



SUSANA MARTINEZ
Governor
JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030
www.env.nm.gov



RYAN FLYNN
Cabinet Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

August 12, 2015

Mark Patterson
FWDA, BRAC Coordinator
P.O. Box 93
Ravenna, OH 44266

Steve Smith
USACE FWDA Program Manager
CESWF-PEC-EF
819 Taylor Street, Room 3A12
Fort Worth, TX 76102

**RE: DISAPPROVAL
FINAL RCRA FACILITY INVESTIGATION WORK PLAN
PARCEL 9
FORT WINGATE DEPOT ACTIVITY
MCKINLEY COUNTY, NEW MEXICO
EPA ID# NM6213820974
HWB-FWDA-15-007**

Dear Messrs. Patterson and Smith:

The New Mexico Environment Department (NMED) has reviewed the *Final RCRA Facility Investigation Work Plan, Parcel 9*, (Plan) dated February 27, 2015 for Fort Wingate Depot Activity (Permittee). NMED hereby issues this Disapproval. The Permittee must address the following comments.

Comments:

1. General NMED Comment – The Plan does not address how site risk will be conducted. For example, the Permittee does not discuss how data that includes both discrete and multi-incremental samples will combine to assess overall risk at each site. Revise the Plan to address site risk, and include cumulative risk for each site. Additionally, the Plan does not address ecological risk. Based on the description of the surface conditions, there is a complete exposure pathway from soils to receptors and sufficient vegetation is present to sustain at least small game receptors. Revise the Plan to address ecological risk.

2. Permittee Statement – Section 4.1.2 Sampling Data, page 4-1, lines 36-38. “If it is determined that an arsenic concentration is above the background value, the NMED Residential SSL of 4.25 mg/kg (cancer endpoint) is used for assessment of potential risk.

NMED Comment:

In this case, the incremental risk above background must to be calculated. The background risk is based on the site-specific level of 5.6 mg/kg. This value must be compared to the calculated total risk for arsenic in an uncertainty discussion. The incremental risk due to arsenic is the difference between total risk and background risk. Revise the Plan to propose this approach and explain how the comparison of arsenic concentrations to the range of arsenic background levels will be performed.

3. Permittee Statement – Section 4.1.2 Sampling Data, lines 10-12, page 4-2. “For metals, results were initially compared to background levels based on the *Soil Background Study and Data Evaluation Report, Version 2* (Shaw, 2010), with the exception of arsenic (discussed above).”

NMED Comment:

Incremental (IM) sampling is proposed for delineating the nature and extent of explosives and metals in Areas of Concern (AOCs) 18 and 85 in Parcel 9. The data collected as part of the background study represent grab samples which are discrete data. Discrete sample results provide a measure of the distribution of concentrations in a relatively small volume of soil in a specified area, where as IM samples provide measure of the distribution of mean concentrations, each of which is an estimate of the population mean for the entire decision unit. Due to the differences in attributes, a comparison of IM results to discrete background data is inappropriate. Comparison of an IM estimate of the mean to a discrete sample is likely to lead to decision errors (refer to Chapter 4 ITRC Incremental Sampling Methodology: <http://www.itrcweb.org/>). It is recommended that background IM data be collected for comparison to the site IM data. If the Permittee does not wish to conduct this background IM then the Permittee must propose to use discrete samples for comparison or retain all detected metals from IM as being site related.

4. Permittee Statement – Section 4.3 Data Quality Objectives, lines 27-30, page 4-2 and Section 6.1.3, Contaminants of Potential Concern, page 6-1. “The process used for development of the data quality objectives (DQO) for additional characterization and/or remediation activities in Parcel 9, as well as quality assurance and quality control (QA/QC) procedures associated with the field activities described in this document are presented in the Quality Assurance Project Plan (QAPP) (Appendix D).”

NMED Comment:

NMED only reviews the Work Plan, not Site-Specific Quality Assurance Project Plans (QAPP). In future submittals, relevant information contained in the QAPP must be included in the appropriate sections of Work Plans and Reports. In addition, Section 6.1.3 includes a table listing the analytical method, holding times and other laboratory sample information. In future Plans this type of table must be provided at the end of the each section or provide a general table in an appendix and reference the table within the main text.

5. Permittee Statement –Section 4.4.3 Incremental Soil Sampling, lines 29-32, page 4-3, Figure 4-1 and Section 5.3.2 Incremental Surface Soil Sampling of Igloo Drainage Areas, lines 4-14, page 5-7. “For igloos, the DU will be comprised of the areas to the left and right of the igloo apron and directly across the road (only if the igloo apron drains over the road). Each ISM sample will consist of thirty subsamples for igloos or fifty subsamples for former building areas.”

“The ISM DUs for Igloo A1000 will consist of the drainage areas from both drain outlets and from the paved aprons at the igloo. The drainage areas are in the unpaved areas on both sides of the paved igloo apron (Figure 4-1). Personnel will collect 30 subsamples from the lowest areas or points in the drainage swales of each side of the igloo drain outlets and from the drainage directly across the paved road from the apron if indicated by field observation. If the access road acts as a drainage divide and no water from the apron runs over it, then the proposed incremental sample locations will consist of 15 subsamples collected on each side of the apron beginning at the drain outlet and roughly equally spaced to the ditch at the road. If water runs across the road from the apron, then personnel will collect 10 subsamples evenly spaced from each drain to the ditch at the road and subsample across the road in a line between the ends of the igloo wing walls.”

NMED Comment:

Revise the proposed sampling in areas that are sloping over the road to utilize two decision units (DUs): one to collect 15 subsamples each from the left and right sides of the apron/slab (DU 1) and another to collect 30 subsamples from directly across the road (DU 2). Propose to collect a total of 2 multi-incremental (MI) samples for each igloo. Also, correct the Legend in Figure 4-1 to state discrete sample rather than composite. Additionally, propose to use one DU containing a total of 30 subsamples collecting 15 subsamples on the right side of the apron and 15 subsamples from the left side of the apron for areas that are on a flat surface.

The proposed sampling will consist of collection of subsamples from both sides of the apron as well as in the ditch across the road, if the analytical results show elevated levels of contaminants, the location (side of apron or ditch) of contamination will not be apparent. In the event incremental sample data result in unacceptable risk, the Plan must include a step out approach for determining the specific area(s) of concern. Revise the Plan to include a step out approach for determining a specific area of concern.

6. Permittee Statement –Section 5.2.2 Sampling Data, lines 18-21, page 5-4. “Due to the inconsistent readings between the XRF and confirmation samples and the cost to prepare the XRF samples for better consistency with laboratory samples, the Army decided not to use XRF samples in future sampling events unless a more efficient preparation method is found.”

NMED Comment:

Historical x-ray fluorescence (XRF) data were used in the risk evaluation. The XRF data were used in the screening analyses presented in Table 5-2 and were compared to background data, which are discrete laboratory results. Revise the Plan to include a discussion on the uncertainties

associated with screening out XRF data in the risk assessment through a comparison to the background data and discuss whether the uncertainties in the XRF data are likely to under- or over-estimate risk and hazard.

7. NMED Comment: Table 5.2, page 5-21.

Revise Table 5.2 to define the three asterisk (***) notation for chromium. In addition, some of the definition/notation at the end of the table is not visible due to formatting. Adjust the cells of worksheet so that all of the information is readable.

8. Permittee Statement – Section 5.2.2, Sampling Data, lines 28-32. “Three wipe samples were collected from the interior of each of the five igloos to determine if explosives residues were present in the igloos. The first wipe sample was collected from the center of the left floor drainage trough, the second from the middle of the floor and the third from the center of the right floor drainage trough. The wipe samples were analyzed for explosives. Of the 24 wipe samples collected, explosives were detected in two igloos [...].”

NMED Comment:

The wipe sample analysis was reviewed by the Agency for Toxic Substance and Disease Registry (ATSDR), Health Consultation for FWDA. The review recommended additional sampling in the igloo interiors after concluding that the existing data appeared inadequate to characterize the extent of contamination. ATSDR issued a report on April 1, 2009 detailing their concerns regarding the inadequacy of the wipe sampling data, along with a suggested sampling approach to resolve the issue. NMED also clarified its position with regard to the igloo interiors in letters dated July 22, 2009 and October 1, 2010. This issue may be addressed with a proposal for an alternative approach (e.g., encapsulation of the igloo interiors) that may be applied facility wide. This comment is applicable to any section in this Work Plan that references this sampling event.

9. Permittee Statement – Section 7.1, Project Scheduling and Reporting Requirements, page 13-1. “The projected schedule for conducting the RFI activities at Parcel 9 is located in the QAPP (Appendix D).”

NMED Comment:

A project schedule must be included in the Plan. Revise the Plan to include a project schedule.

The Permittee must submit a revised Plan to address all comments contained in this Disapproval. In addition, the Permittee must include a response letter that details where each comment was addressed, cross-referencing NMED’s numbered comments. The Permittee must also submit an electronic redline-strikeout version of the revised Plan that shows where all changes have been made. The revised Plan must be submitted on or before **October 30, 2015**.

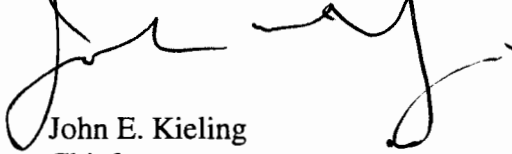
Messrs. Patterson and Smith

August 12, 2015

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If you have any questions regarding this letter, please contact Vicky Baca at (505) 476-6059.

Sincerely,

A handwritten signature in black ink, appearing to read "John E. Kieling". The signature is fluid and cursive, with a large initial "J" and "K".

John E. Kieling
Chief

Hazardous Waste Bureau

cc: Dave Cobrain, NMED, HWB
Neelam Dhawan, NMED, HWB
Kristen Vanhorn, NMED, HWB
Chuck Hendrickson, EPA-6PD-N
Tony Perry, Navajo Nation
Val Panteah, Governor, Pueblo of Zuni
Clayton Seoutewa, Southwest Region BIA
Rose Duwyenie, Navajo BIA
Judith Wilson, BIA
Eldine Stevens, BIA
Christy Esler, Sundance Consulting, Inc.

File: FWDA 2015 and Reading
FWDA-15-007