AYRES ASSOCIATES

03-07-000148

April 26, 1994

Mr. James A. Hosch, Hydrogeologist
Wisconsin Department of Natural Resources
1341 Second Avenue
P.O. Box 397
Cumberland, WI 54829

Re: Remedial Investigation Work Plan
Bob's Service Station
Falun, Wisconsin

Dear Mr. Hosch:

Ayres Associates has been retained by Mr. Robert Anderson, Bob's Service Station, and is submitting this work plan on our client's behalf. This work plan is for a remedial investigation at his site in Falun, Wisconsin. The site is located on State Highway 70 in the NW 1/4, NW 1/4, Section 19, Township 38 North, Range 17 West, Burnett County, Wisconsin. Ayres Associates intends to proceed with bidding documents and subsequent field activities following WDNR approval of this work plan.

SITE BACKGROUND

Bob's Service Station is presently active as an automobile repair facility. Gasoline was dispensed at the facility until June 1993. The dispensing system consisted of two (2) 10,000 gallon underground storage tanks (UST's) plumbed to a pump island containing two dispensers.

The underground storage tanks were pumped dry in anticipation of tank removal in June 1993. Mr. John Foster, a DILHR representative, was contacted for the tank inspection at the site. Mr. Foster stated he could not be present at the site until July 14, 1993. On June 20, 1993, elevated ground water pushed the emptied tanks from the ground. On July 4, 1993, the tanks overturned and approximately 200 gallons of gasoline was spilled. Mr. Anderson called the WDNR to report the release. The WDNR retained Bay West, Inc., to perform emergency remediation measures to limit the environmental impacts of the release. Bay West, Inc., pumped the water and free product from the area where the tanks were located. This pumping resulted in a total of 13 drums of contaminated water which are still located on site.

In a July 8, 1993, letter, you, on behalf of the WDNR, requested that Mr. Anderson retain a qualified consultant to determine the degree and extent of contamination resulting from the release. This work plan outlines proposed environmental engineering services to conduct the remedial investigation phase.

In 1989, Aqua-Tech, Inc., conducted an "Environmental Site Assessment Report" for the Wisconsin Department of Transportation. A soil boring installed north of the former pump

Owen Ayres & Associates, Inc.
Engineers/Architects/Scientists/Photogrammetrists
3433 Oakwood Hills Parkway, P.O. Box 1590, Eau Claire, WI 54702-1590, (715) 834-3161, FAX (715) 831-8100

island found both petroleum contaminated soil and ground water, but the concentration of the Petroleum Volatile Organic Compounds in the ground was below the WDNR's Enforcement Standards. The soil sample contained only 20 ppm Total Petroleum Hydrocarbons at a depth of 12 to 14 feet.

SITE CONDITIONS

Soils on site consist of silts with a trace of sand in the upper approximately five feet. Beneath the silts is clay to at least 11 feet. Ground water exists approximately four feet beneath the ground surface and is anticipated to flow in a south or southwest direction towards and with Wood River.

PROPOSED SCOPE OF SERVICES FOR REMEDIAL INVESTIGATION

The objective of the remedial investigation is to determine the extent of soil contamination at the site and, if necessary, the degree and extent of ground water contamination. ILHR 47.33 requires that a remedial investigation include a site investigation, an analysis of remedial action alternatives and corresponding costs, and development of a remedial action plan. Based on the WDNR requirements and background information for the site, Ayres Associates proposes the following:

SITE SAFETY PLAN PREPARATION

Ayres Associates will prepare a project specific Site Safety Plan for use by Ayres Associates' employees as is required by OSHA.

NON-CONSULTING SERVICES BID PREPARATION

Ayres Associates will assist Bob's Service Station in obtaining bids for non-consulting services needed to complete the remedial investigation. These services include test pit excavation, laboratory analysis, and disposal of the drums on site containing petroleum contaminated ground water. ILHR 47.33 requires that the lowest cost provider be selected from bids obtained.

CONTAMINATED GROUND WATER DISPOSAL

Ayres Associates will assist Bob's Service Station with disposal of the petroleum contaminated ground water contained in the 13 drums labeled "Flammable". The ground water from the drums will be transferred to a septic hauler truck, along with the water pumped from the tank excavation, and will be hauled to a waste water treatment facility. This is the water which was pumped from the former tank location by Bay West, Inc.

TEST PIT INSTALLATION

Five test pits will be installed at the proposed locations shown on Figure 1, "Site Plan". As of this date, we do not have a site map that is to scale. These locations are being proposed to determine the degree and extent of soil contamination associated with the release that occurred on July 4, 1993. Test pits will be installed by backhoe methods to an estimated depth of 12 feet. Test pits TP-1 and TP-2 will

be installed first. The excavation where the UST's were located is still open. If no contamination is found in these test pits, TP-3, TP-4, and TP-5 will not be installed.

Test Pit 6 (TP-6) is proposed in an area where surface staining from a spill was observed. The spill apparently came from the above ground storage tank at this location. The reason for installing this test pit is to keep this spill area PECFA eligible. The provisions of ACT 16, which became effective January 1, 1994, may deny PECFA eligibility for cleanup of this spill area, if it is addressed after a PECFA award is granted for the tank bed spill area.

If contamination extends beyond the proposed locations or depths of the test pits, additional test pits or soil borings may have to be installed to identify contamination limits. Should the test pits indicate ground water has been impacted by the release, monitoring wells may be required to determine the degree and extent of ground water contamination.

SOIL SAMPLE COLLECTION

Soil samples will be collected at 2.5 foot vertical intervals from each test pit. Soil samples will be qualitatively screened for organic vapors using either a Photo Ionization Detector (PID) or a Flame Ionization Detector (FID).

LABORATORY ANALYSIS OF SOIL SAMPLES

Four representative soil samples will be collected for laboratory analysis from test pits TP-1 and TP-2. Two representative soil samples will be collected for laboratory analysis from test pits TP-3 through TP-6. Soil samples will be submitted to a WDNR certified laboratory for quantitative analysis of Gasoline Range Organics (GRO), Petroleum Volatile Organic Compounds (PVOC's), and total lead. These analytes are required, since gasoline was dispensed at this facility.

Based on a total of six (6) test pits for this site and the number of samples from each test pit, a total of 16 soil samples are estimated.

GROUND WATER SAMPLING AND AQUIFER TESTING

If the test pits indicate that contamination has impacted the ground water, it is likely that ground water monitoring wells will be required. If wells are installed, after development, two rounds of ground water samples will be collected and samples submitted to a laboratory for analysis for GRO, VOC/PVOC's, and dissolved lead. In addition, ground water elevations and hydraulic conductivity testing will be done in the monitoring wells to determine aquifer characteristics.

REMEDIAL ALTERNATIVE EVALUATION

Based on the results of the field investigation, a minimum of three remedial alternatives will be evaluated for feasibility and cost effectiveness. As required by ILHR 47, one of the alternatives evaluated will be passive bioremediation, unless it is determined to be inappropriate for the site.

REMEDIAL INVESTIGATION REPORT PREPARATION

Ayres Associates will prepare a remedial investigation report documenting investigation procedures, sampling results, alternative analysis, cost estimates, and recommendations. Drawings in the report may include a location map, site plan, cross sections, and plume maps. The recommended remedial alternative will be identified in a conceptual remedial action plan. Copies of the report will be forwarded to the WDNR and DILHR for approval.

PROJECT SCHEDULE

Assuming a timely approval is given by the WDNR, Ayres Associates intends to proceed with the indicated tasks in May 1994. Following approval, the report will be submitted to our client in approximately 90 to 125 days (July to September 1994), and then it will be forwarded to the WDNR.

After we receive your approval of this work plan, we will proceed with seeking bids for the test pit excavations and the laboratory services. If you have any questions on this work plan, please contact me or Jan Smit, Project Manager, at 715-834-3161. If a report was prepared pertaining to the activities conducted by Bay West, Inc., we would appreciate receiving a copy. Let us know the cost for reproducing it.

Sincerely,

Owen Ayres & Associates, Inc.

Susan J. Vasey

Susan J. Vasey
Hydrogeologist

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Enclosure