

NUCLEAR REGULATORY COMMISSION

Docket No. NRC-2015-0051

Department of Energy; Yucca Mountain, Nye County, Nevada

AGENCY: Nuclear Regulatory Commission

ACTION: Intent to prepare a supplement to a final supplemental environmental impact statement.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is informing the public of its intent to prepare a supplement to the U.S. Department of Energy's (DOE's) "Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (February 2002), and its "Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (July 2008). The NRC staff determined in September 2008 that it is practicable to adopt, with further supplementation, the DOE's environmental impact statements (EISs). The NRC staff concluded that the EISs did not address adequately all of the repository-related impacts on groundwater or from surface discharges of groundwater.

DATES: [INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*].

ADDRESSES: Please refer to Docket ID NRC-2015-0051 when contacting the NRC for further information about the supplement. You may obtain publicly-available information using any of the following methods:

- **NRC’s Agencywide Documents Access and Management System (ADAMS):**

You may obtain publicly available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search, select “[ADAMS Public Documents](#)” and then select “[Begin Web-based ADAMS Search](#).” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. The ADAMS accession number for each document referenced in this document (if that document is available in ADAMS) is provided the first time that a document is referenced.

- **NRC’s PDR:** You may examine and purchase copies of public documents at the NRC’s PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FUTHER INFORMATION CONTACT: Christine Pineda, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

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SUPPLEMENTARY INFORMATION:

I. Background

The Nuclear Waste Policy Act (NWPA) of 1982, as amended, specifies that in the United States, spent nuclear fuel and high-level radioactive waste will be disposed of in a deep geologic repository. Amendments to the NWPA in 1987 identified Yucca Mountain, Nevada, as the single candidate site for characterization as a potential geologic repository. As described in the NWPA, Section 114(f), the DOE prepared a final EIS related to the construction, operation, and closure of a potential geologic repository for high-level radioactive waste at Yucca

Mountain, Nevada in February 2002 pursuant to requirements of the National Environmental Policy Act of 1969 (NEPA). The EIS accompanied the Secretary of Energy's site recommendation to the President on February 14, 2002. In July 2002, Congress passed and the President signed a joint resolution designating Yucca Mountain as the site for development of a geologic repository. In October 2006, the DOE announced its intent to prepare a supplemental EIS to update the 2002 EIS. The DOE published a final supplemental EIS on June 16, 2008. In accordance with NWPA, Section 114(f)(5), the NRC is to adopt the DOE's EIS to "the extent practicable." The NRC staff reviewed the DOE's EISs and found that it is practicable for the NRC to adopt them, with further supplementation (see the NRC staff's Adoption Determination Report, dated September 5, 2008, and available in ADAMS at Accession No. ML082420342). The NRC staff concluded that the EISs did not adequately address all of the repository-related impacts on groundwater, or from surface discharges of groundwater. The NRC staff therefore requested that the DOE prepare an EIS supplement. The DOE initially stated that it would prepare a supplement, but later declined to prepare the supplement. Instead, the DOE prepared a technical analysis, "Analysis of Postclosure Groundwater Impacts for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada" (ADAMS Accession No. ML092150328). In 2014, the DOE updated this report (ADAMS Accession No. ML14303A399). The NRC staff will consider these reports in preparing the supplement.

The supplement will provide additional information about the proposed repository's impacts on groundwater and from surface discharges of groundwater. More specifically, the supplement will describe the extent of the volcanic-alluvial aquifer, particularly those parts that could become contaminated, and how water (and potential contaminants) can leave the flow system. In addition, the supplement will provide an analysis of the cumulative amount of radiological and non-radiological contaminants that can be reasonably expected to enter the aquifer from the repository, and the amount that can be reasonably expected to remain over

time. The supplement will provide estimates of contamination in the groundwater, given potential accumulation of radiological and non-radiological contaminants. The supplement also will provide a discussion of the impacts on soils and surface materials from the processes involved in surface discharges of contaminated groundwater. A description of locations of potential natural discharge of contaminated groundwater for present and expected future wetter periods will be included, as will a description of the physical processes at surface discharge locations that can affect accumulation, concentration, and potential remobilization of groundwater-borne contaminants. Finally, the supplement will provide estimates of the amounts of contaminants that could be deposited at or near the surface and describe their potential environmental impacts.

II. Schedule

The NRC staff intends to issue the draft supplement in the late summer of 2015 and announce the availability of the supplement in the *Federal Register*, via e-mail distribution, in a press release, on the NRC's website, and in media in Nevada. A public comment period will start upon publication of the NRC's Notice of Availability in the *Federal Register*. During the public comment period, the NRC plans to a public meeting at NRC headquarters in Rockville, Maryland, two public meetings in Nevada, and a public conference call.

All meetings will be transcribed. The meeting at NRC headquarters will be webcast and accessible via a conference line. The NRC staff plans to publish the final supplement 12 to 15 months after issuing this notice.

Dated at Rockville, Maryland, this 2nd day of March 2015.

For the Nuclear Regulatory Commission

/RA/

Josephine Piccone, Director
Yucca Mountain Directorate
Office of Nuclear Material Safety and Safeguards