

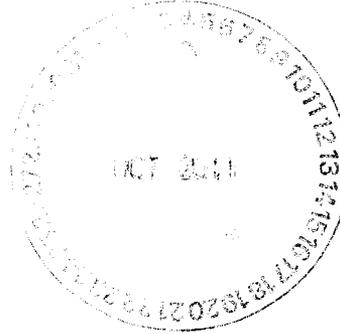


DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS 49TH WING (ACC)  
HOLLOMAN AIR FORCE BASE, NEW MEXICO



ENTERED

SEP 22 2011



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New Mexico Environment Department  
Attn: Mr. John Kieling  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
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Dear New Mexico Environment Department

Holloman AFB is pleased to submit the following responses to comment associated with the 29 August 2011 Notice of Deficiency on Expanded Closure and Post-Closure Care Plans, 20,000 Pound Open Detonation Unit (Holloman Air Force Base, EPA ID # NM6572124422; HWB-HAFB-10-005-OD) for your review:

Comment 1

The Closure Plan does not address the nitroglycerin and RDX contaminated soils other than providing figures showing the location of associated sample locations (see Appendix A, Figures 1 and 2). Please provide more detailed information on the RDX contaminated soils at the OD Unit. Incorporate the additional information into the revised version of the Expanded Closure Plan that shall be submitted to the NMED.

Comment 1 Response

The document submitted is an *Expanded Closure Plan and Post-Closure Plan*, intended to supplement the Permit, Attachment F, Closure and Post-Closure Care Plans. It is not a report used to describe site conditions. Site conditions will be described in the Closure Report. The Permittee will add available information to Section 1.4 of Appendix A (*Sampling and Analysis Plan, Historical Sampling*). Additional information available includes only the sampling date and the concentration.

Comment 2

The Permittee proposes to submit to NMED a Corrective Action Work Plan at Section 2.8 (page 2-8) should any soil samples be found to exceed SSLs and apparently HAFB is planning on submitting one.

Comment 2 Response

It is not known at this time whether any of the sampling results will exceed an RSL or an SSL.

*Global Power for America*

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The Permittee notes that the Permit is not clear on the actions to be taken in response to an exceedance of an SSL or RSL. Permit Attachment F “Background Comparison and Risk-Based Screening” and “Corrective Action” state actions to be taken in response to exceedances.

- Permit Attachment F, “Background Comparison and Risk-Based Screening” (page 4 of 10) states that *if* results exceed *background* or *risk-based standards* (interpreted as SSLs or RSLs), NMED will be contacted to discuss further action prior to completing closure, such as risk assessment, confirmation sampling, delineation of the extent of exceedance, analysis of corrective measures, and corrective measures implementation.
- Permit Attachment F, “Corrective Action” (page 4 of 10) states that if any sample exceeds a *risk-based* or *cleanup level* (also interpreted as SSL or RSL), the Permittee will submit a Corrective Action Work Plan.

Since NMED has expressed an interest in ecological and human health risk assessments as part of the Treatment Unit closure, the Permittee proposes that an ecological risk assessment and a human health risk assessment be performed *if* an exceedance of an SSL or RSL is identified through the evaluation of existing conditions. If either risk assessment identifies an unacceptable risk, then the Permittee will prepare a Corrective Action Work Plan, which may include confirmation sampling, delineation of the extent of exceedance, analysis of corrective measures, and corrective measures implementation. The *Expanded Closure and Post-Closure Plan* will be appropriately modified.

NMED recommends that the Revised Expanded Closure Plan be augmented to address the two locations of known nitroglycerine and the single RDX contaminations now (see Figures 1 and 2). A Corrective Action Work Plan may be submitted only if additional contamination above action levels is identified at the OD Unit at locations other than those three shown on Figures 1 and 2.

The RDX exceeded the SSL of 44.2 mg/kg in 1<sup>st</sup> Quarter of 2006 with a concentration of 57 mg/kg. In accordance with the Permit, Attachment J, Data Evaluation, Page 33 and 34, the area was resampled after the exceedance was identified. The resampling result was below the SSL with a concentration of 4.1 mg/kg.

Two nitroglycerin concentrations were identified that exceed the current SSL of 6.1 mg/kg:

- One nitroglycerin concentrations (16 mg/kg in 2<sup>nd</sup> Quarter of 2009) exceeded the current SSL of 6.1, but did not exceed the SSL existing at that time (347 mg/kg). Therefore, no corrective actions, as required by the Permit, were required or taken.
- The second exceedance (8 mg/kg nitroglycerin) was identified in 1<sup>st</sup> Quarter of 2011. In accordance with the Permit, Attachment J, Data Evaluation, Page 33 and 34, the area was resampled after the exceedance was identified. The resampling result (18 mg/kg) confirmed as an exceedance. The Permittee notified the NMED in writing (letter dated 15 Apr 11 from Lieutenant Colonel Christian J. Knutson, P.E.) of the exceedance. The Permittee elected to perform additional sampling, as stated in the 15 Apr 11 letter. However, by 30 March, 2011, before the additional sampling was performed, the Permittee notified NMED that HAFB would initiate closure activities.
- The Permittee has re-graded the OD unit to backfill the depression in accordance with Permit Attachment I, Post Operation Procedures, No. 3. Therefore, the soil exceeding the SSL is not likely to remain in the same state or location when sampled in March 2011. A geostatistical sampling approach has been proposed for sampling the treatment unit because soils have been disturbed, re-graded, and backfilled over the life of the unit. The geostatistical approach will evaluate existing conditions. Based on the existing conditions, the next steps toward closure will

be determined. These may include an ecological and/or human health risk assessment based on current conditions, corrective actions, or no action.

### Comment 3

The Expanded Closure Plan does not address performing an ecological risk assessment unless residential screening levels are exceeded (see Closure Plan page 2-7). Further, Permit Module III, Section 3 describes generating ecological screening action levels and an ecological risk assessment but this was never done.

The Permittee must provide an ecological risk assessment and incorporate it into the revised Expanded Closure Plan. Include also a Human Health Risk assessment in the revised Expanded Closure Plan.

### Comment 3 Response

The NOD Comment 3 references Permit Module III, Section 3, for requiring an ecological risk assessment. The Permittee respectfully disagrees with the need to perform an ecological risk assessment as part of the *Expanded Closure and Post-Closure Plan*. The Permittee will perform an ecological risk assessment and/or human health risk assessment if any sample collected for closure sampling exceeds a RSL or SSL. The Permittee respectfully declines to perform an ecological risk assessment as part of the *Expanded Closure and Post-Closure Plan* for the reasons detailed below:

1. Permit Module III is titled "Treatment of Energetic Wastes" and does not include any text referring to Treatment Unit closure. Therefore, the requirement to perform the ERA as part of the *closure* based on this citation is not appropriate.
2. The text of Permit Module III, Section E, states: "The Permittee shall generate Screening Action Levels for current Reference Dose (non-carcinogenic) and/or Slope Factor (carcinogen) data listed (in order of preference) in IRIS, HEAST, or other acceptable EPA sources. This risk assessment shall be done whenever contamination is determined below the soil surface, in excess of 0.01 confidence level. The Permittee must submit an ecological risk assessment to the HRMB for approval prior to conducting its ecological risk assessment. NMED will decide on the cleanup level after reviewing the ecological risk assessment. Final Risk Assessment will be expressed as an aggregate Risk Assessment using EPA's Ecological Assessment of Hazardous Waste Sites (1989)."

In the context of the 1990s when the Permit was prepared, it was appropriate to compare values to EPA sources, such as IRIS, if contamination was identified. However, the development of SSLs by NMED served as risk-based screening level data to which the Permittee was allowed by NMED to compare soil data.

Up until the March 2011 exceedance, the Permittee has addressed all exceedances according to Permit requirements. All exceedance resample results were below applicable screening levels in effect at the time. Thus, development of a risk assessment in response to an exceedance was not applicable, and it was not necessary for NMED to decide on cleanup levels based on a risk assessment.

3. Permit Attachment F is titled "Closure and Post-Closure Care Plans". This is the majority of closure requirements for closing the treatment unit. (Additional closure requirements are detailed in Permit Module II, Section K, General Closure Requirements.)

Under the section titled “Summary of Closure Activities” in Permit Attachment H (page 2 of 10), the text reads:

“Following these activities, representative samples from across the entire 20,000 pound OD unit will be collected and analyzed to determine the residual concentrations of any toxic metals and explosive compounds, if any. These analytical results will be compared to background levels or risk-based criteria deemed to be protective of human health. If all levels are determined to be below background (for metals) or the analytical detection limits (for organics), the closure will be considered clean closure. If levels are detected in excess of background or detection limits, but are below risk-based criteria, the closure will be considered a risk-based closure.”

“In the event that an area of the unit is determined to contain levels in excess of risk-based criteria, further action will be taken as necessary in coordination with NMED prior to completing the closure, such as risk assessment, delineation of the extent of the exceedance, analysis of corrective measures, and corrective measures implementation.”

Under the Section titled “Background and Risk-Based Screening” (Permit Attachment F, Page 4 of 10), the Permit states:

“Following sampling and analysis, the analytical results will be compared to background results and with appropriate risk-based standards deemed to be protective of human health. In the event that a sample or area of the OD unit is determined to contain hazardous constituent levels in excess of these standards, NMED will be contacted to discuss further action prior to completing closure, such as risk assessment, confirmation sampling, delineation of the extent of the exceedance, analysis of corrective measures, and corrective measures implementation. When all such activities have been completed and all sample results show that the residual levels of contamination are below the risk-based criteria or are protective of human health and the environment, all remaining closure activities will be completed.”

Based on the permit text regarding closure of the treatment unit, the *Expanded Closure and Post-Closure Plan* is consistent with the Permit text regarding closure. The Permittee proposes to collect samples using a geostatistical approach across the entire treatment unit. Since NMED has expressed an interest in ecological and human health risk assessments for the treatment unit, the Permittee has proposed that an ecological risk assessment and a human health risk assessment be performed *if* an exceedance of an SSL or RSL is identified through the closure sampling event.

#### Comment 4, Part 1

In Appendix A, Section 2.2.3.2 HAFB states that groundwater samples will be collected at the four existing monitoring wells for the appropriate set of analytes listed in Table 3 of Appendix A, but the Permittee does not specify when the groundwater sampling will commence.

#### Comment 4, Part 1 Response

Table 2-1, Proposed Closure Schedule, proposed a date for “sampling and analysis”. This includes soil and groundwater sampling efforts. The Permittee will amend the Table to state “soil and groundwater sampling and analysis”.

#### Comment 4, Part 2

Provide information about when HAFB plans to begin groundwater sampling at the four existing wells at the OD Unit, and for how long the Permittee plans to conduct the groundwater sampling.

#### Comment 4, Part 2 Response

Only one groundwater sampling event is scheduled at this time. As stated in Section 4 of the *Expanded Closure Plan and Post-Closure Plan*, in the event that the site is able to be closed, even though the residential SSLs are exceeded, monitoring of the four wells will be performed periodically, as follows:

- Quarterly for the first 5 years
- Semi-annually for the second 10 years

- Annually for the remaining 15 years

Comment 4, Part 3

Further, the Permittee shall augment the Closure Plan so that if clean closure of the OD Unit is achieved the monitoring wells shall be appropriately plugged and abandoned. Describe how the Permittee will conduct plugging and abandonment of the groundwater sampling wells following clean closure activities at the OD Unit.

Comment 4, Part 3 Response

The Permitted will amend the *Expanded Closure and Post-Closure Plan* to address well abandonment following clean closure of the Treatment Unit. Well abandonment will be performed in accordance with NMED Ground Water Quality Bureau Monitoring Well Construction and Abandonment Guidelines and applicable New Mexico Administrative Code requirements in effect at the time of abandonment.

Comment 5

Please remove all "Permit Text" excerpts from the revised Closure Plan, except in cases like Section 2.1 (Closure Performance Standard), where it may be retained, but no longer titled "Permit Text" in any section of the Closure Plan.

Comment 5 Response

The "Permit Text" excerpts will be removed and modified as suggested.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions, please contact Mr. David Scruggs of our Asset Management Flight at (575) 572-5395.

Sincerely

  
A. DAVID BUDAK, GS-14, DAFC

cc:

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