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DAVE MARTIN
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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

March 9, 2012

Colonel David C. Piech
27th Special Operations Mission Support Group
110 E. Sextant Avenue, Building 600, Suite 1098
Cannon Air Force Base, New Mexico 88103

**RE: APPROVAL WITH MODIFICATIONS
WORK PLAN FOR MONITORING WELL INSTALLATION
AT LANDFILL NO. 25 (LF-25/SWMU 97)
CANNON AIR FORCE BASE, NEW MEXICO, JULY 2011
EPA ID #NM7572124454
HWB-CAFB-11-003**

Dear Col. Piech:

The New Mexico Environment Department (NMED) has received the Cannon Air Force Base (Permittee) *Work Plan for Monitoring Well Installation at Landfill No. 25 (LF-25/[Solid Waste Management Unit]SWMU 97), Cannon Air Force Base, New Mexico* dated July 2011 (Work Plan). NMED hereby issues this Approval with the following modifications.

GENERAL COMMENTS

Comment 1

Uniform Federal Policy--Quality Assurance Project Plan (QAPP), Appendix A:

The Permittee is reminded that NMED does not review or approve QAPPs. Approval of this Work Plan does not constitute approval of the QAPP. In future submittals to NMED, all directly related information contained in the QAPP must be included in the body of submitted work plans and reports.

Comment 2

Site Safety and Health Plan (SSHP), Appendix B:

The Permittee must remove Appendix B, Work Plan Site Safety and Health Plan (SSHP) from the Work Plan. The Permittee is reminded that while a SSHP is required NMED does not review or approve health and safety plans. In all future submittals to NMED the Permittee must not include, nor reference, previously submitted health and safety plans. Approval of this Work Plan does not constitute approval of the SSHP. The information provided in **Section 6. Health and Safety** of the Work Plan is sufficient for all future work plans.

Comment 3

Standard Operating Procedures (SOPs), Appendix C:

The Permittee must remove Appendix C, Standard Operating Procedures (SOPs) and all references to the SOPs in the revised Work Plan. The Permittee is reminded that NMED does not review SOPs. In all future work plans the Permittee must provide descriptions of proposed procedures, specific field methods and specific equipment to be used in the execution of the work plan, including copies of field forms that will be used, in the appropriate section(s) of the work plans. The Permittee must also fully describe all site specific procedures, specific field methods and specific field equipment actually used in field in the appropriate sections of all future reports.

Comment 4

SOP C4 Land Surveys, Appendix C:

The information in this SOP is not found in the body of the Work Plan. The Permittee is reminded that in all future submittals the relevant information contained in the SOPs must be incorporated into the text of the document. Approval of this Work Plan does not constitute approval of the SOPs.

Comment 5

The NMED Technical Background Document for Development of Soil Screening Levels was updated on February 14, 2012. The Permittee is directed to use the updated soil screening levels (SSLs) provided in Table A-1 (NMED Soil Screening Levels) of the NMED *Risk Assessment Guidance for Site Investigations and Remediation* February 2012 for comparison in the Revised Closure Report. A copy of this document can be found on NMED's website:

<http://www.nmenv.state.nm.us/HWB/guidance.html>

Changes to the soil screening guidance (SSG) include updated soil SSLs using new toxicity data and adding mutagenicity. In addition, the Total Petroleum Hydrocarbon (TPH) and the Polychlorinated Biphenyl (PCB) guidance are now combined with the SSG, which replaces the individual documents. The most recent version of the SSG must now be used in the evaluation of site data instead of the NMED 2009 version.

SPECIFIC COMMENTS

Comment 6

In **Section 1 Introduction, last paragraph, page 1-1**, the Permittee states "[t]he new well will be monitored in compliance with NMED requirements and included in the 2012 biennial

sampling event at the site.” The new well must be sampled immediately after development as well as during the 2012 biennial sampling event at the site. The groundwater samples must be analyzed for metals, volatile organic compounds (VOCs), nitrate/nitrite, perchlorate, and total petroleum hydrocarbons diesel range organics (TPH DRO) and the initial round of groundwater sampling data must be included in the monitoring well installation report (Report)

Comment 7

In **Section 1.1 Background, second paragraph, page 1-1** the Permittee states “[h]ydrographs for wells MW-P/Pa and MW-Ra show that groundwater levels have steadily decreased at LF-25 since gauging was initiated in 1995 and 2001, respectively. Over the 6-year period from 2004 to 2010 regional water levels declined at a rate of 1.8 ft per year in MW-Ra and 2.2 ft per year in MW-Pa (Tetra Tech and Trinity, 2010).” These hydrographs were not included in the Work Plan. In all future submittals the Permittee must include all referenced historical figures, graphs, tables and documents or reference specific documents, including page numbers, if the documents are part of NMED’s administrative record.

Comment 8

Figure 2 (Proposed Well Location Map at Landfill No. 25 (LF-25/SWMU 97)) does not show the location of the original MW-R. The Permittee must include the locations of MW-R, MW-Ra and MW-Rb in the well location map in the Report.

Comment 9

In **Section 2.3.5 Well Installation Methodology, bullet 4, page 2-7**, the Permittee states “[t]he top of the screened interval will be set at the existing water table.” The Permittee must set the monitoring well so that it is screened across the water table to allow for testing for the presence of light non-aqueous phase liquids and VOCs in the monitoring well.

Comment 10

In **Section 2.3.5 Well Installation Methodology, bullet 5, page 2-8**, the Permittee states “[o]nce the drill casing has been slowly removed from the borehole, seat the capped screen and casing at the bottom of the borehole.” To prevent collapse of the borehole and damage to the well during construction activities the Permittee must set the capped screen and casing inside the drill casing and incrementally pull drill casing as the filter pack and seal materials are added in lifts. The Permittee must describe all drilling and well installation activities in the Report.

Comment 11

In **Section 2.3.5 Well Installation Methodology, bullet 6, page 2-8**, the Permittee states “[i]n the event of overdrilling the borehole to a depth greater than necessary, backfilling of the borehole will be required prior to setting the well screen and casing.... backfill the borehole to the desired depth at which the capped screen and casing will be seated.” The Permittee is directed to follow guidance for well construction techniques found on page 54 of Appendix 6, Section 6.3.2.a Single-cased Wells, second paragraph, in the *United States Department of Army, White Sands Missile Range RCRA Permit*, December 2009. A copy of this section can be found on NMEDs website at:

http://www.nmenv.state.nm.us/HWB/documents/FINAL_WSMR_APPENDICES_12-2009.pdf.
In the event that backfilling the borehole is necessary the Permittee must describe the amount of footage overdrilled and the method used to backfill to the appropriate depth in the Report.

Comment 12

According to **Section 2.3.5 Well Installation Methodology and Table 3 (Field Project Schedule)** it is unclear if the grout will be allowed to set before the surface completion is installed. The grout shall be allowed to cure for a minimum of 24 hours before the surface pad and protective casing are installed. It is also unclear if the well development will take place before the surface completion is set. The Permittee is directed to follow guidance for well construction techniques found on pages 58 of Appendix 6, Section 6.3.5 Well Development, second paragraph in the *United States Department of Army, White Sands Missile Range RCRA Permit*, December 2009. The Permittee must describe all monitoring well installation activities and include associated data in the Report.

Comment 13

In **Section 2.3.5 Well Installation Methodology, bullet 11, page 2-8**, the Permittee indicates that the well will be tagged with a corrosion-resistant identification tag. The Permittee must also inscribe the monitoring well number into the concrete pad for the monitoring well.

Comment 14

In **Section 2.3.5 Well Installation Methodology, bullet 12, page 2-8**, the Permittee states “[a]fter completion of the well a well alignment test to verify plumbness and integrity of well is recommended.” and describes the procedure. It is unclear from the work plan if this alignment test will be performed. The Permittee must perform the alignment test. The results of this test must be included in the Report.

Comment 15

In **Section 2.3.5 Well Installation Methodology, bullet 13, page 2-9**, the Permittee states [f]ollowing waste characterization as described in Section 5.2, the nonhazardous development and purge water will be disposed of by discharging directly to the ground surface at the well head.” **Section 5.2 Management and Characterization of Decontamination Fluids and Well Development Water, first paragraph, page 5-2** states “[b]ased on generator knowledge of site conditions at the proposed location gathered from installation and groundwater sampling of well MW-Ra, wastewater generated during well development and decontamination is anticipated to be nonhazardous. Wastewater characterized as nonhazardous will be discharged directly to the ground surface in the vicinity of the drilling location upon generation.” Extrapolating waste characterization for disposal purposes using historical data from another well is unacceptable. Wastewater generated during the drilling and well development of MW-Rb must be containerized on site, properly sampled and disposed of appropriately based the groundwater chemical analytical results from the initial sampling of the well.

Colonel David C. Piech
March 9, 2012
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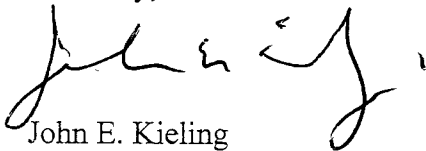
Comment 16

In **Section 5.1 Management and Characterization of Soils, Soil Cuttings, page 5-1**, the Permittee states “[s]oil cuttings will be placed on 8-mil plastic and allowed to dry... [c]haracterization of the cuttings will be through generator knowledge based on known site conditions reported during installation of well MW-Ra... [b]ased on characterization of the waste stream as nonhazardous the dried cuttings will be spread on the ground in the vicinity of the well head.” Extrapolating waste characterization for disposal purposes using historical data from a nearby well is unacceptable. The soil cuttings must be characterized by the testing of a minimum of one composite waste characterization sample. The soil cuttings may remain on plastic pending analysis; however, the plastic must be bermed on the edges to prevent runoff should a precipitation event occur. The cuttings may be thin spread on site provided all the constituents detected in the composite sample(s) are below the (2012) residential SSLs.

No response to this letter is necessary. The Permittee must implement the Work Plan incorporating all comments in this approval with modifications. The monitoring well installation report must be submitted to NMED no later than June 15, 2012.

If you have questions regarding this letter, please contact Lane Andress of my staff at (505) 476-6059.

Sincerely,



John E. Kieling
Acting Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
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