

POLICY ISSUE NOTATION VOTE

May 17, 2001

SECY-01-0088

FOR: The Commission

FROM: William D. Travers
Executive Director for Operations

SUBJECT: DEFERRAL OF REGULATORY OVERSIGHT OF AREA 10 (THE SANDPILE) OF THE LAKE CITY ARMY AMMUNITION PLANT TO THE U.S. ENVIRONMENTAL PROTECTION AGENCY, AND REQUEST TO REMOVE SITE FROM SITE DECOMMISSIONING MANAGEMENT PLAN LIST WHEN REMAINING REMEDIATIONS UNDER NRC'S OVERSIGHT ARE COMPLETED

PROPOSE:

To obtain the Commission's approval of the staff's plan to defer, to the U.S. Environmental Protection Agency (EPA), remediation activities involving depleted uranium (DU) contamination in Area 10 (the sandpile) of the Lake City Army Ammunition Plant (LCAAP), in Independence, Missouri. Also, the staff is seeking the Commission's approval to remove LCAAP from the U.S. Nuclear Regulatory Commission's (NRC's) Site Decommissioning Management Plan (SDMP), once remediations of both Building 3A and the 600-Yard Bullet Catcher have been completed.

SUMMARY:

The staff is proposing to defer the regulation of radioactive contamination remediation of Area 10 of LCAAP to EPA, given EPA's current role at the site, and the trace amounts of DU in Area 10. This proposal is similar to an earlier proposal, to defer regulation of radioactive

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contamination remediation of other portions of the LCAAP site to EPA -- namely, SECY-98-201, dated August 21, 1998 (Attachment 1). The Commission approved the earlier proposal in a staff requirements memorandum (SRM) dated October 15, 1998 (Attachment 2). NRC will retain regulatory oversight of radioactive contamination remediation of both Building 3A and the 600-Yard Bullet Catcher. The U.S. Department of the Army (the licensee) expects to complete remediations of these areas by mid-2001.

BACKGROUND:

NRC approved the licensee's plans to remediate Area 10 of LCAAP by License Amendment 32, dated August 25, 1998. Area 10 was comprised of approximately 30 small piles of sand, a large pile of sand, and a large ridge of sand. The licensee, based on the results of its characterization study, assumed that all the DU material was located in the small piles of sand. The licensee has removed the small piles of sand [approximately 850 cubic meters (30,000 cubic feet)] and has shipped this material offsite, for disposal. However, during the process of disposing of this material, the low-level waste disposal facility discovered that the material contained at least 12 parts per million of leachable lead. Because of the elevated level of leachable lead, this material had to be classified as a mixed waste, as described in COMSECY-99-007, dated March 12, 1999 (Attachment 3). In addition, because the staff had questions related to the licensee's characterization of the large sandpile and the large sand ridge [approximately 22,600 cubic meters (800,000 cubic feet)], the licensee agreed, as part of its Area 10 remediation effort, to scan this sand in lifts of 0.15 meter (6 inches). During this scanning process, the licensee discovered that both the large sandpile and the large sand ridge contained DU at depth.

In late 1998, the licensee suspended its Area 10 remediation efforts because of the amount of potential mixed wastes and the large cost associated with remediation of this material. The licensee planned to evaluate its options as to how to best complete remediation of Area 10.

DISCUSSION:

Issue 1 - Request for Commission Approval to Defer Oversight to EPA

The licensee by letter dated July 10, 2000 (Attachment 4) requested scheduler relief from the requirement of 10 CFR 40.42. Under the provisions of this section of the regulations, the licensee was required to complete remediation of Area 10 by August 25, 2000. The licensee stated that it could complete radiological remediation of Area 10 by segregating the DU from sand and shipping the DU offsite for disposal. However, representatives from both EPA and the State of Missouri Department of Natural Resources (the State) noted that, because the sand in Area 10 is now considered a mixed waste, the act of removing the DU from the sand would be considered treatment under the provisions of the Resource Conservation and Recovery Act (RCRA). Thus, the licensee would require either a RCRA permit or an approved Comprehensive Environmental Restoration, Compensation, and Liability Act (CERCLA) remediation plan, before it could resume radiological remediation of Area 10. Both options are costly and time-consuming, and thus would result in the licensee not being able to complete Area 10 remediation by August 25, 2000. Further, the licensee noted that the increase in cost associated with remediation of Area 10 in the short term would cause funds currently allocated

for other site remediation efforts to be redirected to Area 10 remediation. This would cause a delay in remediation of these other areas until additional funds could be obtained. Both EPA and the State opposed the delaying of remediation of these other areas because the chemical contamination in these areas has been determined to pose a greater risk to human health. Thus, the licensee requested scheduler relief that would allow it to complete remediation of Area 10 in 2008. In addition, the licensee requested, as an alternative to granting the scheduler relief, that NRC transfers its regulatory oversight for this area to EPA, as was done for other areas of the LCAAP site.

The licensee, by letter dated August 7, 2000 (Attachment 5), revised its request for scheduler relief. The licensee requested relief of only a 1-year delay, until August 25, 2001. This one year extension would allow sufficient time for NRC, EPA, the State, and the licensee to resolve the various conflicting regulatory requirements, to allow development of a cost-effective plan to remediate Area 10. The staff, by license amendment dated August 15, 2000, granted a 1-year extension, until August 25, 2001, for this purpose.

In a September 27, 2000, meeting of the involved parties (NRC, EPA, the State, and the licensee), EPA agreed, in principle, for NRC to defer the regulatory oversight for remediation of DU in Area 10. The details of this agreement were worked out in subsequent telephone conversations¹. EPA will subsume this responsibility into its overall regulatory oversight obligations under CERCLA after the licensee develops an "Engineering Evaluation/Cost Analysis" (EE/CA), and issues this document for public comment. The licensee plans to issue the EE/CA for public comment by the end of June 2001. This deferral of regulatory oversight of DU remediation in Area 10 will require approval by the Commission, similar to NRC's earlier deferral of its regulatory oversight of other portions of LCAAP to EPA. Also, the entire LCAAP site will remain under NRC license until the Army has demonstrated that the residual DU contamination levels have been reduced to a level that will not impact either the public health and safety or the human environment.

The staff has concluded that this is a prudent course of action, because of the limited quantity of DU remaining within Area 10, the extent of leachable lead found in this area, and the extensive role of EPA at the site. In addition, the staff considered the Commission's Strategic Plan performance goals before making this proposal. The staff found that the deferral of regulatory oversight for DU remediation of Area 10 would: (1) maintain safety and protect the environment by not causing the licensee to redirect currently allocated funds from other remediation efforts on site that EPA, the State, and the licensee have determined pose greater risks to the public health and safety and the environment; (2) increase public confidence since the proposed process provides an opportunity for the public to comment on the draft EE/CA; (3) result in activities and decisions being more effective, efficient, and realistic, since there will be a single Federal entity--EPA--overseeing remediation of Area 10; and (4) reduce unnecessary regulatory burden on the licensee by providing a means to reduce the potential impacts of dual regulation. Therefore, the staff is seeking Commission approval to allow NRC to defer its regulatory oversight, of radiological remediation of DU contamination located in Area 10, to EPA.

¹EPA, the State, and the licensee have agreed to a dose-based clean-up standard of 15 milli-roentgen equivalent man (mrem) per year above background, industrial land use scenario.

Finally, the staff notes that the proposal to defer to EPA at this site is consistent with the approach used for deferral of another portion of the LCAAP site approved in SECY 98-201 (August 21, 1998), but is different from the situation in the recent case involving the U.S. Army Corps of Engineers (USACE) where the staff proposed to suspend the license of Stepan Chemical Company. SECY 01-0010 (January 23, 2001) (Attachment 6). At the Stepan site, the licensee, Stepan Chemical Company has not submitted a decommissioning plan nor would it be performing the remediation. Rather, USACE will be developing its own decommissioning plan in accordance with the CERCLA process and will be remediating the site under CERCLA subject to EPA oversight. The Stepan license was proposed to be suspended to provide USACE the flexibility to remediate the site without oversight by Stepan and NRC. USACE under CERCLA would be responsible for radiation safety. NRC would become involved after USACE completed its activities and the license was reinstated. At that time, NRC would determine if the site was decommissioned to NRC criteria. Unlike the situation at the Stepan site, at LCAAP, the Army as the licensee is remediating a portion of the site where the principle hazards are constituents regulated by EPA. The Army in accordance with the Commission's regulations has an approved decommissioning plan and is proceeding to implement its plan. The staff expects that the Army in meeting EPA requirements will also meet the NRC decommissioning requirements. It would be inappropriate to use the Stepan model at LCAAP because, as noted, the Army as the licensee is doing the remediation. As a licensee, the Army would be required to meet the applicable Commission's requirements. However, in light of EPA's responsibility for the principle hazards and its status as an independent regulator, NRC would be suspending its direct oversight and remediation processing requirements and deferring decommissioning oversight to EPA to avoid dual regulation. This will require an amendment of the Army's license to extend the time period for the completion of the remediation to be consistent with the schedule to complete the EPA required remediation. Once EPA is satisfied that the remediation is completed, NRC will verify that NRC's decommissioning criteria have been met. However, should EPA have any questions or concerns, NRC would be able to provide technical and inspection support, and if appropriate take necessary enforcement action. This was EPA's preferred approach for this site.

Issue 2 - Request for Commission Approval to Remove LCAAP from SDMP

The Commission, in its October 15, 1998, SRM, stated that when the staff was ready to remove LCAAP from the SDMP, the staff, if at all possible, should provide the Commission with an assessment of the dose, to the average member of the critical group, of any residual contamination from the NRC-regulated portions of LCAAP.

As requested, the staff has performed dose assessments for the NRC-regulated portions of LCAAP, using the DandD computer code², based on current data and cleanup criteria. Dose assessments for the 600-Yard Bullet Catcher, Building 3A, and Building 12A³ are provided as Attachment 7. A summary of the staff's analyses to estimate doses (expressed as peak of the mean), to the average member of the critical group, of any residual contamination, for each facility or area, is provided in the table below.

Summary of Staff Dose Assessment Analyses

Area	Model Assumptions	Annual Doses (peak of the mean)
600-Yard Bullet Catcher	Residential, all code defaults, and average DU soil concentrations	<0.05 mSv (milli-Sievert) (5 mrem.)
Building 3A	Residential, all code defaults, and average DU soil concentrations	<0.05 mSv (5 mrem)
Building 12A	Building occupancy, all code defaults, and average DU surface contamination levels, confined to 410 square meters (4410 square feet)	<0.22 mSv (22 mrem)

The staff is requesting that the Commission approve the staff's removal of LCAAP from the SDMP once: (1) the staff has confirmed that the licensee has successfully completed remediations of both Building 3A and the 600-Yard Bullet Catcher; and (2) the staff has

²The DandD code is a screening tool which yields conservative results. While the RESRAD code could provide more realistic results, the staff did not have adequate site-specific information for modeling these areas. The staff decided not to request the licensee to undertake the additional cost to obtain and provide this information since the DandD code results are conservative.

³The licensee completed remediation of Building 12A in 1987. The staff performed a confirmatory survey in 1996 and confirmed that Building 12A met NRC SDMP criteria for unrestricted release. A dose assessment for Building 12A has been included in this paper for completeness.

transferred regulatory oversight for radiological remediation of Area 10 to EPA. As noted in SECY-98-201 and the Commission's related SRM, LCAAP will remain on the Army's license until NRC has reviewed EPA's basis for its determination that remediation of the remaining portions of the site is complete, and the staff has determined that the residual contamination is compatible with NRC's decommissioning criteria. Based on CERCLA risk-based prioritization of LCAAP remediation activity, this action most likely will not occur for a number of years.

The staff is making this request to allow the Commission, if it chooses, to address collectively all matters the staff is aware of, related to LCAAP, that will require Commission consideration rather than burdening the Commission with a piecemeal-approval process. In addition, given the complexity of the remaining SDMP sites in general, the staff is concerned that the historical 30-day period for interacting with the Commission to solicit approval to remove sites from the SDMP list may be inadequate. Based on the licensee's current schedule, it will not complete the activities necessary for deferral of regulatory oversight, for Area 10, to EPA, until mid-2001. This schedule, followed by EPA's review and subsequent deferral, pending Commission approval, will not allow the staff sufficient time, after the completion of all of these activities, to consult with the Commission and effect the removal of LCAAP from the SDMP list, by August 15, 2001.

RECOMMENDATIONS:

That the Commission:

1. Approve deferral, to EPA, of the remediation of the DU contamination located in Area 10 on the LCAAP site.
[Note that EPA, the State, and the Army have agreed with this proposal.]
2. Approve the staff's removing the LCAAP site from the SDMP list once remediations of Building 3A and the 600-Yard Bullet Catcher have been completed in mid-2001, without the staff preparing a separate Commission Paper at that time.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection. Staff consulted with EPA and the State of Missouri in preparing this paper. Neither EPA nor the State officials objected to the staff's proposed approach.

/RA/

William D. Travers
Executive Director
for Operations

- Attachments:
1. SECY-98-201
 2. SRM dtd 10/15/98
 3. COMSECY-99-007, dtd 3/12/98
 4. Ltr. to S. Brown, NRC from R. Graham, Army, dtd 7/10/00
 5. Ltr. to B. Jorgenson, RGIII from R. Graham, Army, dtd 8/7/00
 6. SECY-01-0010, dtd 1/23/01
 7. Lake City Army Ammunition Plan Dose Assessment for the 600-Yard Bullet Catcher Area and Bldgs 3A and 12 A, undated

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objection. Staff consulted with EPA and the State of Missouri in preparing this paper. Neither EPA nor the State officials objected to the staff's proposed approach.

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*SEE PREVIOUS CONCURRENCE

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