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LETTER AND COMMENTS FROM ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
REGARDING DRAFT REMEDIAL DESIGN DOCUMENT COAL STORAGE AREA 3 FORT
SHERIDAN IL
3/12/2004
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

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March 12, 2004

Headquarters, Forces Command
Deputy Chief of Staff, G1
Attn: AFG1-BC (Victor Bonilla)
1777 Hardee Avenue, SW
Fort McPherson, Georgia 30330-1062

Re: Draft Remedial Design Document Coal Storage
Area 3, Fort Sheridan Environmental
Restoration Project, Fort Sheridan, Illinois
Dated February 9, 2004

0970555001/Lake
Fort Sheridan (BRAC)
Superfund/Technical

Dear Mr. Bonilla:

The Illinois Environmental Protection Agency (Illinois EPA or Agency) is in receipt of the Draft Remedial Design Document Coal Storage Area 3, Fort Sheridan Environmental Restoration Project, Fort Sheridan, Illinois. It was dated February 9, 2004 and received on February 10, 2004. Illinois EPA has reviewed the document and has the following comments.

- 1) **Section 1.1** – The last sentence should read as follows: *The work must comply with the requirements of both CERCLA/NCP and all applicable or relevant and appropriate environmental laws and regulations established by Illinois state and local agencies, and must be approved by relevant local, state, and federal authorities.* Please revise this sentence as indicated.
- 2) **Sections 1.3, 1.4, and 1.5** – The references to the previous documents in these sections should include any addenda to those documents as well. Please revise accordingly.
- 3) **Section 2.1.3** – The two areas to be excavated are listed in this section as 70 feet by 12 feet and 20 feet by 12 feet. In the Proposed Plan, they are listed as 60 feet by 10 feet and 20 feet by 20 feet, respectively. Has additional information been acquired of which the Agency is unaware which would dictate this change in dimensions? Please explain.

- 4) **Section 2.1.3** – The fifth sentence states that no contaminated soils were identified above 4 feet at Area 2. Figure 2 shows contamination in Area 2 at depths of 0 and 1 foot. Please rectify this inconsistency.
- 5) **Section 2.1.3** – The purpose of the excavation is listed as "...to provide a consistent 4-foot cover of clean soil over any refuse that may remain as was done elsewhere in the CSA 3 area." The purpose of the excavation should be to remove contaminated soil and/or waste that presents an unacceptable risk to human health or the environment. The removal does not necessarily need to attain an unrestricted re-use level, but that should be the intent, prior to initiation. That was initially the intent on the Surplus OU portion of CSA 3. At that time, the removal uncovered more contamination than was expected and planned for and that is why some of it was left in the ground. It was not left because 4 feet of clean soil was considered protective. Please revise this section accordingly.
- 6) **Section 2.1.4** – In the third paragraph, it is again stated that areas covered with 4 feet of clean soil are considered protective of human health, as per the No Further Response Action Decision Paper. This statement is inaccurate. Please see Illinois EPA's comments on the Decision Document in regards to this issue. This section will need to be reworded to be consistent with the Decision Document, once it has been revised.
- 7) **Section 2.1.4, page 7** – The RAO for CSA 3 is listed as: "Provide the same level of protection to subsurface PAH contamination that was used for the Surplus OU portion of CSA 3 by preventing the exposure of future residents, recreational visitors, or industrial and commercial workers from contact with PAHs through direct contact with or ingestion of waste and subsurface soil that would result in an excess lifetime cancer risk (ELCR) of 1×10^{-4} or more." That is not the RAO. See Illinois EPA's comments on the Decision Document in regards to the proper RAO and the required data collection and analysis. Please correct the RAO statement and incorporate the required data collection and analysis activities into this design.
- 8) **Section 2.2.1** – The decision made in the referenced paper was not to provide an approach for subsequent remediation, but rather to determine that the sites in question did not pose an unacceptable risk to human health and the environment under the unrestricted future use scenario. That decision was made based on the site-specific information available for those sites and was made after a removal action (a non-time critical removal action) and a risk assessment had taken place, for CSA 3. That is consistent with the CERCLA process. The CERCLA process must also be followed for the DOD OU portion of CSA 3.

- 9) **Section 2.2.1** – The last sentence should also list the post-removal confirmation sampling. If contamination above unrestricted reuse levels is left in place, the subsequent risk assessment and the land use controls will also be key elements of the remedial action. These elements should also be presented/described in the following subsections. The actual land use controls, including implementation, enforcement, notification, and monitoring should be provided in detail in this section, in accordance with the “Principals and Procedures for Specifying, Monitoring, and Enforcement of Land Use Controls and Other Post-ROD Actions” document signed by the Department of Defense and the U.S EPA. According to the Army’s Decision Document, “The actual implementation actions to achieve these LUC objectives will be described in detail in the remedial design for the selected alternative.” That detail has not been provided.
- 10) **Section 2.2.2** – In the second paragraph, it is stated that waste will be removed from area 2 and verified by visual inspection and depth measurement, with no mention of contaminated soil. This is unacceptable for several reasons. First, what is to be done with the contaminated soil in direct contact with the waste? What about the remaining soil that is potentially contaminated by prior migration of the contaminants from the waste? Will it be left on-site or replaced in the excavation? All solid and special waste should be disposed off-site at a permitted nonhazardous waste landfill. Second, although all visible waste material must be removed, it is impossible to verify that all contamination has been removed with only a visual inspection. The entirety of Area 2, as previously identified and including any additional area identified during the removal activity, should be removed. The success of the removal must then be verified by confirmation sampling of the sidewalls and floor of the excavation in accordance with the referenced and approved Sampling and Analysis Plan. The results of that sampling effort, in addition to the confirmation sampling at area 1, could then be used to perform the post-removal risk assessment. (The risk assessment would only be necessary if there remained contamination on-site above unrestricted reuse levels.)
- 11) **Section 2.2.2** – The last paragraph states that no soil samples will be required because of the over excavation of the contaminated areas. That is totally unacceptable. This line of reasoning must assume that the previous investigations were not only 100% accurate as to areal extent of contamination, both horizontally and vertically, but that there has been no subsequent migration of contamination since those investigations were performed 5 years ago. Not only is that impossible (as provided two paragraphs earlier, waste was found at depths where it was supposed to have been removed), but it is also inconsistent with the CERCLA process. Confirmation sampling must be performed to verify the success of the removal. If contamination remains above

unrestricted reuse levels, a risk assessment is required to determine the remaining risk and to determine if that remaining risk level can be considered acceptable. If the remaining risk were unacceptable, further remediation would be required. Final closure of this site will only be based upon the remaining risk to human health and the environment being within or below the risk management range.

- 12) **Section 2.2.3** – This section discusses slope improvements to avoid erosion of the slope. It does not mention other possible failure mechanisms for the ravine slopes, such as slumping, which has already been documented to happen in other areas of that ravine. This type of slope failure, which is common in the stratigraphic unit found throughout all of Fort Sheridan, could also expose the waste that will be left in place. Have the improvements been designed with slope failure, as well as, erosion in mind? Please explain.
- 13) **Section 2.2.3** – In the second paragraph it states that only damaged and non-native trees will be removed. Are there many trees in the area that fit into this category? The reasoning for not removing some trees is understood, but there need to be enough trees removed to allow the design to work as intended. The Agency would rather have a few extra trees removed and have the remedial effort work as designed, than not remove enough trees and the effort fail. It may not be prudent to limit tree removal to what could potentially be a small category. Please ensure that enough trees are removed to allow the remedial effort to be fully implemented as designed.
- 14) **Section 2.2.3** – What is meant by the statement that, “Loose concrete may be relocated to other areas as directed ...”? For what would it be used? Any loose concrete removed from the ravine slope should be disposed of properly or recycled, not replaced in another area. The ravine should be returned, as close as possible, to its original, native condition. The Agency sees no reason to leave any foreign material on the ravine slope. Please revise this section accordingly.
- 15) **Section 2.2.3** – More detail is required to explain, or show, how the cut and de-branched trunks, saplings, and limbs will be used for soil stabilization. Please provide this information here.
- 16) **Section 2.2.4** – Have the proposed stormwater inlets and associated piping been designed to accommodate the 100-year, 24-hour storm event? Have those calculations been performed? That information should be provided in this design. Please include this information and the actual calculations used.
- 17) **Section 2.2.5** – The proposed sign states that digging in the ravine is prohibited. What

about the area 2 location, which is not in the ravine, but will still require a prohibition on intrusive activity? The signs should more likely state that any intrusive activity beyond this point (or on Navy property) and in the ravine is prohibited. The Agency suggests re-wording the signs to be more specific. Also, is the telephone number listed here accurate?

- 18) **Section 2.3.3** – It is stated, “Area No. 1 excavation limits will be about 3 feet deep.” Either an exact depth to be excavated or a surveyed elevation to excavate down to should be provided here. It is noted that the appropriate elevations are provided on the plan drawing, but they should also be provided here with a reference to the plan drawing. The depth of the removal could also change due to the results of the confirmation sampling.
- 19) **Section 2.3.3** – For area number 2, it states the areal removal will be determined by property line, tree line, and visual inspection of the trench. The removal should be limited only by the contaminant concentrations, not by pre-set boundaries. Also, see comment number 10 above regarding visual determination of waste removal.
- 20) **Section 2.3.3.1** - In the fourth paragraph, the sample of the backfill soil should be analyzed, compared to, and meet or exceed the State of Illinois Tiered Approach to Corrective Action Objectives (TACO) Tier I soil remediation objectives for residential properties.
- 21) **Section 2.4** – The land use controls required for CSA 3 should be to monitor and maintain the integrity of the cover soil above any remaining contamination, prohibit any intrusive activity into the subsurface of CSA 3, and to prohibit residential re-use of the property. This should be stated more clearly in this section.
- 22) **Section 2.4** – The last three words in the last sentence should be replaced with “are required.”
- 23) **Section 2.4.1** – The first sentence should include monitoring and maintaining the integrity of the cover soils and prohibiting residential re-use in the land use control objectives. The second sentence should state the Army would restrict those activities rather than the DoD. It is the Army’s responsibility, not the DoD’s.
- 24) **Section 2.4.1** – The second sentence states that to implement those objectives the DOD will restrict excavation or construction ... It does not state how they will restrict those actions. Please provide the methods/steps to be used to accomplish the objectives. This detail needs to be provided for all of the objectives.

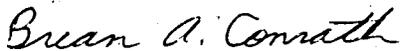
- 25) **Section 2.4.1, page 12** – The first sentence states that, "... activities will be restricted by the signs placed at the top and bottom of the ravine." Please explain how signs restrict activities. Signs can notify of restricted activities, but they do not actually restrict anything. In order for those activities to be restricted, there must be monitoring and enforcement associated with the signs. How does the Army plan to monitor and enforce those restrictions? That information is what is required in this design document.
- 26) **Section 2.4.1, page 12** – There is no mention or discussion of the Land Use Control Memorandum of Agreement (LUCMOA) in this section. Discussion of that document should also be included here.
- 27) **Table 2-1** – The number and cost of the signs provided in this table do not match those provided in the Decision Document (DD) or the Feasibility Study (FS). The FS, for CSA 3, proposed 10 boundary signs at \$44.82 each for a total of \$448. The DD lists 4 boundary signs at \$500 each for a total of \$2,000. This document lists 8 boundary signs at \$400 each for a total of \$3,200. Please explain this discrepancy and make any necessary changes to the table.
- 28) **Table 2-1** – The table does not include the required post-removal confirmation sampling. The costs for that effort need to be included here. The risk assessment, if necessary, also needs to be accounted for in the final cost of this remedy.
- 29) **Tables 2-1 and 2-2** – The total present worth cost of the remedy adds up to \$196,400. This is almost \$8,000 higher than the value presented in the DD submitted one month ago. Please explain the increase. It is noted that the contingency value listed here appears to calculate to approximately 30%, instead of the listed 15%. That equates to an increase of about \$12,000. Is this accurate?
- 30) **Sheets 3 & 4** – From the cross sections and figures on these sheets, the final grade of the ravine slopes appear to range from almost 1:1 (h:v) to 2 or 3:1. Will these final grades stand up over the long term? Has a safety factor for slope stability been calculated for these slopes?
- 31) **Sheet 4** – Table B, in the bottom right corner, lists the units for the total in "lbs/acre", but the actual value is listed in ounces. Please rectify this discrepancy.
- 32) **General** – There are no reduced size plan drawings provided with the design. The Agency requests the full-size drawings be reduced to 11 x 17 and attached to the text of

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Ft. Sheridan
March 12, 2004
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the design document. In addition, there is a considerable amount of textual information on the drawings that is not provided in the text. The majority of that information should be provided within the text of the design as well.

If you have any questions regarding this correspondence, you may contact me at 217/557-8155 or via e-mail at Brian.Conrath@epa.state.il.us.

Sincerely,



Brian A. Conrath
Remedial Project Manager
Federal Facilities Unit
Federal Site Remediation Section
Bureau of Land



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cc: Owen Thompson, USEPA (SR-6J)
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