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ENTERED



RON CURRY
Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 11, 2010

Colonel Stephen Clark
27th 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 (OCTOBER 2008)
CANNON AIR FORCE BASE, CLOVIS, NEW MEXICO
EPA ID NO. NM7572124454
HWB-CAFB-08-006**

Dear Col. Clark:

The New Mexico Environment Department (NMED) has reviewed Cannon Air Force Base's (Permittee) *Corrective Action Complete Proposals*, dated October 2008 (Proposal). NMED hereby issues this notice of disapproval.

General Comment:

The five "NMED Criterion" indicated on page 2 and listed in Section D of the Proposal are not published criteria to be referenced in the Permittee documents. The Permittee must describe a specific rationale for recommending the Corrective Action Complete status for each SWMU, rather than referring to generic criteria intended as guidance.

Comment 1. Introduction and Sections C, D, E, F and G, pages 1-6:

The format of the Introduction and Sections C, D, E, F and G appear to be copied from the Fact Sheet / Statement of Basis that is part of NMED's *Notice of Public Comment Period and Intent to Approve a Class 3 Permit Modification to RCRA Permit for Cannon Air Force Base* dated December 28, 2005. The Permittee, not NMED, is requesting changes to the Permit. The Permittee must rewrite the introductory sections of the Proposal to indicate that the document is submitted to the NMED from the Permittee.

Comment 2. Reference to Corrective Action Complete Tables, pages 1 and 3:

The Permittee must note the correct titles for proposed Permit attachments Table 1, Table 2 and Table 3. The Permittee has reversed the order of Tables 2 and 3 in the Proposal. The reference to incorrect tables was found throughout the document. The Permittee must revise the Proposal accordingly. Correct table titles are listed below.

Table 1. List of Solid Waste Management Units (SWMUs)
and Areas of Concern (AOCs) Requiring Corrective Action

Table 2. List of Solid Waste Management Units (SWMUs)
and Areas of Concern (AOCs) with Corrective Action Complete
with Controls Status

Table 3. List of Solid Waste Management Units (SWMUs)
and Areas of Concern (AOCs) with Corrective Action Complete
without Controls Status

**Comment 3. History / Current and Anticipated Future Land Use – SWMU 2, page 6:
History / Current and Anticipated Future Land Use – SWMU 4, page 7:
History / Current and Anticipated Future Land Use – SWMU 6, page 8:
History / Current and Anticipated Future Land Use – SWMU 10, page 10:**

The Permittee states that the respective site was listed as "an Appendix II site". The term, Appendix II site, originated from a previous permit that is no longer valid. The Permittee must eliminate the term.

Comment 4. Evaluation of Relevant Information – SWMU 4, page 8:

The Permittee states that ten soil samples were collected from borings and submitted for analysis. Table 2, which summarizes the results of sample analyses, reports values for only eight samples because two of the ten samples were duplicates. The Permittee must clarify, in the text, that two of the ten samples were duplicates.

Comment 5. Evaluation of Relevant Information – SWMU 6, page 9:

The Permittee states that arsenic exceeded the NMED residential Soil Screening Level (SSL), but was considered to be within the range of background values, and not considered to be a chemical of potential concern (COPC). The maximum detected concentration of arsenic in subsurface soils, reported in *Naturally Occurring Concentrations of Inorganics and Background Concentrations of Pesticides at Cannon Air Force Base, New Mexico, September 1997*, is 3.6 mg/kg and the Upper Tolerance Limit (UTL) for arsenic is 4.3 mg/kg. Therefore, the maximum arsenic concentration detected in subsurface soil samples at SWMU 6 (7.2 mg/kg) is not within the range of background values at the facility. As an initial screen, the maximum detected site concentration should be compared to the background UTL. If the initial screen indicates that the maximum detected concentration is greater than the background UTL, and sufficient data are available, a statistical comparison of site concentrations to background should be conducted. While either parametric or nonparametric tests may be used, the most commonly applied test for comparing site data to background is the nonparametric Wilcoxon Rank Sum (WRS) test. There may be sufficient data available for arsenic concentrations at SWMU 6 for the Permittee to conduct a statistical test to assess whether the site data are significantly different from the background population. The Permittee must conduct statistical comparison of site concentrations and background values to determine if arsenic is a COPC.

Further, detected concentrations of arsenic, iron, mercury and thallium in subsurface soils at SWMU 6 exceeded NMED's risk-based soil screening level (SSL) for a Dilution Attenuation Factor (DAF) of 20, developed using default parameter values representative of environmental conditions in New Mexico. Site-specific SSLs, developed by substituting site-related data for the default values, may indicate that the generic DAF 20 values are not representative of site conditions. The Permittee may choose to generate site-specific DAF values for arsenic, iron, mercury and thallium that are representative of conditions at SWMU 6.

Comment 6. Evaluation of Relevant Information – SWMU 50, page 11:

The Permittee states that SWMU 50 is a duplicate of SWMU 48A, that investigations have been conducted at SWMU 48A, and therefore, that no further work is required for this SWMU. This statement is incorrect. SWMU 48A is the subject of ongoing investigations. The Permittee must revise the statement.

Comment 7. SWMU 75, Sanitary Sewer Lift Station Overflow Pit (SD-13), pages 12-13:

The overflow pit, described as being 100 feet wide by 600 feet long, is currently beneath impounded surface water that serves as a water hazard at the golf course. The presence of manganese, at concentrations greater than NMED SSLs for the industrial use scenario, was determined by analyses of two soil samples collected near the southern and eastern perimeter of the hazard. Samples of sediment and subsurface soil were not collected from lower elevations of

the site where overflow of sewage would have collected when the sewage lift station pumps failed. The two soil samples are inadequate to determine the nature and extent of potential contamination. SWMU 75 has, therefore, not been fully investigated. However, because the impoundment is lined, investigation and corrective action at this site may be deferred until changes in the landscape and/or removal of impounded surface water allow access for investigation beneath the former overflow pit. SWMU 75 must be removed from the Proposal.

Comment 8. Evaluation of Relevant Information – SWMU 81, page 14:

The Permittee described soil sampling and analyses conducted during a Remedial Investigation conducted in 1992. The number of soil samples described does not agree with the number of samples shown in Table 6. The text describes 10 surface and 13 subsurface samples while Table 6 indicates 25 combined surface and subsurface soil samples. Further, methylene chloride detects shown in Table 6 do not agree with NMED's copy of the referenced report which does not report any methylene chloride detections. The Permittee must resolve the discrepancy in number of soil samples and clearly indicate the source of values shown in Table 6. The Permittee must provide a copy of the document to NMED that describes sampling and results of VOC analyses.

The Permittee should be aware that in order to determine whether a site is eligible for Corrective Action Complete with or without Controls status, NMED requires that the Permittee conduct human health and ecological risk screening to determine if the contaminants potentially pose an unacceptable risk to human health and the environment. Cumulative risk must be evaluated at sites where multiple contaminants are present. After revising Table 6 so that it accurately reflects contaminants at SWMU 81, a Tier I Human Health and Ecological Hazard Index Analysis for COPCs must be conducted.

Comment 9. Evaluation of Relevant Information – SWMU 82, page 16:

The Permittee states that 27 soil borings were drilled to depths of 76 feet below ground surface and that 120 samples from 15 borings were analyzed for various contaminants. Table 9, which summarizes combined surface and subsurface soil sample analyses, indicated that 108 soil samples were analyzed. The Permittee must clearly describe the location of soil samples that were analyzed and resolve the discrepancy in number of soil samples described in the text and those shown in Table 9.

Comment 10. Evaluation of Relevant Information – SWMU 96, page 18:

The maximum concentrations of arsenic and mercury in subsurface soils at SWMU 96 exceeded NMED's risk-based SSL for a DAF of 20, developed using default parameter values generally representative of environmental conditions in New Mexico. A site-specific DAF, developed by substituting site-related data for the default values, may indicate that the DAF 20 values are not

representative of site conditions. The Permittee may choose to generate site-specific DAF values for arsenic and mercury that are representative of conditions at SWMU 96.

Comment 11. SWMU 102, Wastewater Treatment Effluent Discharge, pages 21-22:

The maximum concentrations of arsenic and thallium in subsurface soils at SWMU 102 exceeded NMED's risk-based SSLs for a DAF of 20, developed using default parameter values generally representative of environmental conditions in New Mexico. A site-specific DAF, developed by substituting site-related data for the default values, may indicate that the DAF 20 values are not representative of site conditions. The Permittee may choose to generate site-specific DAF values for arsenic and thallium that are representative of conditions at SWMU 102.

The Permittee states that arsenic and thallium concentrations were within the range of CAFB background levels. The maximum detected concentration of arsenic in subsurface soils, reported in *Naturally Occurring Concentrations of Inorganics and Background Concentrations of Pesticides at Cannon Air Force Base, New Mexico, September 1997*, is 3.6 mg/kg and thallium was not detected in subsurface soils at the facility. Therefore, the arsenic and thallium concentrations detected in subsurface soil samples at SWMU 102 are not within the range of background values. See Comment 5 for the appropriate approach to comparing maximum detected concentrations to background UTLs and conducting statistical analyses to assess whether the site data are significantly different from the background population. The Permittee must conduct statistical comparisons of site concentrations and background values to determine if arsenic and thallium are COPCs.

The Permittee states that ecological screening was not completed because the site is located in an industrial area. NMED considers the site of SWMU 102 to be remote to industrial activities. NMED conducted a preliminary Tier I Ecological Hazard Index Analysis and determined that lindane, arsenic, mercury and thallium are constituents of potential ecological concern. The Permittee must conduct Tier I Human Health and Ecological Hazard Index Analyses for contaminants at SWMU 102.

Comment 12. SWMU 106, Fire Department Training Area No. 2, pages 22-24:

The maximum detected concentration of chromium, residential SSL, industrial SSL, construction worker SSL and soil to groundwater SSL values shown in Table 16 are incorrect. Further, residential SSL, industrial SSL and soil to groundwater SSL values for benzene, toluene, ethylbenzene and xylene have been revised in *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (August 2009). The Permittee must resolve the discrepancy in chromium concentrations reported in *RCRA Facility Investigation for 21 SWMUs, Cannon Air Force Base, New Mexico, October 2007* and reported in the Proposal and use appropriate SSL values.

Comment 13. Basis of Determination – SWMU 125, page 25:

The Permittee states that SWMU 125 has been determined to be appropriate for CAC without Controls based on NMED Criterion 5. However, if evidence indicates that no release to the environment has occurred or is likely to occur in the future from the SWMU, then the Permittee must indicate as such as the basis for determining that the site is appropriate for CAC without Controls.

Comment 14. Tables 1-16, Attached Tables:

The column on the far right of each table lists whether or not a chemical is a COPC and the basis for a yes or no response. The column heading includes references to footnotes 9 and 10. Footnote 9 states, "For this site, a chemical is only considered a contaminant of potential concern if the maximum concentration exceeds background and the industrial or construction worker SSL." Footnote 10 refers to a list of reasons why the Permittee considers the chemical to not be a COPC. The column and the associated footnotes must be deleted as they do not reflect NMED policy in identifying COPCs.

The Permittee is referred to Identification of COPCs (Section 2.5.2) of the *Technical Background Document for Development of Soil Screening Levels, Revision 5.0* (August 2009) and to Data Evaluation (Chapter 5) of the US EPA guidance *Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual, Interim Final* (EPA/540/1-89/002).

COPCs are those substances likely to be present in environmental media affected by a release. Any contaminant identified during investigation activities should be evaluated as a COPC. A site-specific COPC list for soil may be generated based on maximum detected concentrations and refined through a site-specific risk assessment. If there is site history to indicate a chemical was potentially used or present at a site and the chemical was detected in at least one sample, this chemical must be included as a COPC and evaluated in the screening assessment. Inorganics that are present at levels indicative of natural background may be eliminated as a COPC.

The Permittee must address all comments and submit a response and revised Proposal by March 15, 2010. All submittals must be in the form of two paper copies and one electronic copy. The Permittee must also provide an electronic red-line strike out version that shows all revisions made to the Proposal.

Col. Stephen Clark
February 11, 2010
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If you have any questions regarding the content of this letter, please call Pat Stewart at (505) 476-6059.

Sincerely,



James Bearzi
Chief
Hazardous Waste Bureau

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