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Decommissioning from an Emergency Preparedness Perspective

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When a nuclear power plant operator decides to cease operation of its nuclear reactor it begins the decommission process. Decommissioning is the safe removal of a facility or site from service and the reduction of residual radioactivity to a level that permits the release of the property and termination of the license.

The U.S Nuclear Regulatory Commission (NRC) has rules governing decommissioning, including clean-up of radioactively contaminated plant systems and structures, and the storage of the spent nuclear fuel. These requirements protect workers and the public during the entire decommissioning process and the public after the license is terminated. Licensees may choose from three alternative decommissioning strategies: (1) DECON, immediate dismantling and safely removing the plant from service; (2) SAFSTOR, nuclear facility is maintained and monitored in a condition that allows for radioactivity to decay prior to dismantling and property decontamination; or (3) ENTOMB, radioactive contaminants are permanently

encased onsite.

NRC regulations do not distinguish between emergency preparedness (EP) for an operating reactor or a decommissioned reactor site. Since decommissioning nuclear power plants retain their operating license issued under Title 10 of the Code of Federal Regulations Part 50 after permanent shutdown, these plants are subject to the same EP requirements as operating reactors. When a plant ceases operation the potential accidents are limited to the spent fuel pool. As a result licensees seek relief from EP requirements.

Historically, the process for reducing EP requirements at decommissioning plants has been through the license exemption process on a case-by-case basis. A licensee shall comply with regulations until an exemption is granted (e.g., the need to perform exercises and drills, or maintain the capability to alert the public of an emergency). Exemptions to NRC regulations may be granted by the Commission when a licensee can demonstrate that "special circumstances are present."

Special circumstances exist if: (1) There will not be an increase of potential harm to public health or safety; and (2) Implementation of the existing regulation is not necessary to achieve the purpose of the rule. The staff will evaluate the licensee's proposed reason for the exemption and will notify the licensee on whether the exemption is approved or denied.

In the last year, several nuclear power plants (Crystal River, San Onofre, and Kewaunee) have decided to cease operations. The staff recognized that additional decommissioning guidance is needed and is developing an interim staff guidance (ISG) document which will be published in the near future for public comment. An ISG is a document intended to provide guidance to the staff on how to evaluate the exemption request submitted by the licensee. The NRC will be evaluating the trend in plants electing to decommission to determine whether or not additional regulatory actions are needed.

Upcoming Events of Interest to the EP Community

- ◆ **National Evacuation Conference:** January 7-10, 2014 in New Orleans, LA
- ◆ **National Emergency Management Associate Conference:** March 9-14, 2014 in Alexandria, VA
- ◆ **Regulatory Information Conference:** March 11-13, 2014 in Rockville, MD
- ◆ **National Radiological Emergency Preparedness Conference:** April 7-10, 2014 in Salt Lake City, UT

Update on Post-Fukushima Dai-ichi Activities Related to EP

While the event at the Fukushima Dai-ichi Nuclear Station was almost three years ago, the NRC remains committed to assessing and obtaining information to strengthen the emergency preparedness and response efforts in the United States. The staff is currently focusing on licensees capability regarding staffing, communications, facilities, training, drills, and multiunit/source dose assessment. These activities are being developed with the following overarching assumptions: (1) all units are affected; (2) loss of all AC electrical power; and (3) impeded access to the site.

Licensees supplemented their communications submittals in

February 2013 and the staff determined the responses to be acceptable. On April 30, 2013, the licensees provided phase 1 of their staffing submittals. On June 28, 2013 licensees provided the staff their ability to conduct multiunit/source dose assessment.

Currently, the staff is proceeding with the evaluation of the Tier 3 recommendations as discussed in SECY-12-0095 and reviewing staffing and multiunit/source dose assessment submittals to determine whether the responses are acceptable. In addition, the Nuclear Energy Institute is developing additional guidance for staff review and consideration for endorsement.

The Study of Risk-Informed and Performance-Based Oversight Program

NRC staff conducted a study to evaluate the benefits of an enhanced regulatory regimen for offsite preparedness, entitled "Risk-Informed, Performance Based Radiological Emergency Response Program Oversight," which is publicly available on the NRC's Agency-wide Documents Access and Management System (ADAMS) under Accession No. ML13274A531. The study was aimed at identifying the benefits of focusing on the most risk-significant aspects of offsite radiological emergency response for the protection of public health and safety – the Risk Informed piece. The Performance Based piece involves demonstrating successful outcomes rather than compliance with procedural requirements. The program is based not on a list of things to include in plans, but on a conceptual model of the basic tasks that must be performed to ensure

public health and safety in a radiological emergency.

These basic tasks would have objective and outcome-based performance indicators, with clear thresholds for acceptability. In this way, a high level of offsite emergency preparedness would be demonstrated through performance exceeding national standards. If performance is less than the targeted thresholds, then different levels of oversight, corrective action, and re-demonstration would be necessary in order to properly align resources and capabilities with the risks and the tasks.

The results of this study will be part of a paper to be provided to the Commission to inform them of the study's outcomes and NRC staff recommendations.

Public Meeting: Preliminary Draft Changes to NUREG-0654/FEMA-REP-1

On October 29-31, 2013, the NRC, in conjunction with FEMA, held a public meeting at the NRC's headquarters to engage the nuclear industry and offsite response organizations (ORO) stakeholders and the public regarding the preliminary draft changes to NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants." Stakeholders and members of the public were also able to participate remotely via webinar and teleconference.

The preliminary draft evaluation criteria were made publicly available on September 19, 2013 and are available in ADAMS under Accession No. ML13260A283. Draft Revision 2 of NUREG-0654/FEMA-REP-1 is scheduled for formal public comment October 2014.

Additional feedback can be given at the following email address: FEMATHDPolicy@fema.dhs.gov. NRC and FEMA staff will consider this feedback in determining if any additional changes to the criteria is warranted; however, no written responses to the feedback will be provided. The October 2013 meetings were very successful in providing stakeholder views and insights on the draft changes. As a result of the October 2013 meetings the opportunity for additional stakeholder engagement on proposed changes to NUREG-0654/FEMA-REP-1 prior to the formal public comment period is under consideration.

NRC Headquarters Emergency Operations Center

The NRC recently celebrated the grand opening of the new Emergency Operations Center in Three White Flint North. The Ops Center is located in the basement of the new Three White Flint North building. The new center has a large open area and a better design making better use of space. There are no windows and its location is considered more secure and robust. Overall, the new Ops Center ensures the NRC is ready to respond to any incident involving its licensees.