



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

July 23, 2014

MEMORANDUM TO: Mark A. Satorius  
Executive Director for Operations

FROM: Stephen D. Dingbaum */RA/*  
Assistant Inspector General for Audits

SUBJECT: AUDIT OF NRC'S METHOD FOR RETAINING AND  
DOCUMENTING INFORMATION SUPPORTING THE  
YUCCA MOUNTAIN LICENSING PROCESS (OIG-14-A-18)

The Office of the Inspector General (OIG) conducted an audit of the Nuclear Regulatory Commission's (NRC) documentation of the Yucca Mountain licensing process and compliance with Federal requirements. In accordance with 44 United States Code (U.S.C.) § 3303, NRC complied with the National Archives and Records Administration's (NARA) requirement to create a disposition schedule<sup>1</sup> for the records connected with Yucca Mountain licensing process and retained the associated documents. Consequently, the records needed by NRC staff were available following a November 2013 Commission Order requiring the completion of the Yucca Mountain technical safety review. However, NRC was non-compliant with its records management and maintenance policy during the suspension period of the licensing process. NRC has recently become compliant with the agency's records management policy through the process of loading the Yucca Mountain records into the agency's official recordkeeping system, where it is accessible and available for review. Although OIG makes no recommendations, OIG identified matters for consideration as the agency continues to comply with an August 2013 United States Court of Appeals for

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<sup>1</sup> A records disposition schedule details the retention timetable of different types of documents.

the District of Columbia Circuit Writ of Mandamus<sup>2</sup> for NRC to continue with the Yucca Mountain licensing process.

## **BACKGROUND**

In 1983, the Nuclear Waste Policy Act (NWPA) assigned the Department of Energy (DOE) responsibility for constructing and operating a nuclear waste repository for high-level radioactive waste (HLW) and NRC the task of licensing and regulating the HLW repository. In 2002, President George W. Bush signed the Yucca Mountain Development Act, selecting Yucca Mountain as the site for the HLW repository. In 2008, DOE submitted to NRC a license application for construction authorization to build a HLW repository at Yucca Mountain, but subsequently filed a motion to withdraw its application for a construction authorization in March 2010. In October 2010, Gregory Jaczko, then NRC Chairman, directed NRC staff to prepare the orderly closeout of their technical safety review. Subsequently, in 2011, the Atomic Safety and Licensing Board Panel suspended<sup>3</sup> the adjudicatory hearing of the DOE's license application for the construction authorization of a HLW repository at Yucca Mountain.

One of NRC's key records management activities that occurred was to have the Yucca Mountain documents, previously available electronically via the Licensing Support Network (LSN), forwarded to NRC's Office of the Secretary (SECY) to be collectively stored and managed by NRC. The LSN was a system that NRC managed, which made documentary material<sup>4</sup> electronically available to stakeholders, potential stakeholders, and interested governmental participants to the Yucca Mountain licensing process. Prior to the suspension, the LSN was a portal with "spidering"<sup>5</sup> capabilities that allowed a search to be performed into stakeholder servers. Accordingly, NRC did not host the actual physical documents that were available through the LSN, but hosted the

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<sup>2</sup> Writ of Mandamus in this context constitutes a court order for a public agency or governmental body to perform an act required by law when it has neglected or refused to do so.

<sup>3</sup> OIG uses the terms "suspend," "suspended," or "suspension" to identify that the Yucca Mountain licensing process was postponed without a timeline for continuation.

<sup>4</sup> 10 CFR § 2.1001 defines documentary material as "(1) Any information upon which a party, potential party, or interested governmental participant intends to rely and/or to cite in support of its position in the proceeding for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area...a license to receive and possess high-level radioactive waste at a geologic repository operations area...(2) Any information that is known to, and in the possession of, or developed by the party that is relevant to, but does not support, that information or that party's position, and (3) All reports and studies, prepared by or on behalf of the potential party, interested governmental participant, or party, including all related 'circulated drafts,' relevant to both the license application and the issues ...regardless of whether they will be relied upon and/or cited by a party."

<sup>5</sup> To enable "spidering" and search capabilities, each stakeholder in the Yucca Mountain involved in the licensing process had to host a webserver. The term "spidering" refers to the ability to allow the LSN portal to retrieve the LSN-designated documents through each individual stakeholder's server.

metadata<sup>6</sup> files containing the path for each individual document housed on the separate stakeholder Web servers. However, approximately 1 month prior to the suspension of the hearing for the license application for construction authorization at Yucca Mountain, NRC received the documents previously available via the LSN from the involved parties (e.g., DOE and Nye County), which forwarded the documentary material in various electronic<sup>7</sup> and hard copy formats to SECY.

NRC staff also received documents from the Center for Nuclear Waste Regulatory Analyses (CNWRA) as a result of the closure of the technical safety review. CNWRA is operated by the Southwest Research Institute, which NRC has contracted for more than 20 years to help with the Yucca Mountain pre-licensing and licensing reviews.

Meanwhile, interested stakeholders pursued legal action to direct NRC to complete its technical safety review of the Yucca Mountain HLW repository construction authorization license application. This effort culminated in an August 2013 United States Court of Appeals for the District of Columbia Circuit Writ of Mandamus for NRC to continue with the Yucca Mountain licensing process using the \$11.1 million in appropriated funds for Yucca Mountain. In complying with the Writ of Mandamus, NRC issued a Commission Order in November 2013 to finish the remaining volumes of the Safety Evaluation Report (SER).<sup>8</sup>

## **OBJECTIVE**

The audit objective was to determine if agency policy and procedures on document management are compliant with Federal requirements and provide reasonable assurance that documentation related to the review of the Yucca Mountain facility has been appropriately managed and retained.

## **RESULTS**

The records needed by NRC staff were available following the November 2013 Commission Order requiring the completion of the Yucca Mountain technical safety review. However, the Commission was out of compliance with the agency records management policy during the period of time that the licensing process was suspended. NRC did create a disposition schedule for the records in their possession in 2008, thus

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<sup>6</sup> The term "metadata" is used to describe the .xml files that contained the profile information associated with each document.

<sup>7</sup> Electronic formats included external hard drives, compact discs, and digital versatile discs.

<sup>8</sup> The review and evaluation of a license application is documented in an SER. For the Yucca Mountain licensing application, a total of five SER volumes were planned for issuance, one of which was completed and issued publicly prior to the suspension of the license application review.

fulfilling the NARA Federal requirement of establishing a retention schedule. Following the Writ of Mandamus issued in August 2013, and the resulting Commission Order, NRC has taken steps to come into compliance with the agency's records management policy.

### **NRC Was Out of Compliance With Records Management Requirements During the Suspension Period**

Agency guidance requires certain records management and maintenance practices for records received from other entities. However, NRC was out of compliance with this policy during the period that the licensing process was suspended because NRC officials were unclear about how to fund the records management expenses associated with the Yucca Mountain records in their possession. Without certainty in regard to the funding of the records management of the LSN documents received by the NRC, information was at risk for loss during the suspension period.

### **Records Management Requirements**

NRC's main records management policy and guidance documents include Management Directive 3.53 (MD 3.53), "NRC Records and Document Management Program," and NUREG-0910, "NRC Comprehensive Records Disposition Schedule." MD 3.53 is the agency policy that addresses the NARA and General Services Administration records management requirements for Federal agencies, while NUREG-0910 details the disposition schedules for various types of records. MD 3.53 and its associated handbook describe agency policy regarding records management and maintenance, including the responsibilities over documents in NRC's custody, contractor documents, and overall maintenance and upkeep of records in NRC's possession. In accordance with the Federal Records Act, MD 3.53 defines Federal records as "All books, papers, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States Government under Federal law." MD 3.53 explains that items received by Federal agencies encompass those that are accepted or collected in their normal course of duties, regardless of the origin or transmission of the materials. MD 3.53 states that Federal records as defined by the Federal Records Act are considered agency records. Furthermore, agency records are those that document the activities of the agency, which would include licensing activities.

Finally, MD 3.53 describes the maintenance and security of agency records by indicating that records must be protected from potential damage, deterioration, and loss from using obsolete technology. The management directive states that "electronic

records must be backed up regularly to safeguard against the loss of information as a result of equipment malfunctions or human error.”

### **Records Management and Maintenance Weaknesses During the License Suspension Period**

The agency was out of compliance with applicable records management guidance and practices from potentially as early as April 11, 2011,<sup>9</sup> through November 18, 2013.<sup>10</sup> As described earlier, NRC received documents from various sources, such as DOE and CNWRA. Upon receipt of these documents, NRC was considered the “owner” of these documents per MD 3.53 and was required to safeguard and manage these records accordingly.

However, NRC did not appropriately manage the documents that came into its possession. These documents were never backed up appropriately onto another media source during the entire period that the licensing process was suspended. Finally, other than the initial readability tests, the records largely remained untouched, leaving the condition of the records unknown during the entire suspension period.

### **NRC Officials Uncertain of Funding for Records Management**

NRC did not appropriately manage the LSN documents that came into its possession because agency staff were unsure about the source of funding that could be used to manage the records. According to NRC managers, agency staff were uncertain about how to fund the expenses associated with managing records received by various sources as a result of the Atomic Safety and Licensing Board Panel’s April 2011 order. The managers stated that they had always understood that they could use Nuclear Waste Funds<sup>11</sup> only for purposes of managing LSN records, and that they would be in violation of appropriations law if they used NRC’s general funds. Thus, as part of its June 2011 request to Congress to use money from the Nuclear Waste Fund to support Yucca Mountain closure activities, the agency specifically mentioned a plan to load the LSN documents into the Agencywide Documents Access and Management System

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<sup>9</sup> April 11, 2011, is the date that the Atomic Safety and Licensing Board Panel issued an Order directing all parties in the Yucca Mountain licensing process to preserve all LSN documents submitted to the LSN and submit those documents as well as the bibliographic information to SECY.

<sup>10</sup> November 18, 2013, is the issuance date of the Commission Order detailing the steps to continue the license application review of the Yucca Mountain HLW repository.

<sup>11</sup> The Nuclear Waste Fund was established by the NWPA to be used for “...the identification, development, licensing, construction, operation, decommissioning, and post-decommissioning maintenance and monitoring of any repository, monitored, retrievable storage facility or test and evaluation facility constructed under [the NWPA]....”

(ADAMS)<sup>12</sup> using the Nuclear Waste Fund. On August 2, 2011, Congress denied NRC the use of the Nuclear Waste Fund for all activities associated with the closure of the agency's Yucca Mountain review of the license application for construction authorization. Shortly after receiving the congressional response, the agency received LSN documents from DOE, which were then stored by SECY. According to both NRC guidance and records management regulations, by virtue of it physically being received by and housed at NRC, these documents then became subject to standard recordkeeping and maintenance requirements.

Agency officials stated during the exit conference meeting for this audit that they had no choice but to be out of compliance with recordkeeping and maintenance requirements until the source of the funding was adequately determined. What agency officials failed to realize, however, was that the LSN records became agency records at the moment they were received, based on NRC's own policy. Ultimately, this was confirmed in an Office of Information Services document dated April 5, 2013. The Office of the General Counsel further clarified the matter in May 2013. Yet, despite this question having been seemingly cleared up by the Office of the General Counsel, it was not until the November 2013 Commission Order was issued, ultimately specifying that the Nuclear Waste Fund be used for the records management of documents in NRC's possession, that the agency took measures to back up the documents held by SECY. This was approximately 27 months after receipt of the documents, and represents the period of time that the agency's confusion resulted in these agency records being out of compliance with recordkeeping and maintenance requirements.

### **Information Is At Risk for Loss During the Period of a License Suspension**

Without records management and maintenance requirements to guide staff on how to safely keep and manage records during a license suspension, significant agency records could be vulnerable and at risk during that period of time. Agency records may include those that support a record of decisionmaking and institutional knowledge at the Commission, and they would be at risk of loss through failure, destruction, corruption, or obsolescence of records retention technology during a suspension in the licensing process. As a result, such a failure could affect support for and the transparency of particular management decisionmaking by the Commission.

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<sup>12</sup> ADAMS is NRC's official record-keeping system.

## **NRC Is Taking Steps To Appropriately Manage Records**

The United States Court of Appeals for the District of Columbia Circuit, through the issuance of a Writ of Mandamus, instructed NRC to promptly continue with the legally mandated Yucca Mountain licensing process. In accordance with the Writ of Mandamus, NRC issued a Commission Order providing steps to continue the technical safety review of the license application for a construction authorization of a HLW repository at Yucca Mountain. This resolved many of the agency's records management issues related to how the Yucca Mountain license application documents were previously managed and maintained.

## **Court Order Directs NRC To Continue Yucca Mountain Licensing Review**

The United States Court of Appeals for the District of Columbia Circuit determined that NRC violated the NWPA by not issuing a final decision to either approve or disapprove the license application for the construction authorization within a 3-year time period from when the application was submitted in 2008. The Court stated, "The Commission is under a legal obligation to continue the licensing process...."

On August 13, 2013, the United States Court of Appeals for the District of Columbia Circuit issued a Writ of Mandamus to NRC, which specifies the Commission must—among other things—fulfill legal and statutory obligations to complete the review of the Yucca Mountain license application for construction authorization. The Writ concluded, "...unless and until Congress authoritatively says otherwise or there are no appropriated funds remaining, the Nuclear Regulatory Commission must promptly continue with the legally mandated licensing process."

## **NRC Is Taking Steps To Appropriately Manage Records**

As a result of the Writ of Mandamus, NRC has been moving towards compliance with NRC's records management policy, starting with a Commission Order that specified various steps to be performed to continue the licensing process for the construction authorization application of a HLW repository at Yucca Mountain.

In response to a Commission Order in November 2013, the agency made an effort to comply with its own records management policy (MD 3.53) by requiring the loading of the LSN documents into NRC's non-public<sup>13</sup> version of ADAMS to facilitate completion

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<sup>13</sup> The Nov. 18, 2013, Commission Order requires NRC to load the DOE-supplied documents into non-public ADAMS, to give NRC employees ready access to the documents in order to complete the SER.

of the technical safety review. To help complete the technical safety review, the NRC technical staff need access to the LSN collection, including those documents submitted by the DOE<sup>14</sup> to support its license application for construction authorization. Through the process of giving the staff access to the documents, some of the record management weaknesses that the OIG observed during the initial fieldwork phases of the audit were eliminated, including:

- **Lack of backup for records received from other entities.** At the time the license review was suspended, NRC received documents from multiple sources. NRC did not have a backup for the documents.
- **Improper storage of documents.** The external hard drives containing documents from various sources have a limited lifespan and are prone to damage or destruction.
- **Difficulty in retrieving documents.** The categorization and inconsistent organization of the documents on the hard drives were created by the external entities, which made it difficult to locate documents.
- **Lack of detailed inventory of records received from external parties.** Once NRC received records from various sources, NRC did not create a detailed inventory of each of the records that was received.
- **Absence of periodic testing of data integrity.** When NRC initially received the data from various sources, a sample of records in the external hard drives was initially checked for data integrity. However, periodic testing of data integrity and feasibility was not performed throughout the life of the storage period of the documents prior to the November 2013 Order.

### **Matters for Consideration**

NRC should consider the following matters as it continues to comply with the Writ of Mandamus through the November 2013 Commission Order:

1. **Establish and maintain a unique record series.** NRC should ensure the consistent application of the implementation of a unique record series for the

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Once the SER is finalized, only the documents that are used in the SER will be publicly accessible through the public version of ADAMS.

<sup>14</sup> The DOE-supplied records to the NRC include approximately 8 terabytes of data, equating to 40 million pages, and cover about 7 million documents, encompassing 98.8 percent of the total LSN collection.

LSN collection documents and metadata files that were loaded into ADAMS to prevent records from being lost and to group all of the related documents together. A unique records series is important to facilitate NRC's commitment to transparency in its regulatory actions.

2. **Provide targeted training on the new ADAMS LSN collection library.** NRC should train staff to use the new ADAMS library containing the LSN collection and general records management requirements, as well as updating all directly involved employees on the developments of the Yucca Mountain licensing review. Agency officials were already working towards this goal prior to the audit exit conference meeting. For example, the Office of Information Services scheduled a meeting on April 7, 2014, with select NRC staff members to demonstrate how to search the LSN collection in ADAMS.

Additionally, publicly available training will be beneficial in the future for external stakeholders who may lack experience in using ADAMS.

3. **Provide NARA with an updated records disposition schedule.** The 2008 NRC disposition schedule for the documents related to the Yucca Mountain construction authorization license application was submitted prior to suspension of the licensing process and, therefore, does not include the records received from DOE. The agency has not yet submitted a revised records schedule to reflect the upload of LSN documents to ADAMS.

## **AGENCY COMMENTS**

An exit conference was held with the agency on June 2, 2014. Prior to the exit conference, OIG provided agency staff a copy of the discussion draft report. Through the agency response to the discussion draft and discussions at the exit conference meeting, agency management provided supplemental information that has been incorporated into this report as appropriate. The agency opted not to provide formal comments to this final report.

## **SCOPE AND METHODOLOGY**

To understand NRC's compliance with Federal requirements and documentation for the Yucca Mountain proceedings, auditors interviewed staff from the Office of Information Services, SECY, the Office of Nuclear Material Safety and Safeguards, the Office of the General Counsel, and the Atomic Safety and Licensing Board Panel. Auditors reviewed pertinent laws and regulations including NARA regulations, OMB issuances, and the Code of Federal Regulations for specific instruction regarding the guidance on the

Yucca Mountain licensing process. Additionally, auditors reviewed guidance and policy, including Commission Orders, NUREGs, and management directives. The audit staff maintained awareness of the developing news of the Yucca Mountain proceedings and its impacts to the audit in-process.

Internal controls related to the audit objective were reviewed and analyzed. Throughout the audit, auditors were aware of the possibility or existence of fraud, waste, or abuse in the program.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The work was conducted by RK Wild, Team Leader; Jaclyn Storch, Audit Manager; Tincy Thomas, Senior Auditor; Tariq Noaman, Analyst; and Jenny Cheung, Auditor. We performed the audit work at NRC headquarters in Rockville, Maryland, from July 2013 to March 2014.