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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 3, 2009

Mr. Ronald A. Lancaster
27 SOCES/CEA
506 N DL Ingram Blvd
Cannon Air Force Base, New Mexico 88103-5003

**RE: NOTICE OF DISAPPROVAL
DRAFT FINAL WORK PLAN FOR FINAL CLOSURE OF SOLID WASTE
MANAGEMENT UNITS 70 AND 71
CANNON AIR FORCE BASE, NEW MEXICO, JUNE 2009
EPA ID #NM7572124454
HWB-CAFB-09-003**

Dear Mr. Lancaster:

The New Mexico Environment Department (NMED) has received Cannon Air Force Base's (Permittee) *Draft Final Work Plan for Final Closure of Solid Waste Management Units 70 and 7, Cannon Air Force Base, New Mexico, June 2009* (Work Plan). NMED has reviewed the Work Plan and hereby issues this Notice of Disapproval (NOD). The Permittee must revise the Work Plan based on the comments presented below.

General Comment:

The Permittee referenced NMED's Soil Screening Levels (SSLs) Revision 4.0, June 2006. NMED has recently published Revision 5.0, August 2009. The Permittee must use the more recent version of NMED SSLs.

Specific Comments:

Comment 1. Background, Section 2, Page 2:

The Work Plan references two environmental reports associated with SWMU 70; *Annual Evaluations of Bioventing Soil Remediation at SWMU 70, Analytical Results for Samples Collected September 22-23, 1999* and *Annual Evaluations of Bioventing Soil Remediation at SWMU 70, Analytical Results for Samples Collected September 10-11, 2002*. The NMED has located two additional reports; *Annual Evaluations of Bioventing Soil Remediation at SWMU 70, Analytical Results for Samples Collected September 21-22, 2000* and *Annual Evaluations of Bioventing Soil Remediation at SWMU 70, Analytical Results for Samples Collected August 21-22, 2001*. The titles of these reports indicate that annual evaluations were conducted since the soil gas monitoring wells were installed in 1994. The Work Plan did not summarize the results of analyses conducted annually since the wells were installed. To assess the current levels of contamination present at SWMU 70, data collected during annual evaluations must be discussed in the Work Plan.

The Permittee must: 1) present all historical data from all relevant environmental reports in the revised Work Plan; and 2) present the data in tabular format to reveal trends in concentrations of volatile organic compounds (VOCs) over time.

Comment 2. Oil/Water Separator #326 with Associated Leach Field, Section 2.1, Page 2:

This section describes SWMU 70 as consisting of a 2,000 gallon underground tank (UST) that contained petroleum products received from wash water effluent. However, the Permittee's *RCRA Facility Investigation (Phase I)* dated February 1994 describes the SWMU as a two-compartment underground Oil Water Separator (OWS) consisting of a 50-gallon compartment (measuring about 1.5 X 2 feet and extending about 6 feet below the ground surface) and a detached 220 gallon oil storage tank (strapped to a 4 X 7 foot concrete pad that was constructed about seven feet below the top of the concrete sidewalk).

The Permittee must resolve the discrepancy in the description (a 2,000 gallon UST versus an OWS with a detached 220 gallon tank) and revise the Work Plan to accurately describe SWMU 70 and its history (e.g., when the components were removed; when and how the Bioventing Pilot was installed and implemented; subsequent annual sampling and analyses per Comment 1).

Comment 3. Sample Detect Results, Table 1, Page 3:

Tabulated data in Table 1 includes B, C and J qualifiers. The Permittee must provide footnotes describing the qualifiers.

Comment 4. Conceptual Transport and Media Interactions, Section 3.3.5, Page 6:

The Permittee states that data will be screened against the risk-based concentrations for residential human health and ecological screening levels and that the construction worker risk scenario also may be evaluated prior to remedial activities.

The contaminants of potential concern (COPCs) at the site include VOCs. Inhalation of indoor air via vapor intrusion is likely a complete pathway and must also be addressed. The Permittee must consult the US EPA's 2002 Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Soil Vapor Intrusion Guidance).

In addition, the Permittee describes developing media-specific statistical exposure point concentrations (EPCs) for any chemicals that exceed residential and/or ecological thresholds. The Permittee must compare maximum concentrations or upper confidence levels (UCLs) to NMED Soil Screening Levels (SSLs) for the residential, industrial /occupational and construction worker scenarios. If screening values for a specific chemical are not listed in the NMED SSLs, the Permittee must refer to the US EPA Regional Screening Levels. If UCLs are used for comparison, they must be generated using an adequate number of samples. The Permittee must also conduct an ecological risk screening or provide justification as to why such screening is not necessary.

Comment 5. Summary of Contaminants of interest at SWMUS 70 and 72, Table 2, Page 7:

The Permittee does not identify the acronym "VOCs" in the table. The Permittee must include the definition of VOCs in the footnotes.

Comment 6. Sampling and Analysis Rationale, Section 5.1.1, Page 8:

A. The Permittee states that soil vapor samples will be collected from the existing vapor sample ports. The Permittee further states, "Vapor sample analytical results will be reviewed and a final determination will be made if further drilling and soil sampling is necessary. If soil vapor sampling indicates that no soil contamination remains at the SWMU-70 area, then it may not be necessary to collect soil samples."

A determination of whether or not the vertical and horizontal extent of contamination has been delineated cannot be made based on the information provided. Furthermore, results of soil vapor sampling likely will not indicate whether or not soil contamination remains at SWMU 70. As of 2001, concentrations of toluene, ethylbenzene, xylene and volatile compounds were increasing in Monitoring Point Wells B and C. The Permittee must examine and report annual evaluations of bioventing soil remediation for the years 1995 through the current year (see Comment 1).

B. The Permittee proposed seven soil borings to 20 feet below ground surface (bgs), with two soil samples from each boring "if it is deemed necessary to collect subsurface soil samples." According to *Annual Evaluations of Bioventing Soil Remediation at SWMU 70, Analytical Results for Samples Collected August 21-22, 2001*, concentrations of ethylbenzene, xylene and volatile compounds in Monitoring Point Wells B and C were above concentrations reported in 2000 at the 50 ft bgs pore gas sample ports. The NMED considers boring to 20 ft bgs inadequate to determine the vertical extent of contamination at SWMU 70.

Further, the Permittee provided Figure 2 (page 10) to illustrate proposed locations of the seven soil borings, but provided no justification for the selection of locations. The Permittee must revise the Work Plan to describe how the vertical and horizontal extent of contamination will be determined. The Permittee must take step-out samples to define the lateral extent of contamination. To define the vertical extent, the Permittee must, at a minimum, collect samples to five feet below the deepest detected contamination based on field screening.

C. In a letter dated March 7, 1994, the EPA stated that the vertical and horizontal extent of contamination had not been determined at SWMU 70 and suggested continuous sampling be performed during drilling to install the three Monitoring Point Wells and one Vent Well.

With the response to this NOD, the Permittee must provide a copy of the report documenting the results of continuous sampling of the borings drilled during installation of the Bioventing Pilot system that was installed in 1994.

Comment 7. SWMU-71, Section 5.1.2, Page 9:

The Permittee indicates that three soil borings will be installed to approximately 15 feet bgs and two soil samples will be collected from each boring at depths of approximately 8 and 15 feet. Figure 2 (on page 10) depicts the proposed locations of the borings. The Permittee did not discuss the history of the 2,000 gallon underground storage tank (SWMU 71) that was removed in January 1991 and replaced with a new steel Oil/Water Separator (OWS). The unit is enclosed in a concrete vault that discharges to the sanitary sewer system. Based on the information provided, the NMED finds the placement of three borings (on the north, west and south sides of the former position of the UST) to be inadequate to determine whether or not a release occurred from the former UST. The Permittee must revise the Work Plan to describe the rationale for placement of soil borings (e.g., based on the removal the former UST, the location of the new OWS unit, dimensions of excavations at the site during removal and construction).

The Permittee must revise the Work Plan to describe how it will determine the vertical and horizontal extent of contamination. The Permittee must take step-out samples to define the lateral extent of detected contamination. To define the vertical extent, the Permittee must collect, at a minimum, samples to five feet below the deepest detected contamination based on field screening.

Comment 8. Soil Vapor Investigation, Section 5.3.1, Page 11:

The Permittee indicated that pore gas samples will be submitted for VOC analysis using EPA Method TO-3. The Permittee must analyze for VOCs using the most updated EPA method, which is TO-15.

Comment 9. Soil Investigation, Section 5.3.2, Page 13:

The Permittee stated that excavated soil will be stockpiled onsite, samples collected and soil replaced in the excavation. The Permittees may not return drill cuttings, decontamination water, or other investigation derived waste (IDW) to their point of origin. Rather, the Permittees must contain all IDW and characterize it to ensure proper handling.

Regardless of whether or not the IDW is hazardous waste, the Permittee may not return contaminated environmental media to the point of origin because, by doing so, the Permittee will potentially create a landfill and change the hydraulic characteristics of the unit(s) which may provide a conduit for contaminant migration. All boreholes must be backfilled with cement, bentonite grout, neat cement or concrete to within two feet of the surface. The top two feet of the borehole may be filled with clean backfill.

In addition, since jet fuel was not the only petroleum hydrocarbon processed through the Oil/Water Separator system, residential direct exposure standards of 200 mg/kg (TPH) for unknown oil should be used for comparison in accordance with Table 2b of NMED's TPH Screening Guidelines (October 2006).

Comment 10. Decontamination Procedures, Section 5.4, Page 14:

The Permittee stated that dedicated equipment intended for one-time use will not be decontaminated, but will be packaged for appropriate disposal. The Permittee does not describe intended procedures for disposal of waste that will be generated during decontamination of reusable equipment.

Drill cuttings, purge and decontamination water, personal protective equipment (PPE), and all other IDW must be containerized and characterized prior to disposal. Each container of waste generated must be properly labeled immediately following containerization. All IDW must be sampled and analyzed for contaminants that are suspected or detected prior to or during investigation activities. All IDW must be disposed of properly at an appropriate disposal facility. Descriptions of the methods used to store, control, and transport each waste type and classification must be included in the investigation report.

Ronald Lancaster
September 3, 2009
Page 6 of 6

Comment 11. Project schedule, Figure F-2, Page F-3:

The Permittee's project schedule did not allow adequate time for NMED's review of the Work Plan and resolution of comments. For example, the Permittee indicates a total of 20 days for the NMED's review of the Work Plan on line 14 (4 June to 1 July 2009) and one day for submittal of a revised work plan (10 July 2009) followed by mobilization to the work site three days later (13 July 2009).

NMED will set a schedule for comments resolution and reporting based on the scope of work and any required changes to the Work Plan.

Comment 12: Addition of SWMU 73:

The Permittee contacted NMED regarding investigation of SWMU 73, a storm water runoff retention pond, which has not been previously investigated. The Permittee requested approval to conduct sampling of soil at SWMU 73 during the same mobilization to conduct work at SWMUs 70 and 71. The NMED approves of investigating SWMU 73 during the same time frame. The Permittee may include plans for investigating SWMU 73 in the revised Work Plan.

The Permittee must address all comments and submit a response by November 30, 2009. 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 of the revised Work Plan that shows all revisions made to the Plan.

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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File: CAFB 2009 and Reading
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