

RESPONSE SHEET


TO: Annette Vietti-Cook, Secretary
FROM: CHAIRMAN KLEIN
SUBJECT: COMSECY-08-0036 – STATUS OF DECOMMISSIONING PROGRAM – 2008 ANNUAL REPORT

Approved X Disapproved Abstain

Not Participating

COMMENTS: Below x Attached None

I commend the staff for the significant progress it has made over the years to improve the NRC's decommissioning program into its current stable and predictable regulatory framework. In view of this program's maturity, I concur in my fellow Commissioners' views that, in the future, this report should be provided to the Commission for information only.



SIGNATURE

1/7/09

DATE

Entered on "STARS" Yes XX No


RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER JACZKO
SUBJECT: COMSECY-08-0036 – STATUS OF
DECOMMISSIONING PROGRAM – 2008 ANNUAL
REPORT

Approved X Disapproved Abstain

Not Participating

COMMENTS: Below Attached X None



SIGNATURE

11/26/2008
DATE

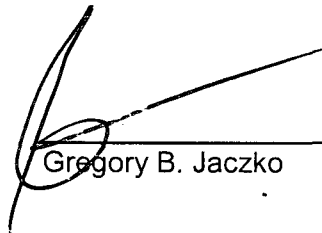
Entered on "STARS" Yes X No

Commissioner Jaczko's Comments on COMSECY-08-0036

I approve the staff's publication of the annual report on the status of the decommissioning program. I commend the staff's plan to add information regarding decommissioning sites regulated by Agreement States to the NRC's public website. This will help provide the public with more complete information on decommissioning sites.

I understand that in the March 12, 2004, Staff Requirements Memorandum for SECY-04-0024 "Recommended Changes to Nuclear Regulatory Commission's Decommissioning Program and Annual Decommissioning Program Report," the Commission approved the staff's proposal to summarize the decommissioning program in a NUREG every two years and in a Commission paper in the off years. I find this to be unnecessarily confusing to a member of the public, making it difficult to locate the entire series of annual decommissioning reports. It also makes the format of the NUREG confusing because the document only covers the decommissioning activities of one year but is published every two years. I propose that staff consider choosing one method or the other (NUREG or Commission paper) and use it consistently each year. Whichever format is chosen, the annual report should be sent to the Commission for information but does not need to be sent up for Commission approval.

I encourage the staff to consider other sites that may benefit from NRC interaction with EPA to facilitate unrestricted release.



Gregory B. Jaczko

11/20/2008
Date

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Commissioner Lyons
SUBJECT: COMSECY-08-0036 – STATUS OF
DECOMMISSIONING PROGRAM – 2008 ANNUAL
REPORT

Approved X Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached X None _____

IRA Peter B. Lyons
SIGNATURE

11/ 25 /08
DATE

Entered on "STARS" Yes X No _____

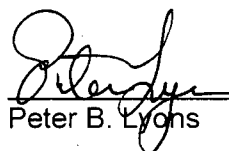
Commissioner Lyons' Comments on COMSECY-08-0036

I approve publication of this 2008 annual report with the following comments. Staff is to be commended for developing a report on the NRC's and Agreement State's decommissioning programs that can be used by a broad spectrum of our stakeholders. I applaud staff's effort to streamline the report by posting updated decommissioning status summaries on the public website. I encourage the Agreement States and the staff to keep information about sites up to date.

Given the maturity of the decommissioning program, I believe that the staff should no longer be required to provide this report to the commission for approval. However, it remains a valuable tool for informing the public about decommissioning. Therefore, staff should continue to produce the report at the two year interval and work with the Agreement States to maintain updated online status summaries for the decommissioning projects. Staff should continue to provide timely notification to the Commission of important decommissioning issues, including site and policy matters.

I also offer the following edits to the report:

- a. page iv, include the names of the Agreement State Representatives
- b. page 7, introduction, delete "comprehensive" and "with emphasis on those managed by the U. S. Nuclear Regulatory Commission (NRC)."
- c. page 11, first bullet, delete the reference to timeliness of the action or include a section on timeliness for all action to provide context
- d. page 27, first paragraph, 5th line, delete "NRC" within the parentheses


Peter B. Lyons 11/25/08
Date

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER SVINICKI
SUBJECT: COMSECY-08-0036 – STATUS OF
DECOMMISSIONING PROGRAM – 2008 ANNUAL
REPORT

Approved XX Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below XX Attached _____ None _____

I approve subject to the attached edits. In the future, staff should provide this report to the Commission for information. As the report now references the NRC website, staff will need to be vigilant in keeping the associated web pages updated.



SIGNATURE

12/15/08

DATE

Entered on "STARS" Yes No _____

2.2 Research and Test Reactor Decommissioning

NRC research and test reactor decommissioning activities include project management for the decommissioning of these reactors, technical review of licensee submittals in support of decommissioning, core inspections, support of development of rulemaking and guidance, public outreach, and participation in industry conferences and workshops. In addition, the staff routinely processes license amendments and exemptions to support the progressive stages of decommissioning. The staff regularly coordinates with other offices on issues affecting research and test reactors, both operating and decommissioning.

As of September 30, 2008, the 10 research and test reactors identified in Table 2-2 are undergoing decommissioning. The General Atomics Mark F and Mark I research and test reactors are awaiting removal of fuel. Plant status summaries for all decommissioning research and test reactors are available at <http://www.nrc.gov/info-finder/decommissioning/research-test/>.

2.2.1 Decommissioning Process

The decommissioning process begins when a licensee decides to permanently cease operations. The major steps of the decommissioning process are application, submittal and review of a DP, implementation of the DP, and completion of decommissioning.

Application

When the licensee has decided to permanently cease operations, it is required to submit a written application for license termination to the NRC within 2 years, or 1 year before license expiration. Each application for license termination must be accompanied by a DP submitted for NRC approval. The NRC and licensee hold presubmittal meetings to agree on the format and content of the DP. These meetings are intended to improve the efficiency of the DP development and review process.

Decommissioning Plan

The DP must include the following:

- The choice of the alternative³ for decommissioning with a description of the planned decommissioning activities.
- A description of the controls and limits on procedures and equipment to protect occupational and public health and safety.
- A description of the planned final radiation survey.

³ An alternative is acceptable if it provides for completion of decommissioning without significant delay. Consideration will be given to delayed alternatives only when necessary to protect public health and safety, including cases where waste disposal capacity is unavailable or and other site-specific conditions, such as the presence of co-located nuclear facilities, are a factor.

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and, (4) obvious technical inadequacies. The objective of the acceptance review is to verify that the application contains sufficient information before the staff begins an indepth technical review. In addition, the staff will conduct a limited technical review to identify significant technical deficiencies at an early stage, thereby precluding a detailed technical review of a technically inadequate submittal. At the conclusion of the acceptance review, the NRC will either accept the DP for detailed technical review or not accept it and return it to the licensee or responsible party with the deficiencies identified. The staff's detailed technical review is guided by NUREG-1757 and its supporting references. The staff documents the results of its detailed technical review in an Environmental Assessment (EA) or EIS and an SER. The staff shares the EA/EIS with the appropriate State and considers State comments in finalizing the EA/EIS. The final EA is either summarized in the *Federal Register*, with a Finding of No Significant Impact (FONSI), or if a FONSI can not be made, an EIS is developed.

The NRC conducts reviews of DPs proposing restricted release in two phases. The first phase of the review focuses on the financial assurance and institutional control provisions of the DP. The staff will begin the review of the remainder of the DP only after it is satisfied that the licensee's or responsible parties' proposed institutional control and financial assurance provisions comply with the requirements of the LTR. The applicable portions of NUREG-1757 will guide this phase of the review. The second phase of the review addresses all other sections of the technical review as guided by NUREG-1757 and includes the development of an EIS. Therefore, one of the first steps in Phase II is the publication of a Notice of Intent in the *Federal Register* to develop an EIS. The basic EIS development steps are listed below:

- publication of a Notice of Intent
- public scoping meeting
- preparation and publication of the scoping report
- preparation and publication of the draft EIS
- public comment period on the draft EIS, including a public meeting
- preparation and publication of the final EIS

In parallel with the development of the EIS, the staff develops a draft and final SER. The staff coordinates the development of the draft SER with the development of the draft EIS so that any RAIs can be consolidated.

Regardless of whether an EA or EIS is developed, the staff structures its reviews to minimize the number of RAIs, without diminishing the technical quality or completeness of the licensee's or responsible party's ultimate submittal. For example, the staff first develops a set of additional information needs and clarifications, including the bases for the additional information and clarifications, and then meets with the licensee or responsible party to discuss the issues. The staff gives notice of and conducts this meeting in accordance with NRC requirements for meetings open to the public. The staff documents the results of the meeting in a meeting report. The formal RAI includes any issues that cannot be resolved during the meeting. In developing the final RAI, the staff documents the insufficient or inadequate information submitted by the licensee or responsible party and communicates what additional information is needed to address the identified deficiencies. The quality and completeness of the licensee's DP factor directly into the scope and extent of the NRC's RAIs.

After publication of the FONSI or EIS, the NRC issues a license amendment, approving the DP, along with any additional license conditions found to be necessary as a result of the findings of the EA, EIS, and/or the SER.

2.5 Fuel Cycle Facility Decommissioning

Currently, the only fuel cycle facility undergoing partial decommissioning is the Nuclear Fuel Services site in Erwin, Tennessee. The public Web site at <http://www.nrc.gov/info-finder/decommissioning/fuel-cycle/> summarizes additional information about the status of the facility.

2.5.1 Fuel Cycle Facility Decommissioning Process

The decommissioning processes for fuel cycle facilities and for complex material sites are similar (see Section 2.3.1). Decommissioning activities at fuel cycle facilities can be conducted during operations (partial decommissioning) or after the licensee has ceased all operational activities.

Project management responsibility for fuel cycle facilities resides in NMSS and the Division of Fuel Cycle Safety and Safeguards (FCSS) during licensee operations and partial site decommissioning, and within the Office of Federal and State Materials and Environmental Management Programs (FSME) and within the Division of Waste Management and Environmental Protection (DWMEP) during entire site decommissioning in support of license termination. Project management responsibility for fuel cycle facilities is transferred from FCSS to DWMEP when the licensee has ceased all operational activities and a critical mass of material no longer remains at the site.

2.5.2 Summary of Fiscal Year 2008 Activities

In FY 2008, the staff completed reviews and released the final facility area of the General Atomics facility in San Diego, California, for which the NRC was the lead reviewing agency. However, this site will retain its State of California license and continue operations. Nuclear Fuel Services has begun submitting FSSRs for partial decommissioning of the site and these reports are currently undergoing staff review.

Erwin, Tennessee

These are separate sites. As written, it appears to be one site.

3. GUIDANCE AND RULEMAKING ACTIVITIES

In FY 2008, the staff worked to increase the effectiveness of the Decommissioning Program and to gain a better perspective on decommissioning as a whole. The Decommissioning Program has been performing a self-evaluation of dose modeling to help it become more effective in the decommissioning of sites. Additionally, staff has been working on initiatives which will help prevent the creation of sites that are unable to complete decommissioning.

Division of Waste Management and Environmental Protection Self-Evaluation of Dose Modeling

DWMEP is conducting an evaluation of the uses and applicability of computer codes used in carrying out DWMEP licensing activities, particularly those codes used for the demonstration of compliance with the decommissioning dose criteria. This evaluation is intended for DWMEP management use, to enhance the efficiency of the use of codes and models and to establish

consistency and relevance in the selection of these computer codes and models. This is expected to be completed in FY 2009.

activity / X

Decommissioning Planning Rule

As the NRC's Decommissioning Program continues to mature, and fewer sites remain in the Decommissioning Program, the program is evolving to focus on ways to expedite the timely and effective decommissioning of sites with difficult issues (e.g., those with ground water contamination) and the prevention of future sites that are unable to complete decommissioning (legacy sites). To help prevent future legacy sites, the NRC staff is in the final stages of preparation of the draft final rule "Decommissioning Planning (10 CFR PARTS 20, 30, 40, 50, 70, AND 72; RIN: 3150-AH45)." ~~This draft final rule is currently under consideration by the Commission. Prior to this, NRC staff prepared SECY-07-0177, "Proposed Rule: Decommissioning Planning (10 CFR Parts 20, 30, 40, 50, 70 and 72; RIN: 3150-AH45)," dated October 3, 2007, which was published for comment on January 22, 2008.~~ One aspect of the rulemaking focuses on ensuring that licensees have adequate financial assurance to complete decommissioning, while the other ensures that licensees have in place an adequate ground water monitoring program and will implement measures to minimize ground water contamination. Additionally, in certain cases, licensees will have new recordkeeping requirements for documenting spills, leaks, and unplanned releases.

which has been previously published as a draft rule

Publication of Regulatory Guide 4.21, Minimization of Contamination and Radioactive Waste Generation: Life Cycle Planning

In June 2008, the NRC published Regulatory Guide 4.21, "Minimization of Contamination and Radioactive Waste Generation: Life Cycle Planning." This regulatory guide supports implementation of 10 CFR 20.1406 (a) and (b), which require license applications submitted after August 1997 to demonstrate how the facility's design and procedures for operation will facilitate decommissioning and minimize contamination of the facility and environment and the generation of radioactive waste. The implementation guidance provided by this regulatory guide will result in designs and operating procedures that (1) reduce the likelihood and extent of contamination, (2) provide design and operating features to promptly identify contamination, (3) anticipate the actions necessary to respond to contamination events, and (4) allow flexibility in managing such events. Proper implementation of this guidance for new facilities should substantially reduce or eliminate the occurrence of legacy sites for the next generation of nuclear facilities.

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X

4. RESEARCH ACTIVITIES

The Office of Nuclear Regulatory Research (RES) continued to support the dose modeling of releases of radioactive material from decommissioning sites. In addition to research activities, RES staff provided technical support to FSME for the Kerr-McGee Cimarron and Shieldalloy sites.

RES is continuing the development or modification of computer codes useful for site decommissioning analyses. This work includes modifying dose assessment codes to incorporate added realism, enhancing RESRAD-OFFSITE with a three-dimensional ground water model, completing a linkage of the DOD Groundwater Modeling System to the Framework for Risk Assessment of Multimedia Environmental Systems and training FSME staff in the use of the linked codes, and continuing to update parameter values for food-chain pathways. The

continue to risk-inform the NRC Decommissioning Program. A summary of the most significant of these activities appears below. X

International Atomic Energy Agency Activities

The NRC decommissioning staff participated in the development of the IAEA Safety Standards Series. Within the past year, the staff supported the IAEA in the following ways:

- Participating in the December 2007, IAEA Consultancy Meeting in Vienna, Austria, on Safety Requirement GS-R-1, "Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety," originally published in September 2000.
- Participating in the February 2008, and July 2008, IAEA Consultancy Meetings in Vienna, Austria, to assist in the review of Safety Guide WS-G-2.4, "Decommissioning of Fuel Cycle Facilities," originally published in July 2001.
- Participating in the March 2008, and July 2008, IAEA Consultancy Meetings in Vienna, Austria, to assist in the review and revision of Safety Guide WS-G-2.2, "Decommissioning of Medical, Industrial, and Research Facilities," originally published in October 1999.
- Participating in the January 2008, and July 2008, IAEA Consultancy Meetings in Vienna, Austria, to review and revise Safety Guide WS-G-2.1, "Decommissioning of Nuclear Power Plants and Research Reactors," originally published in October 1999.
- Participating in twice-yearly meetings of the IAEA Waste Safety Standards Committee, which addresses decommissioning specifically, as part of IAEA waste safety activities.
- Conducting an IAEA expert mission to Tbilisi, Georgia, in May 2008, to assist the Republic of Georgia policymakers with legislative requirements, regulatory framework and regulations for radiation and nuclear safety, radioactive waste management, transportation, and decommissioning.
- Participating in the IAEA International Project on Evaluation and Demonstration of Safety for Decommissioning of Nuclear Facilities (DeSa). The October–November 2007, DeSa meeting was held in Vienna, Austria, to revise the content of safety assessment guidance to reflect NRC experience in decommissioning nuclear facilities.

Site Visit to the Harwell Site in the United Kingdom

On November 9, 2007, a DWMEP representative participated in a visit to the Harwell Site, the original civil nuclear research center in the United Kingdom. The facility is undergoing decommissioning of nuclear reactors and research facilities. The visit included presentations by the United Kingdom Atomic Energy Authority (UKAEA) and a guided tour of the radioactive waste-handling facilities for cleanup, volume reduction, and packaging activities.

Nuclear Energy Agency Activities

- The staff contributed to the NEA Radioactive Waste Management Committee (RWMC) Bureau Annual Report for the RWMC-41.

- The staff provided support to senior management participating in the March 2008, annual RWMC meeting and topical sessions on assisting member countries in the management of radioactive waste and materials, with a focus on the development of strategies for the safe, sustainable, and broadly acceptable management of all types of radioactive waste, in particular long-lived waste and spent fuel.
- The staff contributed to the April 2008, revision of the NEA report "Revision of Waste Party on Decommissioning and Decontamination Report on Recent Evolution in Nuclear Site Licensing for Decontamination and Decommissioning—Relevant Issues and Emerging Practices."
- The staff participated in the NEA Working Party on Decommissioning and Dismantling, hosted by UKAEA in November 2007.

6. PROGRAM INTEGRATION

The Decommissioning Program currently encompasses power and early demonstration reactors, research and test reactors, complex materials facilities, and uranium recovery facilities. In addition to the sites undergoing decommissioning regulated by the NRC, many complex decommissioning sites are being decommissioned under the purview of the Agreement States. Given this large breadth of projects, the Decommissioning Program has undertaken many initiatives to keep abreast of sites undergoing decommissioning.

Comprehensive Decommissioning Program

Before FY 2008, information on sites undergoing decommissioning in the Agreement States was limited to site name, location, and materials on site. The implementation of an enhanced Comprehensive Decommissioning Program now allows the NRC to compile, in a centralized location, more complete information on the status of decommissioning and decontamination of complex sites and uranium recovery sites in the United States. Summaries of information on sites regulated by the Agreement States are currently available to the public to ensure openness and promote communication and thus enhance public confidence with a national perspective on decommissioning.

Evaluation of Broad-Scope Licensees

The Division of Nuclear Materials Safety in Region III continued a pilot inspection effort focused on broad-scope licensees' understanding of the Decommissioning Timeliness Rule and associated regulations and guidance regarding decommissioning. These inspections identified common weaknesses in broad-scope licensees' implementation and understanding of decommissioning requirements. The staff is developing generic communication focusing on the results of this broad-scope pilot effort to highlight the inspection findings and inform licensees of decommissioning requirements.

7. AGREEMENT STATE ACTIVITIES

Thirty-five States have signed formal agreements with the NRC and assumed regulatory responsibility over certain byproduct, source, and small quantities of special nuclear material, including the decommissioning of some complex materials sites. However, after a State becomes an Agreement State, the NRC continues to have formal and informal interactions with the State.

Formal interactions with Agreement States in FY 2008 included the following:

- The Organization of Agreement States (OAS) participated in the Division of Intergovernmental Liaison and Rulemaking Working Group to develop the Decommissioning Planning Rule, as discussed in Section 3 of this report. ✓ *Spec²* X
- DWMEP staff participated in the Conference of Radiation Control Program Directors (CRCPD) activities, including the May 2008, annual meeting.
- As described in Section 6 of this report, DWMEP staff worked with the Agreement States to incorporate more detailed information about complex materials decommissioning sites and uranium recovery facilities undergoing decommissioning under the purview of the Agreement States on the decommissioning Web site. These site summaries are available at <http://www.nrc.gov/info-finder/decommissioning/complex/>.
- Integrated Materials Performance Evaluation Program reviews that included decommissioning were conducted in several Agreement States (Arizona, California, Georgia, Kentucky, Louisiana, Minnesota, New Hampshire, Oregon, Rhode Island, Tennessee, and Washington).

The following are examples of informal interactions:

- DWMEP staff participated in monthly OAS/CRCPD teleconferences.
- DWMEP and the Regions coordinated with the Pennsylvania Department of Environmental Protection to transfer regulatory responsibility for the Curtis-Wright Cheswick, Molycorp, Inc., Quehanna, Safety Light Corporation, Superbolt, Westinghouse Waltz Mill, and Whittaker Corporation sites.

Table 7-1 identifies the decommissioning and uranium recovery sites in the Agreement States.