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August 24, 2009

Ms. Annette Weissbach
Wisconsin Department of Natural Resources
Northeast Region Headquarters
2984 Shawano Avenue
P.O. Box 4480
Green Bay, Wisconsin 54307-0448

Subject: Revised Work Plan for Voluntary Site Assessment, Former Paragon Electric Property, 606 Parkway Boulevard, Two Rivers, Wisconsin – WDNR BRRTS No. AECOM Project No. 13154-001

06-36-551669

Dear Ms. Weissbach:

Thank you for your letter dated December 30, 2008, commenting on the *Phase I Environmental Site Assessment* and the *Work Plan for Site Assessment* for the former Paragon Electric property located at 606 Parkway Boulevard in Two Rivers, Wisconsin. Based on your comments and our subsequent telephone conversations, we have prepared this Revised Work Plan for site assessment work under the Voluntary Party Liability Exemption (VPLE) process.

We are enclosing an electronic copy of the *Phase I Environmental Site Assessment* report dated September 30, 2008 (submitted with the original work plan). The *Phase I Environmental Site Assessment (Phase I)* was completed for the site in accordance with ASTM Standard E1527-05. Based on the findings of this Phase I and your comments in the December 2008 letter, we have prepared the following revised work plan to further assess environmental conditions at this property for the purpose of obtaining a Certificate of Completion. The revisions to Phase I figures requested by the WDNR are included in the enclosed Work Plan figures.

BACKGROUND

The former Paragon Electric property is approximately 26.7 acres in area. Site features include the former manufacturing/office building, two asphalt parking areas, an access road and grassy areas as shown in Figure 1. Figure 2 provides details of the manufacturing building interiors, locations of recognized environmental conditions identified in September 2008 Phase I, and utility locations.

The Phase I identified one existing and seven former storage tanks on the site. As indicated on Figure 2, and summarized in the table below, five of these tanks are underground storage tanks (USTs) and the remaining three are aboveground storage tanks (ASTs). Decommissioning and post-decommissioning sampling documentation is available for four of the five former USTs.

Summary of Storage Tanks

Tank Description	Location	Year of Decommissioning	Summary of Post-decommissioning Sampling
Former 12,000-gallon fuel oil UST	Outside the south wall of the former maintenance area	1990	Six soil samples were collected from three soil borings (SIG-1, SIG-2, SIG-3 shown on Figure 2). All soil samples were analyzed for TPH and one sample from SIG-2 was analyzed for VOCs. All parameters were below detection limit.
2,000-gallon cutting oil UST	Near the east wall of the Machine Shop area	1989	Two side-wall soil samples from the UST excavation were analyzed for TPH and VOCs. TPH of 8.3 mg/kg were detected; VOCs were not detected.
1,050-gallon fuel oil AST	In the storage structure on the south side of the manufacturing building storage area	Existing	--
Former 550-gallon cutting oil UST	In the northeast corner of the Press Room near the Degreasing Pit	1989	Four soil samples from the UST excavation – two from the base, and twp from side walls, were analyzed for TPH and VOCs. TPH was below detection; TCE of 11 and 85 mg/kg were detected in the sidewall samples. Other VOCs were below regulatory limits.
Former 550-gallon mineral spirits UST	In the Receiving Dock area on the south side of the manufacturing building	1989	Three soil samples were collected from three soil borings (CBC-1, CBC-2, CBC-3 shown on Figure 2). All soil samples analyzed for TPH. TPH of 5.9 mg/kg was detected in CBC-3. Additionally, two excavation base samples were analyzed for VOCs and TPH. TPH of 79 and 180 mg/kg were observed, but detected VOCs were below regulatory limits.
Former 540-gallon mineral spirits AST	In the southeast corner of the Machine Shop, inside the south wall of the manufacturing building.	Not available	No sampling. Located on concrete floor inside the manufacturing building. Staining or evidence of a release was not observed.
Former 540-gallon cutting oil AST	In the northeast corner of the Machine shop.	Not available	No sampling. Located on concrete floor inside the manufacturing building. Staining or evidence of a release was not observed.
Former 250-gallon UST	Information unavailable	Information unavailable	Information unavailable.

Notes:

TPH – Total Petroleum Hydrocarbons;
VOCs – Volatile Organic Compounds

A summary of the soil sampling analytical results is provided in the enclosed Table 1.

PROPOSED SCOPE OF SAMPLING

The following are the areas of recognized environmental conditions and the proposed soil and groundwater sampling plan to evaluate these areas. Figure 2 illustrates the sampling locations as proposed in this work plan.

1) A 550-gallon cutting oil tank, was excavated in 1989, and post excavation soil samples indicated the presence of trichloroethene at 85 milligram/kilogram (mg/kg). The residual contaminant level (NR 720 direct contact) for trichloroethylene (TCE) at a non-industrial facility is 14 microgram per kilogram (ug/kg).

   A soil boring, SB-1, will be advanced to the water table in this area (anticipated at 10-feet below ground surface [bgs]). Soil samples will be field screened using a flame ionization detector (FID) or a photo ionization detector (PID). One soil sample from the 0 to 4 feet interval and another soil sample from the depth interval of highest FID/PID measurement or just above the water table will be submitted to a state certified laboratory for VOCs analysis (EPA Method 8260) and polyaromatic hydrocarbon (PAHs) analysis (EPA Method 8270) to confirm post-remedial soil conditions.

2) The former degreaser pit is suspected to be the primary source of the historic widespread TCE contamination at the site. It is also in the area where soil vapor extraction was performed as remedial action.

   Two soil borings, SB-2 and SB-3, will be advanced to the water table in this area (anticipated at 4-feet bgs). SB-2 will be completed within or near the degreaser pit and SB-3 will be completed in the area of former soil vapor extraction. Soil samples will be field screened and two samples will be submitted to a state-certified laboratory for VOC analysis to confirm post-remedial soil conditions.

3) A 550-gallon mineral spirits tank, was excavated in 1989, and at that time one post excavation sidewall sample had 180 mg/kg of TPH. TPH provides a general indication of petroleum compound concentrations. It is not compound specific and does not have an established residual contaminant level (RCL) in the State of Wisconsin.

   One soil boring SB-4, advanced to the water table (approximately 10-feet bgs), is proposed in this area. Soil samples will be field screened using an FID or a PID. One soil sample from the 0 to 4 feet interval and another soil sample from the depth interval of highest FID/PID measurement or just above the water table will be submitted to a state certified laboratory for VOCs and PAHs analysis to confirm post-remedial soil conditions

4) The area south of the Press Room is the location of suspected TCE releases reported to have occurred in 1984 and 1989 (BRRTS No. 04-36-039873).

   One soil boring SB-5, advanced to the water table (approximately 10-feet bgs), is proposed in this location. Soil samples will be field screened using an FID or a PID. One soil sample from the 0 to 4 feet interval and another soil sample from the depth interval of highest FID/PID measurement or just above the water table will be submitted to a state certified laboratory for VOCs analysis.

5) During Phase I site assessment, a 1,050-gallon, fuel oil AST was identified in a storage shed on the subject property. There was evidence of staining on the floor.

   We propose advancing two soil borings (SB-6 and SB7) and installing a temporary monitoring well (in SB-6) in this area. Soil Boring SB-7 will be advanced to the water table (approximately 10-feet bgs) and SB-6 will be advanced to intersect the water table. From each boring, one soil sample from the 0 to 4 feet interval and another soil sample from the depth interval of highest FID/PID measurement or just above the water table will be submitted to a state certified laboratory for VOCs and PAHs analysis to confirm post-remedial soil conditions. A groundwater sample from the temporary well will be collected and analyzed for VOCs and PAHs.

6) During the Phase I, paint was observed on the walls, floors, and the floor drains in the former painting area and paint vault.

   To address this potential concern, we propose advancing two soil boring (SB-8 and SB-9) to the water table (approximately 10-feet) and installing one temporary monitoring well (at SB-9) to intersect the groundwater table. Soil samples will be field-screened and one sample from the 0 to 4 feet interval and another sample (if needed) from the depth interval of highest FID/PID measurement or just above the water table will be submitted to a state certified laboratory for VOCs and lead analyses (EPA Method 6010). A groundwater sample will also be collected and submitted to the laboratory for VOCs and lead analysis.

7) Review of the WDNR files for the subject property indicated the locations of various manufacturing processes within the former Paragon Electric building. The WDNR expressed concern about possible dumping of chemicals used in the manufacturing processes outside the buildings.

   To address this, we propose installing three borings outside the exits from manufacturing areas where waste chemicals generating processes could have occurred in the past. The potential areas of concern and the outside borings to address possible "backdoor" discharge of chemicals are:

   - Paint Area (SB-10),
   - Press Room (SB-5),
   - Machine Shop (SB-11),
   - Waste Storage Area (SB-6 and SB-7), and
   - Motor Assembly Area (SB-12) (the boring will be located outside one of the two exits, where backdoor disposal is determined to be more likely based on site conditions).

   Soil Borings SB-10, SB-11, and SB-12 will be advanced to the water table (approximately 10-feet). Soil samples will be field-screened and two samples from each boring, one soil sample from the 0 to 4 feet interval and another soil sample from the depth interval of highest FID/PID measurement or just above the water table will be analyzed in the laboratory for VOCs and Resource Conservation and Recovery Act (RCRA) metals.

8) The Receiving Dock area located between the Machine Shop and the Press Room has the potential for impacts during loading/unloading of chemicals that were used at the facility.

   Soil Boring SB-4, proposed near the Mineral Spirits tank will also serve to evaluate the soil for loading/ unloading related RCRA metals and cyanide (EPA Method 335.2).

9) Review of WDNR files for the subject property indicated that hazardous and non-hazardous materials were utilized and/or stored on site. The material included oil, waste paint, chlorinated solvents, flammable paint sludge, naphtha solvent, toluene, mercury, and waste cyanide solution. Waste (hazardous and solid) was formerly stored in a storage area located on the south side of the structure on the subject property. A trench drain and isolated catch basin were constructed in this area to capture hazardous or solid waste materials in the event of a release. At the time of the site reconnaissance, AECOM did not observe evidence of a release.

   To confirm possible historical release(s) in the former hazardous and solid waste storage area, we propose advancing two soil borings (SB-13 and SB 14) near the trench drain area. Soil Boring SB-13 will be advanced to the water table (approximately 10-feet bgs) and Soil Boring SB-14 will be advanced to intersect the water table. Soil samples will be field-screened and one sample from the 0 to 4 feet interval and another sample from the depth interval of highest FID/PID measurement or water table will be analyzed in the laboratory for VOCs, RCRA metals, and cyanide. A groundwater sample will also be collected from SB-14 and submitted to the laboratory for VOCs, RCRA metals and cyanide analysis.

10) A 2,000-gallon cutting oil UST was removed from the Machine Shop area in 1989. Two side wall samples from the UST excavation were collected. These samples did not contain detectable VOCs.

Because base samples were not collected at this location, one boring SB-15 will be located in the gravel driveway located east of the Machine shop to identify possible leaks from the base of the UST. Soil Boring SB-15 will be advanced to the water table (approximately 10-feet bgs). Soil samples will be field-screened and one sample from the 0 to 4 feet interval and another sample from the depth interval of highest FID/PID measurement will be analyzed in the laboratory for VOCs.

11) Indoor Vapor Intrusion: A potential for indoor vapor intrusion exists at the site due to pre-remediation concentrations of VOCs in groundwater. Additionally, possible residual soil contamination under the building slab may also contribute to indoor vapor intrusion of VOCs. To characterize the risk associated with this exposure pathway, we are proposing to conduct high purge volume (HPV) sub-slab vapor sampling at five new locations indicated on Figure 2 (HPV-1 through HPV-5) and mini-HPV tests at each of the four former soil vapor extraction wells (V-1, V-2, V-3, and V-5). Analytical samples collected during HPV testing will be analyzed for VOCs via EPA Method TO-15. In addition, field screening with a PID will be conducted throughout the tests to assess whether the trend is steady, increasing or decreasing, which provides information regarding the distribution of vapors between and beyond the probe locations.

12) Background Samples: The WDNR requested that two soil samples be collected from areas that are likely not affected by manufacturing operations to represent background samples. Although AECOM does not perceive background sampling to be necessary without knowing if manufacturing operations have impacted the soil at the site, we are including background sampling in the scope to address the WDNR's request. Two shallow soil samples will be collected and analyzed for VOCs and RCRA metals.

13) Transformers: AECOM has not performed a formal transformer survey at the site. During soil and groundwater sampling activities, AECOM will survey the site for transformers and collect one or two soil samples, if transformers are identified. These soil samples will be shallow (0 to 2 feet depth) and will be analyzed for polychlorinated biphenyls (PCBs).

14) Miscellaneous: AECOM will verify the presence/absence of a basement. Preliminary interviews with site personnel and available documents indicate that a basement is not present under the manufacturing building. As requested by the WDNR AECOM will complete a survey of all existing monitoring wells to document their condition. AECOM will also attempt to obtain additional information about the former 250-gallon UST and advance one soil boring in the area of the UST, if practical. AECOM will confirm that the floor drains identified in the Phase I lead to the sanitary sewer. If required, dye or smoke testing will be performed.

In summary, this work plan includes the following sampling:

- Collecting 32 VOC soil samples, 16 RCRA metals soil samples, 4 additional soil samples for lead, 8 PAH soil samples, 6 cyanide soil samples.
- Collecting 3 VOC groundwater samples, 1 PAH, 1 RCRA metals, 1 additional lead and 1 cyanide groundwater sample.
- Possibly collecting 14 groundwater samples from existing monitoring wells and soil samples near 250-gallon UST. It is our understanding that groundwater samples from the existing monitoring wells are not required as part of the VPLE sampling if the designation of the site use remains light industrial. Soil samples from the 250-gallon UST will be collected if the location of the UST is identified.
- Collecting QA/QC samples.
- Collecting 5 subsurface soil vapor samples for VOC analysis. Four additional vapor samples may be collected from existing vapor extraction wells, if field screening reveals detectable PID measurements.

Soil samples collected during excavation of 12,000-gallon diesel fuel UST did not contain concentrations in exceedance of the residual contaminant levels. Therefore, we are not proposing soil sampling at this location.

FIELD PROCEDURES

Soil Sampling

Soil borings will be advanced using hydraulic push boring technique. Soil samples will be collected continuously at two-foot intervals and sub-samples placed in a glass jar for field screening. Field screening will be performed using a flame ionization detector. Two soil samples will be collected for laboratory analysis from each soil boring; one from 0 to 4-foot depth interval and another based on the highest field screening measurement. If field screening results are not detectable, the deepest, unsaturated soil sample will be submitted for laboratory analysis. Please note that the second sample will not be collected if the unsaturated soil thickness is less than 6 feet. Soil borings will be abandoned in accordance with conditions of Chapter NR141, Wisconsin Administrative Code after sampling is completed.

Soil cuttings will be containerized and based on the soil analytical results, the soil cuttings will be disposed of appropriately.

Monitoring Well Sampling

Temporary monitoring wells will be constructed of 1-inch diameter, polyvinyl chloride riser with a 10-foot screen. Prior to sampling, depth to groundwater measurements will be obtained from the monitoring wells using an electronic water level indicator. The water level indicator will be adequately decontaminated between monitoring wells by rinsing with distilled water. Monitoring wells will be purged and then sampled similar to previous sampling events at the site. Dedicated disposable equipment will be used to collect groundwater samples. The samples will be appropriately preserved and shipped under standard Chain-of-Custody to a State Certified laboratory for analysis.

One duplicate sample will be collected every 20 samples for QA/QC analysis. Additionally a field blank and a trip blank will be prepared for analysis. The laboratory is required to have additional internal quality control measures through matrix spikes, duplicates and laboratory control samples.

The temporary wells will be left in place until laboratory results are available. After which, the well will be properly abandoned in accordance with conditions of Chapter NR141, Wisconsin Administrative Code.

Purge water will be containerized, sampled and disposed of appropriately.

High Purge Volume Sub-Slab Vapor Testing

HPV sub-slab vapor testing will be conducted to assess the potential for vapor intrusion. Unlike conventional sub-slab sampling (which provides essentially a "point measurement"), HPV testing provides information over a broader area by removing a larger volume of soil gas. This minimizes the risk of failing to identify areas of elevated vapor concentrations that may exist between and beyond probe locations.

The HPV testing will consist of removing soil gas from beneath the floor slab at a consistent flow rate, estimated to be about 25 to 100 standard cubic feet per minute (scfm) for a period of up to 2 hours. This would remove sufficient volume of gas from a 6-inch gravel layer with 30% porosity (typical slab sub-grade fill) to withdraw all soil gas beneath the slab within a radial distance of about 25 to 50 feet. During this test, the concentration of extracted VOC vapors will be monitored as a function of time,

which will provide data that can be used to assess the distribution of between and beyond the probe locations and a sample will be collected for laboratory analysis to assess concentrations of individual compounds. Vacuum propagation monitoring will also be conducted during each HPV test at communication test points to evaluate the radius of influence.

The mini-HPV tests at the former SVE wells will be run for only ten minutes, samples for laboratory analysis will only be collected if there are clearly identified PID detections and vacuum monitoring will not be performed. The rationale for this is that the areas around each SVE well are expected to have been effectively remediated; therefore we would not anticipate any substantial PID readings. If conditions are different than expectations, there is flexibility to extend the tests to longer duration through real-time decision-making.

Prior to testing, new sub-slab probes will be installed. The new sub-slab probes will consist of a 1.5-inch brass pipe, coupling, and plug. Two-inch diameter holes will be cored through the concrete in each of the 5 new HPV test locations. The underlying fill and geologic materials will be removed to create a small sump to enhance flow. The sub-slab probe will be set in the drilled hole through the concrete and grouted into place using quick setting swelling cement. Cement seals will be allowed to set before sampling (typically less than 15 minutes).

The HPV testing will be conducted by setting up the apparatus shown in Figure 2. A small manifold consisting of a sample port and vacuum gauge will be connected to the sub-slab probe. A four-foot section of 2-inch diameter PVC pipe will extend from this connection to provide a near-linear flow regime for measurement of the gas velocity using a Dwyer 471 thermal digital anemometer, which will be multiplied by the internal cross-sectional area of the pipe to calculate the flow rate. The applied vacuum at the sub-slab probe will also be monitored periodically for the duration of the test. The ratio of the flow rate to the applied vacuum is the specific capacity, which is linearly proportional to the permeability of the sub-slab material. A bleed valve is located prior to the Shop-Vac®, and will be opened if the fan or vacuum begins to labor or overheat. The extracted soil gas will be discharged outside the building via a discharge line.

During the testing, slip-stream samples of the extracted soil gas will be collected using a lungbox and 1 liter (L) Tedlar™ bags for field screening with a PID detector for total VOCs, and one sample will be collected in a 1L Liter Summa canister with a flow controller calibrated to collect a sample over a period of 2 hours. The laboratory testing methods provide information on concentrations of individual chemicals and a lower reporting limit than can be achieved with the PID. Analysis will be conducted by USEPA method TO-15 with reporting limits of approximately 0.5 parts per billion by volume (ppb_v).

Communication test points will consist of a piece of ¼-inch Nylaflow™ tubing sealed with modeling clay into a nominal ½-inch diameter hole drilled through the floor slab using a hammer drill. Two to three communication test points will be placed at radial distances of approximately 10 to 30 feet from each probe. The exact distance and placement of monitoring points will be selected during HPV testing. Two sets of vacuum measurements will be collected during HPV testing from each monitoring point using a digital micromanometer with data-logging capabilities. Each set of measurements will be a drawdown and recovery cycle resulting from turning the fan on for about one minute and off again until the readings return to near-zero. The vacuum monitoring data will be used to assess the total area influenced by the HPV test at each location. If there is no clearly measurable vacuum, chemical smoke tubes will be used to assess whether there is downward flow into the communication test point (which can occur at very modest vacuum levels, too low to easily measure). Smoke tubes will also be used to determine the flow of air from the building through obvious joints and cracks in the floor.

After all the testing is complete, the sub-slab probes and vacuum monitoring points will be removed and sealed with quick-setting swelling cement.

Site Restoration

Where borings are installed through the concrete floor, the floor will be patched with concrete. Similarly, borings through an asphalt surface will be repaired to restore original conditions to the extent practicable.

REPORTING

A report summarizing the assessment activities will be submitted to the WDNR. If results indicate that further delineation is required, the report will outline recommended assessment. If the results do not indicate the presence of contamination previously unknown, we will request a Certificate of Completion under the VPLE program.

CERTIFICATE OF COMPLETION

The scope of sampling and assessment described in this work plan is based on requesting a Certificate of Completion for a site designated as light industrial and an insurance policy will be purchased for ongoing natural attenuation of chlorinated solvents in groundwater (a figure depicting the extent of groundwater enforcement standard exceedances was previously submitted to the WDNR with the closure request package for the site).

In the future, if Invensys decides to pursue Certificate of Completion with a different site usage designation or if they decide not to pursue the option of closure with ongoing natural attenuation, AECOM will discuss with the WDNR and modify the work plan as necessary.

We will proceed with the assessment activities after obtaining the WDNR's approval to proceed. Please contact Ms. Vasanta Kalluri (920-406-3214) or Mr. Paul Killian (920-406-3165) with any questions.

Yours sincerely

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Attachments:

Table 1 Summary of Soil Analysis
Figure 1 Site Map (Exterior)
Figure 2 Building Layout, Site Features and Proposed Sampling Locations
Phase I Environmental Site Assessment Report – Not Included (Electronic Copy provided on June 17, 2009)

Cc: Mr. Frank Simmons
Invensys, Inc.
33 Commercial Street, C41-2E
Foxboro, Massachusetts 02035

Table 1
Summary of Soil Analysis
Paragon Electric Company
Two Rivers, Wisconsin

Sample Location	Date Sampled	Depth (feet)	TCE (mg/kg)
Soil results associated with STS Work Plan dated June 12, 1986			
B-1, S-1	12/16/86	0-0.5	0.292
B-1, S-2	12/16/86	0.5-1.0	0.0209
B-1, S-3	12/16/86	1.0-1.5	0.0055
B-1, S-4	12/16/86	1.5-2.0	0.004
B-2, S-1	12/16/86	0-0.5	0.0036
B-2, S-2	12/16/86	0.5-1.0	0.0052
B-2, S-3	12/16/86	1.0-1.5	ND
B-2, S-4	12/16/86	1.5-2.0	0.0039
B-3, S-1	12/16/86	0-0.5	ND
B-3, S-2	12/16/86	0.5-1.0	ND
B-3, S-3	12/16/86	1.0-1.5	ND
B-3, S-4	12/16/86	1.5-2.0	ND
B-4, S-1	12/16/86	0-0.5	ND
B-4, S-2	12/16/86	0.5-1.0	0.0042
B-4, S-3	12/16/86	1.0-1.5	ND
B-4, S-4	12/16/86	1.5-2.0	ND
B-5, S-1	12/16/86	0-0.5	ND
B-5, S-2	12/16/86	0.5-1.0	ND
B-5, S-3	12/16/86	1.0-1.5	0.0008
B-6, S-1	12/16/86	0-0.5	0.0043
B-6, S-2	12/16/86	0.5-1.0	0.0048
B-6, S-3	12/16/86	1.0-1.5	0.0041
B-6, S-4	12/16/86	1.5-2.0	0.0031

MAP SOURCE: IMAGE OBTAINED FROM MANITOWOC COUNTY GIS MAPPING, DATED 2005

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SITE MAP (EXTERIOR)
FORMER PARAGON ELECTRIC
TWO RIVERS, WISCONSIN

Drawn :	RLD	4/13/2009
Checked:	MWM	4/13/2009
Approved:	VMK	4/13/2009
PROJECT NUMBER	13154001	
FIGURE NUMBER	1	