DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON, FORT BLISS
1 PERSHING ROAD
FORT BLISS, TEXAS 79916-3803

REPLY TO
ATTENTION OF:

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NOV 2007
NMED Hazardous Waste Bureau

IMWE-BLS-Z

November 7, 2007

Mr. James Bearzi, Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Re: Revised Final RFI Work Plan, Site Investigation of the Oro Grande Landfill (SWMU 25/FTBL-014), Fort Bliss, New Mexico, EPA ID# NM4213720101-01

Dear Mr. Bearzi:

Please find enclosed two copies of the Revised Final RFI Work Plan Site Investigation of the Oro Grande Landfill (FTBL-014), Fort Bliss, New Mexico. This document includes revisions to address review comments transmitted in your letter dated 21 March, 2007 and subsequent clarifications dated 25 July, 2007. A separate summary table of responses to regulatory comments is provided to facilitate your review.

If you have any questions or need further assistance, please do not hesitate to contact Kelly Blough at 915-568-0794(voice), 915-568-1333 (fax), or kelly.blough@us.army.mil.

Sincerely,

cc: Rick Smith, USACE – Tulsa District

Keith Landreth, Director
Directorate of Environment

RCRA Facility Investigation Work Plan, Oro Grande Landfill (SWMU-24/FTBL-14) October 30, 2007
Fort Bliss, New Mexico, EPA ID NM4213720101-01, HWB-FB-06-001

The table presented below provides responses to comments in the New Mexico Environment Department (NMED) Notice of Deficiency (NOD) letter dated March 21, 2007 pertaining to the *Final RCRA Facility Investigation Work Plan, Oro Grande Landfill (SWMU-25/FTBL-14)* dated November 2006.

- November 2004: *Work Plan-Supplemental RCRA Facility Investigation -Oro Grande Landfill/SWMU-25/FTBL-14 submitted to NMED.*
- December 30, 2004: NMED issued NOD and requested revision of the work plan.
- December 2005: Revised document, titled *Final RCRA Facility Investigation (RFI) Work Plan, Oro Grande Landfill/SWMU-25/FTBL-14,* delivered to NMED.
- July 24, 2006: NMED issued NOD and requested revision of the final work plan.
- November 2006: Permittee provided responses to the comments in NMED's July 2006 Notice of Deficiency.
- November 3, 2006: NMED informed the Permittee by electronic mail that the responses to comments were acceptable.
- November 2006: Revised *Final RCRA Facility Investigation Work Plan, Oro Grande Landfill (SWMU-25/FTBL-14)* delivered to NMED.
- March 21, 2007: NMED issued NOD and requested revision of the work plan.
- July 2, 2007: Permittee requested clarification of the comments in the July 2007 NOD.
- July 25, 2007: NMED issued clarification of comments in the March 2007 NOD.
- September 21, 2007: NMED provides extension until November 9, 2007 for responses to NOD and revised work plan.

The Final RCRA Facility Investigation Work Plan will be revised to incorporate the changes indicated in the following table.

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

Comment No.	Section /Page	Para /Line	Comment	C, D, or E[1]	Response	A or D[2]
Reviewer: James Bearzi, Chief Hazardous Waste Bureau, New Mexico Department of the Environment						
1	3.2.3		The Permittee states in Section 3.2.3 that background concentrations were determined by Roy F. Weston, Inc. (date unknown) based on soil samples collected in the vicinity of the Dona Ana, McGregor, and Oro Grande Range Camps. The Permittee cannot utilize site-specific calculated background values until	CE	Section 3 is a summary of previous investigations conducted at the Oro Grande Landfill between 1989 and 2000 and is provided as historical information. Section 3.2.2 is a discussion of the findings from soil investigation presented in the 1997 Thompson Professional Group (TPG). This 1997 TPG report compared the soil findings to background concentrations developed	

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			they are approved by NMED. The Permittee must revise the work plan to either reference a NMED-approved background study or remove the reference to background values.		by Roy F. Weston. This text is presented in the work plan historical informational purposes only. Accordingly, the reference to the findings in the 1997 TPG report is left in the work plan with additional text to indicate that these previously developed background concentrations will not be used in the planned investigation. Copies of the TPG soil borings have been added to the work plan attachment for reference. A cross section has been added to the work plan based on the TPG soil borings.	
2	3.3		The Permittee references in Section 3.3 soil metal concentrations detected at the sites as being lower than EPA Region 3 Risk Based Concentrations for Soil Ingestion Levels. For all individual contaminants for which NMED has specified soil screening levels in NMED's Technical Background Document for Development of Soil Screening Levels, the residential or industrial land use scenario cleanup levels shall be the screening levels as specified in the most recent version of that document. The method for determining cleanup levels for sites with multiple contaminants must follow NMED's Technical Background Document for the Development of Soil Screening Level (as updated) and items A and B below, as applicable: A. If PCBs are a concern at a site, the Permittee shall propose a soil cleanup level for PCBs based on NMED's Position Paper Risk-based Remediation of Polychlorinated Biphenyls at RCRA	CE	Section 3 is a summary of previous investigations and previously conducted activities that were completed between 1989 and 2000. Section 3.3 references investigation activities that were performed at the nearby Oro Grande Range Camp oxidation lagoon by Tetra Tech EM, Inc. in 1998. The purpose of presenting the findings from this 1998 investigation is to indicate that groundwater was not encountered in a boring completed to a depth of 319.5 feet below ground surface. Accordingly, Section 3.3 has been revised to present only the information pertinent to local groundwater occurrence. The discussion of soil sampling and soil results for the 1998 investigation at the oxidation lagoon has been deleted as it is not germane to the Oro Grande Landfill. A. The analysis of PCBs is included in the planned scope of work. If necessary, the Permittee will develop PCB clean up levels in accordance with NMED guidance during remedial action planning.	

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			Corrective Action Sites (March 2000 as updated); and B. If a NMED soil screening level (SSL) has not been established for a hazardous waste constituent, the Permittee shall propose for NMED approval, a cleanup level based on the most recent version of the EPA Region VI Human Health Medium Specific Screening Levels (HHMSSL)(based on a HI of one (1.0) for compounds designated "n" (noncarcinogen effects), "max" (maximum concentration), and "sat" (soil saturation concentration), or ten times the EPA Region VI HHMSSL for compounds designated "c" (carcinogen effects)(i.e. a target excess cancer risk level of 10^{-5}). The Permittee must revise the work plan by removing the references to EPA Region 3 and adding references to NMED SSL and Items A and B above.		B. Noted. The text has been revised as indicated above.	
3	3.5		In Section 3.5, the Permittee identified several data gaps. The Permittee states that the subsurface geology has not been evaluated to allow for verification of the absence of a groundwater pathway. This statement contradicts Figure 2-3, which shows that all the pathways regarding groundwater are incomplete. The Permittee must revise Figure 2-3 to show that some of the exposure pathways are currently unknown.	C	Figure 2-3 has been revised to indicate potentially completed pathways for Army Personnel and Contractor/ Visitor to groundwater. Bullet 3 on page E-1 has been revised to read: *3. Evaluate potential for a groundwater water pathway.* The 3rd bullet in Section 4.1 has been revised to read: • *Evaluate potential for a groundwater water pathway.*	

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4	4.1		The Permittee states in Section 4.1 that one geotechnical soil sample will be collected from the deepest boring drilled to assess the subsurface geology, particularly the first clay layer encountered. The Permittee must prepare a detailed log for each boring that describes the characteristics of all soil/sediments/rock observed in the boring. The Permittee must ensure that the geotechnical data collected from the selected clay layer(s) can and will be used to determine and report the hydraulic conductivity of the clay layer. The Permittee must demonstrate that a competent confining layer (a layer of sufficiently low permeability to minimize the passage of potential contaminants to lower stratigraphic units, including saturated zones) exists beneath the landfill and determine the lateral extent of the stratigraphic unit relative to the landfill.	C	Noted. Soil boring procedures and borehole logging methods are described in Section 4.4 of the work plan. <u>Soil Boring Method</u>: The second paragraph of the Soil Boring Method section on Page 4-6 of work plan has been revised to indicate: The planned order of execution of the soil borings has been adjusted so that the deep soil boring (F14-SB-6), at the southern end of the landfill, will be completed first to establish the site stratigraphy and to allow for field adjustments to the subsequent boring activities, as needed. Based on field observations from boring F14-SB-6, the boring depth at F14-SB-1, at the northern end of the landfill, will be extended to confirm the lateral extent of the first low permeability layer underlying the landfill. A geologic cross section based on the TPG borings has been added to the work plan as Figure 3-3.	
5			Inorganic constituents other than the eight RCRA metals may have been released from the landfill and would more likely occur deeper than two feet below the ground surface. The Permittee must revised their sampling strategy to specify that soil samples will be analyzed for all inorganic constituents listed in 40 CFR 261 appendix VIII. The work plan must also be revised to include activities for the establishment of background concentrations in subsurface soils (> 0.5 feet below ground surface), in additional to	C	<u>Sampling Strategy</u> The sampling strategy in the work plan has been revised to specify that the RFI soil samples adjacent to and beneath the landfill and former tar area will be analyzed for the 31 inorganic chemicals listed in Method 6010B plus cyanide as requested in the NMED NOD and clarification letter dated July 25, 2007. The list of inorganic chemicals in Method 6010B-19, Revision 2, 1996 is attached (Table 1). These analytes will be analyzed by Method 6020 and various other methods. The revised Table 4-1 - Analytical Summary is attached.	

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			surface soils (0 to 0.5 ft interval). Soil from specific horizons must be compared to background concentrations calculated from the same or comparable soil horizon. July 25, 2007 NMED Clarification Letter: *The Permittee states that the eight RCRA metals were selected for soil analyses because they were identified as chemicals of concern based on historical information and findings from previous investigations. The Permittee has identified only a small portion of the wastes in the Oro Grande Landfill. The Permittee has not sampled the soil beneath the landfill for all inorganic constituents nor has the Permittee sample the soil in all location where a release from the landfill is most likely to occur. It is still unknown of other inorganic constituents are present because the Permittee analyzed soil samples for a limited analytical suite.* *The Permittee must analyze soil samples for all the target analyte metals listed for SW-846 Method 6010B, and also cyanide.* *The Permittee also mentioned that Comment 5 and NMED's guidance document titled Technical Background Document for Development of Soil Screening Levels vary in the definition of surface soil. The difference between surface soil and subsurface soil as per NMED's guidance is based on exposure levels to hazardous constituents. This differs from surface and subsurface soil distinguished based on chemical and textual differences.* *The thickness of surface soil varies in*		Background Soil Sampling Section 4.4.3 of the work plan has been revised to indicate that background soil sampling will be conducted only for inorganic chemicals with observed exceedances of the NMED residential soil screening levels. The plan for background soil sampling activities has been moved from Section 4.4.3 to Attachment E. Background soil sampling will only be conducted if there are observed inorganic chemical exceedances in RFI soil samples. The background sampling plan indicates that the background soil samples will match the soil type and the taxonomic soil horizon (leaching zone or zone of accumulation) of the observed inorganic chemical exceedance in the RFI sample. Note that the soil type at the Oro Grande Landfill has been revised based on the 2007 United States Department of Agriculture Soil Survey (http://websoilsurvey.nrcs.usda.gov). The 2007 soil survey indicates that the Pendero fine sand is the only soil type found at the Oro Grande Landfill. The 2007 soil survey map is presented in Attachment C of the RFI Work Plan. The text of the work plan has been revised to match the information from the 2007 soil survey. The background soil samples will be analyzed only for the inorganic parameters with observed exceedances in the RFI samples. The background samples will also be analyzed for the indicator compounds (BTEX). Accordingly, Table 4-1: Analytical Summary in the Work Plan has been revised to remove the planned background soil sample analyses and the indicator compound analyses.	

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			different locations depending on soil classification and genesis. Typically, certain soil horizons (as classified by the U.S. Department of Agriculture, Natural Resources and Conservation Service Taxonomy) are zone of accumulation and other horizons are zone of leaching. Most metals tend to accumulate in the surface soils, unless the environment is acidic, which allows metals to travel further down the soil profile. It is logical and advantageous to calculate at least two different background values for a site based on soil types and horizons. *NMED required the Permittee to calculate separate background values for surface and subsurface soils (based on soil taxonomy) at the site.*			
6	4.4.3		The Permittee states in Section 4.4.3 that soil samples collected from background will be composited. The work plan must be revised to state that soil samples used to calculate background will be composited only if they are from comparable soil horizons. July 25, 2007 NMED Clarification Letter: *The term "soil horizon" is defined by the U.S. Department of Agriculture, Natural Resources and Conservation Service and does not refer to intervals based on a predetermined depth below the ground surface.*	C	The background soil sampling plan has been moved from Section 4.4.3 to Attachment E. The background soil sampling plan indicates that the background soil samples will be grab samples from the same taxonomic soil horizon as the observed exceedance in the investigation samples.	
7	5.0		The Permittee states in Section 5.0 that field activities are expected to begin in January 2006.	C	The schedule has been updated to indicate that the field activities will begin in 2008.	

Comment No.	Section /Page	Para /Line	Comment	C, D, or E[1]	Response	A or D[2]
			The Permittee must alter the projected schedule in Section 5 to accommodate changes to the work plan and the dates of tasks to be performed.			
8	Table J-1 Attachment J		Table J-1 in Attachment J shows the reporting limits, standards and screening levels for the sampling analyte list. The Permittee does not reference what screening levels and human health standards are listed in the table. The Permittee must revise this table to include the screening levels and human health standards listed in Comment 2 of this letter. The Permittee must submit a revised work plan within 90 days of receipt of this letter. In addition, the Permittee must include a response letter that indicates precisely where revisions have been made, cross-referencing NMED's number comments.	C	The Attachments have been re-number due to the addition of an Attachment for the Background Sampling Plan. The Attachment that was previously Attachment J is now Attachment K. The following references have been added to Table K-1: *Technical Background Document for the Development of Soil Screening Levels, Revision 4.0, June 2006, New Mexico Environment Department.* *Risk-based Remediation of Polychlorinated Biphenyls at RCRA Corrective Action Sites, Position Paper, March 2, 2000, New Mexico Environment Department.* Attachment K, Table K-1: The column labeled HHS (Human Health Standards) has been revised to indicate "Tap Water." The column labeled RSL (Residential Screening Level) has been revised to indicate "SSL - Residential" for Soil Screening Level - Residential. The term "RSL" has been replaced with "SSL-Residential" throughout the work plan. The term "HHS" has been replaced with "tap water screening level" throughout the work plan.	