



JUL 10 2013

July 2, 2013

Ralph Hoffman  
1400 North 94<sup>th</sup> Street  
Unit 3092  
Scottsdale, AZ 85260

**RE: Scoping Document and Cost Estimate for Further Site Investigation  
Former Hoffman Valet Cleaners  
7215 W. Center Street  
Wauwatosa, Wisconsin  
FID # 241083150  
BRRTs # 02-41-307576**

Dear Mr. Hoffman:

Environmental Forensic Investigations, Inc. (EnviroForensics) is pleased to present this scoping document to conduct Vapor Intrusion (VI) and groundwater monitoring assessment activities at the Former Hoffman Valet Cleaners (Hoffman's) site located at 7215 W. Center Street, Wauwatosa, Wisconsin (Site).

EnviroForensics has prepared this work scope to continue the required investigation activities per NR 716 of the Wisconsin Administrative Code (WAC), and in response to the attached April 1, 2010 Wisconsin Department of Natural Resources (WDNR) letter (Attachment 1), *DERF Change Order Request – Modification Needed Remedial and Mitigation Actions, Former Hoffman's Valet Cleaners*. The proposed activities likely represent intermediate phases of the Site investigation process and it is possible that additional phases of work may be necessary in the future.

#### **PHASE 06: SCOPE OF FURTHER SITE INVESTIGATIONS**

In accordance with the requests of the WDNR, EnviroForensics has prepared this scoping document to further assess Site and offsite VI issues and assess the current groundwater conditions. The WDNR requested, in the April 1, 2010 letter, that sub-slab and indoor air samples be collected from three (3) properties adjacent to Hoffman's, prior to the installation of a sub-slab depressurization system (SSDS) at the Site. These properties include the following:

- 7229 W Center Street;
- 7219 W Center Street (Johnson commercial property); and
- 7209 W Center Street (Viruet residence).

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Environmental Forensic Investigations, Inc.  
N16 W23390 Stone Ridge Drive, Suite G, Waukesha, WI 53188  
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VI sampling activities conducted by the previous consultant (ARCADIS) found that tetrachloroethylene (PCE) was present at an elevated concentration beneath the Johnson commercial building, which is located directly west of the Site. The property located at 7229 W Center Street neighbors the Johnson business to the west, and appears to be separated by only a fire wall.

Based on the VI data collected to date, EnviroForensics proposed to postpone SSDS installation at the Site building where active dry cleaning using PCE is the current operation. Instead we proposed to install an SSDS in the Johnson property building to mitigate the immediate VI risk previously identified by sub-slab vapor concentrations of 244,000 ug/m<sup>3</sup>, which is well over the current EPA Vapor Risk Screening Level (VRSL) for non-residential properties of 1,800 ug/m<sup>3</sup> PCE.

However, since it has been quite a while since these sub-slab vapor concentrations were detected, the WDNR has requested that the additional information regarding vapor concentrations below the slab and within indoor air be provided prior to installing an SSDS at the Johnson building.

Additionally, further VI investigation at the Viruet residence is not deemed necessary since previously detected concentrations of PCE in sub-slab vapor are below current EPA VRSL for residential properties.

#### **Phase 06a: Work Scope Development and Site-Specific Health and Safety Plan**

Prior to the onset of field activities, EnviroForensics will finalize this scoping document and cost estimate with Mr. John Hnat, the WDNR Project Manager. The final Work Scope will serve as the procedures document, for which the FSI will follow.

EnviroForensics recognizes and stresses the importance of safe work practices for site workers and the public. Prior to the onset of field activities, EnviroForensics will develop a Health and Safety Plan (HASP) for this project to include the VI and groundwater monitoring assessment activities. The HASP will be used by members of the project team, all of whom have completed and are current with the requisite Hazardous Waste Operations Training (29 CFR 1910.120). The HASP will provide health and safety guidelines for the investigation activities and will address key safety issues and potential hazards associated with the project. The HASP will describe the scope of work, specify the appropriate personal protective equipment (PPE), discuss emergency procedures and contacts, list project team member responsibilities, and outline work zones and decontamination procedures to be used. All site personnel will be required to read and sign the HASP prior to beginning work, to acknowledge that they understand the contents of the HASP and will abide by it. All personnel that enter the work areas will be equipped with the minimum level of PPE specified by the HASP.

It has been assumed that all sampling activities referenced in this scoping document can be performed in Level D PPE.



### **Phase 06b: Offsite Access**

EnviroForensics will request access authorization from the owners of each of the following properties where sampling and/or further assessment activities will be performed:

- 7229 W Center Street; and
- 7219 W Center Street (Johnson property).

The properties and buildings are depicted on **Figure 1**. Given the sensitive nature of off-site sampling, draft copies of access agreements and informational materials may be coordinated with counsel prior to issuing. In the event that cooperation with local or state entities is determined to be prudent, EnviroForensics will work with the identified personnel during the site access agreement process.

### **Phase 06c: Sub-Slab Vapor and Indoor/outdoor Air Sampling**

In accordance with the April 1, 2010 WDNR letter and per the WDNR's December 2010 guidance document, *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*, sub-slab sampling should be investigated at all source properties where a release of chlorinated volatile organic compounds (CVOCs) has occurred.

EnviroForensics proposes to assess the VI exposure pathway by collecting the following sub-slab vapor samples and indoor/outdoor air samples (Figure 1):

- Two (2) sub-slab vapor samples (SSV-1 and SSV-2) and one (1) indoor air sample (IA-1) from the basement at 7229 W Center Street;
- Two (2) sub-slab vapor samples (SSV-3 and SSV-4) and one (1) indoor air sample (IA-2) from the basement at 7219 W. Center Street (Johnson Building); and
- One (1) outdoor background air sample up-wind of the prevailing wind direction on the day of sampling.

Sampling activities will be performed in consideration of the applicable methods in the following resource documents:

- *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*; WDNR, December 2010.
- *Vapor Intrusion Pathway: A Practical Guideline*; Interstate Technology & Regulatory Council (ITRC), January 2007. *Chemical Vapor Intrusion and Residential Indoor Air; Guidance for Environmental Consultants and Contractors*; State of Wisconsin Department of Health and Family Services, February 2003.

- *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils* (US EPA 530-D-02-004); US EPA Office of Solid Waste and Emergency Response (OSWER), November 2002.

### *Background Conditions Screening*

Prior to conducting the sub-slab and indoor/outdoor air sampling, an access agreement, along with a Chemical Inventory Form with instructions on how to complete the Form will be sent to the property owners. These documents will be sent by certified mail. EnviroForensics staff will follow up by phone to ensure receipt of the access agreement, discuss sampling procedures, and ensure their understanding of the Chemical Inventory Form and the need to remove any listed chemicals at least 24-48 hours prior to sampling. On the day of scheduled sampling, EnviroForensics staff will evaluate the previously provided Chemical Inventory Form for completeness. A follow up inspection will be performed to confirm that all suspect chemicals have been removed. Any remaining suspect items identified during the inspection will be removed to the extent practicable and listed on a pre-sampling inspection form for later reference.

A visual inspection will be conducted for cracks or other penetrations of the concrete floor (i.e. floor drains, sumps, etc.) that could be direct conduits for impacted vapors to migrate into the occupied space, or conversely, could act as "short circuits" allowing indoor air to enter canisters during sub-slab sampling. Basement walls will also be visually inspected for cracks and penetrations of subsurface utilities that may be conduits for vapors to migrate into the buildings. This information will be incorporated into the sample port placement strategy to avoid damage to sub-slab utilities and reduce the possibility of "short circuiting", which can bias sample results.

Building and room dimensions will be measured and a scaled hand drawing of the layout with sample locations and other observed conditions will be prepared in the field.

The results of all pre-sampling inspection activities will be recorded on Sub-slab Vapor and Indoor Air Building Survey Forms.

### *Indoor/outdoor Air Sampling*

Indoor air samples will be collected from each building prior to penetration of the slab, which occurs during the process of collecting sub-slab samples. This procedure will eliminate the possibility of sub-slab vapor from entering the building and possibly affecting the indoor air sample results.

The indoor air samples will be collected from the breathable space (3-5 feet above the floor) using 6-Liter vacuum canisters, regulated to withdraw time-integrated samples. All air samples will be collected over a 24-hour time period.



Data will be assessed from the nearest fixed weather station throughout the 24-hour sampling period to gather data including: temperature, wind speed, wind direction, humidity, barometric pressure, and rainfall. Weather data and its possible affects on the sampling results will be assessed and discussed in the report.

One (1) sample of outdoor background air will be collected from a secure location up-wind of the prevailing wind direction on the day of sampling.

Initial and final pressure readings will be collected from the vacuum canisters and recorded on Indoor/outdoor Air Field Sampling Forms (Attachment 2), along with all other pertinent information. The vacuum canisters will be individually-certified clean by a certified analytical laboratory for QA/QC purposes. Duplicate samples will not be collected.

Following the completion of the indoor/outdoor air sampling activities a total of three (3) vacuum canisters will be submitted to Test America Laboratories, Inc. of Knoxville, Tennessee under appropriate chain-of-custody procedures, for analysis of the *Dry Cleaners List* of chlorinated volatile organic compounds (CVOCs) using US EPA Method TO-15.

#### *Sub-Slab Vapor Sample Port Installation*

Prior to installing sub-slab vapor ports, a survey of the building's perimeter will be conducted to assist in the evaluation of potential utility locations beneath the slab. Additionally, any provided building diagrams that may show the location of sub-grade utilities will be reviewed.

Once the sampling locations have been determined, the sub-slab sampling ports will be installed. Initially, a counter-sunk hole will be drilled through the concrete slab using an electric impact-drill. Vapor Pin™ sub-slab vapor sampling ports, constructed with a silicon sleeve to provide a mechanical seal between the sample port and the slab, will be installed using a dead blow hammer. The ports will be capped during installation until sampling is initiated and left in place after sample collection for future use.

#### *Sub-Slab Vapor Port QA/QC*

Potential ambient air entering into the sample through leaks in the sampling train or into the sampling port can dilute the sample and lead to the underestimation of the soil vapor concentration in the samples. To ensure that sub-slab vapor samples are representative of subsurface vapor conditions, leak testing was performed per methods presented in the *Standard Practice for Active Soil Gas Sampling in the Vadose Zone for Vapor Intrusion Evaluation*, ASTM Standard D7663-11 and in accordance with WDNR PUB-RR-800, *Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin*.

Testing the integrity of the sample ports will be conducted utilizing helium tracer gas. One (1) liter of Helium tracer gas will be pumped into a sealed shroud encompassing the sub-slab vapor ports. The tubing for the sub-slab sampling train will be attached to a helium detection device outside of the shroud. Air will be purged from the sub-slab vapor sampling apparatus and tested for the presence of helium. If no helium is present, then the sub-slab vapor sampling apparatus is considered to have a quality seal.

The integrity of the sampling lines will be tested prior to sampling using a hand pump with a pressure gauge. Negative pressure will be added to the line and observed for 60 seconds for changes. If no change to the pressure is observed the line will be considered intact.

#### *Sub-Slab Vapor Sample Collection*

One (1) sample of sub-slab vapor will be collected from each of the four (4) sub-slab sample ports. Sub-slab vapor samples will be collected using 1-Liter vacuum canisters, which will be connected to the sub-slab vapor ports using compression fittings and Teflon-lined polyethylene tubing. The tubing will be purged of all ambient air using a peristaltic pump prior to initiating sub-slab sampling. Shut in tests and tracer gas monitoring will be performed per the guidance documents presented previously. The vacuum canisters used for sub-slab sampling will be batch certified initially by the laboratory for quality assurance purposes. Initial and final pressure readings will be collected from the vacuum canisters and recorded on Sub-Slab Vapor Field Sampling Forms (Attachment 2), along with all other required information. Vacuum canisters will be fitted with regulators to restrict flow rates to less than 200 ml/minute.

Following the completion of sampling activities a total of four (4) vacuum canisters will be submitted to Test America Laboratories, Inc. of Knoxville, Tennessee for laboratory analysis of the *Dry Cleaners List* of chlorinated volatile organic compounds (CVOCs) via US EPA Method TO-15. All samples will be shipped overnight under appropriate chain-of-custody procedures.

#### **Phase 06d: Monitoring Well Sampling**

The most recent groundwater monitoring event was conducted by ARCADIS in July 2007; therefore, EnviroForensics proposes to conduct groundwater sampling on the entire monitoring well network (MW-1 through MW-3). The attached Figure 1 depicts the location of the monitoring well network.

The depth to water in each well will be measured using an electronic sounding device and recorded on sampling forms prior to sample collection activities. ARCADIS reported that groundwater recharge to the monitoring wells was not sufficient for low-flow sampling. Therefore, groundwater purging and sample collection will be conducted using standard bailer methods. Field parameters including pH, specific conductivity and turbidity will be measured to determine when purging is complete. A groundwater sample will then be collected. The





groundwater sampling activities will be documented on a Groundwater Field Sampling Data Form (Attachment 3).

One (1) duplicate sample, one (1) field blank sample, and one (1) trip blank sample will be analyzed for QA/QC purposes. The groundwater and QA/QC samples will be analyzed for VOCs using EPA SW-846 Method 8260.

Purge water will be stored on-site in sealed and labeled US Department of Transportation (DOT) 17H-rated drums, or equivalent, for subsequent characterization and management.

#### **Phase 06e: Investigation-Derived Media Management**

Purge water generated during groundwater monitoring activities will be containerized in a 55-gallon drum. After monitoring is completed a sample of purge water will be collected for characterization purposes. A determination will be made if the wastes are hazardous or non-hazardous based on the results of the sample, and a waste profile will be prepared accordingly. Costs for transportation and disposal of investigation-derived media (IDM) are not included in this work scope and cost estimate. A licensed subcontractor will properly manage all (IDM). A representative of Hoffman's will be required to sign all waste manifests and shipping documents.

#### **Phase 06f: Data Evaluation and Reporting**

Once the analytical results are available, EnviroForensics will complete a Progress Report which will summarize the work performed and the findings of the VI and groundwater monitoring assessment activities. Appropriate tables, maps, figures, and appendices will be provided, as appropriate, to aid data presentations and interpretation and the findings of the investigation as outlined in the WDNR Guidelines.

#### **Phase 06g: Project Management**

Project management tasks will include budget management and tracking; the preparation of project status memorandums; and management of personnel and scheduling; as well as meetings and conference calls with outside counsel, insurance carrier(s), regulators, clients, and other stakeholders.

### **SCHEDULE**

It is anticipated that the proposed work can be initiated within two (2) weeks of authorization from the WDNR. Standard laboratory turn times will be utilized, which will provide analytical results within two (2) weeks of sample collection. A letter report summarizing the findings of the sub-slab vapor and groundwater monitoring activities will be submitted within four (4) weeks of receipt of all laboratory analytical data.



## **COST ESTIMATE**

All services provided in support of this proposal will be billed on a time-and-materials basis. The cost estimate to complete this scope of work is **\$21,949**. The estimated costs are itemized by Phase in the attached Table 1. No work will be conducted in excess of the estimated costs without prior written approval.

It should be recognized that some limitations are inherent in the evaluation of subsurface conditions, and that certain conditions may not be detected. Thus, this investigation cannot provide a guarantee that all possible on-site contamination will be discovered. The proposed cost assumes that no additional access agreements are required; that permission will be granted by all property owners to conduct VI and groundwater monitoring activities; that normal conditions will be encountered; and that any delays, obstructions, or other limitations outside the control of EnviroForensics may result in additional cost to the Project.

## **PROJECT TEAM**

Mr. Brian Kappen, P.G. will manage this project and will serve as the project Hydrogeologist as defined in Wisconsin Administrative Code Chapter NR 712.03(1). Mr. Kappen will also provide oversight of all project activities as required by NR 712.05. Mr. Wayne Fassbender, P.G., P.M.P. will serve as senior project manager.

As required by NR 712, the staff will meet the appropriate professional requirements necessary for each Phase of the project. Resumes will be provided upon request.

## **CERTIFICATIONS**

EnviroForensics certifies the following:

1. That consultant and contract services will comply with applicable requirements under Chapter NR 169 and NR 700 through 728.
2. That upon request documents and records related to the contract services will be made available to the WDNR for inspection and copying.
3. That EnviroForensics did not prepare this bid in collusion with any other consultant submitting a bid on this site.
4. That EnviroForensics carries all of the insurance requirements contained in NR 169.30(9) (b). A copy of EnviroForensics' certificate of insurance is included as Attachment 4.





We appreciate the opportunity to work with you on this project. If you have any questions regarding this work scope, please do not hesitate to call us at (414) 982-3988.

Sincerely,  
**Environmental Forensic Investigations, Inc.**

A handwritten signature in blue ink, appearing to read "Brian Kappen".

Brian Kappen, PG  
*Project Manager*

A handwritten signature in blue ink, appearing to read "Wayne P. Fassbender".

Wayne Fassbender, PG, PMP  
*Senior Project Manager*

Attachments

Cc: John Hnat, WDNR Project Manager

**TABLE 1**  
**FURTHER SITE INVESTIGATION COST ESTIMATE**  
**Former Hoffman's Valet Cleaners**  
**7215 West Center Street, Wauwatosa, Wisconsin**

| TASK                                              | LABOR COSTS     | SUB-CONTRACTOR COSTS | DIRECT COSTS   | TOTAL COST      |
|---------------------------------------------------|-----------------|----------------------|----------------|-----------------|
| <b>Phase 6a</b>                                   |                 |                      |                |                 |
| Work Scope Development and Health and Safety Plan | \$6,120         | \$0                  | \$6            | \$6,126         |
| <b>Phase 6b</b>                                   |                 |                      |                |                 |
| Off-Site Access Agreements                        | \$1,410         | \$0                  | \$46           | \$1,456         |
| <b>Phase 6c</b>                                   |                 |                      |                |                 |
| Sub-Slab Vapor and Indoor/outdoor Air Sampling    | \$1,400         | \$1,600              | \$1,323        | \$4,323         |
| <b>Phase 6d</b>                                   |                 |                      |                |                 |
| Groundwater Monitoring                            | \$890           | \$420                | \$682          | \$1,992         |
| <b>Phase 6e</b>                                   |                 |                      |                |                 |
| Investigation-Derived Media Management            | \$855           | \$0                  | \$40           | \$895           |
| <b>Phase 6f</b>                                   |                 |                      |                |                 |
| Data Evaluation and Reporting                     | \$4,750         | \$0                  | \$23           | \$4,773         |
| <b>Phase 6g</b>                                   |                 |                      |                |                 |
| Project Management                                | \$2,305         | \$0                  | \$80           | \$2,385         |
| <b>TOTAL</b>                                      | <b>\$17,730</b> | <b>\$2,020</b>       | <b>\$2,199</b> | <b>\$21,949</b> |





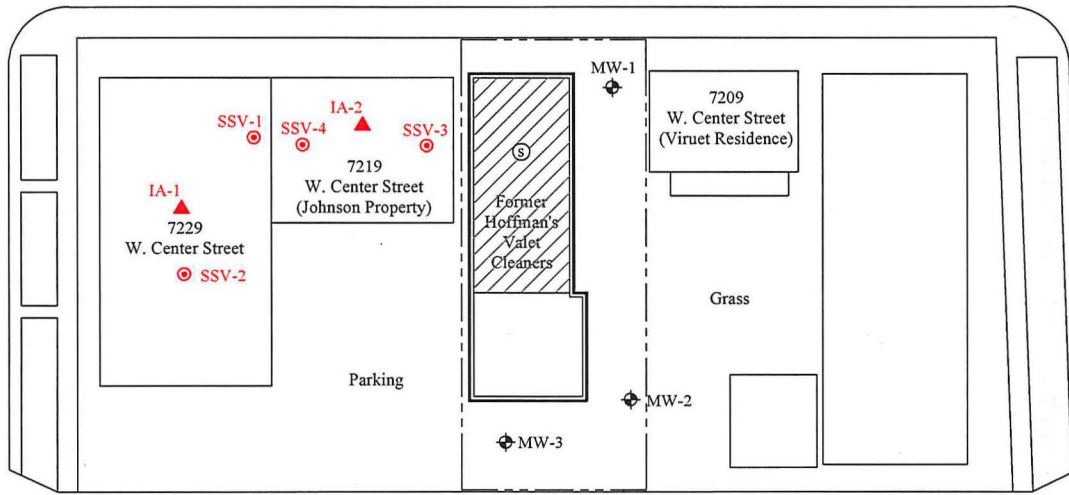
W. CENTER STREET

**Legend**

- Property boundary
- MW-1 Monitoring well location
- SSV-1 Proposed sub-slab vapor sample location
- IA-1 Proposed Indoor air sample location
- Basement
- Sump

N. LEFBER AVENUE

NORTH 72ND STREET

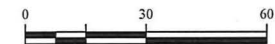


Grass

Parking

Alley

Grass/Trees  
Residential



Scale in Feet

SITE SHOWING MONITORING WELL AND PROPOSED SUB-SLAB VAPOR/INDOOR AIR SAMPLE LOCATIONS

Former Hoffman's Valet Cleaners  
7215 W. Center Street  
Wauwatosa, WI

|           |          |
|-----------|----------|
| Date:     | 7/2/13   |
| Designed: | MMM      |
| Drawn:    | MMM      |
| Checked:  | BK       |
| DWG file: | 63108-11 |

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

|         |      |
|---------|------|
| Figure  | 1    |
| Project | 6200 |



**State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES**

Jim Doyle, Governor  
Matthew J. Frank, Secretary  
Gloria L. McCutcheon, Regional Director

Southeast Region Headquarters  
2300 N. Dr. Martin Luther King, Jr. Drive  
Milwaukee, Wisconsin 53212-0436  
Telephone 414-263-8500  
FAX 414-263-8716  
TTY 414-263-8713

April 1, 2010

Mr. Ralph Hoffman  
2010 W. Woodbury Lane  
Glendale, WI 53209

File Ref: FID# 241083150  
BRRTs# 02-41-307576

**SUBJECT:** DERF Change Order Request – Modification Needed  
Remedial and Mitigation Actions, Former Hoffman’s Valet Cleaners  
7215 W. Center Street, Wauwatosa

Dear Mr. Hoffman:

The Department received a submittal from Arcadis, regarding “Scope of Work and Cost Estimate for Closure Activities”, dated February 10, 2010. The letter provided the results from additional sampling at the adjacent properties, as well as a proposal and cost estimate to install a sub-slab depressurization system under the building on the 7215 W. Center Street property, collect air samples at the adjacent property to the west, and submit a summary of the site actions in a letter report. The Department concurs with the proposal to install a sub-slab depressurization system beneath the dry cleaner building. Based on the new information received, the Department will require some additional samples prior to installation of the system, and modifications to the sampling to be conducted after system installation. I have discussed the following issues and scope modifications with your consultant, and you may direct him to prepare a revised change order request to incorporate them.

1. The sub-slab vapor sample collected beneath the Johnson business, west of the dry cleaner building, found PCE at a very high level, indicating either a significant vapor migration pathway from the dry cleaner sub-slab area or a spread of the soil contamination beneath the Johnson building. Because the vapor level is so high, and the building west (7229 W. Center Street) of the Johnson building appears to be separated from it by only a fire wall, a sub-slab vapor sample should be collected from beneath this next building. The port used to collect this vapor sample should be cemented in place and left until the Department approves its abandonment.
2. To better assess sub-slab vapor conditions beneath the Johnson building and to check the effectiveness of the proposed sub-slab depressurization system on the Johnson property, two sub-slab sample ports should be installed in the Johnson building, to be cemented in place for future use. A pre-system vapor sample should be collected from each of these ports. After installation and start-up of the system, pressure changes will be monitored in these ports and possibly the port in the next building to the west, to evaluate the area influenced by the system.
3. The sub-slab vapor sample collected beneath the Viruet residence, east of the dry cleaner property, found tetrachloroethylene slightly above the level used by the Department to rule out the potential for a vapor intrusion risk to occupants of a home. Therefore, an indoor air sample should be collected from the basement of the Viruet home to assess whether sub-slab vapor is entering the home.
4. An indoor air sample will also be needed from the Johnson building, and an indoor air sample should also be collected at the same time from the building west of the Johnson building. An outdoor air sample should be

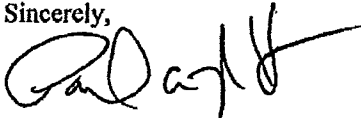


collected as well, for a total of four 24-hour air samples, to be collected in the same time period, and prior to installation of the additional sub-slab ports or the depressurization system.

5. While conducting the sampling at the adjacent properties, your consultant should also assess the condition of the floor and walls of the basements tested, noting any cracks and whether a sump pump crock is present.
6. Indoor air samples, and/or sub-slab vapor samples may be required at selected adjacent properties after the sub-slab depressurization system has been running for at least three months, depending on the results of the baseline indoor air samples. Your consultant may include costs for this sampling in the modified change order, to be used if needed for this work. Alternately, your consultant may wait and include these costs in a subsequent change order request, after results from the baseline air testing and system influence testing have been obtained.

Based on the results of the requested sampling, additional investigation or remediation may be required. If you have any questions about this letter, or if your consultant encounters difficulties obtaining access for sampling, please contact me at (414) 263-8758.

Sincerely,



Pamela A. Mylotta, Hydrogeologist  
Remediation & Redevelopment Program  
Southeast Region, Milwaukee Service Center

C: Brian Maillet – Arcadis  
Terry Evanson – WDNR/GEF2



## ATTACHMENT 2

### Indoor/outdoor Air and Sub-Slab Vapor Field Sampling Forms





## INDOOR AIR BUILDING SURVEY FORM

IDEM Site # \_\_\_\_\_  
Site Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

### Occupant Information

Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

Telephone No ( ) \_\_\_\_\_ Home/Work/Mobile  
( ) \_\_\_\_\_ Home/Work/Mobile

Number and Age of Occupants \_\_\_\_\_

Does anyone smoke inside the building? \_\_\_\_\_

### Building Characteristics

Type of building: (circle) Residential/Industrial/School/Commercial/Multi-use/Other? \_\_\_\_\_

If residential, what type (circle) Single family/Condo/Multi-family/Other? \_\_\_\_\_

If the property is commercial, indicate the business? \_\_\_\_\_

How many floors does the building have? \_\_\_\_\_

Does the building have a (circle) Basement/Crawl space/Slab-on-grade/Other? \_\_\_\_\_

Is the basement used as a living/work space area? \_\_\_\_\_

What type of foundation does the building have (circle) Field stone/Poured concrete/Concrete block Other? \_\_\_\_\_

Describe the heating system and type of fuel used? \_\_\_\_\_

Is there an attached garage? \_\_\_\_\_



### Spill/Contaminant Source Information

Type of petroleum/VOC release? \_\_\_\_\_

When did the release occur? \_\_\_\_\_

What areas of the building have been impacted by the release? \_\_\_\_\_

Are there any odors? \_\_\_\_\_ If so describe the odors: \_\_\_\_\_

Where can release odors be detected? \_\_\_\_\_

### Sampling Information

Sample Date \_\_\_\_\_

Sampler Type Sorbent SUMMA (Please circle one)

Analysis Method Mass APH TO-15Standard TO-15LL TO-15-SIM Other: (Please circle one)

IDEM program or Consulting Firm \_\_\_\_\_

Contact Person \_\_\_\_\_

Telephone No ( ) \_\_\_\_\_

Laboratory \_\_\_\_\_

Telephone No ( ) \_\_\_\_\_



### Pre-Sampling Background Screening and Inspection Information

List products or items which may be considered potential sources of VOCs such as paint cans, gasoline cans, gasoline powered equipment, cleaning solvents, furniture polish, moth balls, fuel tank, woodstove, fireplace, etc.

Date and time of pre-sampling inspection \_\_\_\_\_

Table 3: Sampling Inspection Product Inventory

| Potential VOC source     | Present (Y/N) | Location | Field screening Results (ppm) | Product Description and Condition | Removal Date and Time |
|--------------------------|---------------|----------|-------------------------------|-----------------------------------|-----------------------|
| Paints or paint thinners |               |          |                               |                                   |                       |
| Gas powered equipment    |               |          |                               |                                   |                       |
| Gasoline storage cans    |               |          |                               |                                   |                       |
| Cleaning solvents        |               |          |                               |                                   |                       |
| Furniture polish         |               |          |                               |                                   |                       |
| Moth balls               |               |          |                               |                                   |                       |
| Fuel tank                |               |          |                               |                                   |                       |
| Wood stove               |               |          |                               |                                   |                       |
| Fireplace                |               |          |                               |                                   |                       |
| Perfumes/colognes        |               |          |                               |                                   |                       |
| Glues                    |               |          |                               |                                   |                       |
| Other:                   |               |          |                               |                                   |                       |
| Other:                   |               |          |                               |                                   |                       |

Table 4: Potential vapor migration entry point information

| Potential Vapor entry points              | Present (Y/N) | Field screening results (ppm) | Comments |
|-------------------------------------------|---------------|-------------------------------|----------|
| Foundation penetrations in floor or walls |               |                               |          |
| Cracks in foundation floor or walls       |               |                               |          |
| Sump                                      |               |                               |          |
| Floor drain                               |               |                               |          |
| Other                                     |               |                               |          |
| Other                                     |               |                               |          |





**Sampling Information**

Table 1: Sorbent Tube Sampler Information

| Sample ID# | Floor | Room | Tube ID# | Pump ID# | Volume (liters) | Duration (minutes) | Comments |
|------------|-------|------|----------|----------|-----------------|--------------------|----------|
|            |       |      |          |          |                 |                    |          |
|            |       |      |          |          |                 |                    |          |
|            |       |      |          |          |                 |                    |          |
|            |       |      |          |          |                 |                    |          |
|            |       |      |          |          |                 |                    |          |
|            |       |      |          |          |                 |                    |          |
|            |       |      |          |          |                 |                    |          |
|            |       |      |          |          |                 |                    |          |

Table 2: Canister Sampler Information

| Sample ID# | Floor | Room | Canister ID# | Initial On-site Pressure* | Pressure* On-site Following Sample Collection | Pressure Received at the Laboratory |
|------------|-------|------|--------------|---------------------------|-----------------------------------------------|-------------------------------------|
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |
|            |       |      |              |                           |                                               |                                     |

\*Indicate pressure in units of inches of mercury.  
 Please provide a sketch of spill area and location of sampler unit(s) on following page.

Was the building ventilated prior to sample collection? \_\_\_\_\_

How long was the ventilation process? \_\_\_\_\_

Were vapor control methods in effect while the samples were being collected?

Windows open? Yes / No      Ventilation fans? Yes / No      Vapor barriers? Yes / No

Vapor phase carbon treatment system? Yes / No      SSDS? Yes/No      Other site control measures \_\_\_\_\_

**Weather Conditions during Sampling**

Outside temperature (°F) \_\_\_\_\_      Inside temperature (°F) \_\_\_\_\_

Prevailing wind speed and direction \_\_\_\_\_

Describe the general weather conditions (e.g. sunny, cloudy, rain) \_\_\_\_\_

Significant precipitation (0.1 inches or more) within 12 hours of the sampling event? \_\_\_\_\_



**General Comments and Sketch Area**

Is there any information you feel is important related to this site and the samples collected which would facilitate an accurate interpretation of the indoor air quality? Sketch floor plan, sample locations, location of background sources.

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Comments: \_\_\_\_\_

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Sketch:



Sub-Slab Vapor/ Soil Gas Field Sampling Form

200 S. Executive Dr, Suite 101  
 Brookfield, WI 53005  
 T: 414-982-3988 F: 262-789-6699

|                             |       |                 |       |
|-----------------------------|-------|-----------------|-------|
| SAMPLER NAME                | _____ | SAMPLE ID       | _____ |
| LOCATION/ADDRESS            | _____ | SAMPLE TIME     | _____ |
| PROJECT NO./ NAME           | _____ | CANISTER ID     | _____ |
| CLIENT/CONTACT              | _____ | FLOW CONTROL ID | _____ |
| DATA COLLECTION: START DATE | _____ | END DATE        | _____ |

| Time<br>hh:mm | Vacuum Reading<br>In. of Hg | Wind Direction | Wind Speed<br>mph | Temperature<br>° F | Barometer<br>Hg | Relative Humidity<br>% |
|---------------|-----------------------------|----------------|-------------------|--------------------|-----------------|------------------------|
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |
| _____         | _____                       | _____          | _____             | _____              | _____           | _____                  |

|                                                                   |             |                                                                     |             |
|-------------------------------------------------------------------|-------------|---------------------------------------------------------------------|-------------|
| <b>Helium Leak Test</b>                                           |             | <b>Pressure Test</b>                                                |             |
| Date/Time performed:                                              | /           | Date/Time performed:                                                | /           |
| Background He concentration (ppm):                                |             | Negative pressure of at least -15 in. Hg induced on sampling train? |             |
| Shroud He concentration (%):                                      |             | (circle one):                                                       | yes      no |
| Sub-slab vapor/soil-gas He concentration (post helium insertion): |             | Did pressure hold?                                                  | yes      no |
| Helium Leak Test Passed:                                          | yes      no |                                                                     |             |

Notes:





LOW-FLOW GROUNDWATER FIELD SAMPLING DATA FORM

N16 W23390 Stone Ridge Drive, Suite G
Waukesha, WI 53146
T: 414-982-3988 F: 317-972-7875

SAMPLER NAME: DATE:
SITE: WELL ID:
PROJECT NO.: SAMPLE ID:
CLIENT/CONTACT:

WATER LEVEL MEASUREMENTS:

Water Level (MSL): Feet below reference elevation Time

WELL EVACUATION: Well Depth feet Well Diameter inches Casing Volume gallons
Depth to Top of Screen feet

Total No. of Casing Volumes: Total Gallons Removed: Elapsed Time:

WELL EVACUATION METHOD:

Submersible Pump Bailer Peristaltic pump Other
Non-Dedicated Equipment Identification

Stability Parameter Readings:

Table with 10 columns: Time, pH, Specific Conductance, Turbidity, Dissolved Oxygen, Temperature, Oxidation-Reduction Potential, DTW, Flow Rate, mL Removed. Includes stabilization criteria values.

SAMPLING:

Date Time
Sample Analysis Volume Container Type Number of Containers Preservative

Factor \* Water Column Height Equals Gallons
Factor Diameter
0.04 1" Well
0.163 2" Well
0.653 4" Well
Conversions
1 mL = 0.0003 gal
1 gal = 3,785 mL

SAMPLING METHOD: Low-Flow Grab Bailer Stainless Steel Bailer Peristaltic pump

EQUIPMENT DECONTAMINATION PROCEDURES:

DECONTAMINATION METHOD: Non Phosphatic detergent wash/distilled water rinse Methanol Rinse

NOTES:



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
1/11/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

|                                                                                                                          |                                                                                                                    |        |
|--------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------|
| PRODUCER<br>Mid States Insurance, Inc.<br>110 S. 4th Street<br><br>Zionsville IN 46077                                   | CONTACT NAME: Cindy Dotts                                                                                          |        |
|                                                                                                                          | PHONE (A/C No. Ext): (317) 733-2600 FAX (A/C No.): (317) 733-2605<br>E-MAIL ADDRESS: cindyd@midstatesinsurance.com |        |
| INSURED<br>Environmental Forensic Investigations, Inc.<br>602 North Capitol Avenue<br>Suite 210<br>Indianapolis IN 46204 | INSURER(S) AFFORDING COVERAGE                                                                                      | NAIC # |
|                                                                                                                          | INSURER A: Liberty Surplus Insurance Group                                                                         |        |
|                                                                                                                          | INSURER B: Cincinnati Insurance Company                                                                            | 10677  |
|                                                                                                                          | INSURER C:                                                                                                         |        |
|                                                                                                                          | INSURER D:                                                                                                         |        |
|                                                                                                                          | INSURER E:                                                                                                         |        |
|                                                                                                                          | INSURER F:                                                                                                         |        |

COVERAGES CERTIFICATE NUMBER: CL128201570 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

| INSR LTR | TYPE OF INSURANCE                                                                                         | ADDL SUBR INSR WVD           | POLICY NUMBER     | POLICY EFF (MM/DD/YYYY) | POLICY EXP (MM/DD/YYYY) | LIMITS                                              |
|----------|-----------------------------------------------------------------------------------------------------------|------------------------------|-------------------|-------------------------|-------------------------|-----------------------------------------------------|
| A        | GENERAL LIABILITY                                                                                         |                              | UVE-DE-103252-112 | 8/1/2012                | 8/1/2013                | EACH OCCURRENCE \$ 1,000,000                        |
|          | <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY                                          |                              |                   |                         |                         | DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 50,000 |
|          | <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR                            |                              |                   |                         |                         | MED EXP (Any one person) \$ 10,000                  |
|          | <input checked="" type="checkbox"/> Pollution Liability                                                   |                              |                   |                         |                         | PERSONAL & ADV INJURY \$ 1,000,000                  |
|          | <input checked="" type="checkbox"/> Professional Liability                                                |                              |                   |                         |                         | GENERAL AGGREGATE \$ 2,000,000                      |
|          | GEN'L AGGREGATE LIMIT APPLIES PER:                                                                        |                              |                   |                         |                         |                                                     |
|          | <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC |                              |                   |                         |                         | \$                                                  |
| B        | AUTOMOBILE LIABILITY                                                                                      |                              | ENP0033990        | 8/1/2012                | 8/1/2013                | COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000    |
|          | <input checked="" type="checkbox"/> ANY AUTO                                                              |                              |                   |                         |                         | BODILY INJURY (Per person) \$                       |
|          | <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS                         |                              |                   |                         |                         | BODILY INJURY (Per accident) \$                     |
|          | <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS       |                              |                   |                         |                         | PROPERTY DAMAGE (Per accident) \$                   |
|          |                                                                                                           |                              |                   |                         |                         | Medical payments \$ 5,000                           |
| A        | UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR                                                   |                              | UME-DE-103253-112 | 8/1/2012                | 8/1/2013                | EACH OCCURRENCE \$ 2,000,000                        |
|          | <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE                      |                              |                   |                         |                         | AGGREGATE \$ 2,000,000                              |
|          | DED RETENTION \$                                                                                          |                              |                   |                         |                         | \$                                                  |
|          | WORKERS COMPENSATION AND EMPLOYERS' LIABILITY                                                             |                              |                   |                         |                         | WC STATUTORY LIMITS OTHER                           |
|          | ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)                               | <input type="checkbox"/> Y/N | N/A               |                         |                         | E.L. EACH ACCIDENT \$                               |
|          | If yes, describe under DESCRIPTION OF OPERATIONS below                                                    |                              |                   |                         |                         | E.L. DISEASE - EA EMPLOYEE \$                       |
| B        | Contractors Equipment                                                                                     |                              | ENP0033990        | 8/1/2012                | 8/1/2013                | \$6500 Limit<br>\$250 Deductible                    |

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

|                                    |                                                                                                                                                                                |
|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CERTIFICATE HOLDER<br><br>SPECIMEN | CANCELLATION<br>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. |
|                                    | AUTHORIZED REPRESENTATIVE<br><br>Greg Bixler/MSI7                                                                                                                              |