



west virginia department of environmental protection

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May 27, 2015

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Mr. Mark Welch, CRO
Freedom Industries
1015 Barlow Drive
Charleston, WV 25311

RE: *Updated VRRP Interim Remediation Work Plan, May 19, 2015* Comments, VRP# 15017
Freedom Industries, Charleston, Kanawha County

Dear Mr. Welch:

A review of the above referenced document dated May 19, 2015, and received by the Office of Environmental Remediation on 5/19/2015, has been completed. Our comments are provided as follow:

Title Page/Signature Page

1. The title page of the document states it is the “VRRP Interim Remediation Work Plan”; however, the signature page of the document states it is the “Draft VRP Interim Remediation Work Plan”. Please indicate whether this is a draft or final plan.

Introduction

2. “As outlined in Section 20 of the VRA, ARCADIS... submitted a Site Investigation Report dated April 30, 2015... ARCADIS requested DEP acceptance of the report and permission to proceed to a Baseline Human Health and Ecological Risk Assessment.” WVDEP had requested a report summarizing all actions up to entering the VRP (referred to as the “Initial Site Investigation and Interim Measures Report” in the

Voluntary Remediation Agreement (VRA). The response to the review of the VRP Application and Phase I Assessment noted several areas of the site where additional investigation was required. Therefore, WVDEP could not approve proceeding to the Baseline Human Health and Ecological Risk Assessment as the site assessment is incomplete.

3. "Section 20 of the signed VRA provides a timeline to remedial completion with the report being submitted in the second quarter of 2016" WVDEP is unsure as to what report is referred to here – two reports are scheduled to be submitted in the 2nd quarter of 2016.
4. "However, prior to establishing risk based concentrations for the COCs, WVDEP has requested that Freedom Industries complete all excavation activities." WVDEP has discussed and responded to Freedom/Arcadis' interim plans to attempt to control contaminated stormwater runoff.

Section 1 – Facility Description

5. "In December 2004, the WVDEP issued a Land Use Covenant for the Site." WVDEP does not issue Land Use Covenants (LUC's) – LUC's are recorded and attached to the property deed by the local county clerk.

Section 2 – Chemicals of Potential Concern (COPC's)

6. "Petroleum product and storage and distribution ceased prior to the site being awarded with an Environmental Covenant by the DEP." See comment above.

Section 5 – Geophysical Survey

7. "If underground piping or conduits are encountered, they will be excavated and removed to eliminate any potential migratory pathway for contaminants." – Note that any piping/conduit that extends outside of the current proposed area of excavation and confirmatory sampling will need to be sampled at the furthest extent of the piping/conduit to determine if and how far migration along the pathway may have occurred.
8. "Additionally, ARCADIS will attempt to use GPR to determine the limits of the cobble fill area. This determination is limited by the effectiveness of the GPR and the depth of the fill area, which is currently unknown." – It appears from earlier investigations up to 12 borings and 1 boring/monitoring well have been installed to various depths in the area designated as the "cobble fill" area. However, boring logs were

only prepared for half of the borings and the monitoring well. Boring logs for borings located on the upper terrace (former AST area) in the area designated as “cobble fill” do not indicate the presence of cobble-size material, however gravel is present in clay and sand zones in most borings, and some pea gravel is present. Of particular concern is the boring log for MW-13/SS-28, located adjacent to the collection trench, which indicates cobble-size material to a depth of 16’ as well as “odors”. A soil sample from this boring indicated 21 ppm MCHM at 12-14’. WVDEP believes it is crucial to determine the horizontal and vertical extent of the cobble fill area. If this cannot be accomplished using GPR, then Freedom/Arcadis should explore other geophysical or physical (i.e., excavation) methods to complete this task.

Section 6 – Remedial Activities

9. “The intent of the excavation effort is to remove significantly impacted soil from the release area; to remove localized “hot spots” in the soil beneath the Site; and to cover the release area with a temporary cover to prevent impacted run-off from being generated at the Site.” – WVDEP understands the importance and the need to prevent impacted run-off from the site. However, if significant levels of MCHM and PPH remain in the subsurface cobble fill, then contamination will continue to leach into the groundwater as it migrates to the river, and into the river as river levels rise and recede. Therefore, WVDEP believes the evaluation of the cobble fill area should be completed before a cap (whether permanent or temporary) is placed over this area.
10. “To date the depth of the cobble fill within the spill area is unknown. A test pit will be excavated during the remedial activities in an attempt to ascertain an approximate depth of the cobble fill.” – See comments above concerning defining the area and contaminant concentrations of the cobble fill.

Section 6.1 – Flexible Membrane Liner Installation

11. “The flexible membrane liner shall comply with the following:
 - D. The perimeter edges of the liner on the slope will be anchored in place with soil, large rocks, concrete blocks, metal pins or some other method capable of preventing the liner from moving.” – Please provide additional information on the liner design, properties, durability, maintenance and installation per the manufacturer’s instructions, including the anchoring method that will be used to ensure the liner will not slip.
12. “Following the installation of the cushion material, the flat area of the excavation will be backfilled with clean fill material to grade and compacted.” – Explain how the backfilled material at the edge of the slope will not erode.

Section 6.2 – Remedial Activity Summary

13. “Excavate a test pit within the cobble fill to ascertain the vertical extent, the purpose of the test pit will be to determine the vertical extent of the fill. The test pit will be extended to a depth of no greater than 10 feet below grade;” – See comments above concerning defining the extent of the cobble fill.

Section 7 – Soil Sampling

14. Please provide a map showing approximate soil sampling locations and COC’s to be analyzed at each location, both inside and outside of the excavation.
15. “If an MCHM odor is noted during the sampling, then the hand augured boring will continue to a maximum depth of four feet below the ground surface.” – Please provide justification for limiting the depth of confirmation sampling outside the excavation area to 4’ bgs

Section 8 – Storm Water, Surface Water Sampling & Sediment Sampling

16. Please provide a map showing approximate storm water, surface water, sediment and trench confirmation sampling locations.
17. “Five confirmation samples (one from the bottom and one from each side wall) will be collected from the excavation of the former collection trench and analyzed for COPCs.” – WVDEP does not believe one bottom soil sample and one sidewall sample from the eastern and western walls will be representative of post-excavation trench conditions for an approximate 150’ trench – please propose additional samples for these areas.
18. “A series of three 5-gallon buckets will be inserted flush to the finish grade elevation of the temporary cover down gradient of the former trench.” – Please provide justification for the number and locations of stormwater run-off sampling points.
19. “After a rain event, if sufficient volume had accumulated, the water in the three buckets will be combined and a sample will be collected and analyzed for COPCs.” – Storm water run-off samples should be analyzed as separate (grab) samples, not combined into one composite.
20. “ARCADIS will collect surface water samples for each twenty-five feet (25’) of riverbank beginning at the northern end of the property and the last sample will be collected at the southern boundary of the property (total distance of approximately 935 feet of stream bank).” – For the initial surface water sampling event, WVDEP believes a more focused sampling on the spill/trench area is needed that will assess both stormwater run-off and groundwater discharge to the river. Therefore,

WVFEP would like to meet to share and discuss ideas associated with surface water, sediment, stream bank and stormwater run-off sampling, so that an approvable sampling plan may be submitted.

21. "Additional surface water sampling and bucket sampling will be completed two weeks following the initial sampling event and continue to be completed at a rate of one per month for three months directly after a rain event to confirm the effectiveness of the temporary cover." – WVDEP believes it is crucial to sample, at a minimum, the first 3 precipitation events following the installation of the CAP; a less stringent frequency is likely appropriate after that, so long as there are no detections associated with the run-off. As noted above, we would like to further discuss the proposed sampling.

Section 9 – Initiation of Field Custody Procedure

22. Decontamination and Sample Collection Procedures – WVDEP wants to stress the importance of good sampling hygiene. Characteristics of MCHM and low detection limits make cross-contamination a serious issue.

Reporting

23. Please include an additional section in the work plan to address a remedial activities and results summary report.

As noted above, WVDEP believes it would be beneficial to meet and discuss plans for sampling the various media at the site, as well as the other comments herein, so that an approvable plan may be submitted. However, due to schedule conflicts, we are not available to meet until June 3rd or after. A schedule for submittal of a Response to Comments document as well as a revised VRRP Interim Measures Work Plan may be discussed at that time. I can be contacted by phone at 304-926-0499, ext. 1265 or email at David.W.Long@wv.gov.

Sincerely,



Dave Long
Project Manager

cc: Ira Buchanan, LRS
Charleston File # 15017
ec: Patty Perrine, Interim Program Manager, WVDEP/OER