



March 9, 2006

SHAW-MC-CK11-0363
Project No. 800486

Mr. Lee Coker
U.S. Army Corps of Engineers, Mobile District
Attn: EN-GE/Lee Coker
109 St. Joseph Street
Mobile, Alabama 36602

**Contract: DACA21-96-D-0018, Task Order CK11
 Fort McClellan, Alabama**

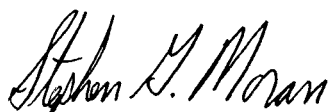
**Subject: Final Removal Action Report, Iron Mountain Road Ranges Soil Remediation
 on ALDOT Eastern Bypass Corridor Property**

Dear Mr. Coker:

Enclosed are one hard copy and one electronic copy of the subject document for your records. This report summarizes contaminated-soil removal activities conducted by Shaw at the Iron Mountain Road Ranges, including supplemental soil removal and erosion control activities performed at Range 12 in February 2006. Responses to ADEM comments on the draft report are attached. EPA concurred with the draft report in the attached letter dated October 4, 2005.

At your request, I have distributed copies of this document as indicated below. If you have questions, or need further information, please contact me at (865) 694-7361.

Sincerely,



Stephen G. Moran, P.G.
Project Manager

Attachments

Distribution: Lisa Holstein, FTMC (6 copies; 2 CDs)
Brandi Little, ADEM (2 copies; 1 CD)
Doyle Brittain, EPA Region 4 (1 copy; 1 CD)
Miki Schneider, JPA (1 copy)
Michelle Beekman, Matrix Environmental (1 copy)
Greg Schank, Matrix Environmental (1 copy)

**Response to ADEM Comments
Draft Removal Action Report
Iron Mountain Road Ranges Soil Remediation on
ALDOT Eastern Bypass Corridor Property
Fort McClellan, Alabama**

Comments received from Stephen A. Cobb, Chief, Governmental Hazardous Waste Branch, Land Division, ADEM, letter dated September 2, 2005.

Specific Comments:

Comment 1: Page 1-3, Section 1.2.2, Line 18. In this paragraph, Fort McClellan states that Figure 1-3 displays the site details for Range 12, including a concrete firing line at 35 meters from the base of the hill that served as the main bullet impact area and four additional firing lines at “25 meters, 15 meters, and 7 meters” from the base of the hill. However, the text only mentions three additional firing lines and at 35 meters, 25 meters, 10 meters, and 7 meters from the base of the hill. Please revise the text and figure to reflect the correct firing line distances.

Response 1: Agree. The text was revised to state that three additional firing lines are parallel to the 35 meter line. The firing lines depicted on Figure 1-3 are shown correctly.

Comment 2: Page 1-3, Section 1.2.3. This section describes Range 13, Parcel 71Q, but does not include a description of the aboveground storage located at Range 13. The aboveground storage tank appears to be on the Eastern Bypass Corridor boundary in Figure 1-1. The text should be expanded to include a description of the aboveground storage tank and its removal.

Response 2: Agree. Please note that the AST is no longer at the site. The text was revised to include additional information about the former AST.

Comment 3: Page 2-1, Section 2.2, Line 35. This sentence states that no excavation activities were required in the Eastern Bypass Corridor areas of the Skeet Range or Range 13 since the results indicated lead concentrations were less than the 880 mg/kg cleanup goal. Please include the concentration range for both ranges in the text.

Response 3: Agree. The text was revised to include the lead concentration ranges for both parcels.

Comment 4: Page 2-2, Section 2.5. The text states that the post-excavation confirmation sampling phase was altered from the description in the work plan. The work plan states that approximately 15 samples would be collected using a 50-by-50 feet sampling grid pattern. Instead, grab samples were collected

from grid nodes used to outline the excavation limits and at the nodes within the excavated area. The text should include a detailed justification as to why the change was made.

Response 4: Agree. The decision to alter the work plan sampling method was in response to an EPA request made at the BCT Meeting held September 28, 2004. In that meeting, EPA requested that composite sampling not be used for confirmation sampling. ADEM and the BCT concurred with this request. This information was added to the text.

Comment 5: Page 2-4, Section 2.5, Line 6. The text states that a regular field sample (sample number SN0064) and a field duplicate (sample number SN0065) were analyzed by the laboratory and found to have lead concentrations of 905 mg/kg and 880 mg/kg, respectively. This paragraph should explain why the duplicate value was used instead of the original value as confirmation for achieving the cleanup goal of 880 mg/kg.

Response 5: Comment noted. Shaw collected additional samples for XRF and fixed-base laboratory analyses from this area in February 2006. The new XRF and laboratory analytical results indicate that lead concentrations in the confirmation samples were less than 880 mg/kg. The report was revised to include the additional sample data.

Comment 6: Page 2-4, Section 2.5, Line 9. This paragraph states a confirmation soil sample, CS (S25,0)+3 was sent for laboratory analysis as a regular field sample (SN0071) and a field duplicate (SN0072). The laboratory reported lead concentrations of 532 mg/kg for the original sample and 4,450 mg/kg for the duplicate. The duplicate value is excessive in comparison to the cleanup goal of 880 mg/kg. This elevated concentration of lead should be explained in detail in the text, together with a description of any additional removal conducted or to be conducted.

Response 6: Agree; the concentration (4,450 mg/kg) of the duplicate sample (SN0072) is excessive. The associated XRF sample collected at this location had a concentration of 502 mg/kg – much nearer to the 532 mg/kg value of the regular sample (SN0071). Other than the possibility that a lead fragment was analyzed in the duplicate sample aliquot, no reasonable explanation is offered. However, please note that these samples were collected in an area that required scraping barren rock. To address this situation, Shaw removed additional soil/rock from this area in February 2006 and conducted additional confirmation sampling. The new results indicate that lead concentrations in the confirmation samples were less than 880 mg/kg. The report was revised to include the additional removal activities and sample data.

Comment 7: Figure 2-3. Figure 2-3 is titled 3 Foot Depth Excavation Limit and Lead Exceedances Range 12, Parcel 70Q, yet it contains lead concentrations for the 2 foot depth excavation. Please clarify whether this figure displays

concentrations for the 2 foot or for the 3 foot excavation and whether a figure is included for both the 2 foot and 3 foot excavation.

Response 7: Agree. Figure 2-3 shows both the lead concentrations at the 2-foot depth as well as the excavation area at the 3-foot depth. Figures 2-1 through 2-3 were revised for greater clarity.

Comment 8: **ADEM is aware that plywood is being used for erosion control and management in areas where lead remains on the Army's property adjacent to the cleanup area. ADEM requires the Army to inspect and maintain these erosion control measures to minimize the lead contaminated soil washing into the areas that have already been remediated. Also, please forward a Land Use Control Implementation Plan to describe all land use control which will be applicable for these sites (e.g., deed notices, other restrictions for industrial use limitations).**

Response 8: Comment noted. The portion of Iron Mountain Road Ranges where lead contamination remains and where erosion control measures are in place is located within the Bravo Area on property that was transferred to the Joint Powers Authority in September 2003; however, monitoring and maintenance of the engineered control remains an Army responsibility. Also, the Army is in the process of preparing a Finding of Suitability to Transfer (FOST) for the transfer of approximately 264 acres of the Eastern Bypass to the Alabama Department of Transportation. The LUCIP for that property will be included as an attachment to the FOST for ADEM review.

A temporary engineering control was installed during March 2005 at the completion of the soil remediation to stabilize the slope cut and to limit erosion. The engineering control consisted of silt fencing supported by iron fence posts and 2" by 12' boards. Sections of the temporary fencing subsequently failed as a result of excessive precipitation in the 3-month period from June through August. Therefore, Shaw conducted additional erosion control measures at the site in February 2006. The additional erosion control measures included repairing the wood boards and applying grass seed mixed with a liquid-gel polymer bonded fiber matrix (BFM) to the upper hillside. The BFM solidified upon ground contact and provides a temporary growth matrix for the seeds to take hold in the barren soil and prevent further erosion. The report was revised to include the supplemental erosion control measures performed at Range 12.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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October 4, 2005

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U.S. Army Transition Force, Fort McClellan
P.O. Box 5022
Anniston, AL 36205-5000

SUBJ: Draft Removal Action Report, Iron Mountain Road Ranges Soil Remediation on ALDOT
Eastern Bypass Corridor Property; Fort McClellan

Dear Mr. Levy:

The Environmental Protection Agency (EPA) has reviewed the subject document and agrees with it as written. Therefore, EPA approves the subject document. If you have any questions, please call me at (404) 562-8549.

Sincerely,

Doyle T. Brittain
Senior Remedial Project Manager

cc: Lisa Holstein, Ft. McClellan
Michael Kelly, US Army AEC
Shana Decker, ADEM
Lee Coker, USA/COE
Steve Moran, Shaw Environmental
Daniel Copeland, CEHNC-OE-DC
Bernie Case, ALANG
Miki Schneider, JPA
Wayne Sartwell, ALANG
Pete Tuttle, USF&WS

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