



Rec'd WDNR/SER
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Pam Mylotta
Wisconsin Department of Natural Resources
2300 North Dr. Martin Luther King, Jr. Drive
Milwaukee, Wisconsin 53212-0436

Subject:

Scope of Work for Supplemental Investigation Activities, Former Hoffman's Valet Cleaners Property, 7215 West Center Street, Wauwatosa, Wisconsin.
BRRTS#02-41-307576 **FID 241083150**

ENVIRONMENT

Dear Ms. Mylotta:

Date:
19 September 2005

Thank you for the opportunity to meet with you and discuss the subject property. ARCADIS had submitted a report to you that summarized the results of a site investigation conducted at the property and recommended that the project be closed. In a letter dated July 28, 2005, you denied the request for closure and requested that additional investigation be completed. During our meeting, we discussed the results of the previous investigation and developed a conceptual scope of work for completing the investigation and pursuing site closure.

Contact:
Ed Buc

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In accordance with our discussions, ARCADIS has prepared a scope of work for supplemental investigation activities at the subject property. This letter presents a brief summary of the project background, the proposed scope of work, and a cost estimate for executing the work.

Our ref:
WI000843.0002

Costs associated with the investigation and remediation of the property are eligible for reimbursement through the Dry Cleaner Environmental Response Program (DERP). In accordance with the DERP, this scope of work will not be implemented until we receive written approval to proceed from the Wisconsin Department of Natural Resources (WDNR). The previous WDNR-approved site investigation work scopes have been completed. Based on changes made to the DERP in August 2005, it is understood that this project is eligible for an interim reimbursement payment. A DERP claim for eligible costs that have been incurred during those previous investigations is enclosed with this letter.

Project Background

The former Hoffman's Valet Cleaners property is located at 7215 West Center Street in Wauwatosa, Wisconsin. The site is developed with a commercial building with a basement located under the northern portion of the building. The property is bordered by Center Street to the north and an alley to the south. A narrow driveway

is located along the east side of the building. The adjacent properties to the east, south across the alley, and north across Center Street are occupied by residences. The adjacent property to the west is occupied by a commercial building.

ARCADIS has conducted three phases of investigation at the subject property. The first phase of investigation was completed in February 2002, in accordance with a work plan dated September 27, 2001. Two borings (GP-1 and GP-2) were advanced inside the dry cleaners near the cleaning machine. The two soil samples collected from the borings contained tetrachloroethene (PCE) at concentrations of 51 and 240 micrograms per kilogram ($\mu\text{g}/\text{kg}$). The concentrations were relatively low, but indicated that a release of dry cleaning solvent had occurred.

A second phase of investigation was completed in September 2002. The work was completed in accordance with the September 2001 work plan. Five additional soil borings were advanced on the property for the collection of soil and groundwater samples. The samples were analyzed for volatile organic compounds (VOCs). Consistent with the first phase of investigation, the detected concentrations of VOCs in both the soil and groundwater samples were relatively low. However, since PCE was detected in the groundwater samples, ARCADIS recommended that additional groundwater sampling be completed to further evaluate groundwater quality.

ARCADIS submitted a work plan for collecting additional groundwater samples, dated March 28, 2003. Based on comments from the WDNR in a letter dated July 13, 2003, the work plan was modified and resubmitted on September 17, 2003. Approval to proceed with this phase of investigation was received from the WDNR in an electronic mail message dated January 13, 2004.

The three monitoring wells were installed in January 2005. One soil sample from each boring was collected for analysis of VOCs. The monitoring wells were then developed and sampled, and the groundwater samples analyzed for VOCs. Consistent with the previous groundwater sampling activities, the groundwater samples from the monitoring wells did not contain detectable concentrations of VOCs. However, the soil samples collected from two of the monitoring well boreholes (MW-1 and MW-2) contained concentrations of PCE exceeding 1,000 $\mu\text{g}/\text{kg}$.

The soil analytical results from the monitoring well boreholes was inconsistent with the soil analytical data collected from the two previous rounds of investigation. Based on the data and the absence of elevated concentrations of PCE in soil samples collected immediately adjacent to the dry cleaning equipment, ARCADIS concluded that the detected PCE concentrations at MW-1 and MW-2 were isolated and did not warrant additional investigation. A site investigation report was prepared, and recommended that the project be closed.

In a letter dated July 28, 2005, the WDNR denied case closure and requested that additional investigation be completed. During a July 26, 2005 telephone conversation with you and our meeting on September 6, 2005, we discussed the results of the previous investigation and developed a conceptual scope of work for supplemental investigation. Based on our conversations, it is understood that the primary issues are 1) whether the PCE detected in soil at MW-1 and MW-2 is potentially due to migration along a sand unit beneath the property, and 2) whether such impacts may represent a vapor intrusion risk. In addition, you requested that additional groundwater monitoring be completed to confirm that groundwater impacts are not present at the monitoring well network.

Scope of Work

In accordance with our conversations, ARCADIS has developed a scope of work for supplemental investigation at the subject property. This scope of work also includes provisional tasks that will only be completed if impacts are found during the initial scope of work. ARCADIS will complete the following tasks:

- Obtain subcontractor bids for drilling and laboratory services.
- Advance one boring in the basement beneath the north side of the building for the collection of two soil samples.
- Install a subslab vapor probe, and collect a vapor sample from the probe and from the basement floor drain or sump, if present.
- Collect one round of groundwater samples from the existing monitoring well network.
- Document whether the residence on the east adjacent property has a basement and whether the basement has a sump.
- Prepare a summary report.

If soil impacts, groundwater impacts, and/or vapor impacts are detected, supplemental investigation activities may be required. In accordance with our discussions, the following provisional tasks have been included to address these issues:

- If vapor impacts are detected beneath the basement, a vapor sample may be collected from the east adjacent residence.

- Up to three additional rounds of groundwater samples may be collected, based on the findings of the supplemental investigation.

In accordance with the DERP, the scope of work will not be implemented without receipt of written authorization from the WDNR. The provisional tasks will be implemented on an as-needed basis in accordance with discussions with the WDNR.

A detailed description of the tasks and provisional tasks are provided below.

Subcontractor Selection

The DERP requires that subcontractors be retained through competitive bidding. ARCADIS will obtain bids from three qualified drillers and three qualified laboratories for the services needed to complete the supplemental investigation. The lowest-cost service providers will be selected to execute the work.

Advancement of Soil Boring

One boring will be advanced through the floor slab in the basement, which is beneath the northern portion of the building. A drilling contractor will be retained to core through the concrete slab and advance a sampler. Due to space constraints, portable tools will be used; these tools can typically collect samples to a depth of approximately 8 to 10 feet.

Soil samples will be collected continuously from the boring, logged by ARCADIS, and field screened with a flame ionization detector. A boring log will be prepared. Two soil samples will be collected for analysis. One soil sample will be collected from the native soil just beneath the basement floor slab. The second soil sample will be collected from the lower portion of a sand unit that was previously identified beneath the site, near the interface between the sand layer and the underlying clay unit.

Each soil sample will be transferred to clean, laboratory-supplied containers with appropriate preservative, and placed in a cooler with ice. The samples will be shipped on ice to the subcontracted analytical laboratory under standard chain-of-custody procedures. The soil samples will be analyzed for VOCs using United States Environmental Protection Agency (U.S. EPA) Method 8260.

After the soil samples are collected, the borehole will be backfilled with the soil cuttings and bentonite. The flooring will then be repaired with concrete.

Collection of Vapor Samples

Two vapor samples will be collected from the basement of the building on the property. One sample will be collected from immediately beneath the floor slab. A hammer drill will be used to core a hole through the concrete and into the fill material beneath the slab. A stainless steel sample port will be installed in the hole and set into place using grout. The vapor sample will be collected using a summa canister. Once the probe is installed, polyethylene tubing will be used to connect the summa canister inlet to the sample port. The inlet valve on the summa canister will be opened to collect a vapor sample. Because the summa canister contains a vacuum, opening the valve will draw in an aliquot of subslab vapor without the use of a sample pump. When the pressure gauge on the summa canister indicates atmospheric pressure, the valve will be closed and the summa canister will be packaged for shipment to the analytical laboratory.

A second vapor sample will be collected from a sump or floor drain located in the basement. The sample will be collected by first sealing the drain or sump with a rubber mat fitted with a sample port. Once the mat is in place, polyethylene tubing will be used to connect the summa canister inlet to the sample port. The inlet valve on the summa canister will be opened to collect a vapor sample. When the pressure gauge on the summa canister indicates atmospheric pressure, the valve will be closed and the summa canister packaged for shipment to the analytical laboratory. The vapor samples will be analyzed for VOCs using U.S. EPA Method TO-15.

Collection of Groundwater Samples

One round of groundwater samples will be collected from the three monitoring wells on the property. Groundwater samples will be collected using low flow sampling techniques.

Prior to sampling, the water level in each monitoring well will be measured and recorded using an electronic water level meter. Each monitoring well will be sampled by first lowering a downhole probe into the water column. Water will then be extracted using a peristaltic pump operating at a low flow rate (less than 100 milliliters per minute). The downhole probe will measure biogeochemical parameters including pH, temperature, conductivity, dissolved oxygen and oxidation reduction potential. Readings will be collected at 15-minute intervals, and once the readings stabilize, a groundwater sample will be collected directly into laboratory-supplied containers with the appropriate preservative. The samples will be placed in a cooler with ice and shipped to the laboratory using standard chain-of-custody procedures. The groundwater samples will be analyzed for VOCs using U.S. EPA Method 8260.

Adjacent Residence

As previously noted, there is a residential dwelling located on the east adjacent property. During the field activities, ARCADIS will note the address of the residence and details regarding its construction. The purpose of the observations will be to determine whether the residence has a basement and whether a sump may be present. No attempt will be made at this time to contact the property owner or to enter the residence; all observations will be made from the dry cleaner property and adjacent public right-of-ways.

Reporting

Following completion of the field activities and receipt of analytical results, ARCADIS will contact you to provide a brief verbal summary of the results of the supplemental investigation. Based on our conversation, ARCADIS will then prepare a written letter report summarizing the results of the supplemental investigation. The letter report will also provide recommendations regarding the potential for site closure.

If the soil samples, vapor samples, and/or groundwater samples contain significant concentrations of VOCs, then supplemental investigation activities will be needed. Some limited additional investigation may be needed based on the results of the vapor and groundwater samples. The following sections present provisional tasks that may be implemented. The need for these tasks will be based on discussing the supplemental investigation results with you. A written report would not be prepared until the provisional tasks are also completed. If the soil samples collected from beneath the basement contain elevated concentrations of VOCs, then additional soil sampling may be warranted. These activities will be addressed in a separate work plan.

Vapor Sampling

If VOCs are detected in the vapor samples collected from the basement of the dry cleaner building, it may be necessary to collect a vapor sample from the adjacent residence to evaluate whether the VOCs detected in the soil at MW-1 may be migrating into the residence through vapor intrusion.

The vapor sample will be collected from a sump or floor drain in the basement of the residence. The sample will be collected by first sealing the drain or sump with a rubber mat fitted with a sample port. Once the mat is in place, polyethylene tubing will be used to connect the summa canister inlet to the sample port. The inlet valve

on the summa canister will be opened to collect a vapor sample. When the pressure gauge on the summa canister indicates atmospheric pressure, the valve will be closed and the summa canister packaged for shipment to the analytical laboratory. The vapor samples will be analyzed for VOCs using U.S. EPA Method TO-15

Additional Groundwater Monitoring

No VOCs were detected in the groundwater samples collected from the monitoring wells in January 2005. If VOCs are detected in the monitoring wells during the supplemental investigation, then additional sampling will be needed to evaluate trends in groundwater quality. This provisional task assumes that up to three additional rounds of groundwater samples will be collected from the three monitoring wells. The samples will be collected in the same manner as previously described. A letter report will be prepared after the monitoring activities are completed. The letter report will present the results of the monitoring activities and recommendations regarding additional monitoring or site closure.

Project Cost

The estimated cost to complete the supplemental investigation is \$6,355. Table 1 presents a breakout of unit rates in accordance with the DERP. The rates presented in Table 1 are consistent with those provided in the previous investigation work plans.

Table 2 presents the estimated cost for the provisional tasks. These tasks will be executed on an as-needed basis based on discussions with you and Mr. and Mrs. Hoffman.

Reimbursement Claim

Until August 2005, the costs associated with the investigation phase could not be submitted for reimbursement until the investigation was completed and approved by the WDNR. As of August 2005, interim investigation claims can be submitted, provided that 1) additional investigation is required, 2) a work plan is submitted for the new phase of investigation, 3) the previous phase of investigation has been completed, and 4) at least \$15,000 in eligible costs have been incurred.

This project has satisfied all of the requirements to qualify for an interim payment. A completed DERP claim is enclosed with this work plan. As we have discussed, Mr. Hoffman has been paying project invoices using a credit card. As a result, "proof of payment" such as cancel checks is not available. In accordance with our discussions,

ARCADIS has prepared a summary of project invoices for which we have received payment and a signed statement that we have received payment.

Closing

We appreciate the opportunity to meet with you to develop a scope of work to address the remaining issues associated with this project. In accordance with the DERP, this scope of work will not be executed until written approval to proceed is received from you. If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

ARCADIS G&M, Inc.



Edmund A. Buc, P.E.
Senior Engineer

Copies:

Ralph Hoffman

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Table 1. Cost Estimate for Supplemental Site Investigation Services, Hoffman's Valet Cleaners, 7215 West Center Street, Wauwatosa, Wisconsin.

ARCADIS Services			
<u>Subcontractor Procurement</u>			
Scientist II	2 hours @ \$80/hr		\$160
		Subtotal	\$160
 <u>Advancement of Soil Boring</u>			
Senior Engineer	2 hours @ \$127/hr		\$254
Scientist II	6 hours @ \$80/hr		\$480
Field Equipment			\$300
		Subtotal	\$1,034
 <u>Collection of Vapor Samples</u>			
Scientist II	3 hours @ \$80/hr		\$240
Field Equipment			\$300
		Subtotal	\$540
 <u>Collection of Groundwater Samples (Three monitoring wells, one round)</u>			
Scientist II	8 hours @ \$80/hr		\$640
Field Equipment			\$400
		Subtotal	\$1,040
 <u>Site Investigation Report</u>			
Senior Engineer	2 hours @ \$127/hr		\$254
Scientist II	16 hours @ \$80/hr		\$1,280
Word Processing	3 hours @ \$56/hr		\$168
Draftsperson	4 hours @ \$81/hr		\$324
		Subtotal	\$2,026
		<i>Subtotal, ARCADIS Services</i>	\$4,800
 Subcontractor Services			
<u>Drilling Services</u>			
Mobilization	Lump sum		\$250
Concrete Coring	1 core @ \$75/ea		\$75
Interior Boring	10 feet @ \$15/ft		\$150
Decontamination	Lump sum		\$100
Borehole Abandonment/Patch	Lump sum		\$75
		Subtotal	\$650
 <u>Analytical Testing Services</u>			
VOCs (Soil)	2 samples @ \$65/ea		\$130
VOCs (Groundwater)	3 samples @ \$65/ea		\$195
VOCs (vapor)	2 samples @ \$290/ea		\$580
		Subtotal	\$905
		<i>Subtotal, Subcontractor Services</i>	\$1,555
		TOTAL	\$6,355

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Table 2. Cost Estimate for Supplemental Site Investigation Provisional Tasks, Hoffman's Valet Cleaners, 7215 West Center Street, Wauwatosa, Wisconsin.

ARCADIS Services			
<u>Collection of Vapor Sample</u>			
Scientist II	3 hours @ \$80/hr		\$240
Field Equipment			\$300
		Subtotal	\$540
 <u>Collection of Groundwater Samples (Three monitoring wells, three rounds)</u>			
Scientist II	24 hours @ \$80/hr		\$1,920
Field Equipment			\$1,200
		Subtotal	\$3,120
 <u>Summary Report</u>			
Senior Engineer	2 hours @ \$127/hr		\$254
Scientist II	16 hours @ \$80/hr		\$1,280
Word Processing	3 hours @ \$56/hr		\$168
Draftsperson	4 hours @ \$81/hr		\$324
		Subtotal	\$2,026
		<i>Subtotal, ARCADIS Services</i>	<u>\$5,686</u>
 Subcontractor Services			
<u>Analytical Testing Services</u>			
VOCs (Groundwater)	9 samples @ \$65/ea		\$585
VOCs (vapor)	1 sample @ \$290/ea		\$290
		Subtotal	\$875
		<i>Subtotal, Subcontractor Services</i>	<u>\$875</u>
		TOTAL	\$6,561