

August 25, 2015

West Virginia Department of Environmental Protection  
Division of Land Restoration  
Office of Environmental Remediation  
601 57<sup>th</sup> Street SE  
Charleston, WV 25304

Attention: Mr. David W. Long  
Project Manager

**Subject: VRRP Interim Site Assessment Work Plan Comment Responses  
Freedom Industries, Incorporated -- Etowah Terminal  
Kanawha County, Charleston, West Virginia  
VRP Project Number 15017**

Dear Mr. Long:

CORE Environmental Services, Inc. (CORE) has received the West Virginia Department of Environmental Protection (WVDEP), Office of Environmental Remediation (OER) comments on the Interim Site Assessment Work Plan submitted by CORE on August 13, 2015. CORE's responses to the WVDEP-OER comments are provided below:

### **Geophysical Survey**

**WVDEP-OER Comment:** Will all geophysical survey work be completed before the test pits are excavated? When will the initial test profiles be complete and when will WVDEP know which methods will be used?

**CORE Response:** *Yes, all geophysical survey work will be completed prior to the test pit excavations. The primary tool for the subsurface surveying will be a Geonics EM61 time domain metal detector and a MALA Geoscience ground penetrating radar (GPR). The results of the geophysical survey will be provided as an appendix to the Interim Site Assessment Report. CORE has revised the Interim Site Assessment Work Plan to include additional details regarding the equipment and schedule for the geophysical survey.*

### **Test Pit Excavation**

**WVDEP-OER Comment:** Please provide detail on how perched groundwater will be removed and transferred to the on-site frac tank(s).

**CORE Response:** *Perched groundwater will be removed from each excavated test pit using a transfer pump. To ensure that perched groundwater is properly characterized for treatment/disposal, the groundwater will be pumped into a separate frac tank and not comingled with surface water currently*

*being collected and stored in frac tanks at the site. The groundwater within the frac tank will be sampled for 4-methyl-1-cyclohexane methanol (MCHM) via U. S. Environmental Protection Agency (USEPA) SW-846 Method 8270D, biological oxygen demand (BOD) via Method 5210B-2001, and total suspended solids (TSS) via Standard Method for the Examination of Water & Wastewater Method SM 2540D, as required by the permit issued by the Charleston Sanitary Board. The water will be filtered using on-site sediment filters, if TSS is above acceptable levels for disposal at the facilities currently used to dispose of accumulated stormwater from the site. The groundwater will either be disposed of at the Charleston Sanitary Board's sewage treatment plant in Charleston, West Virginia or EnviroTank Clean's facility in Belpre, Ohio. CORE has revised the Interim Site Assessment Work Plan to include additional details regarding the transfer, storage, and treatment*

**WVDEP-OER Comment:** If saturated conditions are encountered in test pits prior to encountering native soil, please verify that groundwater will be removed to the extent practicable, and the excavation continued to native soil where a sample will be obtained (subject to the conditions noted). WVDEP believes it is imperative to define the extent of cobble fill and sample native soil below the fill.

**CORE Response:** *CORE concurs and will remove groundwater to the extent practicable in order to facilitate excavation to native soil. CORE has provided additional detail in the Interim Site Assessment Work Plan regarding the groundwater removal.*

**WVDEP-OER Comment:** When collecting soil samples, please take care to preserve as much of the volatile portion of the sample as possible.

**CORE Response:** *When analyzing soil samples for the full analytical suite, the sample is typically collected in a 32-ounce jar. The MCHM/PPH sample will be collected in a 4-ounce Teflon-lined jar and immediately placed on ice to preserve as much of the volatile portion of the sample as possible. As requested by the WVDEP, six of the soil samples collected from the test pits will be analyzed for the full analytical suite. CORE will provide a duplicate sample in a 4-ounce Teflon-lined jar to compare the MCHM/PPH sample results between the 32-ounce and 4-ounce jars.*

**WVDEP Comment:** Limited data has been developed for the "cobble fill" slope, the lower bench, and the slope below the lower bench. For this reason, WVDEP would like for both samples from one test pit in each of these areas (preferably test pits 2, 3 & 4) to be analyzed for the full analytical suite that was recently run on water samples from the collection trench and newly installed sump. Please attach the list of analyses as an appendix.

**CORE Response:** *CORE concurs and will analyze the samples collected from test pits 2, 3, and 4 for the full analytical suite associated with this project. CORE revised the Interim Site Assessment Work Plan to include an appendix containing a table of analytical methods.*

**WVDEP Comment:** P. 3, 2nd bullet: "One matrix spike and one matrix spike *duplicate* sample for every twenty samples...".

**CORE Response:** *CORE has revised the Interim Site Assessment Work Plan as recommended to indicate collection of one matrix spike and one matrix spike duplicate sample for every twenty samples.*

**WVDEP Comment:** The CORE Quality Assurance Plan referenced in the next to last paragraph on p. 3 was not included – please include as an attachment.

**CORE Response:** CORE is currently developing the *Quality Assurance Plan (QAP)* for this project. The QAP will be included as an attachment to the *Interim Remedial Action Work Plan*.

**Appendix A – Site Specific Health & Safety Plan – Appendix B**

**WVDEP-OER Comment:** Please verify that the site-specific Job Safety Analysis Forms (JSA's) will be completed prior to initiation of the field work.

**CORE Response:** Yes, JSA's will be completed prior to initiation of the field work. The JSA's will be reviewed on-site during each pre-task safety meeting. CORE has revised the *Site Specific Health and Safety Plan* to include instructions to complete and review each JSA prior to initiation of field work.

Should you have any questions regarding CORE's responses below or wish to discuss further, please feel free to contact me at (304) 646-7616.

Sincerely,

**CORE Environmental Services, Inc.**



Matthew A. Ford, LRS  
Senior Consultant

Enclosures

cc: Patricia Hickman – WVDEP DLR  
Mark Welch – Freedom Industries  
WVDEP DLR-OER File