

POLICY ISSUE
(Notation Vote)

April 28, 2005

SECY-05-0073

FOR: The Commissioners

FROM: Luis A. Reyes
Executive Director for Operations /RA/

SUBJECT: IMPLEMENTATION OF NEW U.S. NUCLEAR REGULATORY
COMMISSION RESPONSIBILITIES UNDER THE NATIONAL
DEFENSE AUTHORIZATION ACT OF 2005 IN REVIEWING WASTE
DETERMINATIONS FOR THE U.S. DEPARTMENT OF ENERGY

PURPOSE:

To request Commission approval of the staff's plans for implementing the staff's new responsibilities under the Ronald W. Reagan National Defense Authorization Act of Fiscal Year 2005 (NDAA), and to inform the Commission of related technical reviews of waste determinations for the U.S. Department of Energy (DOE).

SUMMARY:

The NDAA gives the U.S. Nuclear Regulatory Commission (NRC) responsibility for providing technical consultation and monitoring for waste determinations made by DOE in South Carolina and Idaho for waste associated with the reprocessing of spent fuel. The staff is involved in similar reviews at Hanford and at West Valley. The staff will be involved in a significant number of waste determination reviews for DOE over the next several years. This paper describes the staff's plans for implementing its new responsibilities under the NDAA, including the proposed schedule, resources, approach to technical issues, and stakeholder interactions, and the staff's plans for activities with regard to similar reviews at Hanford and West Valley.

CONTACT: Anna H. Bradford, NMSS/DWMEP
301-415-5228

BACKGROUND:

The NDAA was passed by Congress on October 9, 2004, and signed by the President on October 28, 2004. Section 3116 of the NDAA allows DOE to continue to use a process similar to its waste-incident-to-reprocessing (WIR) process included in DOE Order 435.1 to determine that waste is not HLW (see attachment for detailed historical information regarding WIR). However, the NDAA is applicable only to South Carolina and Idaho and does not apply to waste transported out of those States. The NDAA requires that (1) DOE consult with NRC on its non-HLW determinations and plans and (2) NRC, in consultation with the State, monitor disposal actions taken by DOE for the purpose of assessing compliance with NRC regulations in 10 CFR Part 61, Subpart C. If the NRC determines that any disposal actions taken by DOE are not in compliance, the NDAA requires NRC to inform DOE, the affected State, and congressional subcommittees. In addition, the NDAA provides for judicial review of any failure of the NRC to carry out its monitoring responsibilities.

Section 3146 of the NDAA requires that the National Academy of Sciences (NAS) undertake a study of DOE's plans for management of those waste streams, resulting from the reprocessing of spent nuclear fuel and stored in tanks, that are greater than Class C and that DOE does not intend to send to a high-level waste repository for disposal. The first meeting of the NAS committee was held on March 7, 2005, for the purpose of determining the scope of the study and obtaining relevant background information.

On February 28, 2005, DOE submitted to NRC its first non-HLW determination under the NDAA. This first determination is for salt waste processing and disposal at the Savannah River Site (SRS), and the staff is conducting its technical review. NRC staff has also interfaced with the States of South Carolina and Idaho to begin discussions of how monitoring activities will be conducted.

In addition, prior to the passage of the NDAA, the NRC and DOE's Office of River Protection (ORP) at Hanford had established an Interagency Agreement (IA) for NRC technical review of DOE's tank waste retrieval actions for Tank C-106. The staff transmitted its Requests for Additional Information (RAIs) on the first part of the review on January 19, 2005. The ORP intends to submit part of its performance assessment (PA) for review in April 2005. This schedule may be impacted if DOE-HQ decides that the Hanford review is a lower priority than the other waste determination reviews.

NRC will also be reviewing WIR determinations for the West Valley site under the West Valley Demonstration Project Act and the Commission's Final West Valley Policy Statement. The staff has requested that the impacts of any WIR determinations be included in DOE's Draft Environmental Impact Statement for West Valley, which is scheduled to be transmitted to NRC for review in August 2005, and that the technical details of DOE's WIR determination be included with the site's Decommissioning Plan, currently scheduled for submittal in mid-2006.

DISCUSSION:New NRC Responsibilities Under the NDAA

In the past, DOE has periodically requested that NRC review certain WIR determinations. These requests were initiated by DOE, and NRC's reviews were performed in an advisory manner and did not constitute regulatory approval. Previous reviews are discussed in detail in the attachment.

The NDAA requires use of the following criteria for determining that waste is not HLW:

1. The waste does not require permanent isolation in a deep geologic repository for spent fuel or HLW;
2. The waste has had highly radioactive radionuclides removed to the maximum extent practical; and
 - A. Does not exceed concentration limits for Class C low-level waste and will be disposed of in compliance with the performance objectives in 10 CFR 61, Subpart C; or
 - B. Exceeds concentration limits for Class C LLW but will be disposed of in compliance with the performance objectives of 10 CFR 61, Subpart C, and pursuant to plans developed by DOE in consultation with the NRC.

These criteria are somewhat different than those used by the staff in past reviews. Therefore, there will be some differences in the reviews performed under the NDAA. For example, as a result of Commission direction in 2000 regarding a staff review of SRS tank closure (SECY-99-0284), the staff has not been assessing whether WIR meets Class C concentrations. This will therefore be a new area of assessment in relation to staff review of non-HLW determinations. If waste exceeds Class C concentrations, the NDAA states that DOE must consult with NRC during the development of its disposal plans. The DOE has not previously consulted with NRC during the development of its specific disposal plans; therefore this is also a new area of assessment in relation to non-HLW determinations.

In addition, the staff must, in coordination with the State, monitor DOE's disposal actions to assess compliance with the performance objectives of 10 CFR Part 61, Subpart C. If DOE is found to not be in compliance, NRC must report its findings to Congress, the State, and DOE. This monitoring and noncompliance reporting are new areas of activity for the NRC for non-HLW determinations.

Staff Approach to Satisfying NDAA Responsibilities

The staff has begun to meet the responsibilities prescribed by the NDAA and is establishing a framework for performing these activities over the long term. The staff's implementation plans are discussed in detail in the attachment. The NDAA requires that DOE reimburse NRC for NRC's activities in FY05; therefore, the staff has established an Interagency Agreement to provide for funding. The staff is working with DOE staff to develop a Memorandum of Understanding (MOU) on the responsibilities and mechanisms for implementing the requirements of the NDAA.

In carrying out its responsibilities, the staff intends to ensure that stakeholders are appropriately informed of NRC processes and activities. DOE waste determinations will be made publicly available, as will NRC RAIs and final reports. The staff believes that the waste determination

review process under the NDAA should be conducted in an open manner. The staff will follow an approach similar to the “NRC Guidelines for Future Stakeholder Interactions on West Valley” (SECY-00-0158) to determine whether meetings should be open to the public. This approach consists of following NRC Management Directive (MD) 3.5, as applied to a licensee. MD 3.5 provides that NRC will conduct its business in an open manner, except for some specific circumstances such as those concerning safeguards information or management meetings not directly related to any regulatory action or decision. Meetings between NRC staff and DOE on the subject of a specific waste determination review for a DOE site will be open to the public. The staff believes this approach will be effective; however, if during implementation of the NDAA it proves to be inapplicable then this approach will be revisited and any changes will be communicated to the Commission.

The technical review approach of DOE’s non-HLW waste determinations will be similar to previous WIR reviews (e.g., for SRS in 2000 and the Idaho National Engineering and Environmental Laboratory INEEL in 2002 and 2003). However, as noted above, due to differences between the criteria in the NDAA and those used in previous NRC reviews, there will be some technical differences in the reviews.

The staff’s reviews will be risk-informed and performance-based. The first step in the process will be DOE’s submittal of its non-HLW determination and supporting documentation, including a PA if necessary (see attachment). The NRC staff will review whether DOE’s assumptions, modeling, and conclusions are technically adequate, accurate, and in compliance with the requirements of the NDAA. The NRC will document its findings in a Technical Evaluation Report (TER). To promote consistency and provide guidance to the staff and to DOE, the staff will also develop a Standard Review Plan (SRP) for conducting waste determination reviews and monitoring activities.

The staff will provide to the Commission the results of waste determination reviews that raise unique policy issues, prior to transmittal to DOE. This is a departure from past practice, in which the staff would send each TER to the Commission for review and approval. The change results from the recognition that these waste determination reviews are expected to become more frequent and that it would be more efficient and effective if the Commission endorsed the staff’s review approach and SRP, rather than each individual TER. However, because the first review under the NDAA (for salt waste processing and disposal) will be completed before the draft SRP is complete, the staff believes it is appropriate to brief the Commissioners’ technical assistants before issuing this TER under the NDAA to inform them of any new or unique issues covered during the staff’s review.

The NRC must also monitor DOE’s disposal activities resulting from NDAA waste determinations and issue reports if noncompliance with 10 CFR 61 is found. This monitoring will be conducted in a risk-informed and performance-based manner and will verify that DOE’s actions to implement its waste determinations are consistent with the analysis that DOE provided to the NRC. The NRC staff will also perform any necessary environmental monitoring to ensure that the performance objectives of 10 CFR Part 61, Subpart C, are being met.

The results of the staff’s monitoring activities would be documented in a publicly available report. Initially, this monitoring would be conducted by the NRC Headquarters staff that conducted the technical review and would be coordinated with the State, and with the Regions

for their awareness. The staff will re-evaluate the roles of Headquarters and the Regions with regard to monitoring once the staff gains more experience. Any findings of noncompliance will be provided to the Commission for approval and must be reported by NRC to Congress, the State, and DOE.

Schedule

The DOE has indicated that it wants NRC to review four separate non-HLW determinations in 2005 for SRS. These reviews will be for salt waste treatment and disposal, two tanks, and an evaporator. DOE submitted the first non-HLW determination, for the SRS salt waste treatment and disposal, on February 28, 2005. Also in 2005, DOE wants NRC to review a non-HLW determination for closure of several tanks at INEEL. DOE has not finalized its projections for FY06 or FY07. However, based on preliminary projections, the staff expects two to five new reviews each year.

The DOE is requesting an accelerated schedule for NRC's first review for SRS because the small amount of remaining tank volume is expected to soon affect DOE's ability to continue to vitrify waste at the site. DOE and NRC staff have established a schedule that is acceptable to the staff of both agencies. The first review of the SRS salt waste treatment and disposal is scheduled to be completed within approximately six months. This schedule is contingent on receiving timely, high-quality waste determination submittals and RAI responses from DOE. The other reviews for SRS tanks, the evaporator, and several of the INEEL tanks are scheduled to be completed within approximately nine months after DOE submits an adequate waste determination.

In addition, staff transmitted its RAIs on the first part of the review for Hanford on January 19, 2005. The ORP intends to submit its PA for review in April 2005. NRC will also be reviewing WIR determinations for the West Valley site. The staff has requested that the impacts of any WIR determinations be included in DOE's Draft Environmental Impact Statement, which is scheduled for NRC review in August 2005, and that the technical details of DOE's WIR determination be included with the site's Decommissioning Plan, currently scheduled for submittal in mid-2006. The staff will continue to conduct the Hanford and West Valley reviews in a manner consistent with the consultation approaches agreed to with DOE, as well as with Commission direction (e.g., the West Valley Final Policy Statement). The staff will also use the SRP in addressing specific technical issues.

NMSS is currently increasing its staffing for these new activities while simultaneously performing multiple technical reviews of DOE submittals. We anticipate that the earliest the draft SRP will be completed is Spring of 2006.

Resources

The staff estimates that the budget requirements for performing the new NDAA activities will be approximately \$2.5 million in FY06, which is included in the FY06 budget. As per the NDAA, funds for WIR beginning in FY06 are limited to appropriated non-fee-based funds. This estimate was originally generated based on NMSS needs. However, the Commission has recently directed the Advisory Committee on Nuclear Waste (ACNW) to include WIR as a high priority activity (COMSECY-04-0077). As a result, FY06 resources for ACNW and the Office of General Counsel (OGC) must come from the \$2.5 million appropriation. OGC and ACNW

resources needs for FY06 and FY07 are estimated to be 1 FTE (0.9 ACNW and 0.1 OGC) and \$10,000 for travel each year. NMSS resources for FY06 are estimated to be 8 FTE and \$1.35 million. The transfer of 1 FTE and \$10,000 from NMSS activities will have an impact on the staff's ability to complete the DOE reviews within the original schedule. In order not to displace other NMSS work, the staff will minimize this impact by coordinating with DOE to adjust the schedules for technical reviews of WIR submittals.

A new section within the Division of Waste Management and Environmental Protection has been established as the most efficient way to carry out the many review and monitoring activities required by the NDAA. The details of the staff's proposed schedule, resources, approach to technical issues, and stakeholder interactions are provided in the attachment.

CONCLUSIONS:

Staff is in the process of implementing its new consulting and monitoring responsibilities under the NDAA. The staff will provide technical reviews and monitoring and will interface with DOE, the States, and other stakeholders during implementation of the NDAA. Because waste determination reviews are expected to become more frequent, the staff believes it will be more efficient and effective to allow the staff to issue its TERs without prior Commission approval, except for those cases that raise unique policy issues. The staff considers this action to be within the delegated authority of the Director of the Office of Nuclear Material Safety and Safeguards.

RECOMMENDATIONS:

The staff recommends that the Commission approve the staff's plans for implementing its new responsibilities under the NDAA.

COORDINATION:

The Office of General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has also reviewed the paper and concurs.

/RA Martin J. Virgilio Acting For/

Luis A. Reyes
Executive Director
for Operations

Attachment:
Implementation of NRC Responsibilities

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*See previous concurrence

OFC	DWMEP:PM	dch	DWMEP:SC		DWMEP:DD		OGC		OCFO		Tech Ed.	
NAME	ABradford*		BJDavis*		SFlanders*		STreby*		A. Azeem*		P. Kleene*	
DATE	01/26/05		01/31/05		03/22/05		03/25/05		04/01/05		03/07/05	
OFC	DWMEP:D		NMSS:OD		DEDMRS		EDO					
NAME	LCamper*		JRStrosnider*		MJVirgilio		LAReyes					

DATE	03/27/05	04/21/05	04/28/05	04/28/05		
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