:48
cis-1,3-Dichloropropene	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
trans-1,3-Dichloropropene	A	*ND*	0.7	5.0		µg/L	1	03/03/09 17:48
Ethylbenzene	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
2-Hexanone	A	*ND*	2.4	10		µg/L	1	03/03/09 17:48
4-Methyl-2-Pentanone	A	*ND*	1.7	10		µg/L	1	03/03/09 17:48
Methyl-t-Butyl Ether	A	*ND*	0.8	5.0		µg/L	1	03/03/09 17:48
Methylene chloride	A	*ND*	3.1	5.0		µg/L	1	03/03/09 17:48
Styrene	A	*ND*	0.7	5.0		µg/L	1	03/03/09 17:48
1,1,1,2-Tetrachloroethane	A	*ND*	1.1	10		µg/L	1	03/03/09 17:48
1,1,2,2-Tetrachloroethane	A	*ND*	1.4	5.0		µg/L	1	03/03/09 17:48
Tetrachloroethene	A	*ND*	1.3	5.0		µg/L	1	03/03/09 17:48
Toluene	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
1,1,1-Trichloroethane	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
1,1,2-Trichloroethane	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
Trichloroethene	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
Vinyl Acetate	A	*ND*	1.5	10		µg/L	1	03/03/09 17:48
Vinyl chloride	A	*ND*	0.9	2.0		µg/L	1	03/03/09 17:48
m,p-Xylene	A	*ND*	1.7	5.0		µg/L	1	03/03/09 17:48

ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queenway Cleaners		
Client Sample ID:	Trip Blank	*Work Order / ID:*	ME0903067-12
Sample Description:		*Collection Date:*	02/25/09 00:00
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	MDL	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method:	SW8260B		Prep Date/Time:				Analyst: CLR
o-Xylene	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
Trichlorofluoromethane	A	*ND*	1.1	10		µg/L	1	03/03/09 17:48
Total Xylenes	A	*ND*	0.9	5.0		µg/L	1	03/03/09 17:48
Surr: Toluene-d8	S	106	0	81.4-122		%REC	1	03/03/09 17:48
Surr: 4-Bromofluorobenzene	S	97.4	0	76.9-116		%REC	1	03/03/09 17:48
Surr: Dibromofluoromethane	S	97.2	0	78.4-125		%REC	1	03/03/09 17:48
Surr: 1,2-Dichloroethane-d4	S	99.5	0	74.2-136		%REC	1	03/03/09 17:48

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed	N/A	=	Not Applicable			
mg/L	=	Milligrams per Liter (ppm)	ug/L	=	Micrograms per Liter (ppb)	cfu	=	Colony Forming Unit
mg/Kg	=	Milligrams per Kilogram (ppm)	ug/Kg	=	Micrograms per Kilogram (ppb)	ng/L	=	Nanograms per Liter (ppt)

U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated Method Blank at a concentration above the routine PQL/RL
b	=	Detected in the associated Method Blank at a concentration above the Method Detection Limit but less than the routine PQL/RL
D	=	Surrogate recoveries are not calculated due to sample dilution
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if listed)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate

DF = Dilution Factor RL = Reporting Limit ST = Sample Type MDL = Method Detection Limit

SAMPLE TYPES

A	=	Analyte
I	=	Internal Standard
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"	OPR	=	Ongoing Precision and Recovery Standard
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"			
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate			
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate			
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank			
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification			
PDS	=	Post Digestion Spike	SD	=	Serial Dilution			

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Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

- Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #100435)
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MICROBAC LOCATIONS, SERVICE CENTERS (SC) AND SATELLITE OFFICES (Sat)

Baltimore Division - Baltimore, MD
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Southern Headquarters - Poquoson, VA
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Southern Testing Division (Sat) - Greensboro, NC
Venice Division - Venice, FL

COOLER INSPECTION

Date: Monday, March 09, 2009

Client Name

Work Order Number

Checklist completed by _____ | _____

Date / Time Received:

Received by:

Reviewed by _____ | _____

Carrier name:

After-Hour Arrival?	Yes ☐	No ☐	
Shipping container/cooler in good condition?	Yes ☐	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☐
Chain of custody present?	Yes ☐	No ☐	
Chain of custody included sufficient client identification?	Yes ☐	No ☐	
Chain of custody included sufficient sample collector information?	Yes ☐	No ☐	
Chain of custody included a sample description?	Yes ☐	No ☐	
Chain of custody agrees with sample labels?	Yes ☐	No ☐	
Chain of custody identified the appropriate matrix?	Yes ☐	No ☐	
Chain of custody included date of collection?	Yes ☐	No ☐	
Chain of custody included time of collection?	Yes ☐	No ☐	
Chain of custody identified the appropriate number of containers?	Yes ☐	No ☐	
Samples in proper container/bottle?	Yes ☐	No ☐	
Sample containers intact?	Yes ☐	No ☐	
Sufficient sample volume for indicated test?	Yes ☐	No ☐	
All samples received within holding time?	Yes ☐	No ☐	
If samples are preserved, are the preservatives identified?	Yes ☐	No ☐	
Samples properly preserved?	Yes ☐	No ☐	
If No, adjusted by? _____	Date/Time _____		
Chain of custody included the requested analyses?	Yes ☐	No ☐	
Chain of custody signed when relinquished and received?	Yes ☐	No ☐	
Samples received on ice?	Yes ☐	No ☐	

Container/Temp Blank temperatures

VOA vials for aqueous samples have zero headspace? No VOA vials submitted ☐ Yes ☐ No ☐

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

General Comments:

Sample ID	Client Sample ID	Comments

Microbac®

Samples Submitted to:
[ ] 250 West 84th Drive, Merrillville, IN 46410, Tel: 219-769-8378, Fax: 219-769-1664
[✓] 5713 West 85th Street, Indianapolis, IN 46278, Tel: 317-872-1375, Fax: 317-872-1379

Chain of Custody Record

Number 89267

Instructions on back

6107

Client Name: Enviroforensics	Project: Shorewood Queensway Dump	Turnaround Time	Report Type
Address: 1060 N. Capitol Ave Ste E220	Location: Shorewood, WI	[✓] Routine (7 working days)	[✓] Results Only [ ] Level II
City, State, Zip: Indianapolis IN	PO #: 2009040	[ ] RUSH* (notify lab)	[ ] Level III [ ] Level III CLP-like
Contact: Greg Zumbaugh	Compliance Monitoring? [ ] Yes(1) [ ] No	_____ (needed by)	[ ] Level IV [ ] Level IV CLP-like
Telephone #: 317-972-7870	(1)Agency/Program		[ ] EDD

Sampled by (PRINT): Hani Roqueballey Sampler Signature: H. Roqueballey Sampler Phone #: 317-972-7870

Send Report via: [ ] Mail [ ] Telephone [ ] Fax (fax #) _____ [ ] e-mail (address) _____

* **Matrix Types:** Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** **Preservative Types:** (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Client Sample ID	Matrix*	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analyses → Preservative Types **	VOCs	DRY WT							For Lab Use Only
																	0903067
6107-SB1-9-10	S	G			2/25/09	13:50	4	6, 7	X	X							01A
6107-SB1-25-26	"	"			2/25/09	14:40	4	6, 7	X	X							02
6107-SB2-15-16	"	"			2/25/09	11:50	4	6, 7	X	X							03
6107-SB2-27-28	"	"			2/25/09	12:20	4	6, 7	X	X							04
S/MSD 6107-SB3-3-4	"	"			2/25/09	9:30	12	6, 7	X	X							05
6107-SB3-6-7	"	"			2/25/09	9:50	4	6, 7	X	X							06
6107-SB3-27-28	"	"			2/25/09	10:30	4	6, 7	X	X							07
6107-SB4-11-11.5	"	"			2/25/09	16:00	4	6, 7	X	X							08
6107-SB4-12.5-13	"	"			2/25/09	16:20	4	6, 7	X	X							09
6107-SB5-6-6.5	"	"			2/25/09	17:20	4	6, 7	X	X							10
6107-SB5-10-10.5	"	"			2/25/09	17:45	4	6, 7	X	X							11

Possible Hazard Identification: [ ] Hazardous [ ] Non-Hazardous [ ] Radioactive

Sample Disposition: [ ] Dispose as appropriate [ ] Return [ ] Archive

Comments: 6107-SB3-3-4 → Sample + MS + MSD

Sample temperature upon receipt in degrees C =

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
H. Roqueballey	3/2/09	M Bell	3/2/09 1510
M Bell	3/2/09 1545	[illegible]	3/2/09 1545
[illegible]		[illegible]	3/3/09 0814

ME0903067 6107 - Shorewood Queensway Cleaner Shorewood, WI DDG Greg Zumbaugh ENVIROFORENSICS 3/6/2009

Page 30 of 31

rev. 11/04/04

Page 1 of 2

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Samples Submitted to:
[ ] 250 West 84th Drive, Merrillville, IN 46410, Tel: 219-769-8378, Fax: 219-769-1664
[x] 5713 West 85th Street, Indianapolis, IN 46278, Tel: 317-872-1375, Fax: 317-872-1379

Chain of Custody Record

Number 89268

Instructions on back

Client Name	Project	Turnaround Time	Report Type
Address SAME AS PAGE 1	Location	[ ] Routine (7 working days)	[ ] Results Only [ ] Level II
City, State, Zip	PO #	[ ] RUSH* (notify lab)	[ ] Level III [ ] Level III CLP-like
Contact	Compliance Monitoring? [ ] Yes(1) [ ] No	_____ (needed by)	[ ] Level IV [ ] Level IV CLP-like
Telephone #	(1)Agency/Program		[ ] EDD

Sampled by (PRINT) _____ Sampler Signature _____ Sampler Phone # _____

Send Report via [ ] Mail [ ] Telephone [ ] Fax (fax #) _____ [ ] e-mail (address) _____

* **Matrix Types:** Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** **Preservative Types:** (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Client Sample ID	Matrix*	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analyses → Preservative Types ** ↓	VOCs								For Lab Use Only
TRIP BLANK	W	X			2/25/09		2		X								0903067 12A

Possible Hazard Identification [ ] Hazardous [ ] Non-Hazardous [ ] Radioactive

Sample Disposition [ ] Dispose as appropriate [ ] Return [ ] Archive

Comments	Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
		3/2/09		3/2/09 1510
	Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
		3/2/09 1545		3/2/09 1545
Sample temperature upon receipt in degrees C =	Relinquished By (signature)	Date/Time	Received for Lab By (signature)	Date/Time
				3/2/09 1840

rev. 11/04/04

March 09, 2009

Greg Zumbaugh
EnviroForensics
1060 North Capitol Avenue
Suite E230
Indianapolis, IN 46204

Work Order No.: ME0903062

RE: 6107 - Shorewood Queensway Cleaners

Dear Greg Zumbaugh:

Microbac Laboratories, Inc. received 1 sample on 3/2/2009 3:45:00 PM for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
Microbac Laboratories, Inc.

Deborah Griffiths
Senior Project Manager

Enclosures

Microbac

WORK ORDER SAMPLE SUMMARY

Date: *Monday, March 09, 2009*

CLIENT: EnviroForensics
Project: 6107 - Shorewood Queensway Cleaners
Lab Order: ME0903062

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0903062-01A	6107-SB5-8W		2/26/2009 12:00:00 PM	3/2/2009

Microbac®

ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queensway Cleaners		
Client Sample ID:	6107-SB5-8W	*Work Order / ID:*	ME0903062-01
Sample Description:		*Collection Date:*	02/26/09 12:00
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*ND*	50		µg/L	1	03/03/09 23:38
Acrolein	A	*ND*	100		µg/L	1	03/03/09 23:38
Acrylonitrile	A	*ND*	100		µg/L	1	03/03/09 23:38
Benzene	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Bromodichloromethane	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Bromoform	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Bromomethane	A	*ND*	10		µg/L	1	03/03/09 23:38
2-Butanone	A	*ND*	10		µg/L	1	03/03/09 23:38
Carbon Disulfide	A	*ND*	10		µg/L	1	03/03/09 23:38
Carbon tetrachloride	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Chlorobenzene	A	*18*	5.0		µg/L	1	03/03/09 23:38
Chloroethane	A	*ND*	10		µg/L	1	03/03/09 23:38
Chloroform	A	*6.4*	5.0		µg/L	1	03/03/09 23:38
Chloromethane	A	*ND*	10		µg/L	1	03/03/09 23:38
Dibromochloromethane	A	*ND*	5.0		µg/L	1	03/03/09 23:38
1,1-Dichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 23:38
1,2-Dichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 23:38
1,1-Dichloroethene	A	*7.7*	5.0		µg/L	1	03/03/09 23:38
cis-1,2-Dichloroethene	A	*4600*	250		µg/L	50	03/05/09 19:56
trans-1,2-Dichloroethene	A	*100*	5.0		µg/L	1	03/03/09 23:38
1,2-Dichloropropane	A	*11*	5.0		µg/L	1	03/03/09 23:38
cis-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/03/09 23:38
trans-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Ethylbenzene	A	*ND*	5.0		µg/L	1	03/03/09 23:38
2-Hexanone	A	*ND*	10		µg/L	1	03/03/09 23:38
4-Methyl-2-Pentanone	A	*ND*	10		µg/L	1	03/03/09 23:38
Methyl-t-Butyl Ether	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Methylene chloride	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Styrene	A	*ND*	5.0		µg/L	1	03/03/09 23:38
1,1,1,2-Tetrachloroethane	A	*ND*	10		µg/L	1	03/03/09 23:38
1,1,2,2-Tetrachloroethane	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Tetrachloroethene	A	*170000*	5000		µg/L	1,000	03/06/09 10:36
Toluene	A	*5.5*	5.0		µg/L	1	03/03/09 23:38
1,1,1-Trichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 23:38
1,1,2-Trichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 23:38
Trichloroethene	A	*1700*	50		µg/L	10	03/05/09 19:24
Vinyl Acetate	A	*ND*	10		µg/L	1	03/03/09 23:38
Vinyl chloride	A	*230*	20		µg/L	10	03/05/09 19:24
m,p-Xylene	A	*ND*	5.0		µg/L	1	03/03/09 23:38
o-Xylene	A	*ND*	5.0		µg/L	1	03/03/09 23:38

ANALYTICAL RESULTS

Date: *Monday, March 09, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Shorewood Queensway Cleaners		
Client Sample ID:	6107-SB5-8W	*Work Order / ID:*	ME0903062-01
Sample Description:		*Collection Date:*	02/26/09 12:00
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
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Surr: Toluene-d8	S	115	81.4-122		%REC	1	03/03/09 23:38
Surr: 4-Bromofluorobenzene	S	108	76.9-116		%REC	1	03/03/09 23:38
Surr: Dibromofluoromethane	S	97.7	78.4-125		%REC	1	03/03/09 23:38
Surr: 1,2-Dichloroethane-d4	S	96.6	74.2-136		%REC	1	03/03/09 23:38

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LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate			
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate			
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank			
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification			
PDS	=	Post Digestion Spike	SD	=	Serial Dilution			

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Corona Division - Corona, CA
Erie Division - Erie, PA
Fayetteville Division - Fayetteville, NC
Hauser Division - Boulder, CO
Kentucky Division - Louisville, KY
Kentucky Division (Sat) - Evansville, IN
Kentucky Division (Sat) - Lexington, KY
Kentucky Division (Sat) - Paducah, KY
Knoxville Division - Maryville, TN
Massachusetts Division - Marlborough, MA
Microbac Corporate Office - Wexford, PA
Microbac NY - Cortland Office - Cortland, NY
Microbac NY - Waverly Office - Waverly, NY
New Castle Division - New Castle, PA
Pittsburgh Division - Warrendale, PA
Richmond Division - Richmond, VA
South Carolina Division - New Ellenton, SC
South Jersey Division - Turnersville, NJ
Southern Headquarters - Poquoson, VA
Southern Testing Division - Wilson, NC
Southern Testing Division (Sat) - Greensboro, NC
Venice Division - Venice, FL

COOLER INSPECTION

Date: Monday, March 09, 2009

Client Name EnviroForensics
Work Order Number ME0903062
Checklist completed by KRS | 3/3/2009 10:01:41 AM

Date / Time Received: 3/2/2009 3:45:00 PM
Received by: DEB
Reviewed by DDG | 3/4/2009 7:48:37 AM

Carrier name: Microbac

After-Hour Arrival?	Yes ☐	No ☑	
Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody included sufficient client identification?	Yes ☑	No ☐	
Chain of custody included sufficient sample collector information?	Yes ☑	No ☐	
Chain of custody included a sample description?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Chain of custody identified the appropriate matrix?	Yes ☑	No ☐	
Chain of custody included date of collection?	Yes ☑	No ☐	
Chain of custody included time of collection?	Yes ☑	No ☐	
Chain of custody identified the appropriate number of containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
If samples are preserved, are the preservatives identified?	Yes ☑	No ☐	
Samples properly preserved?	Yes ☑	No ☐	

If No, adjusted by? _____ Date/Time _____

Chain of custody included the requested analyses?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Samples received on ice?	Yes ☑	No ☐

Container/Temp Blank temperatures: Cooler 1 Temp 2 °C

VOA vials for aqueous samples have zero headspace? No VOA vials submitted ☐ Yes ☑ No ☐

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

General Comments:

Sample ID	Client Sample ID	Comments
ME0903062-01A	6107-SB5-8W	

ME0903062 ENVIROFORENSICS
6107 - Shorewood Queensway Cleaners
Greg Zumbaugh
3/6/2009
DDG

Microbac®

Samples Submitted to: [ ] 250 West 84th Drive, Merrillville, IN 46410, Tel: 219-769-8378, Fax: 219-769-1664 | [✓] 5713 West 85th Street, Indianapolis, IN 46278, Tel: 317-872-1375, Fax: 317-872-1379

Chain of Custody Record

Number 89269

Instructions on back

Client Name Enviroforensics	**Project** 6107 Shorewood Queensway Cleaners	**Turnaround Time**	**Report Type**
Address 1060 N. Capitol Ave Ste E230	**Location** Shorewood WI	[✓] Routine (7 working days)	[✓] Results Only [ ] Level II
City, State, Zip Indianapolis IN	**PO #** 2009040	[ ] RUSH* (notify lab)	[ ] Level III [ ] Level III CLP-like
Contact Greg Zumbaugh	Compliance Monitoring? [ ] Yes(1) [ ] No	______ (needed by)	[ ] Level IV [ ] Level IV CLP-like
Telephone # 317-972-7870	(1)Agency/Program		[ ] EDD

Sampled by (PRINT) Hari Ragupathy **Sampler Signature** [signature] **Sampler Phone #** ______

Send Report via [ ] Mail [ ] Telephone [ ] Fax (fax #) ______ [ ] e-mail (address) ______

* **Matrix Types:** Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** **Preservative Types:** (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Client Sample ID	Matrix*	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analyses → Preservative Types ** ↓	VOCs								For Lab Use Only 0903062
6107-SB5-8W	GW	X			2/26/09	12:00	6	3	X								01A

Possible Hazard Identification [ ] Hazardous [ ] Non-Hazardous [ ] Radioactive **Sample Disposition** [ ] Dispose as appropriate [ ] Return [ ] Archive

Comments	Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
	[signature]	3/2/09	M McCoy	3/2/09 1510
	Relinquished By (signature)	**Date/Time**	**Received By (signature)**	**Date/Time**
	M McCoy	3/2/09 1545	[signature]	3/2/09 1545
Sample temperature upon receipt in degrees C = 2°	**Relinquished By (signature)**	**Date/Time**	**Received for Lab By (signature)**	**Date/Time**
	[signature]		[signature]	3/2/09 1841

rev. 11/04/04

Page 1 of 1

March 06, 2009

Greg Zumbaugh
EnviroForensics
1060 North Capitol Avenue
Suite E230
Indianapolis, IN 46204

Work Order No.: ME0903066

RE: 6107 - Sherwood Queenway Cleaners

Dear Greg Zumbaugh:

Microbac Laboratories, Inc. received 5 samples on 3/2/2009 3:45:00 PM for the analyses presented in the following report.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please feel free to contact us.

Sincerely,
Microbac Laboratories, Inc.

Deborah Griffiths
Senior Project Manager

Enclosures

Microbac

WORK ORDER SAMPLE SUMMARY

Date: *Friday, March 06, 2009*

CLIENT: EnviroForensics
Project: 6107 - Sherwood Queenway Cleaners
Lab Order: ME0903066

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
ME0903066-01A	6107 - MW-1		2/27/2009 8:10:00 AM	3/2/2009
ME0903066-02A	6107 - MW-2		2/27/2009 9:15:00 AM	3/2/2009
ME0903066-03A	6107 - MW-3		2/27/2009 11:35:00 AM	3/2/2009
ME0903066-04A	6107 - MW-4		2/27/2009 10:30:00 AM	3/2/2009
ME0903066-05A	Trip Blank		2/27/2009	3/2/2009

ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-1	*Work Order / ID:*	ME0903066-01
Sample Description:		*Collection Date:*	02/27/09 08:10
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*ND*	50		µg/L	1	03/05/09 13:59
Acrolein	A	*ND*	100		µg/L	1	03/05/09 13:59
Acrylonitrile	A	*ND*	100		µg/L	1	03/05/09 13:59
Benzene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Bromodichloromethane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Bromoform	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Bromomethane	A	*ND*	10		µg/L	1	03/05/09 13:59
2-Butanone	A	*ND*	10		µg/L	1	03/05/09 13:59
Carbon Disulfide	A	*ND*	10		µg/L	1	03/05/09 13:59
Carbon tetrachloride	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Chlorobenzene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Chloroethane	A	*ND*	10		µg/L	1	03/05/09 13:59
Chloroform	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Chloromethane	A	*ND*	10		µg/L	1	03/05/09 13:59
Dibromochloromethane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
1,1-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
1,2-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
1,1-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
cis-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
trans-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
1,2-Dichloropropane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
cis-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
trans-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Ethylbenzene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
2-Hexanone	A	*ND*	10		µg/L	1	03/05/09 13:59
4-Methyl-2-Pentanone	A	*ND*	10		µg/L	1	03/05/09 13:59
Methyl-t-Butyl Ether	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Methylene chloride	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Styrene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
1,1,1,2-Tetrachloroethane	A	*ND*	10		µg/L	1	03/05/09 13:59
1,1,2,2-Tetrachloroethane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Tetrachloroethene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Toluene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
1,1,1-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
1,1,2-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Trichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Vinyl Acetate	A	*ND*	10		µg/L	1	03/05/09 13:59
Vinyl chloride	A	*ND*	2.0		µg/L	1	03/05/09 13:59
m,p-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 13:59
o-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 13:59

ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-1	*Work Order / ID:*	ME0903066-01
Sample Description:		*Collection Date:*	02/27/09 08:10
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Trichlorofluoromethane	A	*ND*	10		µg/L	1	03/05/09 13:59
Total Xylenes	A	*ND*	5.0		µg/L	1	03/05/09 13:59
Surr: Toluene-d8	S	108	81.4-122		%REC	1	03/05/09 13:59
Surr: 4-Bromofluorobenzene	S	97.8	76.9-116		%REC	1	03/05/09 13:59
Surr: Dibromofluoromethane	S	95.4	78.4-125		%REC	1	03/05/09 13:59
Surr: 1,2-Dichloroethane-d4	S	99.4	74.2-136		%REC	1	03/05/09 13:59

ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-2	*Work Order / ID:*	ME0903066-02
Sample Description:		*Collection Date:*	02/27/09 09:15
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*ND*	50		µg/L	1	03/05/09 12:24
Acrolein	A	*ND*	100		µg/L	1	03/05/09 12:24
Acrylonitrile	A	*ND*	100		µg/L	1	03/05/09 12:24
Benzene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Bromodichloromethane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Bromoform	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Bromomethane	A	*ND*	10		µg/L	1	03/05/09 12:24
2-Butanone	A	*ND*	10		µg/L	1	03/05/09 12:24
Carbon Disulfide	A	*ND*	10		µg/L	1	03/05/09 12:24
Carbon tetrachloride	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Chlorobenzene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Chloroethane	A	*ND*	10		µg/L	1	03/05/09 12:24
Chloroform	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Chloromethane	A	*ND*	10		µg/L	1	03/05/09 12:24
Dibromochloromethane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
1,1-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
1,2-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
1,1-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
cis-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
trans-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
1,2-Dichloropropane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
cis-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
trans-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Ethylbenzene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
2-Hexanone	A	*ND*	10		µg/L	1	03/05/09 12:24
4-Methyl-2-Pentanone	A	*ND*	10		µg/L	1	03/05/09 12:24
Methyl-t-Butyl Ether	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Methylene chloride	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Styrene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
1,1,1,2-Tetrachloroethane	A	*ND*	10		µg/L	1	03/05/09 12:24
1,1,2,2-Tetrachloroethane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Tetrachloroethene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Toluene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
1,1,1-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
1,1,2-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Trichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
Vinyl Acetate	A	*ND*	10		µg/L	1	03/05/09 12:24
Vinyl chloride	A	*ND*	2.0		µg/L	1	03/05/09 12:24
m,p-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 12:24
o-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 12:24

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ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-2	*Work Order / ID:*	ME0903066-02
Sample Description:		*Collection Date:*	02/27/09 09:15
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result		RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**			Prep Date/Time:				Analyst: **CLR**
Trichlorofluoromethane	A		*ND*	10		µg/L	1	03/05/09 12:24
Total Xylenes	A		*ND*	5.0		µg/L	1	03/05/09 12:24
Surr: Toluene-d8	S	107		81.4-122		%REC	1	03/05/09 12:24
Surr: 4-Bromofluorobenzene	S	97.9		76.9-116		%REC	1	03/05/09 12:24
Surr: Dibromofluoromethane	S	96.6		78.4-125		%REC	1	03/05/09 12:24
Surr: 1,2-Dichloroethane-d4	S	98.4		74.2-136		%REC	1	03/05/09 12:24

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ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-3	*Work Order / ID:*	ME0903066-03
Sample Description:		*Collection Date:*	02/27/09 11:35
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*ND*	50		µg/L	1	03/05/09 15:37
Acrolein	A	*ND*	100		µg/L	1	03/05/09 15:37
Acrylonitrile	A	*ND*	100		µg/L	1	03/05/09 15:37
Benzene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Bromodichloromethane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Bromoform	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Bromomethane	A	*ND*	10		µg/L	1	03/05/09 15:37
2-Butanone	A	*ND*	10		µg/L	1	03/05/09 15:37
Carbon Disulfide	A	*ND*	10		µg/L	1	03/05/09 15:37
Carbon tetrachloride	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Chlorobenzene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Chloroethane	A	*ND*	10		µg/L	1	03/05/09 15:37
Chloroform	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Chloromethane	A	*ND*	10		µg/L	1	03/05/09 15:37
Dibromochloromethane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
1,1-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
1,2-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
1,1-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
cis-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
trans-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
1,2-Dichloropropane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
cis-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
trans-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Ethylbenzene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
2-Hexanone	A	*ND*	10		µg/L	1	03/05/09 15:37
4-Methyl-2-Pentanone	A	*ND*	10		µg/L	1	03/05/09 15:37
Methyl-t-Butyl Ether	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Methylene chloride	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Styrene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
1,1,1,2-Tetrachloroethane	A	*ND*	10		µg/L	1	03/05/09 15:37
1,1,2,2-Tetrachloroethane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Tetrachloroethene	A	*1200*	250		µg/L	50	03/05/09 16:23
Toluene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
1,1,1-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
1,1,2-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Trichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Vinyl Acetate	A	*ND*	10		µg/L	1	03/05/09 15:37
Vinyl chloride	A	*ND*	2.0		µg/L	1	03/05/09 15:37
m,p-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 15:37
o-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 15:37

ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-3	*Work Order / ID:*	ME0903066-03
Sample Description:		*Collection Date:*	02/27/09 11:35
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Trichlorofluoromethane	A	*ND*	10		µg/L	1	03/05/09 15:37
Total Xylenes	A	*ND*	5.0		µg/L	1	03/05/09 15:37
Surr: Toluene-d8	S	108	81.4-122		%REC	1	03/05/09 15:37
Surr: 4-Bromofluorobenzene	S	98.1	76.9-116		%REC	1	03/05/09 15:37
Surr: Dibromofluoromethane	S	96.9	78.4-125		%REC	1	03/05/09 15:37
Surr: 1,2-Dichloroethane-d4	S	100	74.2-136		%REC	1	03/05/09 15:37

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ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-4	*Work Order / ID:*	ME0903066-04
Sample Description:		*Collection Date:*	02/27/09 10:30
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*ND*	50		µg/L	1	03/05/09 11:52
Acrolein	A	*ND*	100		µg/L	1	03/05/09 11:52
Acrylonitrile	A	*ND*	100		µg/L	1	03/05/09 11:52
Benzene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Bromodichloromethane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Bromoform	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Bromomethane	A	*ND*	10		µg/L	1	03/05/09 11:52
2-Butanone	A	*ND*	10		µg/L	1	03/05/09 11:52
Carbon Disulfide	A	*ND*	10		µg/L	1	03/05/09 11:52
Carbon tetrachloride	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Chlorobenzene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Chloroethane	A	*ND*	10		µg/L	1	03/05/09 11:52
Chloroform	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Chloromethane	A	*ND*	10		µg/L	1	03/05/09 11:52
Dibromochloromethane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
1,1-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
1,2-Dichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
1,1-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
cis-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
trans-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
1,2-Dichloropropane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
cis-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
trans-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Ethylbenzene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
2-Hexanone	A	*ND*	10		µg/L	1	03/05/09 11:52
4-Methyl-2-Pentanone	A	*ND*	10		µg/L	1	03/05/09 11:52
Methyl-t-Butyl Ether	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Methylene chloride	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Styrene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
1,1,1,2-Tetrachloroethane	A	*ND*	10		µg/L	1	03/05/09 11:52
1,1,2,2-Tetrachloroethane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Tetrachloroethene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Toluene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
1,1,1-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
1,1,2-Trichloroethane	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Trichloroethene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Vinyl Acetate	A	*ND*	10		µg/L	1	03/05/09 11:52
Vinyl chloride	A	*ND*	2.0		µg/L	1	03/05/09 11:52
m,p-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 11:52
o-Xylene	A	*ND*	5.0		µg/L	1	03/05/09 11:52

ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	6107 - MW-4	*Work Order / ID:*	ME0903066-04
Sample Description:		*Collection Date:*	02/27/09 10:30
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Trichlorofluoromethane	A	*ND*	10		µg/L	1	03/05/09 11:52
Total Xylenes	A	*ND*	5.0		µg/L	1	03/05/09 11:52
Surr: Toluene-d8	S	106	81.4-122		%REC	1	03/05/09 11:52
Surr: 4-Bromofluorobenzene	S	95.3	76.9-116		%REC	1	03/05/09 11:52
Surr: Dibromofluoromethane	S	96.5	78.4-125		%REC	1	03/05/09 11:52
Surr: 1,2-Dichloroethane-d4	S	98.8	74.2-136		%REC	1	03/05/09 11:52

ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	Trip Blank	*Work Order / ID:*	ME0903066-05
Sample Description:		*Collection Date:*	02/27/09 00:00
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

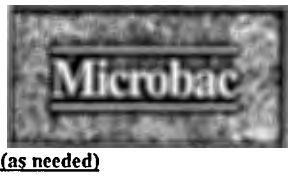
Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Acetone	A	*ND*	50		µg/L	1	03/03/09 18:20
Acrolein	A	*ND*	100		µg/L	1	03/03/09 18:20
Acrylonitrile	A	*ND*	100		µg/L	1	03/03/09 18:20
Benzene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Bromodichloromethane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Bromoform	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Bromomethane	A	*ND*	10		µg/L	1	03/03/09 18:20
2-Butanone	A	*ND*	10		µg/L	1	03/03/09 18:20
Carbon Disulfide	A	*ND*	10		µg/L	1	03/03/09 18:20
Carbon tetrachloride	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Chlorobenzene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Chloroethane	A	*ND*	10		µg/L	1	03/03/09 18:20
Chloroform	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Chloromethane	A	*ND*	10		µg/L	1	03/03/09 18:20
Dibromochloromethane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
1,1-Dichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
1,2-Dichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
1,1-Dichloroethene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
cis-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
trans-1,2-Dichloroethene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
1,2-Dichloropropane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
cis-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
trans-1,3-Dichloropropene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Ethylbenzene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
2-Hexanone	A	*ND*	10		µg/L	1	03/03/09 18:20
4-Methyl-2-Pentanone	A	*ND*	10		µg/L	1	03/03/09 18:20
Methyl-t-Butyl Ether	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Methylene chloride	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Styrene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
1,1,1,2-Tetrachloroethane	A	*ND*	10		µg/L	1	03/03/09 18:20
1,1,2,2-Tetrachloroethane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Tetrachloroethene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Toluene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
1,1,1-Trichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
1,1,2-Trichloroethane	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Trichloroethene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Vinyl Acetate	A	*ND*	10		µg/L	1	03/03/09 18:20
Vinyl chloride	A	*ND*	2.0		µg/L	1	03/03/09 18:20
m,p-Xylene	A	*ND*	5.0		µg/L	1	03/03/09 18:20
o-Xylene	A	*ND*	5.0		µg/L	1	03/03/09 18:20

ANALYTICAL RESULTS

Date: *Friday, March 06, 2009*

Client:	EnviroForensics		
Client Project:	6107 - Sherwood Queenway Cleaners		
Client Sample ID:	Trip Blank	*Work Order / ID:*	ME0903066-05
Sample Description:		*Collection Date:*	02/27/09 00:00
Sample Matrix:	Aqueous	*Date Received:*	03/02/09 15:45

Analyses	ST	Result	RL	Qual	Units	DF	Analyzed
VOLATILE ORGANICS	Method: **SW8260B**		Prep Date/Time:				Analyst: **CLR**
Trichlorofluoromethane	A	*ND*	10		µg/L	1	03/03/09 18:20
Total Xylenes	A	*ND*	5.0		µg/L	1	03/03/09 18:20
Surr: Toluene-d8	S	106	81.4-122		%REC	1	03/03/09 18:20
Surr: 4-Bromofluorobenzene	S	96.9	76.9-116		%REC	1	03/03/09 18:20
Surr: Dibromofluoromethane	S	97.1	78.4-125		%REC	1	03/03/09 18:20
Surr: 1,2-Dichloroethane-d4	S	98.1	74.2-136		%REC	1	03/03/09 18:20



FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)

NA	=	Not Analyzed	N/A	=	Not Applicable			
mg/L	=	Milligrams per Liter (ppm)	ug/L	=	Micrograms per Liter (ppb)	cfu	=	Colony Forming Unit
mg/Kg	=	Milligrams per Kilogram (ppm)	ug/Kg	=	Micrograms per Kilogram (ppb)	ng/L	=	Nanograms per Liter (ppt)

U	=	Undetected
J	=	Analyte concentration detected between RL and MDL (Metals / Organics)
B	=	Detected in the associated Method Blank at a concentration above the routine PQL/RL
b	=	Detected in the associated Method Blank at a concentration above the Method Detection Limit but less than the routine PQL/RL
D	=	Surrogate recoveries are not calculated due to sample dilution
ND	=	Not Detected at the Reporting Limit (or the Method Detection Limit, if listed)
E	=	Value above quantitation range
H	=	Analyte was prepared and/or analyzed outside of the analytical method holding time
I	=	Matrix Interference
R	=	RPD outside accepted recovery limits
S	=	Spike recovery outside recovery limits
Surr	=	Surrogate

DF = Dilution Factor RL = Reporting Limit ST = Sample Type MDL = Method Detection Limit

SAMPLE TYPES

A	=	Analyte
I	=	Internal Standard
S	=	Surrogate
T	=	Tentatively Identified Compound (TIC, concentration estimated)

QC SAMPLE IDENTIFICATIONS

MBLK	=	Method Blank	ICSA	=	Interference Check Standard "A"	OPR	=	Ongoing Precision and Recovery Standard
DUP	=	Method Duplicate	ICSAB	=	Interference Check Standard "AB"			
LCS	=	Laboratory Control Sample	LCSD	=	Laboratory Control Sample Duplicate			
MS	=	Matrix Spike	MSD	=	Matrix Spike Duplicate			
ICB	=	Initial Calibration Blank	CCB	=	Continuing Calibration Blank			
ICV	=	Initial Calibration Verification	CCV	=	Continuing Calibration Verification			
PDS	=	Post Digestion Spike	SD	=	Serial Dilution			

CERTIFICATIONS

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

- Illinois EPA for the analysis wastewater and solid waste in accordance with the requirements of the National Environmental Laboratory Accreditation Program [NELAP] (accreditation #100435)
- Illinois Department of Public Health for the microbiological analysis of drinking water (registry #175458)
- Indiana DEM approved support laboratory for solid waste and wastewater analyses
- Indiana SDH for the chemical analysis of drinking water (lab #C-45-02)
- Indiana SDH for the microbiological analysis of drinking water (lab #M-45-08)
- Kentucky EPPC for the analysis of samples applicable to the Underground Storage Tank program (lab #0061)
- North Carolina DENR for the environmental analysis for NPDES effluent, surface water, groundwater, and pretreatment regulations (certificate #597)
- Wisconsin DNR for the chemical analysis of wastewater and solid waste (lab #998036710)

MICROBAC LOCATIONS, SERVICE CENTERS (SC) AND SATELLITE OFFICES (Sat)

Baltimore Division - Baltimore, MD
Camp Hill Division - Camp Hill, PA
Camp Hill Division (SC) - Pittston, PA
Chicagoland Division - Merrillville, IN
Chicagoland Division (SC) - Indianapolis, IN
Corona Division - Corona, CA
Erie Division - Erie, PA
Fayetteville Division - Fayetteville, NC
Hauser Division - Boulder, CO
Kentucky Division - Louisville, KY
Kentucky Division (Sat) - Evansville, IN
Kentucky Division (Sat) - Lexington, KY
Kentucky Division (Sat) - Paducah, KY
Knoxville Division - Maryville, TN
Massachusetts Division - Marlborough, MA
Microbac Corporate Office - Wexford, PA
Microbac NY - Cortland Office - Cortland, NY
Microbac NY - Waverly Office - Waverly, NY
New Castle Division - New Castle, PA
Pittsburgh Division - Warrendale, PA
Richmond Division - Richmond, VA
South Carolina Division - New Ellenton, SC
South Jersey Division - Turnersville, NJ
Southern Headquarters - Poquoson, VA
Southern Testing Division - Wilson, NC
Southern Testing Division (Sat) - Greensboro, NC
Venice Division - Venice, FL

COOLER INSPECTION

Date: Friday, March 06, 2009

Client Name EnviroForensics
Work Order Number ME0903066
Checklist completed by KRS | 3/3/2009 10:12:58 AM

Date / Time Received: 3/2/2009 3:45:00 PM
Received by: DEB
Reviewed by DDG | 3/4/2009 8:03:43 AM

Carrier name: Microbac

After-Hour Arrival?	Yes ☐	No ☑	
Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shippping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody included sufficient client identification?	Yes ☑	No ☐	
Chain of custody included sufficient sample collector information?	Yes ☑	No ☐	
Chain of custody included a sample description?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Chain of custody identified the appropriate matrix?	Yes ☑	No ☐	
Chain of custody included date of collection?	Yes ☑	No ☐	
Chain of custody included time of collection?	Yes ☑	No ☐	
Chain of custody identified the appropriate number of containers?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
If samples are preserved, are the preservatives identified?	Yes ☑	No ☐	
Samples properly preserved?	Yes ☑	No ☐	
If No, adjusted by? _____	Date/Time _____		
Chain of custody included the requested analyses?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Samples received on ice?	Yes ☑	No ☐	

Container/Temp Blank temperatures — Cooler 1 Temp 2 °C

VOA vials for aqueous samples have zero headspace? No VOA vials submitted ☐ Yes ☑ No ☐

ANY "NO" EVALUATION (excluding After-Hour Receipt) REQUIRES CLIENT NOTIFICATION.

General Comments:

Sample ID	Client Sample ID	Comments
ME0903066-01A	6107 - MW-1	
ME0903066-02A	6107 - MW-2	
ME0903066-03A	6107 - MW-3	
ME0903066-04A	6107 - MW-4	
ME0903066-05A	Trip Blank	

Microbac®

Samples Submitted to:
[ ] 250 West 84th Drive, Merrillville, IN 46410, Tel: 219-769-8378, Fax: 219-769-1664
[✓] 5713 West 85th Street, Indianapolis, IN 46278, Tel: 317-872-1375, Fax: 317-872-1379

Chain of Custody Record

Number 89270

Instructions on back

ME0903066 ENVIROFORENSICS
6107 - Sherwood Queenway Cleaner - Sherwood, WI DDG
3/6/2009

Client Name ENVIROFORENSICS	Project Sherwood Queenway Cleaners 6107	Turnaround Time	Report Type
Address 1060 N CAPITOL AVE STE E230	Location Sherwood, WI	[✓] Routine (7 working days)	[ ] Results Only [ ] Level II
City, State, Zip INDIANAPOLIS IN	PO # 2009040	[ ] RUSH* (notify lab)	[ ] Level III [ ] Level III CLP-like
Contact GREG ZUMBAUGH	Compliance Monitoring? [ ] Yes(1) [ ] No	(needed by)	[✓] Level IV [ ] Level IV CLP-like
Telephone # 317-972-7870	(1)Agency/Program		[ ] EDD

Sampled by (PRINT) HARI REGUPATHY Sampler Signature [signature] Sampler Phone # 317-972-7870

Send Report via [ ] Mail [ ] Telephone [ ] Fax (fax #) [ ] e-mail (address) GZumbaugh@Enviroforensics.com

* **Matrix Types:** Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)

** **Preservative Types:** (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Client Sample ID	Matrix*	Grab	Composite	Filtered	Date Collected	Time Collected	No. of Containers	Requested Analyses → Preservative Types **	VOCs								For Lab Use Only
																	0902066
MS/MSD 6107-MW1	GW	G			2/27/09	8:10	9	3	X								01A
6107-MW2	"	"			"	9:15	3	3	X								02
6107-MW3	"	"			"	11:35	3	3	X								03
6107-MW4	"	"			"	10:30	3	3	X								04
TRIP BLANK	W	"			2/27/09		2	3	X								05

Possible Hazard Identification [ ] Hazardous [ ] Non-Hazardous [ ] Radioactive **Sample Disposition** [ ] Dispose as appropriate [ ] Return [ ] Archive

Comments 6107-MW1 → Sample + MS + MSD

Sample temperature upon receipt in degrees C = 2°

Relinquished By (signature)	Date/Time	Received By (signature)	Date/Time
[signature]	3/2/09	[signature]	3/2/09 1510
[signature]	3/2/09 1545	[signature]	3/2/09 1545
[signature]	Date/Time	[signature]	Date/Time 3/3/09 1820

rev. 11/04/04

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