

POLICY ISSUE INFORMATION

March 3, 2003

SECY-03-0031

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: JEFFERSON PROVING GROUND DECOMMISSIONING STATUS

PURPOSE:

To inform the Commission that because of unique conditions at the Jefferson Proving Ground (JPG) site, the staff intends to allow the licensee to indefinitely delay decommissioning. Rather than require the licensee to decommission the site at this time, the staff will continue the possession-only license currently in effect at the site. Since the regulatory oversight will be transferred from the decommissioning program to licensing, the staff will remove the site from the Site Decommissioning Management Plan (SDMP). The possession-only license will be issued for a 5-year renewable period, and the status evaluated at license renewal to determine if it is appropriate to begin site decommissioning.

BACKGROUND:

JPG was established in 1941 as a military ordnance testing facility and operated until the closure of the base in 1994. The facility is approximately 220 square kilometers (km²) (55,000 acres) and is located in southeastern Indiana. During the time of operation more than 24 million rounds of high-explosive munitions were fired. About 1.5 million rounds did not detonate on impact and remain as unexploded ordnance (UXO) either on or beneath the surface. UXO can be found throughout the facility with the highest density along the center firing line.

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As part of its testing program, the U.S. Army fired depleted uranium (DU) projectiles from 1984 to 1994 under NRC license SUB-1435. About 70,000 kilograms (150,000 pounds) of DU remain in an impact area of approximately 8.4 km² (2000 acres) north of the firing line. The DU impact area is the area under NRC license and is contaminated with both UXO and DU. The area south of the firing line, where DU was stored, was decontaminated and released for unrestricted use in 1996. The license for the DU impact area north of the firing line was amended for possession only, in 1996. Removal of the DU from the site would pose a high risk to workers because of the presence of UXO.

Portions of the JPG site are used by the U.S. Fish and Wildlife Service (FWS) and U.S. Air Force (USAF). The U.S. Army has entered into Memoranda of Agreements (MOAs) with the FWS and USAF, that address access and land-use restrictions at JPG. The FWS has established the Big Oaks National Wildlife Refuge (NWR) in about 200 km² (50,000 acres) of the JPG facility. The FWS is responsible for providing UXO and DU safety/awareness training to all personnel and visitors and, in conjunction with the USAF, providing access control to the site. The USAF uses about 4 km² (1000 acres) of the JPG facility as a bombing range which is not part of the NWR. Public use of the Big Oaks NWR is limited to hunting, fishing, wildlife observation, photography, and guided tours. The public has no access to the DU impact area.

Decommissioning plans (DPs) were submitted by the Army in December 1999 and June 2001. The NRC staff (staff) discontinued review of the 1999 DP, considering it as superseded by the 2001 DP. The staff rejected the 2001 DP during an expanded acceptance review noting a number of deficiencies, particularly the need for off-site transport models. In a revised DP dated June 27, 2002, the Army addressed the deficiencies noted by the staff with respect to the 2001 DP and proposed to decommission JPG under restricted-release conditions, in compliance with 10 CFR 20.1403. After completing an expanded acceptance review, the 2002 DP was accepted for technical review by the staff.

Save the Valley (STV), a local citizens group, requested a hearing on the 1999 DP and its hearing request was granted. That hearing has remained pending since the original grant of hearing. The hearing now deals with the December 12, 2002, timely "Request for Hearing and Comments on Revised Decommissioning Plan by Save the Valley, Inc," and "Motion to Defer Hearing Pending Completion of Technical Review" filed by STV. The staff is not a party to the proceeding, but the Presiding Officer has requested the staff's "...views on the merits of the STV motion to defer a hearing pending the completion of the Staff's technical review...", and has also requested "...an explanation as to why (as was previously represented by Staff counsel) a full two years will be required to complete that review...."¹ The response of the Army to STV's filings and the staff's response to the Presiding Officer's questions were submitted on January 17, 2003.

The citizens living near JPG have expressed concern over the Army's proposal to leave the DU in place and stop environmental monitoring once the license is terminated. Additionally, in a letter dated June 11, 2002, the Mayor of Madison, IN, stated that the Army's request to

¹ See orders dated December 17 and 18, 2002.

terminate the environmental monitoring of DU poses a potential health hazard to future generations who live near JPG.

From the initial limited technical review of the revised DP, the staff has determined that the off-site transport models will need to be validated before NRC could consider approval to terminate the Army's license in accordance with the 2002 DP, and thus terminate environmental monitoring by the Army. The mobility of DU is known to be low, but parameters such as the source term (concentration, oxidation state, impurities, distance to Big Creek, etc.) and local hydrology may influence the speed of off-site transport. The Army has stated that many of the parameters used for modeling were determined from literature values, not from actual field measurements. To validate the off-site transport models, site-specific data are needed. However, the Army's DP notes that the collection of this data could result in an imminent personnel safety hazard because of the presence of UXO. The inability to validate the models severely limits the staff's options regarding approval of the DP. Based on discussions with the Army, the Army has requested NRC approve an alternative schedule under 10 CFR 40.42(g)(2) to continue with a possession-only license (See Attachment).

DISCUSSION:

The current license will be amended to include the following license conditions for a possession-only license: 1) criteria for levels of DU in the environmental media sampled under the radiation protection program, and an action plan if the levels were exceeded; 2) a 5-year renewal requirement; and 3) continuation of the access restrictions addressed in the MOAs. Annual inspections will continue to be carried out by the region. With a possession-only license, the Army will continue to conduct environmental monitoring as part of its radiation protection program. The continued collection of environmental monitoring data and action levels will ensure that no DU is migrating off-site. Under this approach, decommissioning will not be pursued until site-specific data needed for input into the off-site transport models can be collected without undue risk to the health and safety of the public, including the Army's employees and contractors. Advances in UXO cleanup technology might allow for decommissioning in the future, although the time frame is uncertain. Nevertheless, it is recognized that it is not clear at this time when the data can be safely collected. Thus, the license under this approach may be for possession-only indefinitely.

Amending the existing license for JPG to continue as a possession-only license and delaying further development of the decommissioning plan until validated models can be established appears to be the most prudent course of action. The staff has concluded that under the unique circumstances of this case, where the collection of data to complete the decommissioning plan in itself could create personnel safety hazards, and the licensee -- a federal agency -- is a stable and durable entity that can provide access controls and monitoring in accordance with the Commission's requirements, extending the requirement to submit a decommissioning plan until the necessary data can be safely collected and models validated could be approved under 10 CFR 40.42(g)(2) as it presents no undue risk from radiation to the public health and safety and is otherwise in the public interest. Given the 5-year renewal period, the staff will be in a position to periodically revisit the need to continue the delay in completing the decommissioning plan.

The approach will be implemented by:

- 1) the Army requesting an alternate schedule to submit a decommissioning plan pursuant to 10 CFR 40.42(g)(2) and withdrawing its current decommissioning plan contingent on an alternative schedule approval;
- 2) the staff, after holding public meetings in the three counties near JPG to explain the proposed change from decommissioning to a possession-only license renewable for 5-year terms for an indefinite period, and subject to comments received, would make the findings required by 10 CFR 40.42(g)(2) and amend the current license to reflect the conditions discussed above; and
- 3) the possession-only status would continue until it was safe for the licensee to gather data to validate the models, resubmit the DP, and proceed with decommissioning at which time the decommissioning process would be initiated.

Amending the license for JPG will satisfy NRC's four performance goals. The responsibilities under the NRC license including the continued collection of environmental data will maintain safety and the protection of the environment. Continued environmental monitoring and NRC's ongoing regulatory presence will increase public confidence, since the potential for DU migrating off-site appears to be the public's biggest concern. A possession-only license for an indefinite period in the short term will reduce both the regulatory burden on the Army and unnecessary costs as the Army will not be required to submit the additional information required by the staff to complete its evaluation of the 2002 DP.

Under the possession-only license, JPG will no longer be performing decommissioning. The staff has concluded that under the unique situation at JPG of not being able to initiate decommissioning because of the UXO, JPG should be removed from the SDMP list. The regulatory oversight for the possession-only license will be transferred from the decommissioning program to the licensing program. The staff will evaluate the status of UXO remediation technology during each 5-year license renewal to determine if advances in the technology would allow for UXO removal and the initiation of decommissioning.

The staff considered delaying submission of this paper until it completed its re-analysis of the Licence Termination Plan (LTR). However, given the unique circumstances of the JPG site, staff's approach to allow the licensee to delay decommissioning does not impact the policy options in the LTR re-analysis.

RESOURCES

The annual inspections will require approximately 0.1 full time equivalent (FTE). The review of the license at the end of each 5-year period will require approximately 0.2 FTE. Upon issuance of the amended possession-only license, the project management responsibility will transfer from the Decommissioning Branch in NMSS to Region III. This transfer activity will require minimal level of resources.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. OGC considered whether the pendency of the hearing before the Presiding Officer presented any separation of functions issues. That hearing, however, deals with a specific decommissioning approach, restricted release, a subject completely different from the alternative approach proposed in this paper. Further, the staff is not a party to that proceeding and the Presiding Officer has only requested the staff to explain the basis for its estimate of the time needed for the technical review of the 2002 DP and its views on STV's motion to defer the hearing pending completion of the staff's technical review. Use of the approach suggested in this paper for application to the JPG site will essentially render the 2002 DP moot. Under these circumstances, this alternative approach is proper for consideration outside the hearing process. OGC does not perceive any separation of functions (10 CFR 2.781) impediments.

The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

/RA/

William D. Travers
Executive Director
for Operations

Attachment: Ltr. Dtd 02/04/03 fr. J. Ferrer to L. Camper re: Request for Alternative
Decommissioning Schedule

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



DEPARTMENT OF THE ARMY
U.S. ARMY SOLDIER AND BIOLOGICAL CHEMICAL COMMAND
5183 BLACKHAWK ROAD
ABERDEEN PROVING GROUND, MARYLAND 21010-5424

04 FEB 2002

REPLY TO
ATTENTION OF

Office of the Director, Stockpile,
Industrial, Remediation and Restoration

Mr. Larry Camper
Chief, Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
US Nuclear Regulatory Commission
Washington DC 20555

Dear Mr. Camper:

In accordance with 10 CFR 40.42 (g) (2), the US Army makes a contingent request for an alternative schedule for submittal of a Decommissioning Plan for the termination of the Jefferson Proving Ground (JPG) license SUB-1435. The alternative schedule is necessary due to the acknowledged unexploded ordnance and the personnel safety hazard that would be created should the Army be requested by NRC to provide additional site specific data during technical review to further validate termination of the JPG license under 10 C.F.R. § 20.1403, restricted conditions.

The Army proposes that a license amendment for SUB-1435 be negotiated with NRC that would create a 5-year renewable possession only license for an indefinite time period. Contingent upon the successful negotiation of an indefinite duration possession only license amendment for JPG, the Army would then formally withdraw the revised Decommissioning Plan (June 2002) and Environmental Report (June 2002) for decommissioning of JPG administratively accepted by NRC for technical review on October 1, 2002.

Ms. Joyce Kuykendall, SBCCOM Radiation Safety Officer, may be contacted for additional information at (410) 436-7118, facsimile (410) 436-4445 or by email at joyce.kuykendall@sbccom.apgea.army.mil.

Sincerely,

Dr. John Ferriter
Director, Stockpile, Industrial,
Remediation and Restoration