June 7, 2018

Mr. Jeff Ackerman
Wisconsin Department of Natural Resources
3911 Fish Hatchery Road
Fitchburg, WI 53711

RE: Revised Work Plan for Conducting Environmental Services for the DB Oak Property (former Thomas Industries) Located at 700-710 Oak Street in Fort Atkinson, Wisconsin — FEC Project No. 170503

Dear Mr. Ackerman:

As you are aware, ***Friess Environmental Consulting (FEC)*** prepared a work plan to conduct additional environmental services, including limited soil removal, vapor testing of the on-site building and adjacent to neighboring properties, additional rounds of groundwater sampling and, if necessary, additional monitoring well installation in the area of MW-12A. In your letter dated March 2, 2018, you requested more information regarding the methodologies and quality control procedures for the three components to the work plan. This revised work plan will address the limited soil removal and the vapor evaluation. We are going to collect an additional round of groundwater samples prior to proposing additional groundwater investigation.

Project Background

The DB Oak property is located at 700-710 Oak Street in Fort Atkinson, Wisconsin. The property is relatively flat at an approximate elevation of 790 feet above mean sea level (MSL). Regional topography near the site slopes to the east and south towards the Rock River. The DB Oak property is bounded by East Cramer Street to the north, Oak Street to the west-southwest, and the Union Pacific (formerly Chicago and Northwest) rail line to the east-southeast. The property consists of an 180,000-square foot building with surrounding driveways and parking lots. A large parking lot and driveway near the northwest corner of the building are accessible from North Main Street to the west and Oak Street to the south. A gravel driveway and loading dock area is at the east side of the facility building. The loading dock is accessible from an asphalt driveway and small parking lot at the south side of the property, and from a gravel driveway at the north side of the building. An undeveloped wooded parcel is between the driveway at the north side of the building and East Cramer Street. Lawn areas are south and west of the building. The site location and property features are shown on Figures 1 and 2.

Based on a review of information, extensive site investigation activities have been conducted for a release of chlorinated volatile organic compounds (CVOCs) from the above referenced site. In addition, remedial activities, including soil vapor extraction and in-situ biological reductive de-chlorination and

6637 North Sidney Pl., Milwaukee, WI 53209 | WWW.FECINC.US Phone 414.228.9815 Fax 414.228.9816

groundwater monitoring, have been conducted since 2004. FEC has been requested to evaluate the site conditions and provide this revised work plan.

Storm Water Outfall Evaluation and Limited Soil Removal

Surface water samples were collected from the storm drain at the southeast side of the DB Oak facility building, and surface water and sediment samples were collected from the storm water outfall and drainage swale at the southeast corner of the property. CVOCs were detected in water and sediment samples. Soil sample results indicate CVOCs within the upper two feet of sediment at the base of the swale. Results also show concentrations decline with depth and distance from the outfall. Contaminated sediment is believed to be caused by historic releases at the east side of the DB Oak building conveyed through the storm drain to the outfall and drainage swale. Sediment removal is proposed near the outfall to improve surface water and groundwater quality at the southeast corner of the DB Oak property. FEC will evaluate the source of stormwater impacts and possible vapor migration in the sewer. FEC will coordinate the removal and disposal of approximately 60 tons of CVOC impacted soil from the outfall of the drainage swale. FEC will document the procedures utilized by OSI Environmental (OSI) to remove and transport the soil to a solid waste landfill. The waste disposal will be conducted in accordance with the contained out ruling previously obtained for the project. A copy of the contained out letter is attached. FEC will collect soil samples during and at the completion of soil removal for field screening with a photoionization detector (PID), visual classification in accordance with the Unified Soil Classification System (USCS), and potential laboratory analyses. Up to six soil samples will be collected in accordance with our attached procedures from the base of the trench following the removal of the soil. The soil samples will subsequently be submitted under standard chain-of-custody protocol to a Wisconsin-certified laboratory for analyses of CVOCs, via the EPA method 8260. Following sample collection, a filter fabric and rip rap will be placed in the ditch to minimize future sediment migration and direct contact. The area of sewer evaluation and area of soil removal is shown on the attached Figure 3.

Sub-Slab and Sewer Vapor Evaluation

Vapor sampling is considered warranted within the southeastern portion of the building and at several locations downdgradient of the DB Oak Property. One sub-slab vapor sampling point will be installed in accordance with our attached procedures within the building near the eastern wall of the interior of the building. Shut-in testing and leak detection will be conducted in accordance with our attached procedures and the summa canister valve will be opened and the sample will be collected over approximately 30 minutes to allow for recommended flow rates.

In addition, three soil gas probes will be installed in the Lorman and Jefferson Street right-of ways at locations adjacent to the existing storm sewer. The

locations are shown on Figure 4. FEC will document the procedures utilized by Giles Engineering Associates, Inc. (Giles) to advance three soil gas probes (GP-1 to GP-3) to a maximum depth of approximately 10 feet below ground surface (bgs). The probes will be advanced with a truck-mounted soil probe direct-push sampling unit. Sampling locations are illustrated on the attached Figure 2. FEC will collect soil samples in accordance with our attached procedures at continuous 2-foot intervals for field screening with a photoionization detector (PID), visual classification in accordance with the Unified Soil Classification System (USCS), and potential laboratory analyses. Boring logs will be provided. The soil gas probes will be installed above the water table and constructed with a sand filter pack. A bentonite seal will be constructed above the sand and screen. A concrete seal will be placed at the surface. After allowing for the cement to set, FEC will conduct leak testing in accordance with our attached procedures and collect the soil gas samples. The soil gas samples will subsequently be submitted under standard chain-of-custody protocol to a Wisconsin-certified laboratory for analyses of CVOCs, via the TO-15 analytical method. The soil gas probe sampling would be conducted in June 2018. Upon receipt of the laboratory analytical results, FEC will compile and analyze the findings of the sampling and prepare a report to document the sampling procedures and findings.

Groundwater Sampling

Twelve groundwater monitoring wells, fourteen piezometers, and four temporary wells have been installed during the SI. Groundwater samples have also been collected and/or evaluated from fourteen soil probes and twelve monitoring wells installed on neighboring properties. Based on the results of the groundwater monitoring, additional well installation may be necessary in the area of MW-12. No VOCs were detected in MW-12 in March 2016 or in several groundwater grab samples collected near MW-12 in June 2015. There was an elevated detection of cis-1,2- dichlororethene (c-DCE) detected in the water sample collected from MW-12A. Prior to conducting additional site investigation, FEC will collect a round of groundwater samples in accordance with our attached procedures from MW-12A to confirm the impacts and evaluate the current site conditions. FEC will conduct the sampling of MW-12A in June/July 2018.

If impacts are confirmed above the groundwater quality ES, additional wells and piezometers would be installed to the south and east of MW-12A. The methodologies and quality control procedures for the additional wells component to the work plan will be provided under a separate cover.

Following completion of the above referenced scope of work, FEC will prepare a supplemental site investigation report for submittal to the WDNR, which will include the results of the vapor and groundwater testing, a technical evaluation of the natural attenuation and plume definition, and documentation of limited soils removal and disposal.

Estimated Timeframe

We will proceed following DNR approval, access to the property, coordination with the contractors and utility clearance. Following receipt and review of the laboratory analytical testing, FEC will provide the results of the testing to the DNR. We will also provide verbal reports, as information is available, to keep you updated regarding the status of the project.

The professionals at FEC have over twenty five years of experience in conducting numerous Phase I and Phase II Environmental Assessments, and soil and groundwater investigation and remediation projects. FEC conducts their services with that degree of care and skill ordinarily exercised by members of the environmental consulting community practicing under similar conditions at the same time in the same or similar locality. A copy of our signed certification is attached.

We appreciate this opportunity to submit this work plan for additional environmental consulting services. Please call us at (414) 228-9815 if you have any questions or if you need additional information.

Respectfully,

FRIESS ENVIRONMENTAL CONSULTING, INC.

Trenton J. Ott
Project Manager

Richard W. Frieseke, P.E.
President

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Certifications

“I, Richard Frieseke, 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."

_____ _____

Signature, title and P.E. number P.E. stamp

“I, Trenton Ott, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (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."

_____ _____

Signature and title Date

“I, Bryan Frieseke, hereby certify that I am a scientist as that term is defined in s. NR 712.03 (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."

_____ _____

Signature and title Date

PID SCREENING PROCEDURE

To evaluate soils for the presence of volatile organic vapors commonly emitted by volatile organic compounds (VOCs), soil samples are screened with an OVM Model 580B photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp calibrated to isobutylene. The PID provides a qualitative measure of volatile organic vapors with ionization potentials less than 10.6 eV, which include those present in the more volatile petroleum fuels and solvents. PID readings are measured in instrument units (iu).

A representative portion of soil is placed into an 8-ounce glass jar until the jar is approximately half full. The jar is sealed with a metal lid and allowed to warm prior to screening. Following agitation of the container, the lid of the container is slightly opened, the PID tip inserted into the headspace (area in the jar above the soil), and the highest reading on the meter recorded.

To evaluate the significance of PID readings, FEC generally considers PID readings greater than 10 iu an indication of potential contamination. It should be noted that lower readings do not necessarily indicate the absence of contamination, because nonvolatile contaminants may be present. PID readings are not as meaningful in such cases. In addition, the PID does not identify the types of chemicals present. The screening results should be evaluated by considering the contaminants present, the limitations of the PID meter, and physical observations (soil staining or odors).

SOIL SAMPLING PROCEDURES

The actual procedures utilized to collect soil samples at the subject site may vary slightly from FEC's standard procedures, described below, which are in general accordance with applicable industry standards (i.e., standards of the American Society for Testing and Materials {ASTM}) and Wisconsin Department of Natural Resources (DNR) regulations and guidelines).

Split-Barrel Sampling Procedure

The split-barrel sampling procedure as defined in ASTM D-1586 (84) consists of driving a 2-inch outside diameter (O.D.) thick-walled, hollow sampler into the soil a distance of 18 inches with a 140-pound hammer falling 30 inches. The value of Standard Penetration Resistance (N) is obtained by adding the number of blows of the hammer during the final 1 foot. The N value provides a qualitative indication of the relative density of granular soils (silts, sands, and gravel). The samples collected by this procedure provide a general indication of subsurface conditions and general stratigraphic change; and can be placed into containers for future classification, screening, and/or laboratory analysis.

The downhole drilling equipment is decontaminated prior to conducting the fieldwork to avoid the introduction of contaminants. The decontamination procedure consists of cleaning the augers and rods with a hot water pressure washer. The driller hand washes the split-barrel samplers prior to each use to avoid cross-contamination. The samplers are scrubbed in an Alconox detergent and municipal water solution, and double-rinsed with municipal water in two separate containers between each use.

Soil Probe Sampling Procedure

The soil probe sampling procedure consists of advancing a 2-inch outside diameter (O.D.), thick-walled, hollow sampler that contains a rigid plastic sheath. The probe sampler is hydraulically advanced into the soil at 4 to 5-foot vertical intervals. As the sampler is advanced, soil is collected in the plastic sheath. The samples collected by this procedure provide a general indication of subsurface conditions and general stratigraphic change, and can be placed into containers for classification, screening, and/or laboratory analysis.

The downhole soil probe equipment is decontaminated prior to conducting the fieldwork and between each probe advancement to avoid the introduction of contaminants or cross-contamination between locations. The decontamination procedure consisted of washing the downhole equipment in an Alconox detergent and municipal water solution and double rinsing with municipal water in two separate containers between each use.

Soil Sample Collection Procedure

Selected samples are chosen for laboratory submittal to quantify the degree of contamination based on the PID screening results and the depths from which the samples were collected. In general, the sample from each probehole/boring that exhibited the highest PID readings and was collected closest to the estimated water table depth, and/or that was collected from a deeper interval correlating to the vertical extent of contamination is submitted for laboratory analyses.

Selected soil samples collected are submitted to the laboratory for analyses depending on which laboratory parameters are to be analyzed in accordance with the sampling plan.

In addition to the samples collected, a trip blank is submitted to the laboratory for quality control analyses for each sampling round. The trip blank is a laboratory-supplied methanol sample that remains with the soil samples. Analysis of a trip blank can identify contamination that may occur as a result of outside influences (e.g., laboratory contamination).

The soil samples are submitted for laboratory analyses within holding times. Chain of Custody procedures are adhered to throughout sample collection, handling, and laboratory submittal as established by the DNR.

GROUNDWATER SAMPLING PROCEDURES

The actual procedures utilized to sample groundwater at the subject site may vary slightly from FEC's standard procedures, described below, which are in general accordance with Wisconsin Department of Natural Resources (DNR) regulations and guidelines.

Groundwater Monitoring Well Construction Procedure

Groundwater monitoring wells are constructed in general accordance with DNR requirements as presented in Wisconsin Administrative Code Chapter NR 141.

Each monitoring well consists of a 10-foot length of 2.0-inch inside diameter (I.D.), 2.38-inch outside diameter (O.D.), or machine-slotted (0.010 inch) polyvinyl chloride (PVC) screen with a threaded-joint solid PVC riser pipe extending from the screened portion of the well to the ground surface. The PVC riser pipe is cut off slightly below the ground surface and fitted with a locking cap for security. The annulus between each PVC pipe and outer wall of the borehole is backfilled with a commercially packaged coarse sand (to serve as a filter pack) from the base of the borehole to an elevation of approximately 1/2 foot above the screened portion of the well. A 1/2-foot layer of fine sand is placed above each filter pack, and a bentonite annular space seal is placed above the fine sand to a depth of 1 foot below the ground surface. The driller embeds a metal protector cover over each well in a concrete surface seal for security. Each protector cover consists of a flush mount, watertight, steel unit 9 inches in diameter and 12 inches in length.

Well Development and Purging Procedures

Wisconsin Administrative Code Chapter NR 141.21 requires that well development consist of the removal (purging) of ten well volumes of water or a sufficient volume to produce sediment-free water from wells that cannot be purged dry, or slowly removing the stagnant water in a well that can be purged dry. In accordance with a guidance document wells that are purged dry should be allowed to recover and, if time permits, should be purged a second time prior to sample collection.

Monitoring wells are developed following construction using a 1.6-inch O.D. disposable PVC bailer or submersible centrifugal pump. Purged water is collected, contained and properly disposed.

Groundwater Sample Collection Procedure

Groundwater monitoring wells are allowed to recover following development and prior to sample collection. To reduce the potential for cross-contamination, the wells suspected to be the least contaminated are sampled first during each sampling round.

Following well purging with a submersible centrifugal pump or a disposable PVC bailer, each sample is collected with a disposable polyethylene bailer and transferred to the appropriate containers depending on which laboratory parameters are to be analyzed.

In addition to the samples collected from the monitoring wells, a trip blank is submitted to the laboratory for quality control analyses for each sampling round. The trip blank is a laboratory-supplied water sample that remains with the groundwater samples. Analysis of a trip blank can identify contamination that may occur as a result of outside influences (e.g., laboratory contamination).

The water samples are stored on ice in a cooler and submitted to the laboratory within allowable holding times.

VAPOR SAMPLING PROCEDURES

Vapor Point Installation Procedure

Sub-Slab

To install the sub-slab vapor sampling point, a small diameter hole will be drilled through the concrete slab into the sub-slab aggregate. A 2-inch long stainless steel or brass sleeve will be inserted into the drill hole. The space between the top of the sleeve and the concrete floor will be sealed with hydraulic cement and allowed to set. After allowing for the cement to set, FEC will collect the sub-slab samples.

Soil Gas Probe

The probes will be advanced with a truck-mounted soil probe direct-push sampling unit. The soil gas probes will be installed above the water table and constructed with a sand filter pack. A bentonite seal will be constructed above the sand and screen. A concrete seal will be placed at the surface.

Vapor Sampling and Testing Procedure

Sub-Slab

In order to collect the sample, the probe cap will be replaced with a stainless steel or brass ball valve with male NPT threads and an outlet equipped with either compression fittings or hose barb to allow for attaching dedicated HDPE sample tubing. The threads of the valve will also be wrapped with Teflon tape prior to insertion and the valve will be closed. Dedicated sample tubing will be connected to the outlet of the sampling probe ball valve and routed through a “T” to a vacuum pump and to a 1-liter summa canister equipped with a 15-minute regulator. The lines running to the vacuum pump and summa canister will both be equipped with stainless steel or brass ball valves with compression fittings or hose barbs.

Soil Gas Probe

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Shut-in and Leak Detection Testing

With the valves of the summa canister and sampling probe closed, a shut-in test will be conducted by creating a vacuum of approximately 50 to 100 inches of water within the system and then closing the influent valve to the vacuum pump. If dissipation is observed on the vacuum gauge, the connections will be re-tightened and the test will be repeated. If no dissipation is observed after approximately 1 minute, the system will be considered leak-tight.

A helium shroud leak test will be conducted with a helium shroud and a Mark 9822 helium detector. The shroud will consist of a plastic container placed over the vapor sampling point. The shroud will have three holes drilled in the sides each fitted with rubber stoppers to allow for the insertion of HDPE tubing to fill the shroud with helium, monitor the helium within the shroud, and allow the tubing from the vapor sampling point to exit the shroud. Once the shroud is filled with helium to at least 40% by volume based on the field screening within the shroud, the helium meter will be connected to the vapor sampling point tubing and monitored for leaks. If leaks are detected during the screening, the surface seal will be repaired and retested.

Another method used to establish airtightness of probe seals is the Water Dam Method. The vapor probe (sub-slab or soil gas) will be sunk below the grade of the floor, and the core-hole above the probe will be used as a casing to hold water. If the water placed in the casing maintains a constant level, the test confirms that no leaks are present in the vapor sample probe.

If no leaks are detected during the helium shroud test or with the water dam method, the sampling apparatus will be arranged to isolate the line from the sampling probe valve to the regulator on the summa canister.

Selected vapor samples collected are submitted to the laboratory for analyses depending on which laboratory parameters are to be analyzed in accordance with the sampling plan.

The vapor samples are submitted for laboratory analyses within holding times. Chain of Custody procedures are adhered to throughout sample collection, handling, and laboratory submittal as established by the DNR.