



NEW MEXICO  
ENVIRONMENT DEPARTMENT

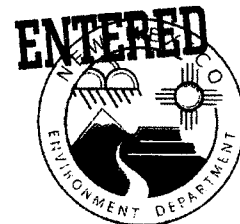
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**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

March 30, 2010

Colonel Stephen Clark  
27<sup>th</sup> Special Operations Wing  
100 South D.L. Ingram Boulevard  
Cannon Air Force Base, New Mexico 88103-5214

**RE: NOTICE OF DISAPPROVAL  
CORRECTIVE ACTION COMPLETE PROPOSALS  
CANNON AIR FORCE BASE, NEW MEXICO, MARCH 2010  
EPA ID #NM7572124454  
HWB-CAFB-~~09-005~~  
08-006**

Dear Col. Clark:

The New Mexico Environment Department (NMED) received Cannon Air Force Base's (Permittee) *Corrective Action Complete Proposals* dated March 2010 (Proposal) on March 15, 2010. NMED hereby issues this Notice of Disapproval (NOD) with the following directions.

**General Comment:**

The Permittee submitted *Corrective Action Complete Proposals* dated July 2008 for Areas of Concern (AOCs) A, B and C and for Solid Waste Management Units (SWMUs) 79, 86, 87, 88, 89, 90, 97, 104, 105, 124 and 129.

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The Permittee subsequently submitted *Corrective Action Complete Proposals* dated October 2008 (the Proposal that is the subject of this letter) for SWMUs 2, 4, 6, 10, 50, 72, 75, 81, 82, 96, 98, 102, 106 and 125. Both documents have the same title, but different dates. The revised Proposal that the Permittee submitted most recently (dated March 15, 2010) is yet another document with the same title, but different date. To avoid confusion, NMED requests that the Permittee submit future documents with distinct titles and use revision numbers when submitting revised documents.

**Comment 1. Introduction, Page 1:**

In the *URS Response to Comments* enclosed with the Proposal, the Permittee agreed to correct the titles of Tables 2 and 3 as listed in NMED's NOD dated February 11, 2010. However, the titles of Table 2 and 3 as described in the introduction are cited incorrectly. The words "Not Currently Requiring Corrective Action," must be corrected to "with Corrective Action Complete".

**Comment 2. Evaluation of Relevant Information – SWMU 102, Page 21:**

The Permittee did not conduct a Tier I Ecological Hazard Index Analyses for contaminants at SWMU 102 as directed in NMED's NOD dated February 11, 2010. Instead, the Permittee stated that ecological screening is not typically completed for subsurface soils collected from depths greater than 20 centimeters (0.6 feet) bgs. NMED agrees that surface soil (less than 0.6 feet) is considered an appropriate exposure interval for surface foraging and shallow-burrow wildlife, as well as many forage plants (grasses) and invertebrates. However, where primary vegetation may be present at the site consisting of deep-rooted plants, the mixed soil interval to a depth of ten feet below ground surface (ft bgs) should be evaluated for indirect exposures to wildlife through consumption of plants with roots that penetrate into these deeper soil intervals. In addition, where deeper burrows (such as a kit fox or badger den/burrows) may potentially occur, the deeper soil interval of up to ten ft bgs should also be used to evaluate soil ingestion exposures to these species (kit fox). This interval is deemed appropriate as red fox tunnels of up to 33 ft in length and leading to den chambers as deep as three to ten ft bgs have commonly been observed (USEPA Wildlife Exposure Factors Handbook Volume I, page 2-2222, <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=2799>). The Permittee must conduct an ecological risk assessment for the soil interval up to ten ft bgs. Contaminants of potential concern (COPCs) at SWMU 102 include the metals detected at concentrations above background upper tolerance limits (arsenic, cadmium, mercury and thallium) as well as the detected volatile organic compounds (toluene and xylene) and pesticides (4,4-DDE, 4,4-DDT, chlordane and lindane).

**Comment 3. Attachment II, Tables 3 and 6:**

NMED directed the Permittee to calculate site-specific soil to groundwater soil screening levels (SSLs) for arsenic, iron, mercury and thallium in subsurface soils at SWMU 6 and for arsenic and mercury detected at SWMU 75. Table 3 (data for SWMU 6) and Table 5 (data for SWMU 75) include a footnote stating that site-specific soil-to-groundwater SSLs were calculated in accordance with Equation 17 (NMED 2009) and a resultant DAF of 1,017.7. The calculated DAF value is correct. Equation 17 in NMED's *Technical Background Document for Development of Soil Screening Levels, Revision 4.0, June 2006* is the same as Equation 19 in NMED's *Technical Background Document for Development of Soil Screening Levels, Revision 5.0, August 2009*. However, the Permittee calculated site-specific soil to groundwater SSLs using DAF 1 values found in Revision 4.0 (2006). The Permittee must recalculate site-specific soil to groundwater SSLs using DAF 1 values found in Revision 5.0 (August 2009, updated in December 2009).

**Comment 4. Attachment II, Tables 6 and 7:**

Table 6 presents maximum detected concentrations of volatile organic compounds (VOCs) in SWMU 81 surface soils. Table 7 presents maximum detected concentrations of VOCs in SWMU 81 surface soils and subsurface soils combined. Maximum detected concentrations of 2-butanone (MEK) and acetone are lower in Table 7 than those indicated in Table 6. The Permittee must correct the maximum detected concentrations of these two compounds in Table 7.

**Comment 5. Attachment II, all Tables:**

All tables, except Table 12, in Attachment II include a column titled "Soil to Groundwater SSL Using DAF = 20" and a footnote indicating that the dilution attenuation factor (DAF) of 20 is not applicable to this site. In future documents where the maximum detected concentration of a constituent exceeds NMED's soil screening level (DAF of 20), the Permittee must calculate a site-specific soil to groundwater soil screening level. Site-specific SSL values higher than SSLs using DAF of 20 will sufficiently indicate that a generic DAF is not representative of site conditions.

**Comment 6. Response to Comments Regarding SWMU 6, POL Tank No. 129:**

In the NOD dated February 11, 2010, NMED directed the Permittee to conduct statistical comparison of site concentrations and background values to determine if arsenic is a contaminant of potential concern because the maximum detected concentration of arsenic exceeded the background upper tolerance limit (UTL) established for subsurface soils at Cannon Air Force Base. In the *URS Response to Comments* accompanying the revised Proposal the Permittee quoted portions of *RCRA Facility Investigation (RFI) for 21 SWMUs (October, 2007)* and stated that NMED accepted the RFI in a letter dated 14 May 2008. The Permittee modified the statement in the revised Proposal to indicate that the arsenic was considered to be only slightly

higher than background values, and was not considered to be related to the former underground storage tank. The Permittee did not conduct statistical comparison of site concentrations and background values as directed.

Even though NMED indicated in previous correspondence that the Permittee may petition for Corrective Action Complete status for a specific SWMU, NMED must re-evaluate all relevant data, using current criteria, to determine if the status is appropriate. During the corrective action process, stakeholders have the opportunity to examine the Permittee's data and proposals during the required public comment periods and public meeting. NMED must consider and respond to all comments received during the public comment periods of the permit modification process. To approve Corrective Action Complete status, NMED must have sufficient and good quality data that is defensible to all stakeholders. The Permittee must conduct statistical comparison of site concentrations and background values for arsenic to provide adequate evidence that arsenic is not a COPC at SWMU 6.

**Comment 7: Response to Comments Regarding SWMU 75, Sanitary Sewer Lift Station Overflow Pit**

In the NOD dated February 11, 2010, NMED directed the Permittee to remove SWMU 75 from the Proposal based on the presence of manganese that exceeded New Mexico soil screening level for the construction worker (150 mg/kg) and an inadequate number of soil samples (four samples from two shallow borings) to determine the nature and extent of potential contamination. According to Section 13.1 of *RCRA Facility Investigation for 21 SWMUs* dated October 2007, the exact location of the overflow pit "could not be determined and no drawings of this pit were identified". According to Section 13.2.3 in the same document, "The area of concern was soil at the bottom of a pond that has been reconfigured and lined." Further, the area around the pit was rebuilt twice (after the emergency overflow event when lift station pumps failed) to improve drainage around the golf course and to create water hazards for a new section of the golf course. Because the impoundment (current golf course water hazard) is lined, NMED directed the Permittee to remove SWMU 75 from the Proposal and suggested that the SWMU be deferred until changes in the landscape and/or removal of the impounded surface water allow access for investigation beneath the former overflow pit.

In the *URS Response to Comments*, the Permittee stated that NMED concurred with the conclusion that the construction worker exposure pathway did not apply to SWMU 75 in a letter dated May 14, 2008. The Permittee did not provide a response to NMED's comment regarding inadequate characterization and the Permittee did not withdraw SWMU 75 from the Proposal.

Even though NMED indicated in previous correspondence that the Permittee may petition for Corrective Action Complete status for a specific SWMU, NMED must re-evaluate all relevant data, using current criteria, to determine if the status is appropriate. During the corrective action process, stakeholders have the opportunity to examine the Permittee's data and proposals during the required public comment periods and public meeting. NMED must consider and respond to

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all comments received during the public comment periods of the permit modification process. To approve Corrective Action Complete status, NMED must have sufficient and good quality data that is defensible to all stakeholders. SWMU 75 has not been adequately characterized. The Permittee must remove SWMU 75 from the Proposal.

**Comment 8: Redline Strikeout Version of Revised Report**

The Permittee failed to provide an electronic redline-strikeout version of the Proposal. The Permittee must provide a redline-strikeout version of the next revision.

The Permittee must address all comments and submit a revised Proposal by May 31, 2010. All submittals must be in the form of two paper copies and a minimum of one electronic copy. The Permittee must also provide an electronic red-line strike out version that shows all revisions made to the Proposal.

Please contact Pat Stewart at (505) 476-6059, should you have any questions.

Sincerely,



James Bearzi  
Chief

Hazardous Waste Bureau

cc: J. Kieling, NMED HWB  
D. Cobrain, NMED HWB  
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P. Stewart, NMED HWB  
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