REMEDIAL ACTION PLAN AND SVE SYSTEM DESIGN REPORT
(Revised)

ONE HOUR MARTINIZING CLEANERS
6737 MILWAUKEE AVENUE
WAUWATOSA, WI 53511
BRRTS# 02-41-551923

August 13, 2019

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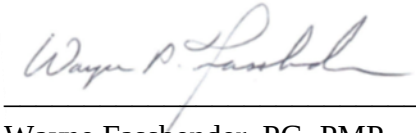

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CERTIFICATIONS

I, Andrew Horwath, hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Andrew D. Horwath

Senior Engineer, Lic. No. E-43831-6

Signature, title and P.E. number

P.E. stamp

I, Wayne Fassbender, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Wayne P. Fassbender

Senior Project Manager

Signature and title

Date: August 13, 2019

EXECUTIVE SUMMARY

EnviroForensics, LLC (EnviroForensics) has prepared this Remedial Action Plan and SVE System Design Report (Report) on behalf of OHM Holdings, Inc. for the One Hour Martinizing Cleaners facility located at 6737 Milwaukee Avenue, Wauwatosa, Wisconsin (Site). Historic releases of the dry cleaning solvent tetrachloroethene (PCE) to the subsurface have occurred at the Site during its former operation as an active dry cleaning facility. Pure PCE product does not appear to have been released in significant quantities because concentrations of PCE are low and not indicative of pure PCE. In addition, very little natural degradation of PCE has occurred to produce daughter compounds such as trichloroethene, dichloroethene, or vinyl chloride.

Residual PCE impacts in soil have not resulted in detectable concentrations in groundwater to date (the water table resides at depths of approximately between 48 and 52 feet below ground surface (bgs) across the Site and fluctuates approximately 1.0 to 1.5 feet seasonally). However, PCE vapors have accumulated beneath the Site building in concentrations that exceed the industrial/commercial vapor risk screening level (VRSL) of 6,000 micrograms per cubic meter. There was a one-time detection of PCE vapor above the VRSL in the adjacent commercial building to the south during a sampling event in 2014; however, PCE was not detected above the VRSL in several sampling events since that early detection (most recently in 2019). It does not appear from the sampling data that there is currently a risk of vapor intrusion at this commercial property.

The primary source of PCE impacts appears to be associated with floor spills around the former location of the dry cleaning machine that may have migrated to a small area outside the access doors to the building on the east side. This small area may also have been the location of minor surface spills during product deliveries. These areas are targeted for mass reduction due to the accumulation of PCE vapors beneath the Site building slab.

Another small area exists near a storage shed located in the southeast corner of the property. PCE impacts in this area are likely due to minor surface spills. This area is not being targeted for mass reduction since PCE concentrations in soil are shallow (do not extend to the water table) and are beneath a concrete cap which is protective of human health and the environment. However, additional investigations (soil sampling) is planned to determine if impacts from this area have spread to the adjacent off-site property to the east. Maintenance of the cap in this area will be required.

Some active remediation is required to reduce contaminant mass and associated risk of vapor intrusion at the Site building. PCE impacts targeted for mass reduction are within the upper 10 feet of unsaturated soil and much of the contaminant mass is located beneath the dry cleaner building. Therefore, excavation of this material is not feasible. Site soil consists mainly of silty sand and gravel which is permeable and readily transmits soil vapor (as opposed to a clay or silt matrix) and is conducive to remediation by soil vapor extraction (SVE). SVE was successfully used in a pilot test at the Site and is a practical remedial method that can be utilized effectively to reduce the mass of PCE around and beneath the Site building.

The SVE system has been designed using data collected during an SVE pilot study conducted in 2016. The system will consist of one (1) existing shallow vapor extraction well located outside of the Site building and connected to the SVE mechanical equipment, also located outside the building near the extraction well. One (1) additional shallow vapor extraction point will be installed within the Site building and connected to the SVE system. Each extraction well is anticipated to have an effective radius of influence extending out 25 feet.

Operation and maintenance (O&M) activities for the SVE system will be conducted routinely to optimize system efficiency. Performance monitoring, including subsurface vacuum measurements and effluent sampling of PCE concentrations, will be performed to verify the radius of influence and calculate contaminant mass removal rates. The overall effectiveness of SVE will be evaluated by collecting vapor samples from existing sub-slab ports located within the Site building and adjacent off-site commercial property to the south.

A Construction Documentation Report will be prepared that documents as-built construction of the SVE system and the final O&M Plan for the SVE system. Semi-annual progress reports will be submitted to the Wisconsin Department of Natural Resources, as required, during remediation.

1.0 INTRODUCTION

EnviroForensics, LLC (EnviroForensics) has prepared this Remedial Action Plan and SVE System Design Report (Report) on behalf of OHM Holdings, Inc. (OHM) pertaining to construction of a soil vapor extraction (SVE) system at their property located at 6737 Milwaukee Avenue, Wauwatosa, Wisconsin (Site). The location of the Site is shown on **Figure 1**. The goal of the SVE system is to achieve reduction in mass of unsaturated soil impacts that are currently producing tetrachloroethene (PCE) vapors which pose a risk of intrusion to the Site building. This Report follows guidelines for remedial action design set forth in Wisconsin Administrative Code (WAC) Chapter NR 724 rule and other associated State of Wisconsin Chapter NR 700 series rules. The design criteria for the SVE system, including engineering plans and specifications, are provided in this Report.

This Report follows submittal of the Site Investigation Report, dated January 19, 2016, with approval and conditions by the Wisconsin Department of Natural Resources (WDNR) on February 27, 2018. The conditions included a request by the WDNR for additional on-site and off-site investigations to determine the extents of residual PCE impacts. During meeting discussions with the WDNR held on May 17, 2018 and May 28, 2019, it was agreed that these investigations would be needed prior to closure.

A request to re-enter the Dry Cleaner Environmental Response Fund (DERF) reimbursement program for funding of the remedial actions, along with a request for variance from the consultant bidding process, was approved by the WDNR on June 11, 2018.

2.0 SITE BACKGROUND

Site investigation activities began at the Site by Giles Engineering & Associates, Inc. (Giles Engineering) in 2008. EnviroForensics assumed management of investigation activities in 2009 with completion of a Site Investigation Report in 2016, and SVE remedial pilot testing completed in 2017. This section describes the Site and presents a brief history.

2.1 Geographic Information

The layout of the Site, including Site features, and the surrounding area, is depicted on **Figure 2**. The Site is improved with a slab-on-grade, one story building and asphalt/concrete parking and driveway areas. There are no surface water features or private wells on the Site. The Site is bound by Milwaukee Avenue to the north; North 68th Street to the west; a commercial property (1536 N. 68th Street) to the south; and a residential property (6721 Milwaukee Avenue) to the east. The adjacent commercial property to the south is currently occupied as office space for an accounting firm. The surrounding area consists of a mix of residential and commercial properties.

2.2 Site History

The Site operated as a gasoline service station from at least 1927 up to the late 1970's or early 1980's. The property was purchased as a vacant gasoline service station by OHM in 1982. The underground gasoline storage tanks were removed by the previous owners. An underground heating oil tank was removed from the Site in 1997 under the current ownership.

OHM operated the Site as an active dry cleaning facility beginning in 1982. The former dry cleaning machine was located on the eastern portion of the building and is no longer present. PCE was the main dry cleaning solvent used in the cleaning process until its use was discontinued at this facility in 2009. Since 2009, the site has been a drop-off location for clothes cleaned at a central facility. OHM discontinued the use of PCE in their dry cleaning process in January of 2014, in favor of a more environmentally friendly solvent.

In 2008, during initial discovery investigations performed by Giles Engineering, PCE was detected in subsurface soil indicating that a release of PCE had occurred at the Site sometime in the past. The amount of chemical released, the duration of the release, and the specific release areas or locations are unknown, but the source areas are below the building foundation near the

old dry cleaning machine, and outside the building near a storage shed. This would indicate that floor spills occurred inside the building that may have entered the subsurface through the joint between the floor slab and outside wall, or into a floor drain which may have leaked. The soil impacts near the storage shed were likely caused by spillage. It is not known whether these incidental releases were of fresh or waste product.

2.3 Hydrogeologic Setting

The Site lithology is comprised of poorly sorted glacially deposited till generally consisting of silty, clayey, sand and gravel with interspersed and discontinuous lenses of silty clay and sandy clay, which are typically between 1-2 feet thick. Coarser material consisting of sand and gravel with varying amounts of silt and clay appear to be predominant. A 10-feet thick clay layer is encountered just above the water table at a depth of between 45 to 55 feet. The surface of the water table as measured in monitoring wells exists at depths of between 48 to 52 feet below ground surface (bgs) on Site and fluctuates between 1.0-1.5 feet seasonally. The direction of groundwater flow is consistently toward the northeast.

2.4 Subsurface Impacts

Soil boring locations and detected chlorinated volatile organic compounds (CVOCs) in soil are shown on **Figure 3**, and the locations of sub-slab vapor samples and detected CVOC at the Site and surrounding properties are shown on **Figure 4**. PCE is the primary compound detected with only minimal detections of compounds associated with the natural degradation of PCE. No CVOCs were detected in groundwater during the course of Site investigation; therefore, proposed remedial actions are not targeting groundwater.

As seen on **Figure 3**, the primary source area for PCE soil contamination was identified underneath the east side of the OHM building, where the dry cleaning machine was formerly located. Up to 510 micrograms per kilogram (µg/kg) of PCE were detected at that location, diminishing with depth.

A secondary location of PCE-impacted soil was identified on the southeast portion of the Site, adjacent to a storage shed and has characteristics of a surface spill. Up to 530 µg/kg of PCE were detected at this location, again diminishing with depth. The PCE impacts at this location appear to be isolated, have concentrations of PCE well below any direct contact standards, are

capped by concrete, and are not causing a vapor risk at any occupied structures. Therefore, this area is not being targeted for remediation.

Soil contaminant concentrations were compared to WDNR Residual Contaminant Levels (RCL), which are based on the United States Environmental Protection Agency (U.S. EPA) Regional Screening Levels (RSL). At many locations, the concentrations exceed the RCL established for protection of groundwater; however, the PCE impacts in soil appear to have attenuated prior to reaching the water table. None of the PCE concentrations in the shallow soil exceeded the RCLs for direct contact in either residential or non-residential settings.

As can be seen on **Figure 4**, PCE vapors have accumulated beneath the Site building (slab on grade) and adjacent commercial building to the south (basement slab) at concentrations that exceed the VRSL for PCE of 6,000 micrograms per cubic meter ($\mu g/m^3$) for non-residential settings. Sub-slab vapor samples collected at SSV-2 at the Site building contained PCE at concentrations up to 20,600 $\mu g/m^3$. A sample collected from the commercial property to the south contained PCE at concentrations up to 12,400 $\mu g/m^3$ during sampling in 2014. However, PCE was not detected at concentrations exceeding the VRSL at this adjacent commercial property during subsequent sampling events, the most recent occurring in April 2019.

In addition, indoor air samples collected from the Site building contained PCE at a maximum concentration of 1,310 $\mu g/m^3$, which is above the non-residential Vapor Action Level (VAL) of 180 $\mu g/m^3$. At the time of indoor air sampling, solutions containing CVOCs were being used in the building to remove stubborn stains from dry cleaned clothes and the old dry cleaning machine was still within the building. A field screening of vapors using a photoionization detector (PID) was performed at that time. The PID readings indicated elevated volatile organic compound (VOC) readings near the unused dry cleaning machine. Since the last indoor air sampling event, the deactivated dry cleaning machine has been removed.

Additional subsurface data was collected in August of 2018 from the adjacent Milwaukee Avenue and 68th Street roadways. PCE was detected in soil and soil gas along the sanitary lateral leading to the main in Milwaukee Avenue indicating that the Site building lateral acted as a migration conduit to a limited degree. The PCE concentrations in soil at direct push boring DP-2 shown on **Figure 3** are below the RCLs for direct contact exposure, but above the RCL for protection of groundwater.

As shown on **Figure 5**, soil vapor sample 6554-SG-2 collected close to the sanitary lateral and at the approximate depth of the sanitary lateral contained PCE at a concentration of 3,720 µg/m^3 and trichloroethene (TCE) at a concentration of 91.4 µg/m^3 which are below the utility VRSLs for these compounds. Soil vapor sample 6554-SG-1 located west along the sanitary main contained PCE at a concentration of 404 µg/m^3 and TCE at a concentration of 34.9 µg/m^3, which are less than their respective utility VRSLs for these compounds.

2.5 SVE Pilot Testing

SVE pilot testing was performed by EnviroForensics in June of 2016. A copy of the full pilot test report has been previously submitted. Two (2) SVE wells were installed to facilitate testing and several existing and newly installed vapor monitoring points were used to measure negative pressures during the test. The two (2) extraction wells consisted of one (1) shallow well screened from 3-5 feet bgs; and one (1) deeper well screened from 10-20 feet bgs. The data collected during testing supports using SVE to effectively remediate the Site. The radius of negative pressures propagated outward over 50 feet using the shallow SVE well and almost to 80 feet using the deeper SVE well. Based on this data, a minimal number of extraction wells are needed to create an effective remediation zone.

3.0 ADDITIONAL SITE INVESTIGATION

A Site Investigation Report, dated January 19, 2016, was submitted to the WDNR. The WDNR provided a written response on February 27, 2018 approving the Site Investigation Report with conditions. The conditions included a request for additional on-site and off-site investigations to determine the extents of residual PCE impacts.

During the meeting with the WDNR May 28, 2019, it was agreed that the delineation of on-site soil impacts to the east of DP-13 along the property boundary is required prior to closure. If the investigation indicates additional impacts along the Site property boundary, then additional soil sampling at the off-site property to the east would be required. The proposed soil boring locations are depicted on **Figure 6**. The additional site investigation activities are described in the following section.

3.1 Off-Site Access

In order to complete the full scope of work, EnviroForensics will need to obtain access to 6727 Milwaukee Avenue. The off-site access agreement will allow EnviroForensics and its subcontractors access to the off-site property. The off-site access agreement has already been written and approved by the property owner, Mr. Brian Taugher.

3.2 Subsurface Utility Survey

In accordance with safe work practices and as required by Wisconsin State Law, EnviroForensics will contact the State of Wisconsin One Call subsurface utility protection service at least 72-hours prior to the anticipated onset of subsurface work at the Site. As a result, subsurface utilities and structures owned or managed by member companies (e.g. telecommunications, electric and gas utilities) will be located by an independent contractor service. Those common utilities that are not member companies of the One Call protection service will be contacted directly and requested to provide information regarding the location of onsite, adjacent or nearby underground structures (e.g. municipal water, sanitary sewer, storm sewer).

EnviroForensics will also contract with a private underground utility locating service to provide additional confidence regarding the position of potential underground hazards at the Site. The private locating service will use geophysical and/or electromagnetic equipment, as appropriate; to assist in clearing each planned boring location prior to sampling activities.

3.3 Soil Sampling

To define the extent of soil contamination exceeding the WDNR Residential RCLs, EnviroForensics has selected up to two (2) direct push soil sampling locations. The approximate soil sampling locations are depicted on **Figure 6**. Soil borings will be advanced with a cart mounted Geoprobe unit from the surface to approximately 10 feet bgs.

Direct-push soil cores will be collected in 5-ft long by 1.5-inch diameter vinyl acetate plastic sample sleeves, sampled and logged. Field screening at each 2-foot interval will be conducted using a PID, the results of which will be recorded. Soil lithology will be continuously described in accordance with the Unified Soil Classification System and recorded on boring logs.

Soil samples selected for laboratory analysis will be collected using a Terra-core device to produce approximately a 5-gram sample and placed into a 40 milliliter (ml) vial containing a pre-weighted volume of methanol preservative (EPA method 5035). Nitrile gloves will be changed between each sample interval and new plastic sleeves will be inserted into the core barrel. Any reusable sampling equipment that contacts soil samples will be decontaminated with an Alconox detergent solution and triple rinsed with clean water between sampling intervals.

Up to three (3) soil samples will be collected at each soil boring location. The sample locations selected will be based on the visual, olfactory, and PID readings. The soil samples will be submitted for CVOCs analysis using U.S. Environmental Protection Agency (EPA) SW-846 Test Method 8260B. Samples collected from the OHM property will be initially analyzed. Based on the results, the additional samples collected from the off-site property owned by Brian Taugher may also be analyzed.

Per standard data quality assurance and quality control (QA/QC) protocol, one (1) trip blank sample per cooler will be analyzed via U.S. EPA SW-846 Test Method 8260B. The soil samples will be labeled, logged on a chain of custody form and placed into a cooler containing ice pending delivery to the fixed based laboratory.

Soil cuttings generated during sampling activities will be placed into Department of Transportation 17H-rated drums, or equivalent for subsequent characterization and management. Following soil sampling activities, each borehole will be backfilled with hydrated bentonite chips and topped off with concrete or topsoil to match the existing surface cover.

3.4 Data Evaluation and Reporting

Upon receiving the analytical results from the laboratory, EnviroForensics will tabulate and evaluate the data. Tables, maps, figures, and appendices will be updated as appropriate to aid in the presentation and interpretation of the investigation findings. The findings of the investigation will be included in the Construction Documentation Report and incorporated in the closure report. A separate results report will be sent to Mr. Brian Taugher, the off-site property owner, if samples collected from his property are analyzed.

4.0 REMEDIAL ACTIVITIES

The recommended closure strategy is a combination of active remediation and passive risk management methods. The remedial action for soil mass reduction and associated sub-slab vapor will consist of SVE. The use of SVE should eliminate the current risk of vapor intrusion to indoor air at the Site building. The SVE system will also reduce the mass of PCE in soil which will in turn reduce the risk of reoccurring accumulation of sub-slab vapor.

Site closure may involve continued obligations such as the long term operation of sub-slab depressurization systems if the concentrations of PCE in sub-slabvapor continue to exceed VRSL's post remediation. There will also be a need for institutional controls such as Site use restrictions and Geographic Information System registration to identify areas where conditional soil management controls must be maintained.

4.1 Soil Vapor Extraction

SVE technology will be used to remediate vadose zone soil impacts beneath and around the Site building. The primary objective of SVE is to remove contaminant mass from vadose zone soil to concentrations that no longer pose a risk of vapor intrusion to the Site building.

The following sections describe the SVE system design, operation and maintenance (O&M) activities, and performance monitoring program.

4.1.1 Permitting

Construction and operation permits apply to remediation systems that emit contaminants under WAC Chapters NR 406 and 407, respectively. The following permitting thresholds apply to remediation systems, regardless of whether or not emissions control devices are used:

- Total volatile organic compound emissions greater than 5.7 pounds per hour (lb/hr) [NR 406.04(1)(m)2]; and

- Assuming a stack height less than 25 feet, PCE emissions greater than 9.11 lb/hr or 301 pounds per year (lb/yr) [NR 407.03(1)(sm)].

The sampling data collected during the 2016 SVE pilot test indicated a CVOC mass removal rate of less than 100 lb/yr at startup. Therefore, EnviroForensics anticipates that the SVE system will be exempt from permitting requirements. However, the SVE system is designed so that carbon treatment can be easily added if necessary to reduce the concentrations of CVOCs to below the permit thresholds. It is also possible to raise the stack height above 25 feet, which increases the acceptable CVOC emission limits.

Ambient air quality criteria defined in WAC Chapter NR 445.07 also apply to remediation systems. For example, the concentration of PCE must be less than 4,069 $\mu g/m^3$ in ambient air while the SVE system is operating. The monitoring program designed to ensure compliance with all emissions and air quality standards is described in Section 4.3.

4.1.2 Infrastructure Installation

The proposed layout of the system and anticipated radius of influence is shown on **Figure 7**. The extraction well and piping construction details are depicted on **Figures 8** and **9**, respectively. Two (2) extraction wells were previously installed for pilot testing (SVE-1s and SVE-1d), as were vacuum monitoring points (VP-1 through VP-4s/d). SVE-1s will be used for extraction, along with one (1) new shallow extraction well located inside the Site building and identified as SVE-2s on **Figure 7**. SVE-1d will not initially be used as an extraction well but will be preserved for possible future use. Each extraction well is anticipated to produce an effective radius of influence of 25 feet with negative pressure equal to, or exceeding, 0.1 inches of water (inH_2O).

The new extraction well will be constructed of 4-inch diameter schedule 40 polyvinyl chloride (PVC) with 0.020-slotted screen from 3 to 5 feet bgs. The extraction well will be connected with 4-inch diameter PVC piping anchored to the inside wall of the Site building and leading to the SVE equipment enclosure located just outside the Site building along the east wall. The existing extraction well SVE-1s will be connected with 4-inch diameter PVC piping rising above ground and connected directly to a manifold affixed to the outside of the SVE equipment enclosure. This will eliminate trenching to make the connections.

4.1.3 SVE Mechanical System

Below is a summary of system equipment. A process and instrumentation diagram is included as **Figure 10**.

- Regenerative vacuum blower capable of providing up to 150 actual cubic feet per minute of air and applying vacuum up to approximately 4 inches of mercury.
    - The blower will be powered by a 5Hp 3-phase, electric motor.

- A pressure relief valve assembly shall be installed to protect the blower by automatically reducing the applied vacuum at the blower.

- Vacuum dilution valve assembly with an intake air filter installed between the moisture separator and vacuum pump to reduce the vacuum applied to the recovery well network.

- A particulate air filter installed in the process plumbing between the moisture separator and vacuum extraction pump to protect the vacuum extraction pump from suspended particles in the inlet air flow.

- A moisture separator to remove and contain (30-gallon) moisture from the air stream prior to the vacuum extraction pump.
    - A float tree assembly will be installed on the moisture separator to automatically shut down the blower after sufficient moisture accumulation.
    - Moisture will likely contain contaminants, so any liquid collected will be analyzed by a Wisconsin Certified Analytical Laboratory and managed according to State regulations.

- The remediation system controls shall include the following.
    - A 24 hour timer
    - Low vacuum switch

- The remediation system instrumentation shall include the following.
    - A differential pressure gauge for calculating airflow (inH_2O)
    - Vacuum gauges at each extraction leg on the manifold (inH_2O)
    - Vacuum gauge at the blower (inH_2O)
    - Temperate gauge on the SVE exhaust (°F)

- System Telemetry will be utilized to monitor system operating conditions and receive alerts.

- Air Permitting
    - Data collected during the SVE pilot study indicated an air permit will not be required.
    - A table depicting the estimated mass removal was provided with the Pilot Study Report.
    - The estimates provided above are conservatively estimated and represent worst-case scenarios. Mass emissions data collected following system startup will be evaluated to confirm air permitting requirements.

- Electrical Service
    - Power will be supplied to the system through a stand-alone power supply from the local power company.
        - The anticipated power supply is 3 phase, 4-wire, 240 volt service.
    - A licensed electrician will perform the work necessary to prepare the Site to receive a power drop from the local power company.
    - Upon installation, the electrical service will be inspected by the City of Wauwatosa and the local power provider, as required.

- The system equipment will be mounted within an enclosed insulated skid to be located between the northeast corner of the building and SVE-1s.

- SVE Plumbing Connections
    - The conveyance piping will be plumbed to a manifold outside the remediation unit and the manifold will be connected to the vacuum pump.
    - Each branch from the SVE manifold will be equipped with a vacuum gauge and valve to control air-flow from each extraction well.

- Commissioning and Initial Startup
    - Once the remediation units have been delivered, all plumbing connections have been made, and electrical service has been established, the system will be started.
    - The objectives of the startup and optimization phase will be to:
        - confirm the systems have been constructed as designed;
        - confirm the equipment operates as specified; and
        - collect and evaluate initial operating data.

4.2 SVE System O&M

For costing purposes, the SVE system is anticipated to operate for a period of one (1) year. The SVE system will be operated continuously for the first two (2) months of operation to satisfy air emissions monitoring requirements and to determine sustained mass removal rates. After the first two (2) months, the system may be operated intermittently allowing vapors to accumulate within the subsurface during the period of inactivity. The intermittent operation may be two (2) weeks on, followed by two (2) weeks off. Operating in this fashion will conserve power costs. After the first year of operation, the need for continued operation will be evaluated. The SVE system will be shut off for at least 30 days to allow the subsurface to reach equilibrium and sub-slab vapor samples will be collected to determine the concentrations of residual impacts. If additional remediation is warranted, a change order will be issued to cover the anticipated duration of system operation.

Routine and periodic O&M of the SVE system will be required. O&M activities will include the following:

- Address system shutdowns or operational issues;
- Record operational parameters and vapor concentrations to evaluate efficiency:
    - Effluent CVOC vapor concentration by sample collection in vacuum canisters;
    - Total system run time;
    - System vacuum;
    - Vacuum at each wellhead;
    - Vacuum at monitoring points;
    - Flow rate; and
    - Exhaust temperature.
- Inspect, maintain, and/or repair the following components as needed and recommended by the manufacturers:
    - Blower belts and pulleys;
    - Blower inlet filter;
    - Blower motor bearings and oil level;
    - System enclosure exhaust fan;
    - Moisture separator tank and float switches;
    - Vacuum bypass valve;
    - Moisture separator dilution valve;
    - Exhaust muffler; and

- Electrical power phase converter.

EnviroForensics will prepare and submit an O&M Plan to WDNR in accordance with Wisconsin Administrative Code (WAC) Chapter NR 724.13 after the system has been installed.

4.3 SVE Performance Monitoring

The effectiveness of the SVE system will be evaluated periodically by monitoring the subsurface vacuum influence and air emissions of total CVOCs. These activities are summarized below.

Samples of the SVE system emissions will be collected from the effluent piping and analyzed for CVOCs to calculate mass removal rates and cumulative mass removed and to determine operational changes to optimize system performance. Testing is also required to determine whether emissions treatment is required to stay below permitting thresholds. The emissions testing schedule required under WAC Chapter 419.07 is as follows:

- Once each day for the first three (3) days of operation;
- Weekly for the next three (3) weeks; and
- Monthly thereafter.

The effluent samples will be collected in 1-liter vacuum canisters at a rate of 200 milliliters per minute and submitted to a laboratory for analysis for PCE and related compounds. The first two samples, collected on days 1 and 2 of operation, will be analyzed on a rush timeframe to avoid delays in meeting the emissions thresholds.

An annual outdoor air sample is required to evaluate ambient air quality and the need for emissions treatment to meet the ambient air standard. The sample will be collected from a location downwind of the exhaust stack at the time of sampling. The ambient air sample will be collected following the first day of continuous system operation. This is likely the worst case scenario since subsurface vapor concentrations collected by the SVE system will be reduced over time. One (1) 24-hour sample will be collected over a 24-hour period using a 6-liter vacuum canister and shipped to a laboratory for analysis of total CVOCs.

During Site visits to collect effluent air samples, vacuum will be measured in the existing vapor monitoring points using a manometer. Existing vapor monitoring points are depicted on **Figures 5 and 7**. Two additional permanent sub-slab vapor monitoring points will be installed within the

Site building as indicated on **Figure 7** to measure the negative pressure field extension beneath the building slab.

4.4 Confirmation Sampling

Once performance monitoring data indicates a significantly diminished mass removal rate, or after one (1) year of operation, the SVE system will be shut down and sub-slab samples will be collected at the Site building to confirm the effectiveness of the SVE remedy. Two (2) sub-slab vapor samples will be collected from the Site building and analyzed for the dry cleaner list of CVOCs according to EPA Method TO-15.

EnviroForensics will then provide recommendations for system shutdown or a proposed timeframe for continued operation, maintenance, and monitoring.

4.5 Proposed Implementation Schedule

The SVE system will need to be custom built for this application, and that process is anticipated to take 60 days upon WDNR approval of this design report. Installation of the extraction wells and conveyance piping can be completed within a few days of upon delivery of the SVE system to the Site. The timing of system startup will depend on the availability of electrical service; however, it is anticipated that startup will occur within 90 days of WDNR approval of this design report. Construction documentation will be submitted within 60 days after the remedial system construction is completed. Operation and monitoring reports will be submitted on a semi-annual basis, as required.

5.0 COST ESTIMATES

Costs are based on an initial estimated SVE system operating life of one (1) year. WDNR Form 4400-214D has been completed to allow budget tracking of this work and is included in **Appendix A**. Subcontracted services including construction, SVE system fabrication, laboratory expenses, drilling expenses, and utility service charges are actual charges with no markup. The costs are subdivided into these main work categories:

- SVE system engineering design, specifications, and cost estimating;
  The cost to construct and provide the SVE system. The equipment installation would be considered a long-term lease and EnviroForensics would retain ownership of the SVE system at the end of the project;
- Costs to install SVE system infrastructure such as SVE extraction wells, connective piping, electrical connections, telemetry and make connections to the SVE mechanical system;
- Anticipated costs for electrical usage for one (1) year;
- Initial startup and preparation of O&M Plan;
- Exhaust sampling and SVE system O&M for one (1) year;
- Data analysis and bi-annual performance reporting (2 remedial progress reports);
- Year-end sub-slab vapor confirmation sampling; and
- Project coordination and management during design engineering, system installation, and carrying through one year of system operation, maintenance, and reporting.

The SVE system costs including design, installation, O&M, monitoring, and reporting through one (1) year of operation are summarized below. Detailed cost breakdown sheets showing special DERF rates are provided in **Appendix B**.

Engineered Plans and Specifications

This work effort has been performed and includes the production of design specifications included in this document, and documents utilized to obtain reasonable cost estimates for planning purposes. The work performed includes SVE system modifications to the original design per request of the WDNR to reduce SVE construction and operational costs where feasible. Costs also include preparation of a work scoping section for additional investigations to determine if impacts have spread to an adjacent off-site property to the east.

Cost to Prepare the Initial Remediation Plan and Design Documents: $19,591.00

Cost for Remedial Design Revisions and Investigative Work Plan: $13,936.00

Additional Site Investigations: $4,171.90

SVE System Modifications and Infrastructure Installation

- ✓ SVE system fabrication and Long-term Lease: $20,000.00
- ✓ Consultant Oversight, O&M Plan, and System Connections Cost: $14,878.20
- ✓ Contractor to Install Connections and SVE Extraction Well: $3,000.00
- ✓ Private Utility Locate: $450.00
- ✓ Electrical Service Connections: $8,000.00

Subtotal Cost: $46,328.20

SVE System O&M (one year)

Includes Site visits to collect system vapor effluent samples, measure negative pressures within the sub-surface and perform routine maintenance such as belt tightening or replacement, filter replacements, system adjustments, and possible testing and batch disposal of condensate. Additional Site visits have been planned to address unexpected system malfunctions. Labor also includes professional services to diagnose and correct system for optimal performance.

- ✓ Consultant Labor: $14,080.00
- ✓ Electrical Service and Telemetry Costs: $8,400.00
- ✓ Air Sampling Laboratory Costs: $1,810.00
- ✓ Consultant Miscellaneous Direct Costs: $3,955.80

Subtotal Cost: $28,245.80

Data Analysis and Bi-annual Performance Reporting

Work effort includes assembling of field data collected, analysis of system performance over time, production of bi-annual performance reports, and production of off-site results reports for sampling performed on adjacent commercial property to the south.

Consultant Cost: $9,157.30

Year End Confirmation Sampling

Work effort includes collection of sub-slab soil vapor samples to assess concentrations of residual contaminants after one (1) year of SVE system operation, evaluation of data, and recommendations for future Site remedial needs with associated cost estimates. Recommendations could include either further Site remedial efforts, or preparation of closure documentation and any required continued obligations.

✓ Consultant Labor and Direct Cost:		$3,334.00
✓ Laboratory Cost:		$270.00
	Subtotal Cost	$3,604.00

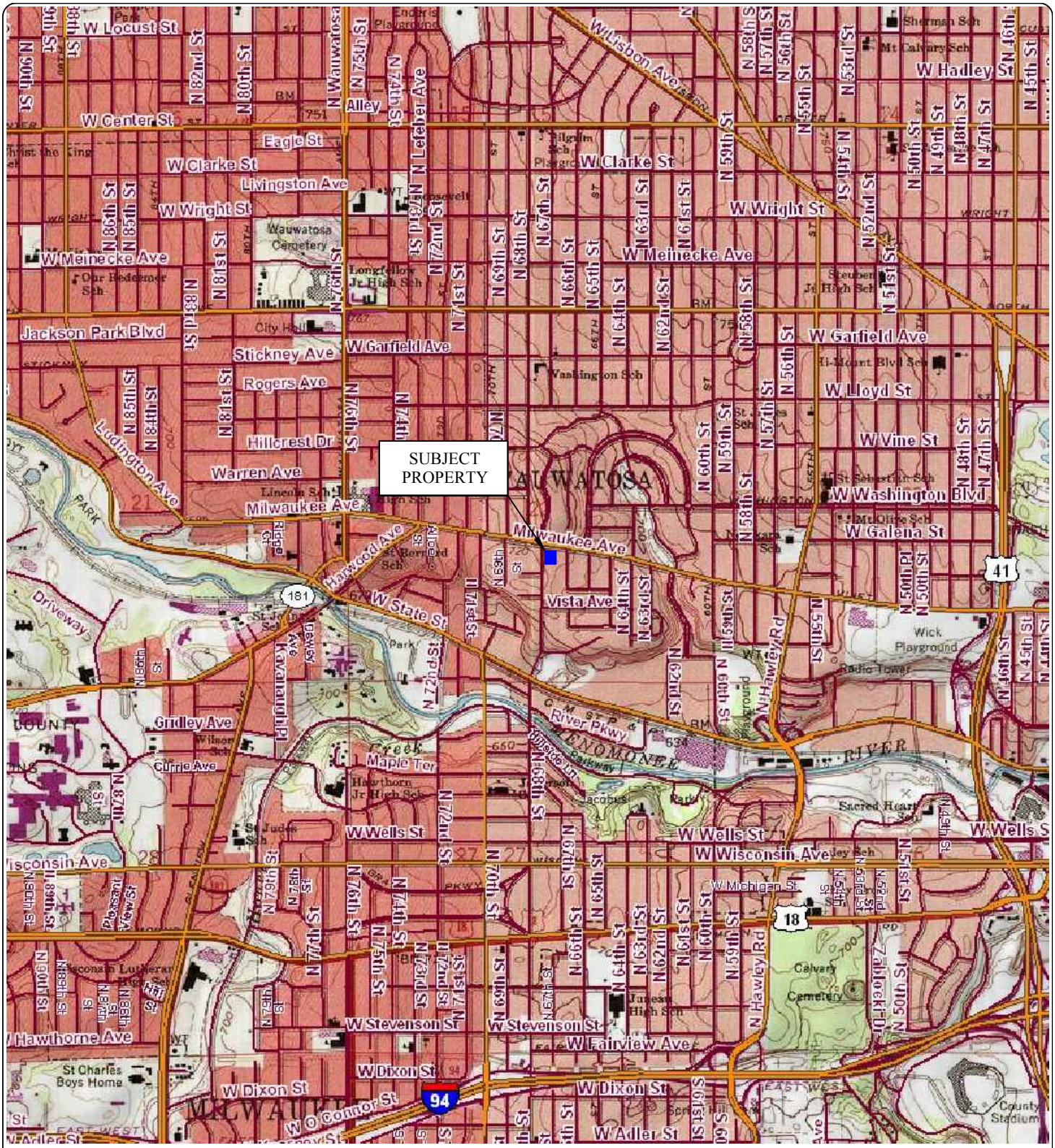
Project Management

Project management includes time needed to manage the progress of Site work, schedule resources, manage budgets, communicate with project stakeholders, and address miscellaneous project issues as they arise. This cost begins with the initial design work and is projected through one year of system operation, maintenance and reporting.

	Consultant Cost	$9,696.80

The total estimated project cost is: **$134,731.00**

FIGURES



Scale 1:24,000

1 1/2 0 1 Mile

1000 0 1000 2000 3000 4000 5000 6000 7000 Feet

1 .5 0 1 Kilometer

N

Source: US Geological Survey, Milwaukee, Wisconsin Quadrangle, 2007

No.	Date	Revision	Approved

ENVIRO forensics
ENVIRONMENTAL FORENSIC INVESTIGATIONS, INC.
602 N. Capitol Ave., Ste 210 • Indianapolis, IN 46204
EnviroForensics.com

Date:	8/9/13
Designed:	MMM
Drawn:	MMM
Checked:	BK
DWG file:	66372-11

SITE LOCATION MAP

One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Figure
1
Project
6140

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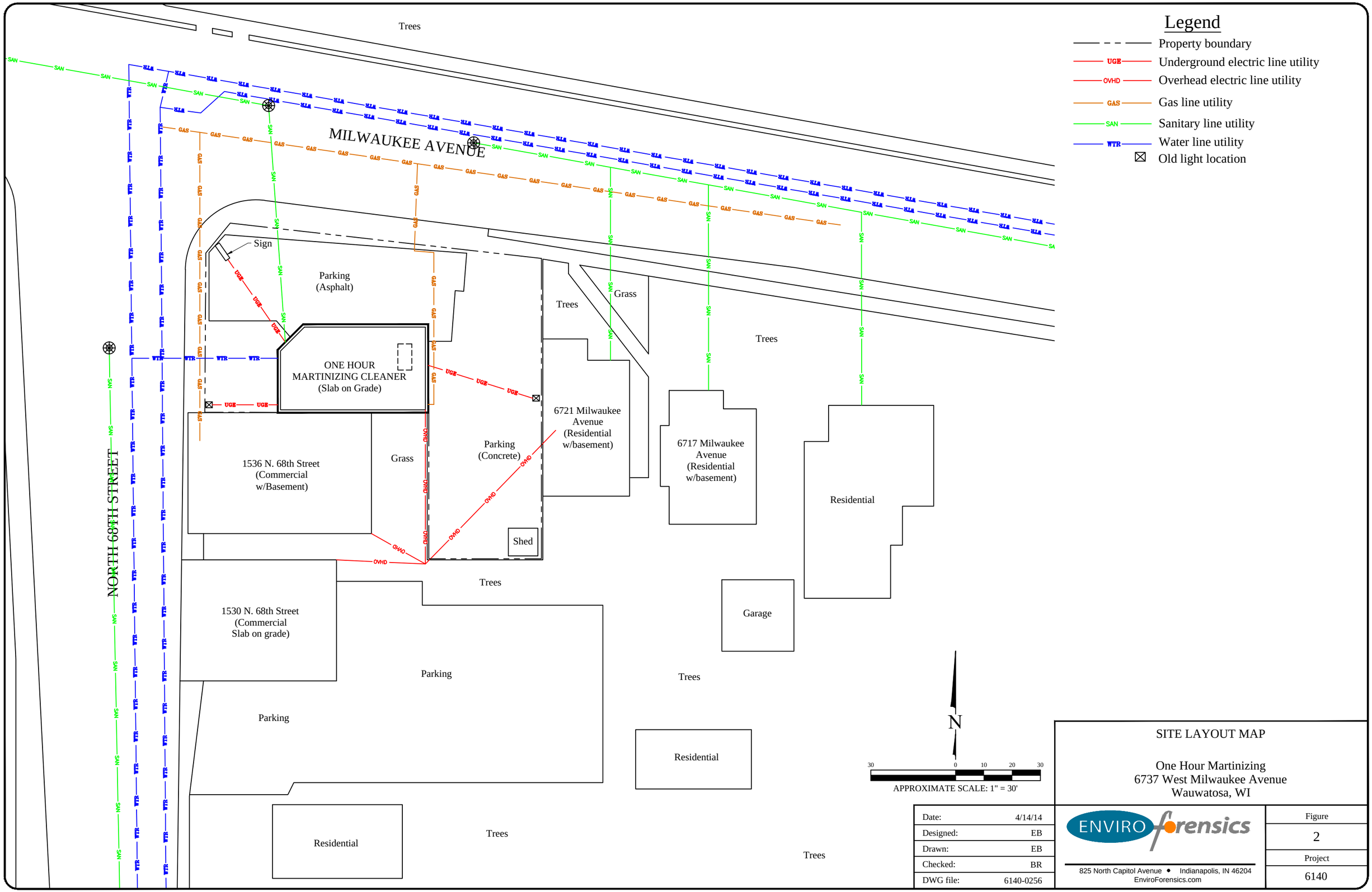
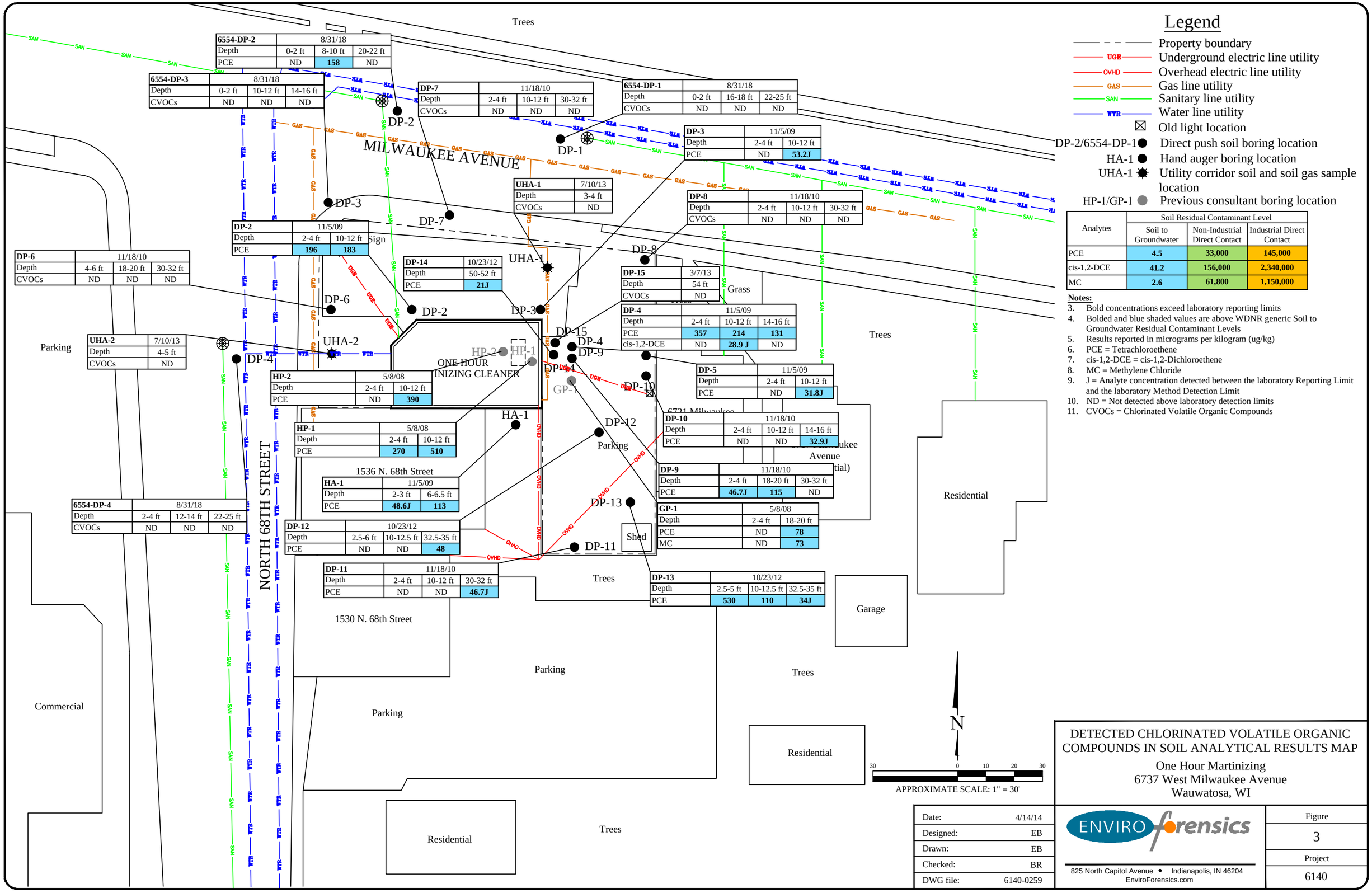

Legend
Property boundary
UGE Underground electric line utility
OVHD Overhead electric line utility
GAS Gas line utility
SAN Sanitary line utility
WTR Water line utility
Old light location
MILWAUKEE AVENUE
NORTH 68TH STREET
Trees
Sign
Parking
(Asphalt)
ONE HOUR
MARTINIZING CLEANER
(Slab on Grade)
Grass
Trees
Trees
6721 Milwaukee
Avenue
(Residential
w/basement)
6717 Milwaukee
Avenue
(Residential
w/basement)
Residential
1536 N. 68th Street
(Commercial
w/Basement)
Grass
Parking
(Concrete)
Shed
Trees
1530 N. 68th Street
(Commercial
Slab on grade)
Garage
Parking
Trees
Parking
Residential
Residential
Trees
Trees
N
30 0 10 20 30
APPROXIMATE SCALE: 1" = 30'
SITE LAYOUT MAP
One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI
Date: 4/14/14
Designed: EB
Drawn: EB
Checked: BR
DWG file: 6140-0256
ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com
Figure
2
Project
6140



6554-DP-2	8/31/18		
Depth	0-2 ft	8-10 ft	20-22 ft
PCE	ND	**158**	ND

6554-DP-3	8/31/18		
Depth	0-2 ft	10-12 ft	14-16 ft
CVOCs	ND	ND	ND

DP-7	11/18/10		
Depth	2-4 ft	10-12 ft	30-32 ft
CVOCs	ND	ND	ND

6554-DP-1	8/31/18		
Depth	0-2 ft	16-18 ft	22-25 ft
CVOCs	ND	ND	ND

DP-3	11/5/09	
Depth	2-4 ft	10-12 ft
PCE	ND	**53.2J**

UHA-1	7/10/13
Depth	3-4 ft
CVOCs	ND

DP-8	11/18/10		
Depth	2-4 ft	10-12 ft	30-32 ft
CVOCs	ND	ND	ND

DP-2	11/5/09	
Depth	2-4 ft	10-12 ft
PCE	**196**	**183**

DP-14	10/23/12
Depth	50-52 ft
PCE	**21J**

DP-15	3/7/13
Depth	54 ft
CVOCs	ND

DP-6	11/18/10		
Depth	4-6 ft	18-20 ft	30-32 ft
CVOCs	ND	ND	ND

DP-4	11/5/09		
Depth	2-4 ft	10-12 ft	14-16 ft
PCE	**357**	**214**	**131**
cis-1,2-DCE	ND	**28.9 J**	ND

UHA-2	7/10/13
Depth	4-5 ft
CVOCs	ND

DP-5	11/5/09	
Depth	2-4 ft	10-12 ft
PCE	ND	**31.8J**

HP-2	5/8/08	
Depth	2-4 ft	10-12 ft
PCE	ND	**390**

DP-10	11/18/10		
Depth	2-4 ft	10-12 ft	14-16 ft
PCE	ND	ND	**32.9J**

HP-1	5/8/08	
Depth	2-4 ft	10-12 ft
PCE	**270**	**510**

DP-9	11/18/10		
Depth	2-4 ft	18-20 ft	30-32 ft
PCE	**46.7J**	**115**	ND

HA-1	11/5/09	
Depth	2-3 ft	6-6.5 ft
PCE	**48.6J**	**113**

GP-1	5/8/08	
Depth	2-4 ft	18-20 ft
PCE	ND	**78**
MC	ND	**73**

DP-12	10/23/12		
Depth	2.5-6 ft	10-12.5 ft	32.5-35 ft
PCE	ND	ND	**48**

6554-DP-4	8/31/18		
Depth	2-4 ft	12-14 ft	22-25 ft
CVOCs	ND	ND	ND

DP-11	11/18/10		
Depth	2-4 ft	10-12 ft	30-32 ft
PCE	ND	ND	**46.7J**

DP-13	10/23/12		
Depth	2.5-5 ft	10-12.5 ft	32.5-35 ft
PCE	**530**	**110**	**34J**

Legend

- Property boundary
- UGE — Underground electric line utility
- OVHD — Overhead electric line utility
- GAS — Gas line utility
- SAN — Sanitary line utility
- WTR — Water line utility
- Old light location
- DP-2/6554-DP-1 — Direct push soil boring location
- HA-1 — Hand auger boring location
- UHA-1 — Utility corridor soil and soil gas sample location
- HP-1/GP-1 — Previous consultant boring location

Analytes	Soil Residual Contaminant Level		
	Soil to Groundwater	Non-Industrial Direct Contact	Industrial Direct Contact
PCE	**4.5**	**33,000**	**145,000**
cis-1,2-DCE	**41.2**	**156,000**	**2,340,000**
MC	**2.6**	**61,800**	**1,150,000**

Notes:

3. Bold concentrations exceed laboratory reporting limits
4. Bolded and blue shaded values are above WDNR generic Soil to Groundwater Residual Contaminant Levels
5. Results reported in micrograms per kilogram (ug/kg)
6. PCE = Tetrachloroethene
7. cis-1,2-DCE = cis-1,2-Dichloroethene
8. MC = Methylene Chloride
9. J = Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit
10. ND = Not detected above laboratory detection limits
11. CVOCs = Chlorinated Volatile Organic Compounds

DETECTED CHLORINATED VOLATILE ORGANIC COMPOUNDS IN SOIL ANALYTICAL RESULTS MAP

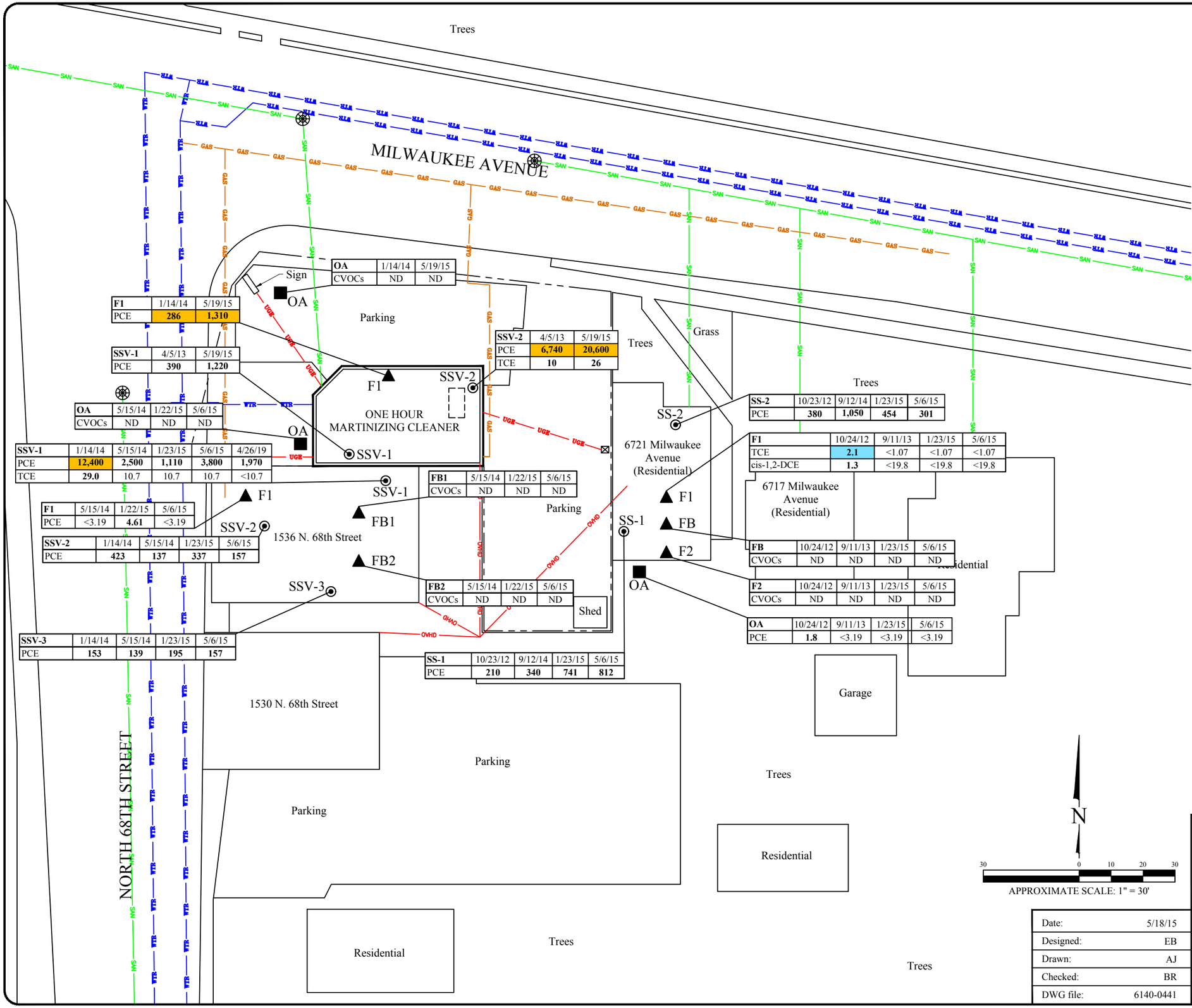
One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Date:	4/14/14
Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6140-0259

ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 3

Project 6140



OA	1/14/14	5/19/15
CVOCs	ND	ND

F1	1/14/14	5/19/15
PCE	**286**	**1,310**

SSV-2	4/5/13	5/19/15
PCE	**6,740**	**20,600**
TCE	**10**	**26**

SSV-1	4/5/13	5/19/15
PCE	**390**	**1,220**

OA	5/15/14	1/22/15	5/6/15
CVOCs	ND	ND	ND

SSV-1	1/14/14	5/15/14	1/23/15	5/6/15	4/26/19
PCE	**12,400**	**2,500**	**1,110**	**3,800**	**1,970**
TCE	**29.0**	10.7	10.7	10.7	<10.7

FB1	5/15/14	1/22/15	5/6/15
CVOCs	ND	ND	ND

F1	5/15/14	1/22/15	5/6/15
PCE	<3.19	**4.61**	<3.19

SSV-2	1/14/14	5/15/14	1/23/15	5/6/15
PCE	**423**	**137**	**337**	**157**

FB2	5/15/14	1/22/15	5/6/15
CVOCs	ND	ND	ND

SSV-3	1/14/14	5/15/14	1/23/15	5/6/15
PCE	**153**	**139**	**195**	**157**

SS-1	10/23/12	9/12/14	1/23/15	5/6/15
PCE	**210**	**340**	**741**	**812**

SS-2	10/23/12	9/12/14	1/23/15	5/6/15
PCE	**380**	**1,050**	**454**	**301**

F1	10/24/12	9/11/13	1/23/15	5/6/15
TCE	**2.1**	<1.07	<1.07	<1.07
cis-1,2-DCE	**1.3**	<19.8	<19.8	<19.8

FB	10/24/12	9/11/13	1/23/15	5/6/15
CVOCs	ND	ND	ND	ND

F2	10/24/12	9/11/13	1/23/15	5/6/15
CVOCs	ND	ND	ND	ND

OA	10/24/12	9/11/13	1/23/15	5/6/15
PCE	**1.8**	<3.19	<3.19	<3.19

Legend

- Property boundary
- UGE — Underground electric line utility
- OVHD — Overhead electric line utility
- GAS — Gas line utility
- SAN — Sanitary line utility
- WTR — Water line utility
- ☒ Old light location
- SSV-1/SS-1 ⊙ Sub-slab vapor point location
- OA ■ Outdoor air sample
- ▲ Indoor air sample
  (FB = Collected from basement
  F1 = Collected from first floor
  F2 = Collected from second floor)

Sub-Slab Vapor		
Analyte	Small Commercial Vapor Vapor Action Level	Residential Vapor Risk Screening Level
PCE	**6,000**	**1,400**
TCE	**290**	**70**
cis-1,2-DCE	NL	NL

Note:
1. Bolded and shaded values exceed the Vapor Risk Screening Level
2. Bold values equal or exceed laboratory detection limits.
3. All results reported in micrograms per cubic meter (ug/m^3)
4. Vapor risk screening levels calculated in accordance with WDNR Publication RR-800
5. PCE = Tetrachloroethene
6. TCE = Trichloroethene
7. cis-1,2-DCE = cis-1,2,-Dichloroethene
8. CVOCs = Chlorinated Volatile Organic Compounds
9. ND = Not detected above laboratory detection limits

Indoor Air		
Analyte	Small Commercial Vapor Vapor Action Level	Residential Vapor Action Level
PCE	**180**	**42**
TCE	**8.8**	**2.1**
cis-1,2-DCE	NL	NL

Note:
1. Bold and shaded values exceed the Vapor Action level.
2. Bold values equal or exceed laboratory detection limits.
3. All esults reported in micrograms per cubic meter (ug/m^3)
4. Vapor Action Levels calculated in accordance with WDNR Publicaton RR-800
5. PCE = Tetrachloroethene
6. TCE = Trichloroethene
7. cis-1,2-DCE = cis-1,2,-Dichloroethene
8. CVOCs = Chlorinated Volatile Organic Compounds
9. ND = Not detected above laboratory detection limits

DETECTED CHLORINATED VOLATILE ORGANIC COMPOUNDS IN SUB-SLAB VAPOR AND INDOOR AIR

One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Date:	5/18/15
Designed:	EB
Drawn:	AJ
Checked:	BR
DWG file:	6140-0441

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825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 4

Project 6140

Legend

- Property boundary
- Underground electric line utility (UGE)
- Overhead electric line utility (OVHD)
- Gas line utility (GAS)
- Sanitary line utility (SAN)
- Water line utility (WTR)
- Old light location
- SG-1 ● Soil gas sample point location
- UHA-1 ✹ Utility soil gas sample location

Analytes	Vapor Risk Screening Levels (Soil Gas)		Vapor Risk Screening Levels (Utility Soil Gas)
	Residential	Small Commercial	Small Commercial
PCE	**1,400**	**6,000**	**18,000**
TCE	**70**	**290**	**880**

Notes:

1. Bolded and shaded blue values are above the residential vapor risk screening level for shallow soil gas
2. Units in micrograms per cubic meter = ug/m^3
3. NE = Not Established
4. PCE = Tetachloroethene
5. TCE = Trichloroethene
6. CVOCs = Chlorinated Volatile Organic Compounds
7. ND = Not Detected

MILWAUKEE AVENUE

NORTH 68TH STREET

6554-SG-2	8/31/19
PCE	**3,720**
TCE	**91.4**

6554-SG-3	8/31/19
CVOCs	ND

UHA-1	7/10/13
PCE	**120**

SG-3	11/19/10
PCE	**180**

UHA-2	7/10/13
PCE	**110**

SG-1	11/19/10
PCE	**390**

6554-SG-1	8/31/19
PCE	**404**
TCE	**34.9**

SG-7s	2/6/15	4/16/15
PCE	<31.9	**625**

SG-7d	2/6/15	4/16/15
PCE	**2,130**	**1,480**
TCE	**19.3**	<10.7

SG-4s	2/6/15	4/16/15
PCE	**468**	**241**

SG-4d	2/6/15	4/16/15
PCE	**1,870**	**1,180**

SG-2	11/19/10
PCE	**160**

SG-4	11/19/10
PCE	**1,500**

SG-5s	2/6/15	4/16/15
PCE	**1,240**	**321**

SG-5d	2/6/15	4/16/15
PCE	**686**	**468**

SG-6s	2/6/15	4/16/15
PCE	**475**	**334**
TCE	<10.7	**11.8**

SG-6d	2/6/15	4/16/15
PCE	**4,710**	**334**

Trees
Sign
Parking
UHA-1
UHA-2
6554-SG-1
6554-SG-2
6554-SG-3
ONE HOUR MARTINIZING CLEANER
SG-1
SG-2
SG-3
SG-4
SG-4s
SG-4d
SG-5s
SG-5d
SG-6s
SG-6d
SG-7s
SG7d
Grass
Trees
6721 Milwaukee Avenue (Residential)
6717 Milwaukee Avenue (Residential)
Residential
Shed
Garage
1536 N. 68th Street
1530 N. 68th Street
Parking
Parking
Parking
Trees
Trees
Residential
Trees

N

30 0 10 20 30

APPROXIMATE SCALE: 1" = 30'

DETECTED CHLORINATED VOLATILE ORGANIC COMPOUNDS IN SOIL GAS ANALYTICAL RESULTS MAP

One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Date:	12/4/15
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6140-0490

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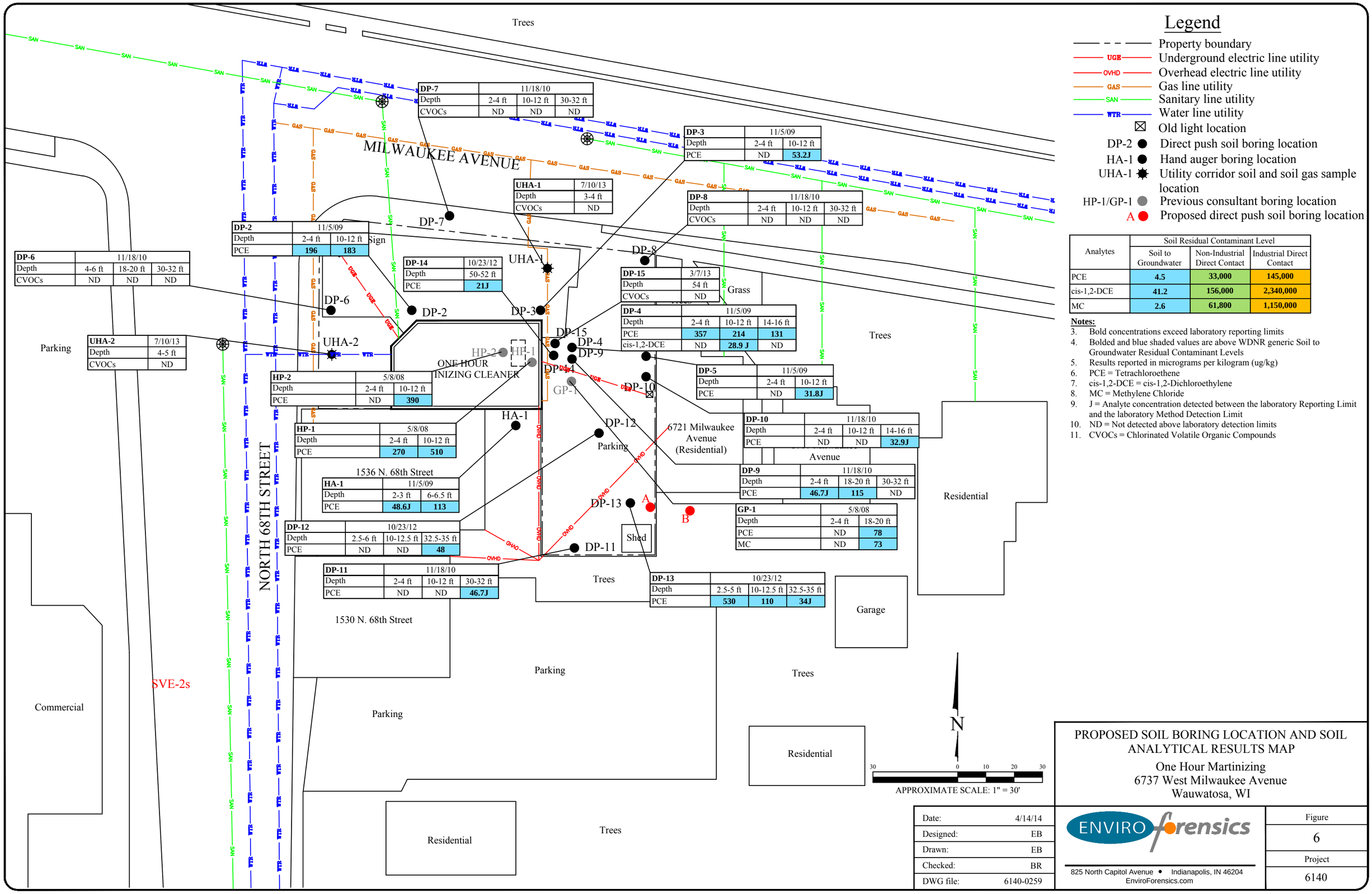
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 5

Project 6140



DP-7	11/18/10		
Depth	2-4 ft	10-12 ft	30-32 ft
CVOCs	ND	ND	ND

DP-3	11/5/09	
Depth	2-4 ft	10-12 ft
PCE	ND	**53.2J**

UHA-1	7/10/13
Depth	3-4 ft
CVOCs	ND

DP-8	11/18/10		
Depth	2-4 ft	10-12 ft	30-32 ft
CVOCs	ND	ND	ND

DP-2	11/5/09	
Depth	2-4 ft	10-12 ft
PCE	**196**	**183**

DP-14	10/23/12	
Depth	50-52 ft	
PCE	**21J**	

DP-6	11/18/10		
Depth	4-6 ft	18-20 ft	30-32 ft
CVOCs	ND	ND	ND

DP-15	3/7/13
Depth	54 ft
CVOCs	ND

DP-4	11/5/09		
Depth	2-4 ft	10-12 ft	14-16 ft
PCE	**357**	**214**	**131**
cis-1,2-DCE	ND	**28.9 J**	ND

UHA-2	7/10/13
Depth	4-5 ft
CVOCs	ND

HP-2	5/8/08	
Depth	2-4 ft	10-12 ft
PCE	ND	**390**

DP-5	11/5/09	
Depth	2-4 ft	10-12 ft
PCE	ND	**31.8J**

DP-10	11/18/10		
Depth	2-4 ft	10-12 ft	14-16 ft
PCE	ND	ND	**32.9J**

HP-1	5/8/08	
Depth	2-4 ft	10-12 ft
PCE	**270**	**510**

DP-9	11/18/10		
Depth	2-4 ft	18-20 ft	30-32 ft
PCE	**46.7J**	**115**	ND

HA-1	11/5/09	
Depth	2-3 ft	6-6.5 ft
PCE	**48.6J**	**113**

GP-1	5/8/08	
Depth	2-4 ft	18-20 ft
PCE	ND	**78**
MC	ND	**73**

DP-12	10/23/12		
Depth	2.5-6 ft	10-12.5 ft	32.5-35 ft
PCE	ND	ND	**48**

DP-11	11/18/10		
Depth	2-4 ft	10-12 ft	30-32 ft
PCE	ND	ND	**46.7J**

DP-13	10/23/12		
Depth	2.5-5 ft	10-12.5 ft	32.5-35 ft
PCE	**530**	**110**	**34J**

Legend

- Property boundary
- UGE — Underground electric line utility
- OVHD — Overhead electric line utility
- GAS — Gas line utility
- SAN — Sanitary line utility
- WTR — Water line utility
- Old light location
- DP-2 — Direct push soil boring location
- HA-1 — Hand auger boring location
- UHA-1 — Utility corridor soil and soil gas sample location
- HP-1/GP-1 — Previous consultant boring location
- A — Proposed direct push soil boring location

Analytes	Soil Residual Contaminant Level		
	Soil to Groundwater	Non-Industrial Direct Contact	Industrial Direct Contact
PCE	**4.5**	**33,000**	**145,000**
cis-1,2-DCE	**41.2**	**156,000**	**2,340,000**
MC	**2.6**	**61,800**	**1,150,000**

Notes:

3. Bold concentrations exceed laboratory reporting limits
4. Bolded and blue shaded values are above WDNR generic Soil to Groundwater Residual Contaminant Levels
5. Results reported in micrograms per kilogram (ug/kg)
6. PCE = Tetrachloroethene
7. cis-1,2-DCE = cis-1,2-Dichloroethylene
8. MC = Methylene Chloride
9. J = Analyte concentration detected between the laboratory Reporting Limit and the laboratory Method Detection Limit
10. ND = Not detected above laboratory detection limits
11. CVOCs = Chlorinated Volatile Organic Compounds

PROPOSED SOIL BORING LOCATION AND SOIL ANALYTICAL RESULTS MAP

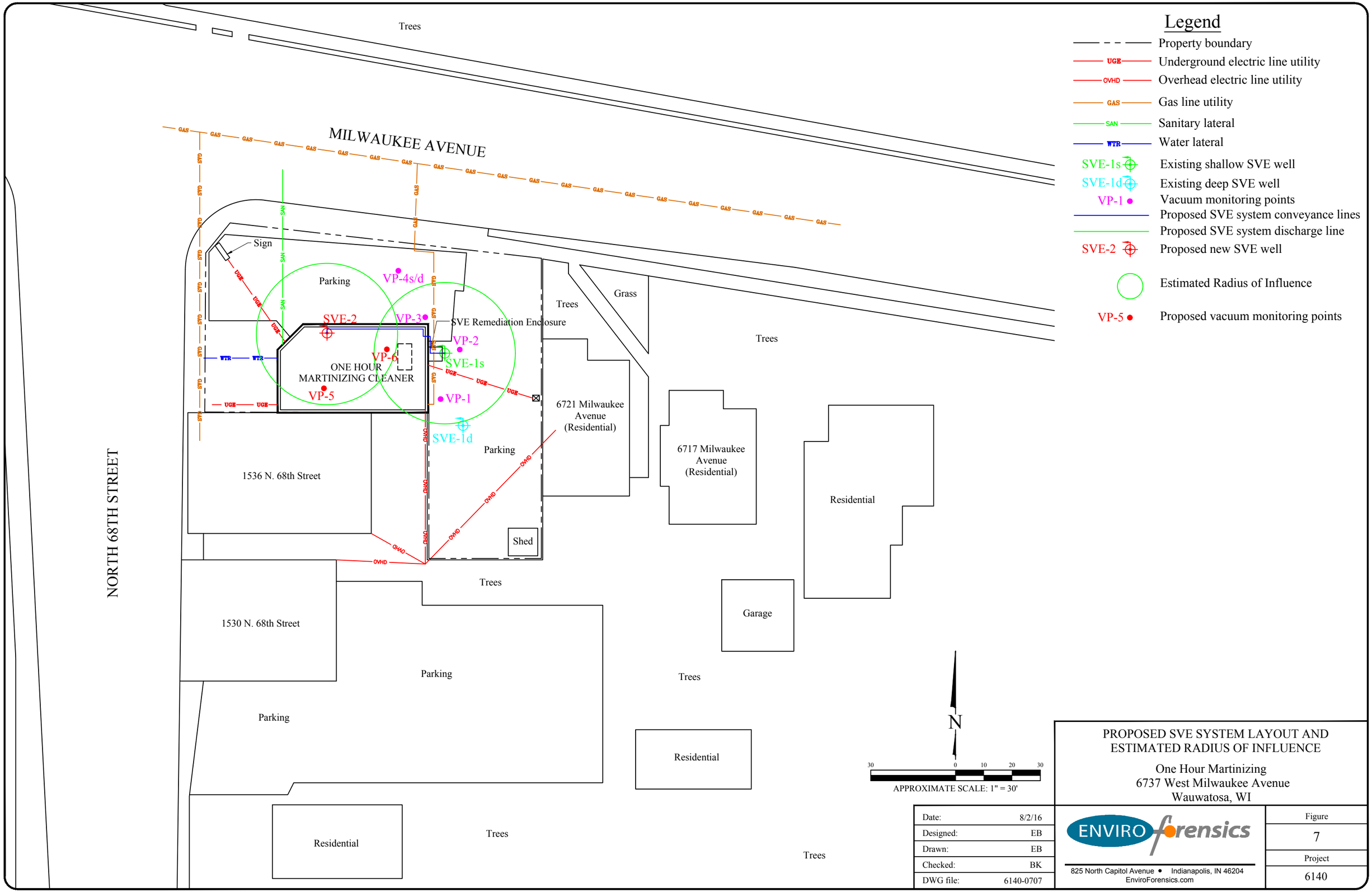
One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Date:	4/14/14
Designed:	EB
Drawn:	EB
Checked:	BR
DWG file:	6140-0259

ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 6

Project 6140



PROPOSED SVE SYSTEM LAYOUT AND
ESTIMATED RADIUS OF INFLUENCE

One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Date:	8/2/16
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6140-0707

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825 North Capitol Avenue • Indianapolis, IN 46204
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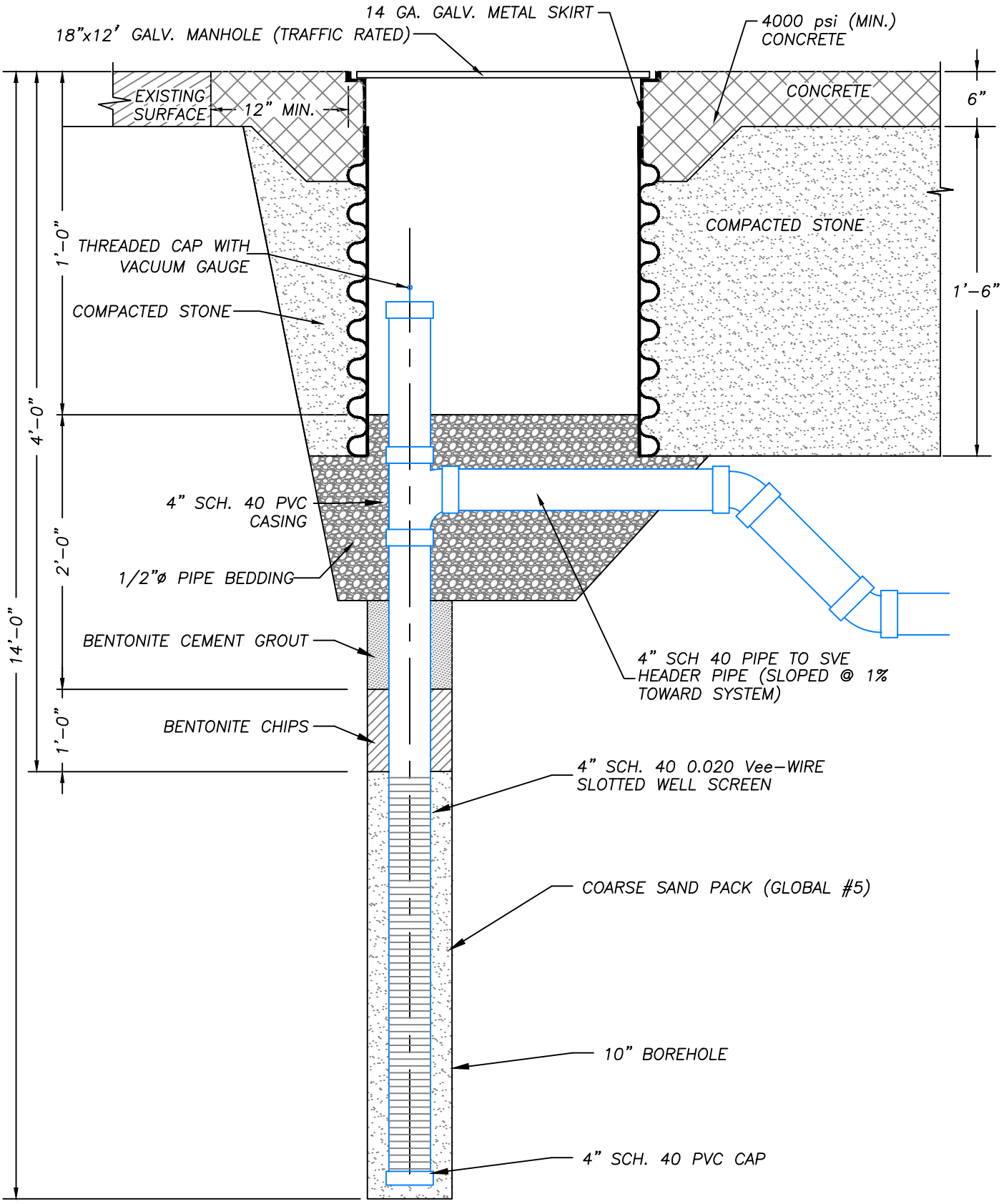
Figure
7
Project
6140



No.	Date	Revision	Approved

ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Date:	8/28/18
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6140-0711

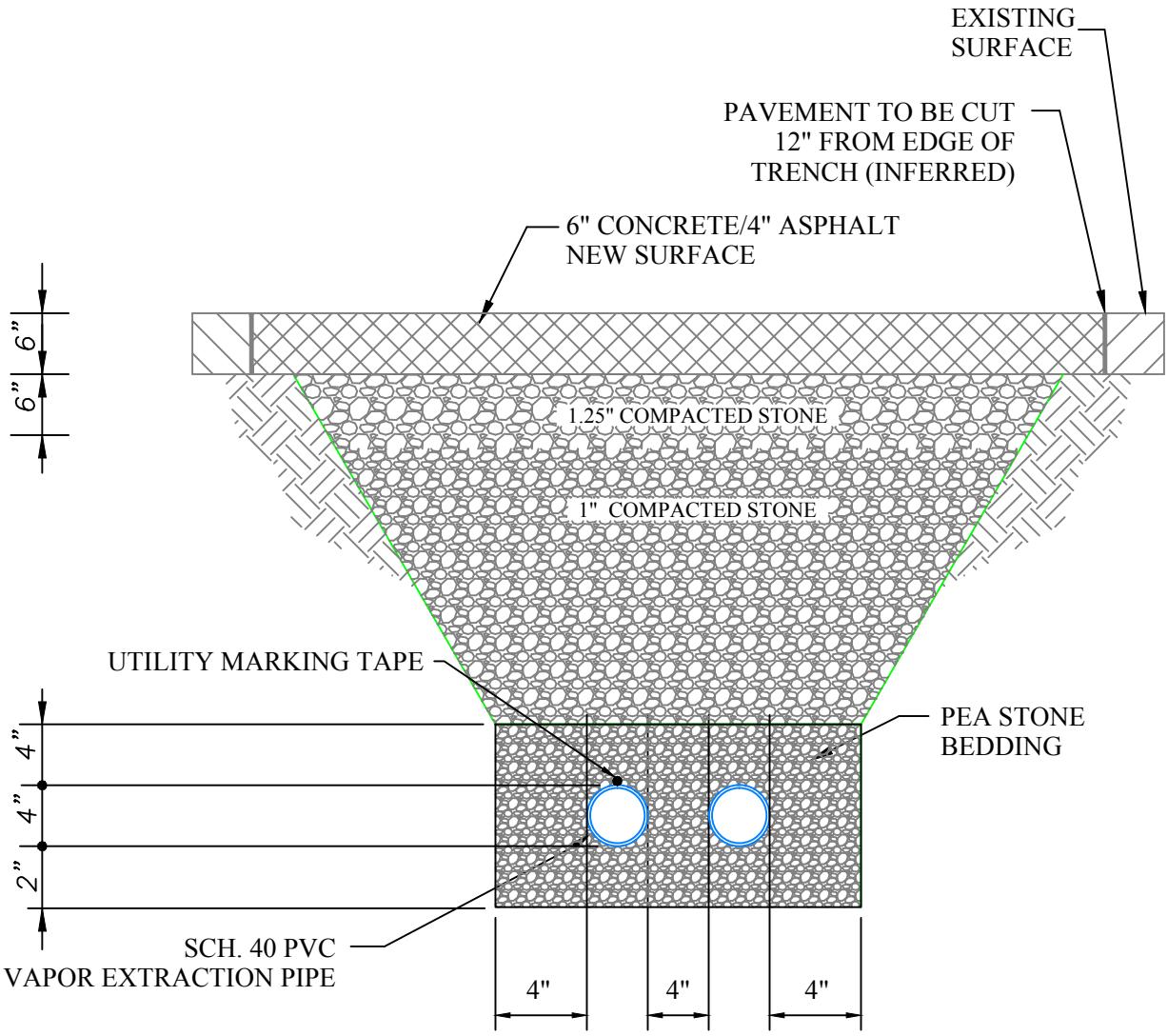
SVE EXTERIOR WELLHEAD CONNECTION DIAGRAM

One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Figure 8

Project 6140

IN PAVED AREA



NOTES:

- TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKERS AND PROTECTION OF OTHER UTILITIES PER OSHA REGULATIONS.
- DISPOSE OF EXCAVATED MATERIAL PER STATE AND FEDERAL REGULATIONS.

No.	Date	Revision	Approved

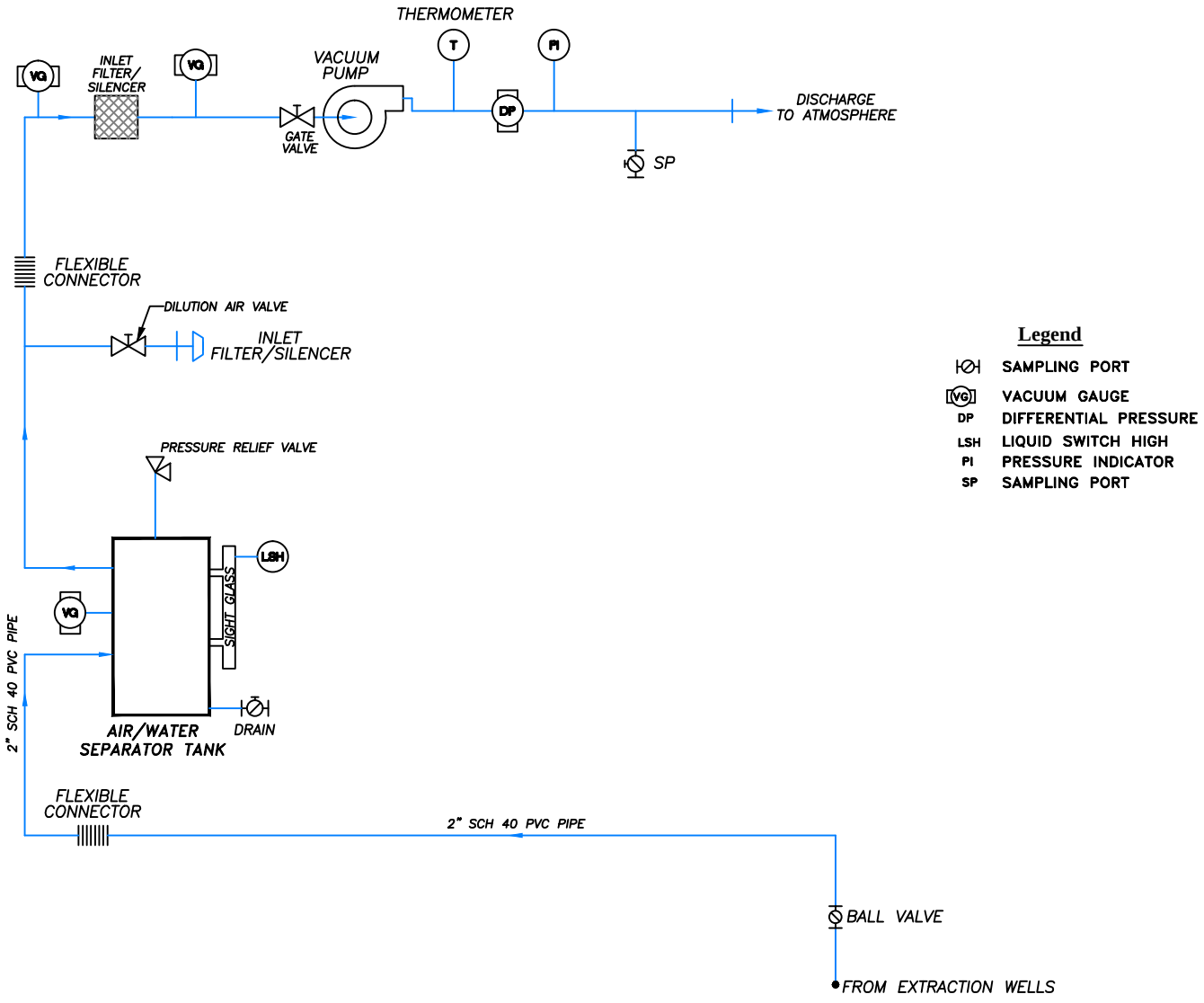
ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Date:	8/28/18
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6140-0711

TYPICAL PIPING TRENCH DETAIL

One Hour Martinizing
6737 West Milwaukee Avenue
Wauwatosa, WI

Figure
9
Project
6140



No.	Date	Revision	Approved

ENVIRO forensics

825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Date:	9/26/18
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6140-0741

SVE SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM
Martinizing Dry Cleaning
6737 West Milwaukee Avenue
Wauwatosa, WI

Figure
10
Project
6140

APPENDIX A

WDNR Form 4400-214D

Site Name: *One Hour Martinizing, Wauwatosa*
BRRTS #: *02-41-551923*
Type of Action: *Remediation*

Dry Cleaner Environmental Response Program
Reimbursement Cost Detail Linking Spreadsheet Form 4400-214D (R 08/12)

TASKS					DERF COST BREAKOUT (this claim)									
Bid / Budgeted Description	**EnviroForensics Work Scope June 2019**	**Total Approved Budget**	**Previous Claims (If applicable)**	**Total Invoiced Costs**	**A Soil Investigation**	**B Soil Remediation**	**C Groundwater Investigation**	**D Groundwater Remediation**	**E Air/Vapor Investigation**	**F Air/Vapor Remediation**	**G Lab & Other Analysis**	**H Miscellaneous Costs**	**Budget Remaining Use (-) to indicate cost over-run**	**% Task Complete, Remarks**
Consultant Costs														
23a -- SVE Remedial System Design	$ 19,591.00	$ 19,591.00		$ -									$ 19,591.00	100%
23b -- SVE System Design Revisions	$ 13,936.00	$ 13,936.00		$ -									$ 13,936.00	
23c -- Additional Site Investigation	$ 2,300.90	$ 2,300.90												
23d -- SVE Construction, Infrastructure Installation, and O&M Plan Development	$ 14,748.20	$ 14,748.20		$ -									$ 14,748.20	
23e -- SVE System O&M for 12 months	$ 18,035.80	$ 18,035.80											$ 18,035.80	
23f -- Data Analysis and Bi-annual Performance Reporting	$ 9,157.30	$ 9,157.30		$ -									$ 9,157.30	
23g -- Year End Confirmation Sampling and Results Reporting	$ 3,334.00	$ 3,334.00		$ -									$ 3,334.00	
23h -- Project Management (through design and one year O&M)	$ 9,696.80	$ 9,696.80		$ -									$ 9,696.80	
Consultant Cost Total	*$ 90,800.00*	$ 90,800.00	$ -	*$ -*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	*$ 88,499.10*	
Sub-Contractor Costs														
Private Utility Locate	$ 900.00	$ 900.00											$ 900.00	
Driller	$ 3,850.00	$ 3,850.00												
Electrical Contractor	$ 8,000.00	$ 8,000.00											$ 8,000.00	
Sve Equipment Rental	$ 20,000.00	$ 20,000.00		$ -									$ 20,000.00	
Monthly Electrical Usage and Telemetry (12 months)	$ 8,400.00	$ 8,400.00		$ -									$ 8,400.00	
Analytical Laboratory	$ 2,651.00	$ 2,651.00											$ 2,651.00	
Waste Water & Drill Cutting Disposal	$ 130.00	$ 130.00											$ 130.00	
Sub-Contractor Cost Total	*$ 43,931.00*	*$ 43,931.00*	$ -	*$ -*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	*$ -*	*$ 40,081.00*	
DERF ELIGIBLE SUB-TOTALS	**$ 134,731.00**	**$ 134,731.00**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 128,580.10**	

Non-DERF Eligible Expenses		
Attorney-Directed Tasks		$ -
Subcontractor Markup		$ -
Non-DERF Cost Total	$ -	*$ -*
INVOICE GRAND TOTAL	**$ -**	**$ -**

Total DERF Eligible Costs This Claim **$ -**

Check Numbers

APPENDIX B

Detailed Cost Breakdown Sheets

TABLE 1
COST ESTIMATE-SVE REMEDIATION AND SAMPLING
OHM - Wauwatosa
Wauwatosa, WI

TASK	LABOR COSTS	SUB-CONTRACTOR COSTS	DIRECT COSTS	TOTAL COST
Phase 23a				
SVE System Design	$19,495.00	$0.00	$96.00	**$19,591.00**
Phase 23b				
SVE System Design Revisions	$13,905.00	$0.00	$31.00	**$13,936.00**
Phase 23c				
Additional Site Investigation	$1,930.00	$1,871.00	$370.90	**$4,171.90**
Phase 23d				
SVE System Construction, Infrastructure Installation, and O&M Plan Development	$11,820.00	$31,450.00	$3,058.20	**$46,328.20**
Phase 23e				
SVE System O&M for 12 Months	$14,080.00	$10,210.00	$3,955.80	**$28,245.80**
Phase 23f				
Data Analysis and Bi-annual Performance Reporting	$9,120.00	$0.00	$37.30	**$9,157.30**
Phase 23g				
Year End Confirmation Sampling and Results Reporting	$3,130.00	$270.00	$204.00	**$3,604.00**
Phase 23h				
Project Management (through design and one year O&M)	$9,680.00	$0.00	$16.80	**$9,696.80**
TOTAL	**$83,160**	**$43,801**	**$7,770**	**$134,731**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23a SVE System Design

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr. Engineer	$ 155.00	hr					$0.00	
Sr Project Manager	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr					$0.00	
Health & Safety Specialist	$ 130.00	hr					$0.00	
							$0.00	**$0.00**

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr	3.0				$525.00	
Sr. Engineer	$ 155.00	hr	12.0				$1,860.00	
Sr Project Manager	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr	90.0				$13,950.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr	15.0				$1,800.00	
Field Professional	$ 95.00	hr					$0.00	
Drafting	$ 85.00	hr	16.0				$1,360.00	
Admin	$ 65.00	hr					$0.00	
Health & Safety Specialist	$ 130.00	hr					$0.00	
							$19,495.00	**$19,495.00**

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate		LS		1.00			$0.00	
Driller		LS		1.00			$0.00	
Surveyor		LS		1.00			$0.00	
Waste Disposal		LS		1.00			$0.00	
Historical Database Report		LS		1.00			$0.00	
Remediation		LS		1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
							$0.00	**$0.00**

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal
Soil VOC 8260 dry wt	$ 83.50	ea		1.00			$0.00
Soil VOC 8260 dry wt QA/QC	$ 83.50	ea		1.00			$0.00
GW VOC 8260	$ 70.00	ea		1.00			$0.00
GW VOC 8260 QA/QC	$ 70.00	ea		1.00			$0.00
Air TO-15 – Soil Gas	$ 200.00	ea		1.00			$0.00
Air TO-15 – Sub-Slab	$ 200.00	ea		1.00			$0.00
Air TO-15 – Indoor Air	$ 200.00	ea		1.00			$0.00
Air - Individual Certification	$ 50.00	ea		1.00			$0.00
Air - Batch Certification	$ 50.00	LS		1.00			$0.00
Trip Blank VOCs 8260	$ 70.00	ea		1.00			$0.00
Level IV QA/QC (15%)							$0.00
							$0.00 **$0.00**

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal
Hotel	$ 120.00	day		1.00			$0.00
Meals	$ 67.00	LS		1.00			$0.00
Misc Materials		LS		1.00			$0.00
Equipment Rental		LS		1.00			$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00 **$0.00**

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00		$ 130.00	$ 0.50			$ 65.00	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00				$ -	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	De-scaler			$ 100.00					
	Data Logger with Transducer			$ 155.00				$ -	
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00				$ -	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13						$ -	
	Padlocks	$ 15.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	PDB Harness	$ 80.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00				$ -	
	Rotary Hammer Drill			$ 170.00				$ -	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60						$ -	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50						$ -	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	55-Gallon Drum	$ 55.00						$ -	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00				$ -	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00						$ -	
	Sub-Slab Cover (Stainless Steel)	$ 40.00						$ -	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00				$ -	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00						$ -	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00						$ -	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00				$ -	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	40					$ 16.00	
	B/W Copies	$ 0.25						$ -	
	Document - Format/Sending	$ 15.00	1					$ 15.00	
	Report CD Copy	$ 5.00						$ -	
								$ 96.00	$96.00
	PHASE TOTAL								**$19,591.00**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23b SVE System Design Revisions

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr. Engineer	$ 155.00	hr					$0.00	
Sr Project Manager	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr					$0.00	
Health & Safety Specialist	$ 130.00	hr					$0.00	
							$0.00	**$0.00**

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr	3.0				$525.00	
Sr. Engineer	$ 155.00	hr	20.0				$3,100.00	
Sr Project Manager	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr	48.0				$7,440.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr	4.0				$520.00	
Staff Professional	$ 120.00	hr	16.5				$1,980.00	
Field Professional	$ 95.00	hr					$0.00	
Drafting	$ 85.00	hr	4.0				$340.00	
Admin	$ 65.00	hr					$0.00	
Health & Safety Specialist	$ 130.00	hr					$0.00	
							$13,905.00	**$13,905.00**

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate		LS		1.00			$0.00	
Driller		LS		1.00			$0.00	
Surveyor		LS		1.00			$0.00	
Waste Disposal		LS		1.00			$0.00	
Historical Database Report		LS		1.00			$0.00	
Remediation		LS		1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
							$0.00	**$0.00**

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal
Soil VOC 8260 dry wt	$ 83.50	ea		1.00			$0.00
Soil VOC 8260 dry wt QA/QC	$ 83.50	ea		1.00			$0.00
GW VOC 8260	$ 70.00	ea		1.00			$0.00
GW VOC 8260 QA/QC	$ 70.00	ea		1.00			$0.00
Air TO-15 – Soil Gas	$ 200.00	ea		1.00			$0.00
Air TO-15 – Sub-Slab	$ 200.00	ea		1.00			$0.00
Air TO-15 – Indoor Air	$ 200.00	ea		1.00			$0.00
Air - Individual Certification	$ 50.00	ea		1.00			$0.00
Air - Batch Certification	$ 50.00	LS		1.00			$0.00
Trip Blank VOCs 8260	$ 70.00	ea		1.00			$0.00
Level IV QA/QC (15%)							$0.00
							$0.00 **$0.00**

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal
Hotel	$ 120.00	day		1.00			$0.00
Meals	$ 67.00	LS		1.00			$0.00
Misc Materials		LS		1.00			$0.00
Equipment Rental		LS		1.00			$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00 **$0.00**

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00		$ 130.00				$ -	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00				$ -	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	De-scaler			$ 100.00					
	Data Logger with Transducer			$ 155.00				$ -	
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00				$ -	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13						$ -	
	Padlocks	$ 15.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	PDB Harness	$ 80.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00				$ -	
	Rotary Hammer Drill			$ 170.00				$ -	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60						$ -	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50						$ -	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	55-Gallon Drum	$ 55.00						$ -	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00				$ -	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00						$ -	
	Sub-Slab Cover (Stainless Steel)	$ 40.00						$ -	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00				$ -	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00						$ -	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00						$ -	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00				$ -	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	40					$ 16.00	
	B/W Copies	$ 0.25						$ -	
	Document - Format/Sending	$ 15.00	1					$ 15.00	
	Report CD Copy	$ 5.00						$ -	
								$ 31.00	$31.00
	PHASE TOTAL								**$13,936.00**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23c Additional Site Investigation

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr	8.0				$760.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$760.00	**$760.00**

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr	3.0				$390.00	
Project Professional	$ 130.00	hr	6.0				$780.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr					$0.00	
Drafting	$ 85.00	hr					$0.00	
Admin	$ 65.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$1,170.00	**$1,170.00**

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate	$ 450.00	LS	1.0	1.00			$450.00	
Driller/Contractor	$ 850.00	LS	1.0	1.00			$850.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$1,300.00	**$1,300.00**

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal
Soil VOC 8260 dry wt	$ 83.50	ea	6.0	1.00			$501.00
Soil VOC 8260 dry wt QA/QC	$ 83.50	ea		1.00			$0.00
GW VOC 8260	$ 70.00	ea		1.00			$0.00
GW VOC 8260 QA/QC	$ 70.00	ea		1.00			$0.00
Air TO-15 -- Soil Gas	$ 200.00	ea		1.00			$0.00
Air TO-15 -- Sub-Slab	$ 200.00	ea		1.00			$0.00
Air TO-15 -- Indoor Air	$ 200.00	ea		1.00			$0.00
Air - Individual Certification	$ 50.00	ea		1.00			$0.00
Air - Batch Certification	$ 50.00	LS		1.00			$0.00
Trip Blank VOCs 8260	$ 70.00	ea	1.0	1.00			$70.00
							$571.00

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal	
Hotel		day		1.00			$0.00	
Meals		day		1.00			$0.00	
Misc Materials (PVC piping manifold and valves)		LS		1.00			$0.00	
Equipment Rental		day		1.00			$0.00	
Waste Disposal		drum		1.00			$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	**$0.00**

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00		$ 130.00	1.00			$ 130.00	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00	$ 1.00			$ 175.00	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	Data Logger with Transducer			$ 155.00				$ -	
	De-scaler			$ 100.00					
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00				$ -	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Padlocks	$ 15.00						$ -	
	PDB Harness	$ 80.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00				$ -	
	Rotary Hammer Drill			$ 170.00				$ -	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60						$ -	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50						$ -	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13	20.00					$ 2.60	
	55-Gallon Drum	$ 55.00						$ -	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00				$ -	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00						$ -	
	Sub-Slab Cover (Stainless Steel)	$ 40.00						$ -	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00				$ -	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00						$ -	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00	1					$ 10.00	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00	$ 1.00			$ 50.00	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	2					$ 0.80	
	B/W Copies	$ 0.25	10					$ 2.50	
	Document - Format/Sending	$ 15.00						$ -	
	Report CD Copy	$ 5.00						$ -	
								$ 370.90	$370.90
	PHASE TOTAL								**$4,171.90**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23d SVE System Construction, Infrastructure Installation, and O&M Plan Development

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr	24.0				$2,880.00	
Field Professional	$ 95.00	hr	24.0				$2,280.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$5,160.00	**$5,160.00**

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr	8.0				$1,240.00	
Sr Professional	$ 155.00	hr	10.0				$1,550.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr	18.0				$2,340.00	
Staff Professional	$ 120.00	hr	8.0				$960.00	
Field Professional	$ 95.00	hr	6.0				$570.00	
Drafting	$ 85.00	hr					$0.00	
Admin	$ 65.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$6,660.00	**$6,660.00**

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate	$ 450.00	LS	1.0	1.00			$450.00	
Driller/Contractor	$ 3,000.00	LS	1.0	1.00			$3,000.00	
Electrical Contractor for Supply and Connections	$ 8,000.00	LS	1.0	1.00			$8,000.00	
SVE System Construction & Long Term Lease	$ 20,000.00	LS	1.0	1.00			$20,000.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$31,450.00	**$31,450.00**

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal	
Soil VOC 8260 dry wt	$ 83.50	ea		1.00			$0.00	
Soil VOC 8260 dry wt QA/QC	$ 83.50	ea		1.00			$0.00	
GW VOC 8260	$ 70.00	ea		1.00			$0.00	
GW VOC 8260 QA/QC	$ 70.00	ea		1.00			$0.00	
Air TO-15 -- Soil Gas	$ 200.00	ea		1.00			$0.00	
Air TO-15 -- Sub-Slab	$ 200.00	ea		1.00			$0.00	
Air TO-15 -- Indoor Air	$ 200.00	ea		1.00			$0.00	
Air - Individual Certification	$ 50.00	ea		1.00			$0.00	
Air - Batch Certification	$ 50.00	LS		1.00			$0.00	
Trip Blank VOCs 8260	$ 70.00	ea		1.00			$0.00	
Level IV QA/QC (15%)							$0.00	
							$0.00	**$0.00**

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal	
Hotel	$ 130.00	day	2.0	1.00			$260.00	
Meals	$ 65.00	day	3.0	1.00			$195.00	
Misc Materials (PVC piping manifold and valves)	$ 800.00	LS	1.0	1.00			$800.00	
Equipment Rental	$ 125.00	day	1.0	1.00			$125.00	
Waste Disposal	$ 130.00	drum	1.0	1.00			$130.00	
							$0.00	
							$0.00	
							$0.00	
							$0.00	
							$1,510.00	**$1,510.00**

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00		$ 130.00	$ 8.00			$ 1,040.00	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00				$ -	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	Data Logger with Transducer			$ 155.00				$ -	
	De-scaler			$ 100.00					
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00	$ 1.00			$ 30.00	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Padlocks	$ 15.00	3					$ 45.00	
	PDB Harness	$ 80.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00	$ 1.00			$ 200.00	
	Rotary Hammer Drill			$ 170.00				$ -	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60						$ -	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50						$ -	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13						$ -	
	55-Gallon Drum	$ 55.00	1					$ 55.00	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00				$ -	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00						$ -	
	Sub-Slab Cover (Stainless Steel)	$ 40.00						$ -	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00	$ 1.00			$ 15.00	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00						$ -	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00	1					$ 10.00	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00	$ 3.00			$ 150.00	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	8					$ 3.20	
	B/W Copies	$ 0.25						$ -	
	Document - Format/Sending	$ 15.00						$ -	
	Report CD Copy	$ 5.00						$ -	
								$ 1,548.20	$1,548.20
	PHASE TOTAL								**$46,328.20**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23e SVE System O&M for 12 Months

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr	16.0				$2,080.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr	56.0				$5,320.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$7,400.00	$7,400.00

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr	6.0				$930.00	
Sr Professional	$ 155.00	hr	10.0				$1,550.00	
Project Manager	$ 130.00	hr	2.0				$260.00	
Project Professional	$ 130.00	hr	4.0				$520.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr	36.0				$3,420.00	
Drafting	$ 85.00	hr					$0.00	
Admin	$ 65.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$6,680.00	$6,680.00

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate		LS		1.00			$0.00	
Driller		LS		1.00			$0.00	
Surveyor		LS		1.00			$0.00	
Historical Database Report		LS		1.00			$0.00	
Electrical Usage and Telemetry	$ 700.00	month	12.0	1.00			$8,400.00	
							$0.00	
							$0.00	
							$8,400.00	$8,400.00

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal	
Soil VOC 8260 dry wt	$ 83.50	ea		1.00			$0.00	
Soil VOC 8260 dry wt QA/QC	$ 83.50	ea		1.00			$0.00	
GW VOC 8260	$ 70.00	ea		1.00			$0.00	
GW VOC 8260 QA/QC	$ 70.00	ea		1.00			$0.00	
Air TO-15 -- Soil Gas	$ 180.00	ea		1.00			$0.00	
Air TO-15 -- SVE Effluent	$ 90.00	ea	17.0	1.00			$1,530.00	
Air TO-15 -- outdoor Air	$ 180.00	ea	1.0	1.00			$180.00	
Air - Individual Certification	$ 50.00	ea	1.0	1.00			$50.00	
Air - Batch Certification	$ 50.00	LS	1.0	1.00			$50.00	
Trip Blank VOCs 8260	$ 70.00	ea		1.00			$0.00	
							$1,810.00	$1,810.00

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal	
Hotel	$ 120.00	day		1.00			$0.00	
Meals	$ 67.00	LS		1.00			$0.00	
Misc Materials	$ 500.00	LS	1.0	1.00			$500.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
							$0.00	
							$0.00	
							$0.00	
							$500.00	$500.00

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00	44	$ 130.00	$ 3.00			$ 1,270.00	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00	$ 6.00			$ 1,050.00	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	Data Logger with Transducer			$ 155.00				$ -	
	De-scaler			$ 100.00					
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13						$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00				$ -	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Padlocks	$ 15.00						$ -	
	PDB Harness	$ 80.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00				$ -	
	Rotary Hammer Drill			$ 170.00	$ 0.50			$ 85.00	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60						$ -	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50						$ -	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	55-Gallon Drum	$ 55.00						$ -	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00	$ 2.00			$ 60.00	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00	2					$ 150.00	
	Sub-Slab Cover (Stainless Steel)	$ 40.00	2					$ 80.00	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00				$ -	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00	1					$ 105.00	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00	2					$ 20.00	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00	$ 12.50			$ 625.00	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	12					$ 4.80	
	B/W Copies	$ 0.25	24					$ 6.00	
	Document - Format/Sending	$ 15.00						$ -	
	Report CD Copy	$ 5.00						$ -	
								$ 3,455.80	$ 3,455.80
	PHASE TOTAL								**$28,245.80**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23f Data Analysis and Bi-annual Performance Reporting

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$0.00	**$0.00**

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr	4.0				$700.00	
Sr Engineer	$ 155.00	hr	8.0				$1,240.00	
Sr Professional	$ 155.00	hr	12.0				$1,860.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr	24.0				$3,120.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr	16.0				$1,520.00	
Drafting	$ 85.00	hr	8.0				$680.00	
Admin	$ 65.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$9,120.00	**$9,120.00**

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate		LS		1.00			$0.00	
Driller		LS		1.00			$0.00	
Surveyor		LS		1.00			$0.00	
Waste Disposal		LS		1.00			$0.00	
Historical Database Report		LS		1.00			$0.00	
Remediation		LS		1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
							$0.00	**$0.00**

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal
Soil VOC 8260 dry wt	$ 83.50	ea		1.00			$0.00
Soil VOC 8260 dry wt QA/QC	$ 83.50	ea		1.00			$0.00
GW VOC 8260	$ 70.00	ea		1.00			$0.00
GW VOC 8260 QA/QC	$ 70.00	ea		1.00			$0.00
Air TO-15 -- Soil Gas	$ 200.00	ea		1.00			$0.00
Air TO-15 -- Sub-Slab	$ 200.00	ea		1.00			$0.00
Air TO-15 -- Indoor Air	$ 200.00	ea		1.00			$0.00
Air - Individual Certification	$ 50.00	ea		1.00			$0.00
Air - Batch Certification	$ 50.00	LS		1.00			$0.00
Trip Blank VOCs 8260	$ 70.00	ea		1.00			$0.00
Level IV QA/QC (15%)							$0.00
							$0.00 **$0.00**

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal
Hotel	$ 120.00	day		1.00			$0.00
Meals	$ 67.00	LS		1.00			$0.00
Misc Materials		LS		1.00			$0.00
Equipment Rental		LS		1.00			$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00 **$0.00**

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00		$ 130.00				$ -	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00				$ -	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	Data Logger with Transducer			$ 155.00				$ -	
	De-scaler			$ 100.00					
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13						$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00				$ -	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Padlocks	$ 15.00						$ -	
	PDB Harness	$ 80.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00				$ -	
	Rotary Hammer Drill			$ 170.00				$ -	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60						$ -	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50						$ -	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	55-Gallon Drum	$ 55.00						$ -	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00				$ -	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00						$ -	
	Sub-Slab Cover (Stainless Steel)	$ 40.00						$ -	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00				$ -	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00						$ -	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00						$ -	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00				$ -	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	12					$ 4.80	
	B/W Copies	$ 0.25	10					$ 2.50	
	Document - Format/Sending	$ 15.00	2					$ 30.00	
	Report CD Copy	$ 5.00						$ -	
								$ 37.30	$37.30
	PHASE TOTAL								**$9,157.30**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23g Year End Confirmation Sampling and Results Reporting

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr	5.0				$475.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$475.00	$475.00

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr	1.0				$175.00	
Sr Engineer	$ 155.00	hr	2.0				$310.00	
Sr Professional	$ 155.00	hr	5.0				$775.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr	10.0				$1,300.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr	1.0				$95.00	
Drafting	$ 85.00	hr					$0.00	
Admin	$ 65.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$2,655.00	$2,655.00

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate		LS		1.00			$0.00	
Driller		LS		1.00			$0.00	
Surveyor		LS		1.00			$0.00	
Waste Disposal		drum		1.00			$0.00	
Historical Database Report		LS		1.00			$0.00	
Remediation		LS		1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
							$0.00	$0.00

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal
Soil VOC 8260 dry wt		ea		1.00			$0.00
Soil VOC 8260 dry wt QA/QC		ea		1.00			$0.00
GW VOC 8260		ea		1.00			$0.00
GW VOC 8260 QA/QC		ea		1.00			$0.00
Air TO-15 -- Soil Gas		ea		1.00			$0.00
Air TO-15 -- Sub-Slab	$ 90.00	ea	3.0	1.00			$270.00
Air TO-15 -- Indoor Air		ea		1.00			$0.00
Air - Individual Certification		ea		1.00			$0.00
Air - Batch Certification	$ 50.00	LS		1.00			$0.00
Trip Blank VOCs 8260		ea		1.00			$0.00
							$270.00

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal
Hotel	$ 120.00	day		1.00			$0.00
Meals	$ 67.00	LS		1.00			$0.00
Misc Materials		LS		1.00			$0.00
Equipment Rental		LS		1.00			$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00

	Direct Costs - Chargeable Equipment Expense	Rate (hr/unit)	# Hrs/Units	Rate (day/use)	# days/use	Rate (weeks/use)	# weeks/use	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00		$ 130.00	$ 1.00			$ 130.00	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00				$ -	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	Data Logger with Transducer			$ 155.00				$ -	
	De-scaler			$ 100.00					
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13						$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00				$ -	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Padlocks	$ 15.00						$ -	
	PDB Harness	$ 80.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00				$ -	
	Rotary Hammer Drill			$ 170.00				$ -	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60	9					$ 5.40	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50	1.5					$ 6.75	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	55-Gallon Drum	$ 55.00						$ -	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00				$ -	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00						$ -	
	Sub-Slab Cover (Stainless Steel)	$ 40.00						$ -	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00				$ -	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00						$ -	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00	1					$ 10.00	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00	$ 1.00			$ 50.00	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	4					$ 1.60	
	B/W Copies	$ 0.25	1					$ 0.25	
	Document - Format/Sending	$ 15.00						$ -	
	Report CD Copy	$ 5.00						$ -	
								$ -	$ 204.00
	PHASE TOTAL								**$3,604.00**

Project Title: OHM - Wauwatosa
Project Number/Name: 6140
Date: 8/13/2019

Phase 23h Project Management (through design and one year O&M)

Labor - Field	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr					$0.00	
Sr Engineer	$ 155.00	hr					$0.00	
Sr Professional	$ 155.00	hr					$0.00	
Project Manager	$ 130.00	hr					$0.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$0.00	**$0.00**

Labor - Office/Reporting	Price	Unit	# Units				Subtotal	Task Total
Director Technical Services	$ 175.00	hr	2.0				$350.00	
Sr Engineer	$ 155.00	hr	6.0				$930.00	
Sr Project Manager	$ 155.00	hr	24.0				$3,720.00	
Project Manager	$ 130.00	hr	36.0				$4,680.00	
Project Professional	$ 130.00	hr					$0.00	
Staff Professional	$ 120.00	hr					$0.00	
Field Professional	$ 95.00	hr					$0.00	
Drafting	$ 85.00	hr					$0.00	
Admin	$ 65.00	hr					$0.00	
Health and Safety Specialist	$ 130.00	hr					$0.00	
		hr					$0.00	
							$9,680.00	**$9,680.00**

Contractors/Consultants	Price	Unit	# Units	Markup			Subtotal	Task Total
Utility Locate		LS		1.00			$0.00	
Driller		LS		1.00			$0.00	
Surveyor		LS		1.00			$0.00	
Waste Disposal		LS		1.00			$0.00	
Historical Database Report		LS		1.00			$0.00	
Remediation		LS		1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
				1.00			$0.00	
							$0.00	**$0.00**

Contractor/Consultant - Laboratory	Price	Unit	# Units	Markup			Subtotal
Soil VOC 8260 dry wt	$ 83.50	ea		1.00			$0.00
Soil VOC 8260 dry wt QA/QC	$ 83.50	ea		1.00			$0.00
GW VOC 8260	$ 70.00	ea		1.00			$0.00
GW VOC 8260 QA/QC	$ 70.00	ea		1.00			$0.00
Air TO-15 -- Soil Gas	$ 200.00	ea		1.00			$0.00
Air TO-15 -- Sub-Slab	$ 200.00	ea		1.00			$0.00
Air TO-15 -- Indoor Air	$ 200.00	ea		1.00			$0.00
Air - Individual Certification	$ 50.00	ea		1.00			$0.00
Air - Batch Certification	$ 50.00	LS		1.00			$0.00
Trip Blank VOCs 8260	$ 70.00	ea		1.00			$0.00
Level IV QA/QC (15%)							$0.00
							$0.00 **$0.00**

Direct Costs - Expenses	Price	Unit	# Units	Markup			Subtotal
Hotel	$ 120.00	day		1.00			$0.00
Meals	$ 67.00	LS		1.00			$0.00
Misc Materials		LS		1.00			$0.00
Equipment Rental		LS		1.00			$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00
							$0.00 **$0.00**

	Direct Costs - Chargeable Equipment Expense	Rate	# Hrs/Units	Rate	# days/use	Rate	#	Subtotal	
Vehicles	Field Vehicle - Full Day	$ 20.00		$ 130.00				$ -	
	Support Vehicle - Full Day	$ 30.00		$ 180.00				$ -	
	Mileage at Federal IRS Reimbursement Rate (used only for daily use over 230 miles)	$ 0.545						$ -	
Meters	Air Velocity Meter (per use)			$ 25.00				$ -	
	Multi-meter Conductivity/pH/Temp/TDS			$ 165.00				$ -	
	Dissolved Oxygen Meter			$ 40.00				$ -	
	FID Foxboro/Sensidyne (TIP)			$ 155.00				$ -	
	Flow Calibrator			$ 30.00				$ -	
	Methane Meter			$ 116.00				$ -	
	PID or 580 OVM			$ 120.00				$ -	
	Turbidity Meter			$ 30.00				$ -	
	ppb RAE			$ 175.00				$ -	
	Ozone Leak Detector			$ 135.00				$ -	
	Inline Ozone Meter			$ 230.00				$ -	
	ORP Meter			$ 30.00				$ -	
Pumps	Air Pump - Low Flow (Barcad)			$ 25.00				$ -	
	Development Pump			$ 130.00				$ -	
	Electric Submersible Pump with Control Box (Units)			$ 130.00				$ -	
	Low-Flow Sampling Bladder	$ 12.00						$ -	
	Peristaltic Pump			$ 105.00				$ -	
	Pumping Test Accessory Equipment (Flow Meters/Manifolds/Tubing)	$ 100.00						$ -	
	Portable SVE Unit - 1.5 HP			$ 155.00				$ -	
	Intrinsically Safe Vapor Evacuation Blower			$ 125.00				$ -	
	Pneumatic Low-Flow Pump - 1" Well			$ 50.00				$ -	
	Pneumatic Low-Flow Sampling Kit w/ Flow Cell and Multimeter			$ 270.00				$ -	
Other	Asbestos Sampling Kit			$ 250.00				$ -	
	Asbestos Investigation Supplies			$ 130.00				$ -	
	Asbestos Sampling Core	$ 2.50						$ -	
	Backpack Blower			$ 75.00		$ 200.00		$ -	
	Bailers (Disposable)	$ 10.00						$ -	
	Bailers (Non-Disposable)			$ 15.00				$ -	
	Core Boxes	$ 10.00						$ -	
	Core Sampler			$ 55.00				$ -	
	Data Logger with Transducer			$ 155.00				$ -	
	De-scaler			$ 100.00					
	Well Caps	$ 30.00						$ -	
	Elec. Well Sounder (Probe)			$ 30.00				$ -	
	Metal Detector			$ 50.00				$ -	
	Nitrile Sampling Gloves (Disposable)	$ 0.13						$ -	
	5035 Sample Kit	$ 16.00						$ -	
	P/T Plugs	$ 5.00						$ -	
	Field Book	$ 11.00						$ -	
	Filter - Large	$ 18.00						$ -	
	Filter - Small	$ 9.00						$ -	
	Generator			$ 105.00				$ -	
	Hand Auger			$ 30.00				$ -	
	Helium QA/QC Kit			$ 265.00				$ -	
	Helium QA/QC Accessories	$ 20.00						$ -	
	Oil/Water Interface Probe			$ 105.00				$ -	
	Padlocks	$ 15.00						$ -	
	PDB Harness	$ 80.00						$ -	
	Passive Diffusion Bag	$ 35.00						$ -	
	Steam Cleaner			$ 130.00				$ -	
	Transducer (ea)			$ 40.00				$ -	
	Coring Machine			$ 200.00				$ -	
	Rotary Hammer Drill			$ 170.00				$ -	
	Hand Drill			$ 75.00				$ -	
	NAPL Sample Kit			$ 40.00				$ -	
	Surveying Equipment			$ 50.00		$ 200.00		$ -	
	SVE Inlet Air Filter			$ 80.00				$ -	
	SVE Dilution Air Filter			$ 28.00				$ -	
	SVE Blower Oil (quart)			$ 32.00				$ -	
	SVE Blower Grease (tube)			$ 20.00				$ -	
	O2 Meter			$ 50.00		$ 175.00		$ -	
	Ozone Air Filter Holder			$ 18.00				$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 3/8" OD (per foot)	$ 1.50						$ -	
	Tubing (Bonded) - Polyethylene (Teflon): 1/4" OD X 1/4" OD (per foot)	$ 1.20						$ -	
	Tubing (Bonded) - Polyethylene (Teflon) : 1/16" OD X 1/4" (per foot)	$ 1.25						$ -	
	Tubing (Bonded) - Polyethylene: 1/4" OD X 3/8" OD (per foot)	$ 1.10						$ -	
	Tubing - Polyethylene: 1/4" OD (per foot)	$ 0.60						$ -	
	Tubing - Polyethylene: 1/2" OD (per foot)	$ 0.85						$ -	
	Tubing - Tygon: 3/8" STD (per foot)	$ 4.45						$ -	
	Tubing - Silicone: 3/8" STD (per foot)	$ 4.50						$ -	
	System Wiring (per foot)	$ 0.60						$ -	
	PFA Tubing - 1/2-inch ID	$ 5.00						$ -	
	Manual Drive Point Kit	$ 90.00						$ -	
	55-Gallon Drum	$ 55.00						$ -	
	550 gal poly tank			$ 40.00				$ -	
	325 gal poly tank			$ 30.00				$ -	
	Temporary Sampling Port	$ 25.00						$ -	
	Trimmer			$ 50.00					
	Vapor Pin Sub-Slab Sampling Port	$ 75.00						$ -	
	Sub-Slab Cover (Stainless Steel)	$ 40.00						$ -	
	Well abandonment kit	$ 25.00						$ -	
	Well Cover 8X12"	$ 105.00						$ -	
	Measuring Wheel			$ 15.00				$ -	
	Measuring Wheel or Pole			$ 15.00				$ -	
	Camera			$ 25.00				$ -	
	1L Tedlar Bag	$ 20.00						$ -	
	Radon Sample Kit	$ 30.00						$ -	
	HAZMAT Exemption Shipper	$ 40.00						$ -	
	Manometers	$ 105.00						$ -	
	Westlaw	$ 105.00						$ -	
	CAD/drafting/graphics	$ 90.00						$ -	
Safety	Barricades & Traffic Signs			$ 10.00				$ -	
	Fall Protection			$ 25.00				$ -	
	Gloves (Chemical Resistant)	$ 10.00						$ -	
	Level "B": Level "C1" plus SCBA			$ 210.00				$ -	
	Level "C1": Level "C2" plus Polycoat Suit			$ 85.00				$ -	
	Level "C2": Level "D" plus Respirator			$ 40.00				$ -	
	Standby SCBA			$ 130.00				$ -	
	Routine Field and Safety Equipment			$ 50.00				$ -	
Production	1 Inch Binder	$ 9.00						$ -	
	2 Inch Binder	$ 12.00						$ -	
	3 Inch Binder	$ 15.00						$ -	
	4 Inch Binder	$ 22.00						$ -	
	Binder Tabs (Set of 8)	$ 5.00						$ -	
	Color Copies	$ 0.40	12					$ 4.80	
	B/W Copies	$ 0.25	48					$ 12.00	
	Document - Format/Sending	$ 15.00						$ -	
	Report CD Copy	$ 5.00						$ -	
								$ 16.80	$16.80
	PHASE TOTAL								**$9,696.80**