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April 4, 2007

Mr. Binyoti Amungwafor Wisconsin Department of Natural Resources 2300 North Martin Luther King Jr. Drive Milwaukee, WI 53212

Mr. Sam Gruichich Dorothy G., Inc., d/b/a Redi-Quick Dry Cleaners 9508 W Greenfield Avenue West Allis, WI 53215

Re: Comparison of Remedial Action Bids

Redi-Quick Dry Cleaners, West Allis, Wisconsin

BRRTS # 02-41-000676

Dear Binyoti and Sam:

This letter provides our evaluation and comparison of the bid proposals for remedial action work at the Redi-Quick site in West Allis, Wisconsin. Bids were submitted by Shaw Environmental, Inc. (Shaw) and KPRG and Associates, Inc. (KPRG), pursuant to Wis. Admin. Code § NR 169.23.

The Redi-Quick site has undergone a site investigation and supplemental site investigation, conducted by Envirogen, Inc. (subsequently purchased by Shaw). Additionally, an indoor air vapor mitigation system has been installed in the neighboring property, owned by Ms. Suzanne Dauer. In November 2006, DNR approved the supplemental site investigation and advised Dorothy G., Inc., the owner, that it may proceed with remediation.

The City of West Allis has agreed to provide funding for the DERF-reimbursable portion of site remediation through the use of a federally funded, DNR-administered Ready for Reuse loan. In order to ensure that the bids would comply with the requirements of that loan program, we waited to issue the request for bids until we had an opportunity to confirm compliance requirements for the loan program.

We issued a request for bids (RFB) on February 16, 2007, with a sealed bid submittal date of March 2, 2007. The RFB was issued to five prospective consultants, based on pre-screening for qualified, interested consultant candidates. Upon request of two prospective bidders, the bid submittal date was postponed until March 9, 2007.



We received two sealed bids. We later learned that the other three consultants decided not to submit bids, and we have communicated the reasons for those decisions by separate correspondence. We have proceeded to review the two submitted bids.

# **Background**

The history and conditions of the site have been described in the site investigation report and supplemental site investigation report. As noted therein, there has been a dry cleaner operation at the site since at least the late 1950s, and the site previously had been used as a gasoline service station. A petroleum-related investigation was completed at the site prior to initiation of the dry cleaner fluid investigation. The dry cleaner-related investigation was initiated due to the discovery of dry cleaner solvents during the petroleum investigation.

The reported geology of the Site consists of silty clays extending to approximately 25 feet below ground surface (bgs). A sandy layer beneath the silty clay extends to approximately 35 feet bgs, and is underlain by another layer of silty clay. Depth to groundwater is approximately 8-12 feet bgs; groundwater flows approximately to the north and east.

The principal source of the dry cleaner solvent, perchloroethylene (PCE), in soil and groundwater appears to be a reported 1,000-gallon dry cleaner fluid underground storage tank beneath the building, which was abandoned in place. That tank was last used prior to 1981, when the current operator began to operate the dry cleaner business.

Site investigation revealed that the PCE plume is concentrated but relatively limited in size. The accessible portion of the plume appears to extend about 60 feet to the east and at least 10 feet to the north, principally on the Dauer property. The plume is approximately 14-16 feet deep immediately adjacent to the Redi-Quick site, and intersects groundwater. It becomes shallower and less concentrated as it moves to the east toward 95th Street. The investigation data indicate that the plume extends beneath both the Redi-Quick and Dauer property, but does not substantially extend beyond those properties.

## **Shaw Proposal**

Shaw proposes a remediation based on chemical injection to treat the contaminants in situ.

## Task 1: pre-remedial activities.

Shaw will prepare a remedial action workplan for DNR approval, obtain three contractor bids for



contracted services, contact Diggers Hotline and mark utilities, prepare a health and safety plan, and submit an application for injection permitting. It will also install a monitoring well at the end of the Dauer driveway to monitor performance of the injection well pilot test, and collect baseline groundwater data.

## Task 2: remedial action plan.

Shaw will design and implement a pilot test for chemical injection of Newman Zone for bioremediation. The pilot test will demonstrate the effectiveness of the proposed injection process, and will determine the correct formulation for full scale operation.

The full-scale program will consist of three injection areas, generally located in the Dauer driveway, the Redi-Quick east property line, and in the parking lot on the south side of the Redi-Quick building. Shaw proposes 39 injection points within those three areas, where chemicals will be injected using push rods. Specific locations and depths will be determined after pilot testing.

Subsequent to injection, Shaw will conduct quarterly groundwater monitoring for one year at selected locations to determine effectiveness in reducing VOCs, followed by natural attenuation-based monitoring. Shaw will also continue to monitor the existing vapor mitigation system at the Dauer residence; and it will submit periodic reports for the entire program.

#### Task 3: monitoring well abandonment and DERF claim preparation.

The monitoring wells will be abandoned upon receipt of case closure from the DNR. Shaw will also be responsible for preparing DERF reimbursement requests.

The total estimated cost of the Shaw proposal is \$82,052.00. A cost breakdown is included in tables to the bid.

## **KPRG Proposal**

KPRG's proposal relies primarily on chemical injection for *in situ* treatment, together with limited excavation of contaminated soils beneath the Redi-Quick building, and an engineered barrier east of the building.



#### Task 1: Design data generation.

KPRG will perform a treatability study to determine the appropriate chemicals and dosages to be used for chemical injection. KPRG will then conduct a pilot test, consisting of injection at four locations in the Dauer driveway, plus 1-2 temporary well points for observation of effectiveness.

#### Task 2: ROAR/RAP finalization.

KPRG prepared an initial RAOR, in which it considered 10 alternatives, including no action. They are presented in Tables 2-1 and 2-2 of the bid proposal. The analysis indicates that substantial soil excavation would be both technically and economically infeasible; soil vapor extraction, air sparging and groundwater treatment would be of marginal technical benefit. The table indicates that *in situ* chemical oxidation, engineered barriers and enhanced biodegradation provide the best opportunity for effective and cost-effective remediation, perhaps coupled with limited interior excavation to the extent feasible.

KPRG proposes to prepare a more complete RAOR and RAP upon completion of the pilot program, incorporating the information and evaluation of that study into the final remedy selection.

## Task 3: Commodity services bidding.

KPRG will competitively bid all commodity services. However, it considers the chemical injection to be a specialty contract not subject to commodity services competitive bidding. Orin Remediation Technologies is the proposed injection contractor.

## Task 4: Remedial construction/injection.

The anticipated remediation includes source removal within and under the Redi-Quick building, *in situ* chemical treatment on the Dauer property, limited excavation, fill and concrete on the east side of the Redi-Quick building (engineered barrier), together with GIS registry, and natural attenuation for groundwater impacts.

#### Task 5: Construction documentation.

KPRG will document construction through an as-built report.



# Task 6: Operation, maintenance, monitoring and reporting.

KPRG will submit an operation, maintenance and monitoring plan. KPRG anticipates one year of quarterly monitoring, followed by one year of semi-annual monitoring.

# Task 7: Case closeout report and well abandonment.

KPRG will submit a case closure report once it has determined that groundwater conditions stabilize or are declining, as appropriate to satisfy closure requirements.

The total estimated cost of the KPRG proposal is \$146,305.00. A cost breakdown is included in tables to the bid.

#### **Evaluation**

#### A. Qualifications

Both bidders have the requisite qualifications and experience. The project leaders are professional geologists with substantial, relevant experience. Both companies have experience in solvent remediation, including *in situ* treatment. Shaw appears to have greater in-house injection experience, but KPRG has augmented its expertise by teaming with Orin Remediation Technologies as a subcontractor.

## B. Pricing

Attached to this letter is a table showing the cost breakdown of the competing bids. Since the bidders did not propose the same scope of work and did not divide the work according to the same task designations, we have attempted to combine tasks to identify equivalent scopes of work.

In addition to task-based costs, both bidders provided information regarding personnel rates, and KPRG also provided unit costs and equipment costs for certain items. Shaw personnel rates range from \$40-\$170; KRPG rates range from \$45-\$130. Although different titles do not allow a perfect comparison, it appears that Shaw's rates for scientists, engineers and senior project personnel are generally on the order of 30% higher than corresponding KPRG personnel.



The attached table illustrates two significant cost distinctions between the bids.

1. KPR G proposes a pre-remediation treatability study, to be followed by a pilot testing program that includes four injection points in the Dauer driveway. Also included are two temporary observation wells. KPRG's emphasis on treatability reflects its concern that the chemical of choice, sodium persulfate, may be ineffective, requiring a different, substantially more expensive chemical.

Shaw does not specifically propose a treatability study, but proposes a pilot testing program using Newman Zone that similarly includes four injection points. Shaw proposes that the pilot study be conducted to the east of the Redi-Quick building, using one new well and MW-10 and PZ-10 to monitor performance.

2. Shaw's proposal includes 39 chemical injection points at three general areas: Dauer driveway and Redi-Quick interior, east property line, and south parking lot. KPRG proposal, subject to refinement though a supplemental RAOR and completion of the RAP, includes 10 injection points in the Dauer driveway, excavation inside the Redi-Quick building beneath the former UST, and limited excavation, fill and concrete capping on the east side of the property. Additionally, KPRG assumes the need for a second round of injection over 75% of the area after verification monitoring. This difference in scope accounts for approximately \$50,000 of difference in the cost proposals.

Additionally, KPRG notes that if it is necessary to use sodium permanganate, in lieu of sodium persulfate, the cost of the construction will increase by \$65,583.

## C. Other Factors

The KPRG proposal is substantially more detailed than the Shaw proposal, including a discussion of RAOR/RAP completion and the chemicals that may be used for injection. Additionally, the Shaw proposal does not include an analysis of alternatives, as contemplated by Wis. Admin. Code § NR 169.23(6)(a). In all other respects, both bids appear to follow the requirements of § NR 169.23.

## Recommendations

Based on the information provided, we recommend that DNR approve the retention of Shaw Environmental, Inc., for the following reasons:



- 1. The total cost of the Shaw proposal is 38-56% of the KPRG proposal. The Shaw proposal is therefore more cost-effective.
- 2. The KPRG proposal calls for excavation inside the Redi-Quick building. Although there is value in targeting a likely hot spot, we do not think that this is a practical alternative, as it is disruptive of the business and creates the risk of damage to the building. Additionally, there is no analysis of the cost-effectiveness of this substantially more intrusive and more expensive option. That is, KPRG has not provided information on the extent to which the proposed limited excavation will accelerate the time for closure or achieving groundwater standards.
- 3. KPRG proposes an engineered barrier on the east side of the site, as compared to Shaw's proposal to treat contaminated soil at that location. Treatment is generally preferred over isolation for contaminant management: it will cause less intrusion in the short term and likely result in lesser restrictions or cost of future use in the long term.
- 4. Shaw has substantial experience with *in situ* chemical treatment, and specific understanding of this site based on its prior work in the investigation and supplemental investigation phases. Although its proposal is more abbreviated in description, its history of performance provides sufficient confidence in its ability to perform effectively.
- 5. Shaw's proposal calls for one round of injection, while KPRG contemplates two rounds. If an additional round of injection is required, however, Shaw's pricing would increase the cost by about \$20,000, which is still substantially below KPRG's bid.

Please do not hesitate to call me if you would like to discuss this letter.

Sincerely,

AXLEY BRYNELSON, LLP

Carl A. Sinderbrand CAS:gmk

Enclosure

cc: David C. Williams, Esq.

Charles V. Sweeney, Esq.

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