

FB 06

Final Voluntary Corrective Action Report
Inactive MacGregor Range Open Detonation
SWMU #20 (FTBL-015), Fort Bliss
Dona Ana County, New Mexico
EPA ID NO. NM4213720101-01
HWB-FB 03-001



Respondent:

Fort Bliss
David Dodge

January 2004 Responses to Notice of Deficiency Letter dated 24 November 2004

Reviewer:

New Mexico Environment Department
James P. Beam
Glenn von Gonten
Notice of Deficiency letter dated 24 November 2004

- Respondent:**
1. Concur (C), Does not Concur (D), or takes Exception (E).
 2. Commentator Agrees (A) with response, or Does not Agree (D) with response.

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1	General	<p>[A] Fort Bliss' RCRA Facility Investigation (RFI) of SWMU 20 was conducted in 3 phases. The Phase 1 RFI was a general characterization of 9 SWMUs, including SWMU 20. Fort Bliss collected and analyzed a small number of surface soil and an even smaller number of subsurface soil samples during its Phase 1 RFI. Because of very limited site historical information, Fort Bliss did not completely characterize the activities performed at SWMU 20. The Phase 2 RFI was even more limited in scope and was confined to six "confirmatory" samples taken in close proximity to soil samples that tested positive for polychlorinated biphenyls (PCBs) and explosives. The Phase 3 RFI attempted to characterize areas of SWMU 20 that had not previously been addressed and to delineate the extent of the PCB contamination.</p> <p>[B] SWMU 20 includes the entire Open Detonation area and is not limited to the relatively small detonation pits upon which Fort Bliss focused. [C] Given that SMWU 20 is approximately 10 acres in size and includes at least 2 detonation pits, numerous "mounds", a trench, a large amount of fiberglass and metal debris, and the surrounding kickout area, Fort Bliss' investigation to date did not include a sufficient number of soil samples. Fort Bliss cannot demonstrate that no release has occurred at SWMU 20 because it failed to take a sufficient number of samples to adequately characterize SWMU 20. [D] As Fort Bliss noted in Section 5 of its 1998 Phase 2 RFI Report, "[I]t is also reasonable to suggest that there may be other localized pockets of PCB contaminated surface soils in this area that were not detected during the Phase 1 investigation." NMED agrees with this statement, although the presence of other constituents other than just PCB is also likely.</p>	<p>[A] Concur.</p> <p>[B] Do not concur. The characterization of SWMU 20 in the Phase I RFI as 'roughly 10 acres in size' considered the two detonation pits, the space between the two, and the 'kickout' areas where debris was observed. The detonation pits are the unambiguous locations of detonation activities, and have been sampled. However, the trench and kickout areas also have been sampled. No constituents have been identified above NMED residential soil screening levels.</p> <p>[C] Do not concur. Twenty eight soil samples have been collected from within the detonation pits (combined area of < 1 acre), targeting the geophysical anomalies and the areas most likely to have been affected by historical activities. No constituents have been identified in the detonation areas above NMED residential soil screening levels. Samples also have been collected from the trench area and 'kickout' areas near the detonation pits. No constituents have been identified in the surrounding areas at concentrations above NMED-published residential soil screening levels. While additional sampling of kickout areas may be warranted to increase the density of sampling locations over the 10 acres, the most affected areas have already been sampled and no release above NMED residential soil screening levels has been identified. Additional samples in kickout areas further away from the detonation pits seem unwarranted given the results of sampling nearer the detonation pits.</p> <p>[D] Concur. The army initiated additional, third phase sampling in kickout areas based in part on this data gap. No metals, explosives, or PCBs have been identified at concentrations above NMED-published residential soil screening levels in any sample collected within or outside of the detonation pits. Low level concentrations of PCBs have been identified in several of samples. However, as with the initial PCB results that resulted in Phase 2 and Phase 3 delineation activities, none of the reported PCBs concentrations exceed the NMED-published residential soil screening levels.</p>	
2	General	[A] Fort Bliss' depictions of SWMU 20 must be revised (see Figures 1-1 through	[A] Concur. The figures will be revised to highlight the	

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		2.4). The 2003 Phase 1 RFI Report depicts numerous mounds and geophysical anomalies. However, in later figures, the geophysical anomalies appear to have been depicted as mounds (see Figure 2-1, 2003 VCA Report). [B] Fort Bliss must specify whether the mounds depicted on the various site maps are naturally occurring "mesquite-coppice dunes" or are the result of open detonation operations.	difference between mounds and geophysical anomalies. [B] Concur. The 'mounds' were either pushed up to create the depression formerly used for detonation activities or they are mesquite-coppice dunes and the depressions between the dunes (where detonation activities occurred) are naturally occurring. In either case, the mounds are thought to have pre-dated the detonation activities. The geophysical anomalies do not underlie the mounds. The text will be revised accordingly.	
3	General	Fort Bliss did not investigate the trench using geophysics in the Phase 1 RFI, although the site characterization discussion indicated that the trench may have been used for open burning (See Section 1.2 of Appendix A). Fort Bliss later determined that it was appropriate to collect 2 soil samples from the trench in the Supplemental RFI. Fort Bliss must conduct a geophysical investigation of the trench to determine whether any disposal occurred at this site.	Do not Concur. The trench was sampled as a conservative measure to address a potential data gap, to rule out the trench as an area of disposal since it was not previously characterized, and to confirm that detonation activities were not performed there. The trench is thought to be a relic of field maneuver training like the other foxholes and sand-bagged positions identified during the Phase 1 RFI, and as evidenced by spent small arms practice rounds (blanks) that are ubiquitous at the site. Since no explosives or PCBs were identified in the trench, and the locations of detonation activities are known, there is no evidence to suggest that detonation activities have occurred in the trench area. A geophysical survey of the trench areas is not warranted.	
4	Section 1.1	Summary. Fort Bliss states that based on comparisons of identified constituent concentration to state or federal soil standards that "...a release has not occurred." NMED rejects this assertion. Because Fort Bliss has documented that constituents have been detected at concentrations that exceed background concentrations, Fort Bliss has determined that a release has occurred. The release may or may not exceed human health and/or ecological risk-based concentrations, but that sort of determination is quite different than a determination that "no release has occurred." Fort Bliss must revise this section, and any other section(s), to reflect this determination.	Concur. The report will be re-worded to state that no constituents have been identified above NMED-published residential soil screening levels.	
5	Section 2.4.2	[A] Phase 1 RFI Summary. NMED is concerned with Fort Bliss' use of the term	Concur. The report will be re-worded for clarity.	

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		<p>"reporting limits" through this VCA Report. As discussed below, EPA has defined reporting limits as "The lowest concentration or amount of the target analyte required to be reported from a data collection project. Reporting limits are generally greater than detection limits and usually are not associated with a probability level." Laboratories often submit data packages that use terms that are not well defined, such as "reporting limit." NMED requires facilities to submit analytical data that is based on the method detection limits, not laboratory "reporting limits."</p> <p>[B] Fort Bliss' statement in Section 2.4.2 that "Explosives were analyzed, but none were reported in any of the samples" is an example of why NMED is concerned when data is submitted using "reporting limits." Fort Bliss must revise this report to avoid using the term "reporting limit" and must specify whether a constituent was detected. All detections must be reported, even if the laboratory cannot quantify the concentration at which the constituent has been detected.</p>	<p>[A] Analytes reported at any concentration (either quantified above or estimated below the reporting or quantitation limit) above the MDL were addressed in the VCA Report, as documented in the appended analytical data.</p> <p>[B] Explosives were not 'detected' above the method detection limit in any sample collected for laboratory analysis by the EPA-approved SW 846 Method 8330 for explosives. Explosives were reported in field test kit analyses during initial UXO clearance activities. Subsequent sampling was performed to investigate these results. The result of every laboratory analysis of every sample subsequently collected was non-detect. The report will be reworded accordingly.</p>	
7	Section 2.4.4.2	Supplemental RFI Sampling Data Collection. Fort Bliss states that 7 soil samples were collected from "outside" of the SWMU 20 area. However, with the exception of SS-G-08, the soil samples were clearly collected inside the boundaries of SWMU 20. As noted above, SWMU 20 is a large area, and is not just restricted to the two detonation pits. However, the seven soil samples do appear to be appropriate kick out samples.	Concur. The text will be revised to indicate that the samples referenced were collected from the kickout areas.	
8	Section 3.2.1	<u>Human Health.</u> Fort Bliss has not followed NMED's Soil Screening Level Guidance (NMED 2000, revised 2004). Fort Bliss failed to address additive risk (see Section 2.1.1, NMED 2004). Fort Bliss also uses the term "closure" inappropriately. To date, Fort Bliss has not addressed any cleanup of SWMU 20 and apparently intends to leave all debris in place.	Concur. The VCA Report will be re-worded (with respect to closure). Fort Bliss will review applicable NMED guidance regarding additive risk.	
9	App. A SLERA	<u>Draft Screening Level Ecological Risk Assessment Inactive McGregor Range Open Detonation Pit Areas - Solid Waste Management Unit 20 (FTBL-015) - Fort Bliss, New Mexico.</u> Fort Bliss has submitted a "Draft" Screening Level Ecological Risk Assessment (SLERA) Report; NMED does not review draft documents. However, NMED is providing some general comments for Fort Bliss' consideration when it submits a final SLERA Report.	Concur. The SLERA will be finalized.	
10	App. A	<u>Introduction.</u> Fort Bliss must attach the two SLERA checklists (Attachments A and B) that it prepared following NMED guidance.	Concur. The checklists will be included.	

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	SLERA Section 1.1		<i>Our biologist can only identify one checklist in the NMED (2000) guidance.</i>	
11	App. A SLERA Section 2.8	<u>Previous Field Investigations</u> The SLERA indicates that Fort Bliss conducted a Unexploded Ordnance (UXO) clearance at SWMU 20. Section 2.8 must be revised to indicate that the sampling locations were screened for UXO, but that Fort Bliss has never conducted a complete UXO clearance of SWMU 20, or, if Fort Bliss has conducted a complete UXO clearance, provide supporting documentation for the clearance activities.	Concur. Site documentation will be reviewed to determine the completeness of previous UXO clearance surveys. Text will be revised accordingly.	
12	App. A SLERA	Figures 2-1 and 2-3 incorrectly depict the location of SWMU 20. Fort Bliss must review and revise all figures in the VCA Report and Appendix A (SLERA) appropriately	Concur. The figures will be revised.	
13	App. A SLERA Section 4.2	<u>Data Evaluation To Select Contaminants Of Potential Ecological Concern (COPECs)</u> . Fort Bliss uses the terms "sample quantitation limits" and "reporting limits" frequently in this report (e.g., untitled table on Page 2-10). The sample quantitation limit is defined as the detection limit that accounts for sample characteristics, sample preparation, and analytical adjustments such as dilution (see SLERA Guidance, NMED 2000). EPA has defined reporting limits as "The lowest concentration or amount of the target analyte required to be reported from a data collection project. Reporting limits are generally greater than detection limits and usually are not associated with a probability level." NMED is concerned that Fort Bliss may be inappropriately omitting data by only reporting data that exceeds a laboratory contract related reporting limit. Fort Bliss must review and revise this report appropriately to ensure that all detects are reported, even those that the laboratory can only report as an estimated concentration, and not just those detects that exceed the laboratory's contractual requirements.	Concur. The report will be re-worded for clarity. Analytes reported at any concentration (either quantified above or estimated below the reporting or quantitation limit) above the MDL were addressed in the VCA Report, as documented in the appended analytical data. Fort Bliss is confident that no data has been inappropriately omitted. See response to Comment 5.	
14	App. A	<u>Evaluation of Sample Quantitation Limits (SOLs)</u> . In Exhibit 4-1 Fort Bliss indicates that it eliminated mercury and PCB isomers because they were not	Concur. PCBs will be retained for the SLERA evaluation.	

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	SLERA Section 4.2.2	detected in any sample and are not expected to be present in the medium of concern. NMED agrees that the data do not indicate that mercury is of concern. However, several PCB isomers were detected during the 3 RFIs, and, as Fort Bliss indicated in its Phase 1 RFI Report (Section 4.3.6.3), PCBs are a common contaminant associated with missiles, and therefore, are reasonably expected to have been released at SWMU 20. Fort Bliss conducted its Phase 2 RFI largely because of PCB detects. It is inappropriate to eliminate constituents during the SLERA by claiming that they were not present at concentrations that exceeded a laboratory "reporting limit." All PCB isomers must be retained for the SLERA and Fort Bliss must revise its SLERA to include the detected PCB isomers as Contaminants of Potential Ecological Concern (COPECs).		
15	App. A SLERA Section 4.4.2	<u>Identification of Ecological Receptors.</u> Fort Bliss has limited its SLERA to consider only two trophic levels, although it points out that the ecology of desert grasslands is extremely diverse. At a minimum, Fort Bliss must revise its SLERA to include an appropriate carnivore/predator indicator species.	Concur. A carnivore/predator species will be added.	
16	App. A SLERA Table 4-2	<u>Parameters for Calculation of Upper 95% Confidence Limit Concentrations.</u> Fort Bliss must revise Table 4-2 to include the calculated Upper 95% Confidence Limit (UCL) concentration.	Concur. The table will be revised to include the 95% UCL concentration. (It appears that the last column in this table was cut off, not printed).	
17	App. A SLERA Table 4-9	<u>COPEC Concentration in Invertebrates (C_{mv}) Due to Root Uptake.</u> Fort Bliss must explain what "Root Uptake" means with respect to invertebrates.	Concur. The table title was mis-worded, will be revised to "COPEC Concentration in Invertebrates (C _{mv})."	
18	App. A SLERA Section 8	<u>Conclusions and Recommendations.</u> As noted above, [A] Fort Bliss has not adequately characterized SWMU 20. Major data gaps must be addressed. [B] Also, as noted above, Fort Bliss must revise its SLERA to include a carnivore/predator as an indicator species. [C] Also, as noted above, additional investigation is necessary to meet NMED's requirements for a No Further Action (NFA) determination.	[A] Do Not Concur. See response to comments 1 and 19. [B] Concur. See response to comment 15. [C] Do Not Concur. See response to comments 1 and 19.	
19	General	[A] Fort Bliss has not adequately characterized SWMU 20. Fort Bliss shall have 90 days to submit a RCRA Facility Investigation Work Plan that will	[A] Do Not Concur. Previous investigations at SWMU 20 have included sampling of the detonation pits (the areas	

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		<p>specify how Fort Bliss will complete its characterization of SWMU 20. Fort Bliss' RFI Work Plan must also include a section(s) on how it proposes to complete a revised SLERA. [B] NMED recommends that Fort Bliss remove the missile debris that covers SWMU 20 as part of good environmental stewardship. Removal of the debris in and around SWMU 20 would certainly help Fort Bliss justify a NFA petition. Removal of the missile debris should be completed prior to the implementation of the additional investigations to ensure that any indirect investigation, such as a geophysical investigation, is not negatively impacted by the metal debris.</p> <p>[C] NMED recommends that Fort Bliss follow the closure procedures for its permitted Open Detonation Unit specified in Attachment F (Closure Plan) to its RCRA Permit. Fort Bliss' closure plan specifies that it will remove of all metal debris, that the kickout area will be swept with metal detecting equipment and cleared, and that the site will be remediated appropriately.</p> <p>NMED requires Fort Bliss to submit a RCRA Facility Investigation (RFI) Work Plan to address major deficiencies and data gaps in its RFI for SWMU 20. Fort Bliss should submit the required RFI Work Plan for SWMU 20 within 90 days of your receipt of this NOD. NMED is providing Fort Bliss with comments on its the VCA Report and Screening Level Ecological Risk Assessment for future reference.</p>	<p>most likely to be affected), the kickout areas, and the trench north of the Major Detonation Pit. Some constituents have been identified above background levels. Additional investigations have been performed based on the identification of constituents and to address data gaps of the earlier investigations. However, to date, no constituents of concern have been identified at concentrations above NMED residential soil screening levels. While additional sampling of kickout areas may be warranted to increase the density of sampling locations over the 10 acres, the most affected areas have already been sampled and no release above NMED residential soil screening levels has been identified. Additional samples in kickout areas further away from the detonation pits seem unwarranted given the results of sampling nearer the detonation pits. Fort Bliss is an active military installation, no change in mission or land use is anticipated. Site data will be reviewed to evaluate the approach for additional investigation, if necessary.</p> <p>[B] Fort Bliss will consider the recommendation remove surface debris.</p> <p>[C] Do Not Concur. The closure procedures in Attachment F of the RCRA permit are applicable to the permitted, operating Open Detonation Unit, not to SWMU 20. No release of constituents at concentrations above NMED residential soil screening levels has been identified in three rounds of investigation. The SWMU 20 site essentially is characterized by the presence of scrap metal. The level of effort and expense required to implement closure activities as prescribed for the permitted unit are not warranted.</p>	