

December 28, 2015

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

Attention: Mr. David W. Long
Project Manager

**Subject: Interim Remedial Action Work Plan Comment Responses
Freedom Industries, Incorporated -- Etowah Terminal
1015 Barlow Drive
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 Remedial Action Work Plan submitted by CORE on November 19, 2015. CORE's responses to the WVDEP-OER comments are provided below:

1. **WVDEP-OER Comment:** Section 1.1 - Purpose: WVDEP suggests adding an additional bullet (#5) in this section to include the excavation, reinstallation and sampling of the collection trench; this will provide a segue to current bullet #5.

CORE Response: CORE has added a new bullet to Section 1.1 which includes the excavation, reinstallation and sampling of the collection trench.

2. **WVDEP-OER Comment:** Section 4.1 – Site Preparation and Erosion Control, p.4, 2nd ¶: In addition to the proposed security fencing, WVDEP recommends the use of signage (No Trespassing, Danger – Construction Area, etc.) to assist in securing the site.

CORE Response: CORE will place “Danger – Construction Area signs” along the site perimeter. The property has existing “no trespassing signs”. CORE has indicated in this section of the plan that temporary construction fencing with danger signage will be used.

3. **WVDEP-OER Comment:** Site Preparation and Erosion Control, p.4, 3rd ¶: In the unlikely event that an excavation had to be left open overnight and a significant precipitation event occurred, WVDEP needs assurance that appropriate equipment and capacity is available for dewatering the excavation before additional excavation takes place.

CORE Response: SPSI has the necessary equipment on-site to manage stormwater. CORE has added the following to the last paragraph in Section 4.1 “Surface water that accumulates in open excavations following a rainfall event will be pumped into the on-site frac tanks before additional excavation takes place.”

4. **WVDEP-OER Comment:** Section 4.2 Target Excavation Areas, p.6, last ¶: The text states, “Field screening will be performed on site soil using the headspace method and a photoionization detector (PID) calibrated to isobutylene, since previous site data indicates PID response to MCHM and PPH.” WVDEP recommends that olfactory senses be used in conjunction with the PID to segregate contaminated soil. The goal is to remove soil above laboratory reporting (quantitation) limits; previous studies have shown that MCHM odor threshold concentrations are extremely low, even below laboratory quantitation limits.

CORE Response: The use of olfactory senses is not available while personnel are in Level C PPE, as they will be wearing a respirator. CORE has revised this section as follows “Field screening will be performed on site soil using the headspace method and a photoionization detector (PID) calibrated to isobutylene, since previous site data indicates PID response to MCHM and PPH. A flame ionization detector (FID) will also be used to confirm PID results, as necessary. Olfactory methods cannot be used to field screen soil while personnel are wearing level C PPE which includes an air purifying respirator. The field screening results will be used to segregate soil as either “presumed clean” or “obviously impacted”. The former will be stockpiled pending sampling and expedited analysis for MCHM and PPH, and the latter will be loaded to trucks for off-site disposal.”

5. **WVDEP Comment:** Section 4.2 Target Excavation Areas, p.7, 1st ¶: The text states, “A representative number of soil samples will be used to characterize the presumed clean soil stockpile (e.g., one per 500 cubic yards).” DEP prefers the frequency of sampling to be 1/300 yds³, similar to landfill characterization sampling.

CORE Response: CORE has revised the stockpile sampling frequency to one in every 300 tons, which is consistent with landfill characterization sampling.

6. **WVDEP Comment:** Section 4.2 Target Excavation Areas, p.8, Area 1A and Figure #4: Note that Test Pit #17 is actually located in Area 1B

CORE Response: CORE has revised the description of Area 1A to not include Test Pit 17. Test pit 17 has been added to the description for Area 1B.

7. **WVDEP Comment:** Section 4.2 Target Excavation Areas, p.9, (Area 4) 2nd ¶: Due to a concern for potential surface water impacts, WVDEP will require that a surface water sample be obtained from the Elk River after the first day of excavation on the slope (Area 4).

CORE Response: CORE has indicated in Section 4.2 that a surface water sample will be collected from the Elk River up-stream and downstream of the on-site collection trench before starting excavation of Area 1A, as well as following the first day of excavation in Areas 4 and 5.

8. **WVDEP-OER Comment:** Section 4.2 Target Excavation Areas, p.10, (Area 5) 1st ¶: The first sentence in this paragraph is confusing – is there another way to describe the area where the dewatering will take place?

CORE Response: CORE has clarified that the dewatering area will be constructed in Area 4, which will not be backfilled until after excavation and reconstruction of the collection trench in Area 5 is complete.

9. **WVDEP-OER Comment:** Section 4.2 Target Excavation Areas, p.10, (Area 5) 2nd ¶: Due to a concern for potential surface water impacts, WVDEP will require that a surface water sample be obtained from the Elk River after the first day of excavation of the collection trench (Area 5).

CORE Response: CORE has indicated in Section 4.2 that a surface water sample will be collected from the Elk River up-stream and downstream of the on-site collection trench before starting excavation of Area 1A, as well as following the first day of excavation in Areas 4 and 5.

10. **WVDEP-OER Comment:** Section 4.3 Backfill and Site Grading, p.10, 1st ¶: Text states “Each area that is excavated as specified in Section 4.2 of this IRA Work Plan will be backfilled before moving on to the next excavation area.” Will confirmatory sample results be reviewed for potential additional excavation prior to backfilling?

CORE Response: Each area that is excavated as specified in Section 4.2 of this IRA Work Plan will be backfilled, if confirmatory results indicate the area has no MCHM and/or PPH detections. If a confirmatory soil sample result indicates an MCHM and/or PPH detection, the sample location will be over-excavated and resampled.

11. **WVDEP-OER Comment:** Section 6.0 Post-Excavation Soil Sampling Plan, p.13, 1st ¶: The text states, “Also, a minimum of four side wall and two base samples will be collected at the collector (collection) trench excavation.” Since the trench is divided into three sections by the two collection sumps, WVDEP would like to see a minimum of three samples from the excavated trench floor.

CORE Response: *CORE has revised this section to indicate that three floor samples will be collected from the trench.*

12. **WVDEP-OER Comment:** Section 6.0 Post-Excavation Soil Sampling Plan: WVDEP intends to split one soil sample per target excavation area for a total of six soil samples to be analyzed at a separate laboratory (likely Research Environmental and Industrial Consultants – REIC, located in Beaver, WV). Split samples are used as a measure of inter-laboratory precision.

CORE Response: *CORE will coordinate sampling with the WVDEP to all for collection of split soil sampling.*

13. **WVDEP-OER Comment:** Section 7.0 Report Preparation, p.13: Please note that an appropriate number of tables and figures should be included in the report to properly document site activities and results.

CORE Response: *CORE has revised Section 7.0 as follows, “Following completion of the IRAs outlined in this Work Plan, an Interim Remedial Actions Report will be prepared summarizing the activities and outcomes. The report will provide a summary of excavation activities, tables and figures detailing site activities and laboratory analytical results, air monitoring data during construction activities, confirmatory soil sample results, disposal documentation, quantities of backfill and topsoil utilized, final details from revegetation efforts, a site drawing showing the final surveyed grading plan and E&S control measures employed.”*

14. **WVDEP-OER Comment:** Section 8.0 Remedial Action Schedule, p.14: WVDEP requests that the schedule be reviewed and shortened wherever possible.

CORE Response: *The schedule has been shortened and CORE will initiate on-site work such as installation of erosion and sediment controls prior to plan approval to expedite completion of the remedial action.*

15. **WVDEP-OER Comment:** Appendix A - Site-Specific Health and Safety Plan (HASP), Section E – Entry Objectives, pp.4-5: The last sentence on p.4 is incomplete – please review and revise.

CORE Response: *This sentence has been completed.*

16. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Section F – Safety Hazards Table, p.5: Consider adding slips, trips and falls – current site topography is very uneven; slope work could be especially difficult.

CORE Response: Slips, trips, and falls have been added to Section F.

17. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Section G – Personal Protective Equipment (PPE), p.6: Consider adding hearing protection to levels C and D, especially when working around heavy equipment.

CORE Response: Hearing protection has been added to Section G.

18. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Section G – Personal Protective Equipment (PPE), p.6, last ¶ (in bold): Fourth sentence states, “... the CORE Project Manager will notify on-site personnel whether PPE should be ***ungraded*** to Level B or downgraded to Level D based on air monitoring results.” ***Ungraded*** should be changed to upgraded.

CORE Response: “Ungraded” has been revised to “upgraded”.

19. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Section G – Personal Protective Equipment (PPE), p.6, last ¶ (in bold) and Appendix C of HASP – Air Monitoring Plan, p. 6, Section 7.0 - Table: CORE has previously conducted hot-spot soil vapor sampling and ambient air monitoring/sampling for MCHM, PPH and benzene at the site. Results of this sampling were all ND (non-detect) at 2 ug/sample reporting limit or below. WVDEP requests that CORE reconsider whether it is necessary to begin work in Level C PPE.

CORE Response: It is necessary to begin work in Level C PPE, as air monitoring of the excavation work has not been performed.

20. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Section K – Site Map, Item #2: Consider adding Equipment Decontamination Area

CORE Response: CORE has added the Equipment Decontamination Area to the site map.

21. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Appendix C – Air Monitoring Plan: WVDEP advises CORE to be cognizant of potential diesel exhaust interferences during air monitoring, both ambient and personal.

CORE Response: CORE is aware of this potential interference and will make a determination regarding necessary PPE based on analytical data.

22. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Appendix C – Air Monitoring Plan, Section 3.0 - Monitoring Locations and Data Tracking: WVDEP is somewhat concerned with the potential number of air samples to be analyzed during the duration of the

excavation. Will samples be collected every day regardless of the previous day's results in the same target excavation area? Or will decisions on sampling be made during the excavation activities based on results? Please clarify the basis for the frequency of air sample collection, both ambient and personal.

CORE Response: Decisions regarding continuation of air monitoring and PPE requirements will be made based on previous air monitoring data within each excavation area.

23. **WVDEP-OER Comment:** Appendix A - Site-Specific HASP, Figures – Figure #2 – There is a text box at the far right of the figure with no text - please include the text or remove the box.

CORE Response: CORE has removed the textbox.

24. **WVDEP-OER Comment:** Appendix B – Sediment & Erosion Control Plans – Sheet 1 – Phase 1A & 1B Plan: On the far right side of the figure (north end of site), there is a direction to “Install Safety Construction Fence”, but the arrow appears to be pointing to the middle of the slope and not the fence. Please re-direct the arrow or explain.

CORE Response: The arrow location for the safety fence has been corrected.

25. **WVDEP-OER Comment:** Appendix B – Sediment & Erosion Control Plans – Sheet 3 – Phase 3 Plan: Water from the temporary diversion ditches appears to flow to a temporary 8” steel pipe and then to test pit #9 (TP-9) – is this correct? Or should the water be going to the sump within the excavation area? Please explain and revise as necessary.

CORE Response: The path of the diverted water has been redirected farther to the north.

26. **WVDEP-OER Comment:** Appendix B – Sediment & Erosion Control Plans – Sheet 5 – Phase 5 Plan: Is excavation/construction equipment access to the collection trench via the slope or the lower bench where the trench is located? What is the purpose of the HDPE liner? Will this work be conducted when there is virtually no chance of precipitation?

CORE Response: The access to the collection trench will be via the slope. The HDPE liner is necessary as soil from Areas 4 and 5 are staged at this location for loading. This work will be conducted when there is no chance of precipitation, which is unlikely given the time of year this work will be completed.

27. **WVDEP-OER Comment:** Appendix D – Quality Assurance Project Plan, p. 14, Section 8.2.3 – Accuracy: In the equation for Matrix spike percent recovery, is the denominator KC or SC,

or does it matter [both appear to be “Known analyte or compound (i.e., spike) concentration”]?

CORE Response: *The denominator is SC.*

28. **WVDEP-OER Comment:** Appendix D – Quality Assurance Project Plan, Table 2. Maximum Allowed PQLs: Units for soil are listed as mg/kg – should these be ug/kg?

CORE Response: *The units should be ug/kg and the plan has been revised.*

29. **WVDEP-OER Comment:** Appendix D – Quality Assurance Project Plan, Table 3 – QC Samples Per Matrix: Field duplicate air samples for MCHM/PPH/Benzene - since PPH is analyzed separately from MCHM/Benzene, shouldn't there be 2 samples? If so, do the number of air samples for background and field blank samples need to be adjusted also?

CORE Response: *The number of QC samples per matrix have been updated.*

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
Robert Johns – Freedom Industries
WVDEP DLR-OER File