

May 22, 2000

Mr. Dal M. Nett
Chief, Safety Division
Attn: CSTE-DTC-IM-S
U.S. Army Developmental Test Command
Aberdeen Proving Ground, MD 21005-5055

SUBJECT: SUMMARY OF MAY 4, 2000, MEETING TO PROVIDE UPDATE ON
JEFFERSON PROVING GROUND SITE IN MADISON, INDIANA

Dear Mr. Nett:

On May 4, 2000, we met with you to discuss our January 31, 2000, request for additional information and your proposed responses for the site Decommissioning Plan of the Jefferson Proving Ground site in Madison, Indiana. The meeting took place at the U.S. Nuclear Regulatory Commission in Rockville, Maryland. Enclosure 1 includes a summary of the meeting including the agreements reached and action items. Enclosure 2 is the attendance list for the meeting. Enclosure 3 contains the handouts from the meeting.

If you have any questions, please contact John Contardi at (301) 415-6680.

Sincerely,

/RA/

Larry W. Camper, Chief
Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

License No. SUB-1435
Docket No. 040-08838

cc: JPG Distribution List

Enclosures:

1. Meeting Report
2. Meeting Attendees
3. Handouts from Meeting

U.S. Army Jefferson Proving Ground Distribution List - Letter Dated _____

Ms. Joyce E. Kuykendall, Health Physicist
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5183 Black Hawk Road
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U.S. Army Soldier and Chemical Biological
Command
5183 Black Hawk Road
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MEETING REPORT

Date: May 4, 2000

Time: 9:00 a.m. to 11:30 a.m.

Place: U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738
Room OWFN-10B4

Purpose: To discuss U.S. Nuclear Regulatory Commission questions on the Jefferson Proving Ground site Decommissioning Plan so that both parties have an understanding of what the U.S. Army's responses should encompass

Discussion:

Staff from the U.S. Nuclear Regulatory Commission (NRC) met with the staff from U.S. Army to discuss the Jefferson Proving Ground (JPG) site Decommissioning Plan (DP). The participants reviewed the schedule for revision of the DP and Risk Assessment Report. The NRC said that it is acceptable for the licensee to submit RAI responses followed by the submission of a revised DP. The opportunity for a hearing on the DP was offered in December 1999.

The participants discussed institutional control for JPG. The Army clarified the Memorandum of Agreement (MOA) for Land Reuse, which has not been signed as of this meeting. Under the MOA, the Army will retain title to the site and has responsibility for long-term institutional control, but other parties would maintain security during the time the MOA is in effect. The NRC staff suggested that the licensee address how the MOA will affect the DU Impact area and the safety of personnel from the other parties.

Because the Army is a government entity, it may satisfy the financial assurance requirement with a Statement of Intent. A cost estimate, with a breakdown of the costs, needs to be submitted by the licensee. Physical control (e.g., fencing, radiological monitoring) is part of the overall the institutional control program. There has been no other facilities that have successfully completed a license termination under restricted conditions.

The NRC staff clarified the regulatory guidance appropriate for decommissioning the JPG site. The DP should clearly reference the new rule, published in July 1997, for the restricted release option. The Standard Review Plan for decommissioning is on The NRC's webpage. If no further remediation of the site is anticipated to satisfy the restricted release requirement, then a final status survey may not be needed. If sufficient information is provided in the site characterization survey reports, then these reports may be used to support compliance with the 10 CFR 20 release criteria for restricted use. An ALARA analysis is needed for restricted release.

The NRC does not recommend exposure scenarios to licensees. The licensee is the one who proposes the exposure scenarios and provide justification for using these scenarios. The Army asked if it may develop a scenario involving the unexploded ordnance (UXO) onsite, and The NRC responded that UXO on the site is realistic, as permitted by the regulations. The NRC staff will review the scenarios proposed by the licensee and determine the acceptability.

A minimum of two exposure scenarios is required: (1) the site will not result in a total effective dose equivalent (TEDE) that exceeds 25 mrem/yr with institutional controls in place, and (2) if institutional controls are no longer in place that there is reasonable assurance that the TEDE to the average member of the critical group will not exceed either 100 mrem/yr or 500 mrem/yr, with conditions. The NRC staff clarified that humans are the main receptors, but impact on the environment will be analyzed in the EIS. The licensee may use bounding calculations in their performance assessment to demonstrate compliance with The NRC regulations. The licensee should justify selecting or excluding parameters, including default values.

The participants discussed the involvement of other agencies in the decommissioning process. The NRC staff said that they will review potential DU migration before the license is terminated, and consult other agencies in the EIS process.

The Army asked if the JPG Restoration Advisory Board (RAB) is acceptable for the requirement on obtaining public advice. The NRC replied that more information is needed on how the licensee plans to satisfy this requirement, and the licensee agreed to provide more information on the RAB. The Army also explained that the purpose of RAB is to provide the community an opportunity for input in the decommissioning of JPG and to identify potential issues in the environmental restoration.

Once the NRC staff receive responses from the Army on their January 31, 2000, questions, The NRC will move forward with the EIS. A draft EIS will be issued for public comment. After the final EIS is completed, the DP may be approved. Once the licensee satisfies all license termination conditions, then The NRC will issue a letter terminating the license. The length of time for the entire process may take two to three years.

Action Items:

1. The Army will send its responses to the NRC's January 31, 2000, questions on the Decommissioning Plan or will request a short extension by May 15, 2000.
2. The NRC will soon complete the Army's license amendment request to transfer the licensing responsibilities from one command to another and to change the Radiation Safety Officer license condition. The NRC staff will inform the Army of the status within a week.
3. The Army will submit a revised Decommissioning Plan. The tentative schedule is to complete the revised DP by the end of summer 2000.
4. The NRC staff will attend and give a short presentation at the next JPG Restoration Advisory Board meeting on May 31, 2000.

MEETING ATTENDEES

Topic: Discuss the NRC Request for Additional Information on the Jefferson Proving Ground Site Decommissioning Plan

Date: May 4, 2000

NAME	AFFILIATION	PHONE NUMBER
Robert Nelson	U.S. NRC Division of Waste Management	(301) 415-7298
Sherry Lewis	U.S. NRC Division of Waste Management	(301) 415-6619
Chris McKenney	U.S. NRC Division of Waste Management	(301) 415-6663
Richard Clement	U.S. NRC Division of Waste Management	(301) 415-6625
John Russell	Center for Nuclear Waste Regulatory Analyses	(301) 881-0289
Patrick LaPlante	Center for Nuclear Waste Regulatory Analyses	(301) 881-0289
Paul Cloud	U.S. Army Soldier and Biological Chemical Command	(410) 436-2381
Joyce Kuykendall	U.S. Army Soldier and Biological Chemical Command	(410) 436-7118
Peggy Giesecking	U.S. Army Soldier and Biological Chemical Command	(410) 436-4659
Robert Aaserude	U.S. Army Developmental Test Command	(410) 278-1308
James Mullikin	U.S. Army Center for Health Promotion and Preventive Medicine	(410) 436-2656
Michael Ebinger	Los Alamos National Laboratory	(505) 667-3147

*Jefferson Proving Ground
NRC License Termination Plan
Review of Decommissioning Plan and Risk Assessment*

AGENDA

- 1 - Introductions
- 2 - Purpose of Meeting
- 3 - Discussion of Responses to Questions
- 4 - Additional Issues

Clarification of Regulatory Guidance

Schedule for Revision of Decommissioning Plan and
Risk Assessment

Memorandum of Agreement for Land Reuse

EPA Requirements

Is it acceptable to submit RAI responses now followed by the submission of a revised Decommissioning Plan/License Termination Plan? Would this revised Plan go through a public comment period?

Is it acceptable to the NRC to basically rely on physical controls for the institutional controls (*e.g.*, fencing, radiological monitoring) as JPG will remain under Army control so the government ownership will be the enforcement mechanism as outlined in DG-4006?

Are there any other facilities that have successfully completed a license termination under restricted conditions? If so, who? We may want to contact them with questions.

How do we determine the duration of the institutional controls? The draft MOA with FWS and the AF currently contemplates the MOA being in effect at least 25 years, with 10-year renewal options thereafter. Would this be adequate?

Both DG-4003 and the regulations discuss financial assurance. What does the NRC require to meet this element considering we are the federal government and must comply with the Anti-Deficiency Act (cannot obligate funds until there is a need) and we are basically self-insured?

Section 20.1403 of the regulations requires either a statement of intent or an arrangement deemed acceptable by the governmental entity who is assuring custody or ownership of the site. Does the NRC have any specific requirements for either of these? Would the MOA between FWS, AF and Army suffice?

Section 20.1403(d)(1)(ii) requires financial assurance to enable a 3rd party to carry out the responsibilities for control and maintenance of the site. Does this mean some type of insurance or bonding? If so, as mentioned earlier the federal government is self-insured and is limited by the Anti-Deficiency Act with regards to funding.

Does the NRC agree with the exposure scenarios provided in the 1998 risk assessment? If not, what would the NRC require to satisfy a license termination under restricted conditions?

Does the NRC get involved if there is DU migration or is this strictly a state or EPA issue?

How does the NRC risk assessment model compare to the various CERCLA risk assessment models used by EPA?

Questions for NRC

On Question 1, second paragraph. If exposure to DU from water-dependent pathways (e.g., drinking water, irrigated crops) is minimal, the sensitivity of the predicted dose values to input values is also minimal. How could this be demonstrated more clearly within the chosen exposure scenarios?

On Question 3: Uranium isotopes in the DU (U-238, U-234, U-235) are important in the assessments, but are K_d s for ingrowth of daughter products to be included even when ingrowth is minimal after 100 to 1000 years?

On Question 4: The NRC comments present a valid point on justification of default values. How many of the many RESRAD default parameters need to be justified? Beyond the soil concentration values and fundamental properties of the site, what is the set of parameters that requires further discussion.

On Question 5: Outside of the isotopes of U and the Be that is used as alloy material on some DU munitions, there are no assay data that indicate other impurities in the Army's DU. Are there references that would indicate that the Army needs to look at impurities such as Tc and Pu?

On Question 6: Are bounding calculations adequate for estimating uncertainty? Most of the parameters can be bounded, whereas formal uncertainty analyses on all parameters would be prohibitive and time consuming. Is there some sort of metric that NRC uses to assure conservatism in a model output?

On Question 7: Is the receptor considered stationary at the point of exposure, or can the receptor(s) wander the affected area or beyond. Also, which of the three exposure scenarios is referred to in this question?

On Question 10: Clarification is needed on exposure pathways that are acceptable and reasonable for the conditions at JPG. First, since hunting is allowed at JPG, there is potential for a receptor to be exposed to DU and maintain institutional control of the site. Do institutional controls mean that no receptors can access the affected area? Second, it would be helpful if NRC and Army can mutually agree on a set of exposure scenarios that would reflect JPG now and in the future. Can NRC help Army modify current scenarios to meet this need?

On Question 11: Irrigation is not common in southern Indiana, especially for subsistence or cash crops. Please give guidance as to exposure scenarios: should exposure scenarios that are possible but not at all likely important to include in the assessments, or would more realistic scenarios suffice?

1. Questions No. 2 and 8 ask for the use of updated references in the application of requirements and criteria for the methods and results provided in both the decommissioning plan and the risk assessment. Request clarification of the regulatory guidance that must be applied to each of these documents.
2. In the application of the requirements for restricted use for the termination of this license no further decontamination of the site is anticipated. What additional surveys, if any, will be required to support our compliance with the 10 CFR 20 release criteria for restricted use? i.e. final survey, confirmatory survey. Or, is the information obtained from our scoping and characterization surveys, in addition to our continued environmental monitoring program data acceptable?
3. What is the EPA and the State of Indiana involvement in the NRC acceptance of our proposal for restricted use termination of this license?
4. The U.S. Army is currently negotiating an agreement between the US Fish and Wildlife Service and the Air Guard for the use of the property at Jefferson Proving Ground. This agreement will identify the institutional controls to be implemented by these activities for control of the site under the restricted use criteria. Is this agreement acceptable to the NRC as a demonstration of the US Army control of the site and the institutional control requirements?
5. The questions presented by your office and our subsequent review and responses indicate that we will need to revise the Decommissioning Plan and the Risk Assessment to address not only our position on the proposed action but changes in the regulatory guidance under which these documents were prepared. The acceptance of the decommissioning plan by the the NRC allows a 24 month period for the completion of any actions required, such as remediation, before the termination of the license. Does the submission and acceptance of our responses to the questions constitute the acceptance of this plan or will the 24 month period be after the submission and acceptance of the revised plan?

Mr. Dal M. Nett
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