

## **POLICY ISSUE INFORMATION**

November 9, 2012

SECY-12-0153

FOR: The Commissioners

FROM: Mark A. Satorius, Director  
Office of Federal and State Materials  
and Environmental Management Programs

SUBJECT: STATUS OF THE DECOMMISSIONING PROGRAM—2012 ANNUAL  
REPORT

### PURPOSE:

To provide the U.S. Nuclear Regulatory Commission (NRC) with the NRC staff's 2012 Annual Report on the Status of the Decommissioning Program, the highlights of key decommissioning accomplishments in fiscal year (FY) 2012, as well as an outlook of activities for FY 2013. This paper does not address any new commitments or resource implications.

### BACKGROUND:

The staff requirements memorandum (SRM) to COMSECY-08-0036, "Status of Decommissioning Program—2008 Annual Report," dated January 8, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML090080223), stated that staff should discontinue publication of the annual report on the status of decommissioning in NUREG-1814, and instead publish an annual SECY paper on the status of the decommissioning program with information substantially equivalent to that contained in the 2008 Annual Report. In accordance with this SRM, the 2012 Annual Report is provided to the Commission for information only.

The enclosed 2012 Annual Report on the Status of the Decommissioning Program provides a comprehensive summary of the NRC's Decommissioning Program. The report summarizes the

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status of sites undergoing decommissioning since the last report, through September 30, 2012, including the decommissioning of complex materials sites, commercial reactors, research and test reactors, uranium recovery facilities, and fuel cycle facilities. The report also discusses highlights in the decommissioning program since last year's report, and informs the Commission of decommissioning issues that the staff will address in FY 2013.

## DISCUSSION:

### Summary of Status Update for FY 2012

As of September 30, 2012, 12 nuclear power and early demonstration reactors, 11 research and test reactors, 17 complex decommissioning materials facilities, 2 fuel cycle facilities (partial decommissioning), 22 Title I<sup>1</sup> uranium recovery facilities, and 11 Title II<sup>1</sup> uranium recovery facilities are undergoing decommissioning or are in long-term safe storage, under NRC jurisdiction. In FY 2012, the Decommissioning Program continued to make progress at complex sites where decommissioning had long been delayed. In March 2012, the NWI Breckenridge site was released for unrestricted use following extensive remediation in calendar years 2010 and 2011. Additionally, remediation activities were completed at the NRC-licensed portion of the Stepan site in Maywood, New Jersey, and the ABB Prospects site in Windsor, Connecticut. These sites are expected to begin the process for license termination in FY 2013.

In October 2011, staff approved the Westinghouse Electric-Hematite Decommissioning Plan for Westinghouse's former Fuel Fabrication facility in Festus, Missouri. Because the site contained numerous documented and undocumented burial pits, which possibly contained special nuclear material and/or classified equipment, the NRC required the Hematite Decommissioning Plan to incorporate within its Fundamental Nuclear Material Control Plan, Physical Security Plan, and nuclear criticality assessments contingency actions and procedures to follow should Category I material and/or equipment be identified. In May 2012, Westinghouse began remediation in the burial pits with oversight by Region III inspectors.

The NRC and licensees also made considerable progress in research and test reactor decommissioning. After completing decommissioning in 2011, confirmatory surveys were conducted and the NRC terminated the University of Arizona facility in February 2012. The staff also reviewed the license termination request for the National Aeronautics and Space Administration (NASA) Mockup and Plum Brook reactors after decommissioning was completed. Staff work associated with the NASA Plum Brook Facility included multiple confirmatory surveys and the review of 18 final status survey reports related to decommissioning activities. The University of Illinois research reactor began physical decommissioning activities in October 2011. The licensee completed all remediation, demolition, and surveys of the site in July 2012, and inspection staff performed independent confirmatory surveys of the remaining footprint.

In FY 2012, the Zion Station decommissioning project continued to perform decommissioning activities for both Units 1 and 2. The removal of waste continued with regular shipments to the EnergySolutions disposal site in Clive, Utah.

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<sup>1</sup> Title I refers to facilities under the Uranium Mill Tailings Radiation Control Act of 1978, as amended, that were inactive, unregulated processing sites when the act was passed, while Title II facilities are those facilities licensed by the NRC or an Agreement State.

Staff also continued its extensive coordination with the U.S. Army Corps of Engineers (USACE) at the BWX Technologies, Inc., Shallow Land Disposal Area in Vandergrift, Pennsylvania. On September 30, 2011, USACE ceased excavation activities after a contractor deviated from accepted field procedures. The exhumed material was beyond the scope of USACE's established procedures. In response, the NRC staff provided technical guidance and conducted several site visits. Staff will continue to work collaboratively with USACE to revise future Work Plans before resuming remediation activities.

In FY 2012, staff worked with the State of Wyoming and the U.S. Department of Energy (DOE) to evaluate options for completing decommissioning at the ANC Gas Hills site given the limitations of available funds. The Confirmatory Order with the State was modified to focus only on essential elements such as pumping the contaminated water under a corrective action program during the summer months, and taking annual settlement measurements at Pond #1. The NRC is working with Wyoming to evaluate the extent of the contaminated plume of ground water flowing to the north of the site.

As noted in last year's report, the character of the decommissioning program has changed considerably as past successes have reduced the inventory of the sites undergoing decommissioning. In turn, new programmatic issues have arisen as the number of facilities with different and more complex decommissioning challenges has increased. Examples of such challenges are the regulation of military sites contaminated with depleted uranium from past testing of munitions and the contamination of NRC-licensed and unlicensed military sites with naturally occurring and accelerator-produced radioactive material. In FY 2012, staff continued its interactions with the military services to better understand the issues and develop a path forward.

Finally, FY 2012 saw a continued emphasis on the uranium recovery decommissioning program. Staff began the development of Volume 4 of the Consolidated Decommissioning Guidance, NUREG-1757, which will incorporate the provisions and aspects of the existing uranium recovery guidance that are specifically relevant to the reclamation, restoration and decommissioning of uranium recovery facilities. In response to the FY 2011 audit by the Office of the Inspector General, staff developed and implemented a program to conduct observational site visits at sites that have been transferred to DOE and are generally licensed pursuant to 10 CFR 40.27 and 40.28. The effort included development of guidance for conducting the site visits, performing sites visits at a number of sites to determine the effectiveness of the guidance, and identifying areas for improving the guidance.

#### Trends in Fiscal Year 2013 and Beyond

The NRC staff expects FY 2013 activity in the Decommissioning Program to increase slightly in some areas while remaining level in others. The progress in power and early demonstration reactors is expected to remain level, as most of these reactors remain in SAFSTOR mode. Progress in research and test reactor decommissioning is expected to continue in FY 2013, with Ford Nuclear Reactor and Worcester Polytechnic Institute facilities expected to complete decommissioning in the coming year. Additionally, decommissioning activities are expected to be completed at several complex materials sites in FY 2013, including the ABB Prospects and Stepan sites; and some Title II uranium recovery sites are expected to complete decommissioning activities and be transferred to DOE for long-term control. These sites are Bear Creek and Pathfinder Lucky Mc.

Staff will also work extensively with other Federal agencies, States, and other stakeholders to address the varied challenges at sites with technical or financial issues. For example, the NRC staff is assisting with the development of an interagency Memorandum of Understanding among USACE, DOE, and NRC that defines the role of each Federal entity throughout the remainder of the remediation process at Shallow Land Disposal Area. Staff will also continue to work with the State of Wyoming and DOE to evaluate options for completing decommissioning at the ANC Gas Hills site given the limitations of available funds.

In FY 2013, staff also expects to continue its focus on the development of Volume 4 of the Consolidated Decommissioning Guidance, NUREG-1757. Staff will also continue to refine the program for observational visits at sites transferred to DOE in response to the 2011 OIG audit.

#### CONCLUSION:

The staff plans to continue its close oversight of the decommissioning of nuclear power reactors, research and test reactors, complex materials sites, and uranium recovery facilities. In addition, the staff plans to continue to identify and implement methods to make the decommissioning program more efficient and effective and continue its efforts to prevent future legacy sites.

Site summaries for all decommissioning sites are accessible to the Commission and the public through the NRC's decommissioning website (<http://www.nrc.gov/about-nrc/regulatory/decommissioning.html>). To ensure that the web site is current, project managers in the Office of Federal and State Materials and Environmental Management Programs, the Office of Nuclear Material Safety and Safeguards, and the Regions routinely review and update the facility information.

#### COORDINATION:

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

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**ML12298A090**

**WITS 200900003**

<b>OFFICE</b>	DMWEP	DWMEP	DWMEP	Region I	Region III	Region IV
<b>NAME</b>	KConway	SAchten	LChang	MFerdas	CLipa	BSpitzberg
<b>DATE</b>	10/23/12	11/2/12	10/24/12	11/2/12	11/5/12	10/31/12
<b>OFFICE</b>	OGC	OCFO	DWMEP	DWMEP	TechEd	FSME
<b>NAME</b>	BJones	JGolder	DPersinko	LCamper	CPoland	MSatorius BH for
<b>DATE</b>	11/6/12	11/5/12	11/2/12	11/5/12	11/8/12	11/9/12

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