**State of Wisconsin**
**DEPARTMENT OF NATURAL RESOURCES**
**2300 N. Dr. Martin Luther King, Jr. Drive**
**Milwaukee WI 53212-3128**

**Tony Evers, Governor**
**Preston D. Cole, Secretary**
Telephone 608-266-2621
Toll Free 1-888-936-7463
TTY Access via relay - 711

January 11, 2021

Mr. Aaron Lewis
Lube-Tech & Partners, LLC
900 Mendelssohn Avenue
Golden Valley, MN 55427

SUBJECT: Review of *Supplemental Information and Modification to Proposed Remedial Action Plan*
Former Moore Oil Company
4033 West Custer Avenue, Milwaukee, WI
BRRTS # 02-41-246044 & 02-41-583185
FID #: 241174340

Dear Mr. Lewis:

On September 28, 2020, the Wisconsin Department of Natural Resources (DNR) received a *Supplemental Information and Modification to Proposed Remedial Action Plan* (RAP), prepared by Stantec Consulting Services, Inc. (Stantec) for the site identified above. This report was in response to a call between the DNR and Stantec on June 17, 2020 requesting additional information regarding site investigation activities and a RAP received on June 16, 2020. The site was historically a bulk oil and distribution facility, with numerous petroleum and solvent releases documented. The site investigation indicated that soil of the property is contaminated with petroleum Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs) and metals. Corrective actions have been performed as part of an approved closure plan for a Hazardous Waste Treatment, Storage, and Disposal Facility historically located at the site. A review fee was paid to the DNR to review the proposed RAP.

It should be noted that Lube-Tech has indicated in conversations with the DNR that final remediation of BRRTS # 02-41-583185 (Custer Playfield seeps) would be accomplished within the site-wide remedial actions planned for BRRTS # 02-41-246044.

**Site Investigation Review**

A DNR review letter of November 15, 2012 to Moore Oil, Inc. outlined the remaining investigative and corrective actions to be completed for the RCRA (Resource Conservation and Recovery Act) Units and the Solid Waste Management Units located on-site. The review also included comments on the actions necessary to meet the requirements for investigation of discharges under Wis. Admin. Code Ch. NR 716. Subsequent information submitted to the DNR including the RAP was reviewed and the DNR has determined that additional actions and/or information is required to complete the site investigation, as summarized below:

- Source identification and contamination extent evaluation

  Wis. Admin. Code § NR 716.11(3)(a) requires the field investigation to determine the nature, degree and extent, both areal and vertical, of the hazardous substances or environmental pollution in all affected media.

1) Soil and Groundwater Pathway
    a. Our understanding is that the mineral spirits recycling facility which operated on-site received spent solvents or other wastes for processing. Explain how it was determined that PFAS-containing compounds were not likely present in wastes received on-site.

    b. Determine if n-nonane was ever analyzed in samples collected on-site due to the presence of mineral spirits storage tanks.

    c. 1,1,1, trichloroethane was reported in some samples on-site. 1,4-dioxane is often associated with this compound. Determine if 1,4-dioxane was ever sampled on-site.

    d. The western fence line in the area of GP-20 had methyl-ethyl-ketone (MEK) barrel storage historically, describe any sampling in this area for MEK and summarize degree of any remaining impacts.

    e. Analytical results from soil boring SB-3 indicate contaminants beneath the building in this area. Additional delineation of the extent of impacts should be conducted north of SB-3 into the warehouse area.

    f. The soil impact figures submitted do not show any remaining impacts in the former AST (Above-ground Storage Tank) farm located on the south end of the property, an area that was previously excavated. Confirmation sample data should be included as it appears figures in the submittal were drawn using this information. A discussion should be included as to why any further remedial action is not needed in this area.

    g. Provide a statement of the condition or degree of impacts along the railroad spur ballast, including depth of ballast, and whether underlying clay acts as a berm between the two properties (surface elevations of the spur and the two properties in this area may be helpful).

2) Vapor Pathway
    a. Provide a figure with the interior layout of the remaining building with details such as interior walls, drains, utilities, basements, sumps, floor material, etc. shown. State whether any drains are within the building.

    b. Provide the rationale for selecting the number and locations of sub-slab vapor sampling points.

    c. Conduct a second round of sub-slab sampling for the vapor points currently on-site.

Please submit the above-referenced information or a work plan within 60 days describing how you will accomplish the work necessary for a completed site investigation.

**Remedial Action Plan Review**

Soil excavation is planned for areas of residual free-phase petroleum and soil impacts as a contaminant mass reduction remedy. Installation of a clay barrier and cutoff trench with a sump on the east side of the planned excavation is designed to limit contaminant migration in groundwater off the property. The addition of soil covers in landscaped areas and impervious pavement along with the maintenance of paved areas and building slabs over the entire property is planned as an engineered barrier to limit the direct contact and infiltration risk from residual soil contaminants. Installation of additional monitoring wells is planned, along with a program of natural attenuation monitoring of contaminants in groundwater to assess the efficacy of the remedy. Future continuing obligations placed upon properties and inclusion of the site on the DNR database will be part of the remedy.

Based on our review of the RAP and the incomplete site investigation, the DNR approves the proposed RAP as an interim remedial action with conditions and considerations listed below. Future remedial actions may be warranted depending upon additional information submitted and the results of RAP completion. Please keep the following in mind when implementing the interim RAP:

1) Since the goal of the excavation is removal of impacted material to minimize contaminant migration, excavation deeper than the assumed water table should be considered where obvious contamination exists and conditions permit. Effort should be made to obtain excavation base samples if possible, since that information would be helpful in documenting volume and degree of contaminant mass removal and may affect the degree to which future additional remedial actions may be required.

2) Sidewall sampling at 50’ intervals does not appear appropriate for all areas of the proposed excavations. Smaller intervals should be used where appropriate and sampling rationale stated. Additional sampling data will also help better define residual impact areas for any further investigation or closure requirements.

3) The entire recovery trench on the neighboring property should be considered for removal since it is part of the previous remedial system and a possible path for contaminant migration on the neighboring property.

4) Any addition or removal of utilities should include measures to prevent the migration of contamination along or within the utility or justify why those measures are not necessary.

5) Planned inclusion on the DNR database for soil contamination is insufficient to address direct contact risk for impacts off-site to the southwest on the former railroad right-of-way. Submit a revised approach to address this risk, such as soil removal or capping.

6) Submit a statement clarifying that the cutoff trench and sump will be abandoned or removed prior to case closure. Also submit a description of the criteria to be used to determine when the cutoff trench and sump are no longer a necessary remedy.

7) As stated in the interim RAP, covers and caps were proposed as a protective remedy at the site. Following soil excavation and on-site construction activities, submit a draft cap maintenance plan, along with a figure indicating the types and locations of applied engineered barriers.

Please keep in mind that Wis. Admin. Code § NR 724.15(1) compliant remedial action documentation reporting must be submitted following completion of remedial activities described for the property.

We appreciate your efforts to restore the environment at this site. If you have any questions concerning the site or this letter, please contact me at (414) 207-2179, or by email at adam.mcilheran@wisconsin.gov.

Sincerely,

Adam S. McIlheran
Hydrogeologist
Remediation and Redevelopment Program

cc: Stu Gross, Stantec Consulting Services Inc. (Stu.Gross@stantec.com )
SER file