

**SUMMARY OF THE
U.S. NUCLEAR REGULATORY COMMISSION / U.S. DEPARTMENT OF ENERGY
QUARTERLY MANAGEMENT MEETING
LAS VEGAS, NEVADA
March 25, 2008**

Introduction

The U.S. Nuclear Regulatory Commission (NRC) staff and the U.S. Department of Energy (DOE) held a public Quarterly Management Meeting (QMM) on March 25, 2008, to discuss the overall progress of the Yucca Mountain Project (YMP) at the potential geologic repository site at Yucca Mountain, Nevada. The meeting was held at the NRC Atomic Safety and Licensing Board hearing facility in Las Vegas, Nevada, with video and audio connections at the Center for Nuclear Waste Regulatory Analyses (CNWRA) in San Antonio, Texas, and the NRC Headquarters in Rockville, Maryland. Other participants included Nuclear Energy Institute (NEI), State of Nevada, Nye County, Clark County, and members of the public. Teleconference connections were also made available to interested stakeholders.

NRC Program Update

Mike Weber thanked Ward Sproat for his presentation at the NRC's 20th Annual Regulatory Information Conference (RIC) and discussed NRC's preparation activities for reviewing an application. Over the past 20 years, the preparation activities included: 1) incorporating the Environmental Protection Agency's regulations, that were based on the Nation Academy of Science's recommendations, into NRC standards and regulations; 2) developing a risk-informed performance-based Part 63 rule and Yucca Mountain Review Plan after considering public comments; 3) developing technical capabilities and insights through the NRC's Federally Funded Research and Development Center; and 4) increasing public outreach efforts. The next Affected Units of Local Government (AULG) workshop will be held on April 17 in Las Vegas.

Recent budget cuts have had an impact on the NRC and could affect the NRC's ability to meet the schedule specified in the Nuclear Waste Policy Act. However, the NRC will always stand by its mission to protect people and the environment.

DOE Program Update

Ward Sproat, Director of the Office of Civilian Radioactive Waste Management (OCRWM), opened the DOE program update by stating that this will be the last pre-application Quarterly Management Meeting. Mr. Sproat introduced Christopher Kouts as the official Principal Deputy Director of OCRWM. Mr. Kouts has been on the project for many years and brings his dedication and high quality standards to the Director's office.

Mr. Sproat continued by stating that considerable progress has been made by DOE since the last QMM in December 2007. The final Preclosure Safety Analysis (PCSA) documents have been completed. One unique application of this work relates to the use of these risk insights in refining the repository design at this stage of the project. These final PCSA documents are

currently being processed into the License Support Network (LSN). The license application (LA) is ninety-five percent complete and the remaining Postclosure sections should be completed in approximately a week. Therefore, the LA will be submitted to the NRC prior to the June 30, 2008, milestone.

License Application Quality and Completeness

William Boyle, Director of the Regulatory Authority Office (RAO) within OCRWM, began his presentation by stating that the project is proud of the work and the validation processes that have been undertaken to deliver a high quality LA. These processes include frequent quality checks, independent verification reviews, independent quality control checks and validation. Also, Dr. Boyle added that the Office of Quality Assurance was involved in an oversight role, which was conducted in parallel with the LA development, and is continuing.

Dr. Boyle discussed the LA Management Plan (LAMP). The LAMP defines the organizational responsibilities and authorities for line management. This plan developed a protocol for project management teams to communicate within the project and outlined the four phases used to develop the LA namely: (1) storyboard draft, (2) interim draft, (3) final draft, and (4) final validated section.

The final phase, LA validation, included separate reviews by independent teams to validate the sections for correct references and reviewed material statements for alignment to the appropriate source documents. A signed completeness and accuracy statement was required from each LA Section team member, which substantiates that the section is complete and accurate as required by 10 CFR 63.10. This phased approach established configuration control for the LA, and the project reacted to influences that occurred over the course of LA development such as the NRC issued Interim Staff Guidance documents. The LAMP also reflected the conduct of LA self-assessments by line organizations, and defined the issue resolution and escalation process.

Dr. Boyle stated that the Office of Quality Assurance attends the weekly LA project meetings and has conducted independent reviews beginning in May 2007. The Office of Quality Assurance has expended over 2,400 hours evaluating the LA, which included completing 39 surveillances. Fifteen condition reports (CRs) have been issued as a result of these surveillances; most of the CRs were Level Ds, documenting an opportunity for improvement, and are being tracked to closure.

Michael Weber, NRC, asked if the Supplemental Environmental Impact Statement (SEIS) is being completed in parallel with the LA. Dr. Boyle responded that a separate organization is completing the SEIS, and it will be submitted with the LA or shortly after the LA submittal. Mr. Weber then asked about the remaining sections of the LA to be completed. Dr. Boyle stated that there are three sections, dealing with the postclosure scope, out of the 71 LA sections that are not yet complete.

Lawrence Kokajko, NRC, asked about the 15 CRs that were issued as a result of the independent Office of Quality Assurance surveillances, specifically if the CRs need to be closed for the LA to be approved by DOE. Larry Newman, DOE, stated that of the fifteen CRs issued, one was a Level B, two were a Level C, and the remainder were Level D's. The Level B CR dealt with

referencing cancelled or superseded documents, and this was incorporated into an existing CR on cancelled or superseded documents. One Level C dealt with the process of incorporating the Director's decisions into the LA, and the other Level C dealt with procedural controls, both of which are closed. Mr. Newman stated that the Office of Quality Assurance is tracking selected CRs, and they will be closed before the LA is submitted to the NRC. Mr. Newman added that from a quality assurance perspective, he believes that the LA is a high quality document.

Aby Mohseni, NRC, asked if the CR on superseded or cancelled documents was the same CR that was issued as a result of the NRC audit conducted earlier. Mr. Newman stated it was a new CR to define a process to deal with documents that become superseded or cancelled. However, since the two CRs are related, they have been consolidated. Paul Harrington, DOE, added that DOE will not reference documents in the LA that are superseded or cancelled, other than for historical or contextual purposes. Mr. Sproat committed the DOE to submitting a letter responding to NRC concerns regarding cancelled or superseded documents and to-be-verified (TBV) data by April 15, 2008 (see Action Items 1 and 4).

Jack Davis, NRC, asked if the Office of Quality Assurance conducted quality checks on raw data. Mr. Newman stated that the quality checks on raw data are ongoing, and recently the Lead Lab conducted an Igneous Quality Assurance Audit for transparency, in which the NRC had participated. This audit extensively evaluated referenced source documents and discovered some minor issues related to transparency.

Mr. Davis asked for details of the issues identified. Mr. Newman stated that the audit team identified 72 minor deficiencies or questions that will require further investigation. He added that the audit is ongoing and none of the issues identified are problems with the models, or the conclusions which are drawn from these models. Mr. Davis asked if the audit will be available on the LSN, and Mr. Newman stated that it would.

Wes Patrick, CNWRA, inquired at the level of granularity in the definition of material statements. Dr. Boyle indicated that material statements are statements that were identified in the LA with a potential to influence the NRC's decision as to the safety of the repository. He added that approximately 10,000 material statements were identified, and that these statements have been validated by independent teams. This effort ensures that the material statements are aligned with the source documents.

Mr. Davis asked how DOE determined the extent of reviews needed to ensure a high quality LA. Mr. Newman stated that the LAMP provided the plan for the Office of Quality Assurance oversight. He added that the Office of Quality Assurance was involved with LA personnel from the initial draft of the LA, and that the LAMP mapped the process for conducting reviews at critical points in the LA development process. The Office of Quality Assurance also conducted interviews with line management, which helped to provide an effective, quality measurement. At each step of the LA development process, the Office of Quality Assurance conducted surveillances and then interviewed line management to assess the effectiveness of the process. Mr. Davis asked if audits were performed on items that were significant from a radiation dose standpoint.

Mr. Newman stated that the Total System Performance Assessment (TSPA) and PCSA sections focused on radiological doses, and they were included in the surveillances performed by the Office of Quality Assurance. Ted Feigenbaum, BSC, added that all PCSA products went through an independent quality engineering review.

Repository Licensing Interactions - NRC

Mr. Mohseni began his presentation by stating NRC will transition to its regulator role, as distinguished from its role as defined in the prelicensing agreement, upon submittal of the LA. Mr. Mohseni's presentation focused on the NRC timeline for its docketing acceptance review of the LA, technical review of the LA (if docketed), the adoption review for the Environmental Impact Statement (EIS) and any supplements, and the development schedule for the Safety Evaluation Report (SER). The NRC will conduct a 90-day parallel adoption and docketing acceptance review of the EIS and any supplements and LA, respectively, upon submittal. The requirements in 10 CFR 63.21 will guide the NRC's acceptance review of the LA. The adoption determination for the EIS and any supplements will be based upon 10 CFR 51.109. The results of the acceptance review and adoption determination will be documented in the Federal Register Notice in conjunction with the Notice of Hearing. Mr. Mohseni then discussed the NRC staff's points of contact for the LA review process and outlined the Requests for Additional Information (RAI) process and schedule. Mr. Mohseni added that public status meetings should be held periodically. He stated that status, technical, and outreach meetings will be conducted during the LA review period. Mr. Mohseni concluded by stating the NRC is ready to receive the LA and will conduct its regulatory functions in accordance with its strategic goals of safety and security of the public and protection of the environment.

April Gil, DOE, inquired how the schedule for RAIs is determined. Mr. Mohseni stated that the schedule for RAIs will be determined during the teleconference meeting between the NRC, DOE, and the public. Dr. Gil asked if the response to an RAI directs the NRC to the LA section containing the information NRC staff needed, will this be sufficient to close the RAI. The NRC stated that it would be sufficient to close an RAI and that they will document the response given by DOE and formally include the documentation on the docket.

Mr. Kouts asked how soon, after the LA is docketed, will the NRC be initiating RAIs. Mr. Mohseni responded that approximately 30 days after the LA is docketed the initial RAIs will be sent to the DOE.

Mr. Newman asked how Region IV will be involved with the review and the docketing decision of the LA. Mr. Mohseni stated Region IV may do field reviews on data and respond directly back to NRC staff. Blair Spitzberg, Region IV, stated his staff will assist the NRC headquarters staff on technical reviews during the acceptance period. He added that after the LA is docketed, Region IV of the NRC will conduct any investigations, resulting from allegations reported to the NRC staff. Formal inspections will not be conducted unless and until the Construction Authorization (CA) is granted.

Dr. Boyle asked if RAIs will come in bundles or be sent one at a time. Mr. Mohseni stated that the NRC staff, in the interest of moving the project forward, will not wait to bundle RAIs, and

will send an RAI as soon as it is identified. If several RAI's are identified concurrently that are similar, they could be bundled for efficiency.

Dr. Boyle asked how a supplementation to the SEIS would be processed. Mr. Mohseni stated that it is a different process than the RAIs. Mr. Kokajko added that in the event the NRC does not adopt the SEIS, the NRC can ask DOE to conduct the supplementation or the NRC can conduct it. Mr. Kokajko stated the LA and the EIS and any supplements would be reviewed before providing more detail on the supplementation process.

Mr. Sproat asked for clarity on the FEIS adoption process and asked if only 90 days would be required for an NRC review. Mr. Kokajko stated 90 days is sufficient for the review and that 10 CFR 51.109 provides the criteria for the adoption determination.

Jeff Williams, DOE, asked when the 90 day review period begins if the SEIS and the LA are not submitted concurrently. Mr. Mohseni indicated that the regulations state that the LA submittal must be accompanied by the EIS and any supplements. The 90-day review period starts upon tendering of the LA. Mr. Kokajko observed that DOE could submit them concurrently, and obviate the question.

Repository Licensing Interactions - DOE

Mr. Williams stated that the NRC and DOE both understand that upon LA submittal that prelicensing interactions will be replaced by existing NRC protocols and procedures for applicants. Mr. Williams described how the newly developed Licensing Support Office (LSO), which is located in Rockville, MD, will primarily function to facilitate responses to NRC's RAIs. The LSO staff will be the primary points of contact for the NRC, and they are aligned with the NRC's project managers. The LSO staff will also be the initial point of contact for the Naval Nuclear Propulsion Program (NNPP) issues.

Mr. Williams discussed the need for regularly scheduled status and technical meetings after the LA is submitted. He stated the need for the NRC and DOE to agree upon the type and timing of these post LA submittal meetings. Mr. Williams added that these meetings should also utilize video and teleconferencing to facilitate communication and openness to the public; however, he stated that any meetings on the NNPP's Technical Support Document (TSD) will be classified and closed to the public.

Mr. Williams then discussed DOE's understanding of the acceptance and technical reviews of the LA. He requested that the NRC provide an RAI issuance schedule to allow DOE to efficiently allocate resources.

Mr. Williams stated that the post LA submittal briefing should be conducted soon after the LA is submitted and that the schedule for this meeting depends on the availability of facilities and the LA submittal date. He then requested that the NRC provide possible dates based upon the availability of their facilities. He stated that this meeting will last two days and will provide an overview of the LA organization and structure. In addition, DOE will discuss how the LA

conforms to the regulations in 10 CFR Part 63 and the Yucca Mountain Review Plan (YMRP) acceptance criteria, and present the mapping of the Key Technical Issues (KTIs) to the LA.

Mr. Williams then discussed how the LA will be submitted. The LA submittal will include 33 paper copies of the LA, the NNPP TSD, the FEIS, the SEIS, and Official Use Only (OUO) supporting documents. Documents that will be submitted with the LA, but not part of the LA submittal, are the cross-reference matrix, the KTI mapping to the LA, and approximately 200 supporting references. The potential list of supporting references was provided by the DOE to the NRC on February 20, 2008. Mr. Williams then stated that any LA updates will evolve from three sources: (1) the completion of RAI responses, as appropriate, (2) new information, and (3) upon NRC staff requests to update the LA.

Mr. Williams identified that the PCSA documents are currently being processed into the LSN. Mr. Williams asked for the NRC's perspective on the number of LA copies the DOE needs to provide for the AULGs.

Mr. Weber asked if the public can access the LSO. Mr. Williams stated if there is a public meeting at the LSO; the public will be able to attend. Mr. Weber asked if the LSO will provide more public involvement in the licensing process. Mr. Williams stated that the LSO allows the public greater involvement by allowing the public to access the LSO by videoconferencing participation in project meetings at another location, i.e. the LSO.

Mr. Kokajko stated the NRC staff will provide, to the DOE, the number of technical document copies needed for the AULGs. Mr. Weber then stated that the post-LA submittal briefing should be held in mid-July. Mr. Williams responded by asking if the last week of June was available for the post LA submittal briefing. Mr. Kokajko responded that the NRC would explore this possibility. He then stated that the KTI mapping to the LA should be mapped to each NRC comment and not just the KTI subject. Dr. Boyle stated he didn't know the level of detail that the KTI mapping will address, but he added that it will address all of the 293 KTIs.

License Application Cross-Reference Matrix

Todd Shrader, DOE, stated the objective of the cross-reference matrix is to provide an independent reviewer a means to locate in the LA where an acceptance criterion or regulatory requirement is addressed. The matrix will cross-reference the NRC regulation, acceptance criterion, and LA section. Mr. Shrader stated that the matrix does not provide any additional technical information from the LA, but that it was intended to ensure regulations and guidance were addressed during the development process and to assist the NRC staff in the acceptance review process. The cross-reference matrix will be transmitted contemporaneous with the LA submittal and will be used to facilitate rapid responses to NRC's RAIs relative to the conformance of the LA to regulatory criteria. Mr. Shrader gave examples of the matrix to demonstrate its structure and content. Mr. Shrader concluded by stating that the matrix was developed as a tool for the DOE and could assist the NRC during their acceptance review. Following a review of selected examples, Mr. Weber stated that it looked like an excellent tool for all parties involved in the licensing process.

Mr. Davis asked if the matrix could be provided electronically. Mr. Shrader responded that the size of the matrix may limit accessibility, but options would be explored. Mr. Williams stated that a hard copy of the matrix would be accessible in the LSO.

Jim Rubenstone, NRC, stated that a detailed description of structures, systems, and components (SSCs) that are important to safety (ITS) and barriers that are important to waste isolation (ITWI) would be more beneficial to the NRC than the matrix. Dr. Gil agreed and stated that the detail in the LA would be sufficient to evaluate the safety of the repository.

Janet Kotra, NRC, asked how many copies will be made available to the public and will an executive summary of the LA be provided to the public. Dr. Boyle stated that an executive summary will be provided and copies of the LA will be in DOE's reading rooms. He then stated that the regulation provides that NRC can request that additional copies be made available. Mr. Weber stated he would suggest the number of copies needed at a later date.

Handling of Sensitive Unclassified, Classified, and Proprietary Information

David Crawford, DOE, introduced the presentation by stating that security-sensitive information in the LA falls under the category of sensitive unclassified information and classified Naval Nuclear Propulsion Information. This designation is based upon the classification guides and the Joint DOE and NRC Sensitive Unclassified Information and Classification Guide for the Office of Civilian Radioactive Waste Management Program, CG-OCRWM-1, 2004. Mr. Crawford stated that the LA contains 137 figures containing Official Use Only (OUO) information. These figures provide detailed facility drawings and will be eliminated from the publicly available version of the LA, and segregated. The LA text will state which figures are OUO. Mr. Crawford stated this process is similar to that for other license applicants.

Mr. Crawford then asked for clarification on the proper marking of OUO documents. Mr. Rubenstone stated that the front page of the OUO document needs to be marked as OUO and the applicable Freedom of Information Act exemption stated. Each page following needs to be marked OUO as outlined in CG-OCRWM-1, 2004.

Mr. Weber asked if the only classified information deals with NNPP. Dr. Gil stated that the NNPP information is the only classified information associated with the LA. Mr. Weber asked if the physical protection plan is considered OUO. Mr. Crawford stated that the physical protection plan is not OUO. It is classified as safeguards information (SGI) and is not required to be in the LA. Only a description of the Physical Protection and Material Control and Accounting plans will be included in the LA, which would not be considered OUO information. NRC Staff confirmed that the LA only needs to contain descriptions of the plans, and recognized that the plans will be submitted to the NRC prior to DOE receiving the License to Receive and Possess.

Action Item Status

Three new action items were identified during the course of the meeting. The new actions were for: (1) NRC to provide DOE with the number of copies of the LA that DOE needs to distribute to the CNWRA, (2) NRC to provide DOE with the number of copies of the LA that DOE needs

to distribute to the AULGs, and (3) the number of copies of the NNPP TSD the NRC needs. Status of the remaining action items is provided in the table attached to these minutes. Mr. Sproat committed to delivering a letter to the NRC by April 15, 2008, that provides closure to Items 1 and 4 in the attached table.

Public Comments

Ms. Judy Treichel, asked if the issuance of the final Environmental Protection Agency (EPA) Standard, 40 CFR Part 197, Exposure Limits, regulation could impact NRC's review of the LA. Mr. Kokajko stated that the NRC cannot make a final SER decision until the EPA standard is issued. However, he stated the NRC can review the LA using the draft standard. Ms. Treichel asked NRC how DOE could demonstrate compliance if the standard has not been published.

Mr. Williams stated that the LA has been written to demonstrate compliance with the proposed rule. Ms. Treichel then asked the NRC what level of public participation will be allowed at meetings during the LA review period. Mr. Mohseni stated that, the issue being discussed at the meeting will determine the Category of meeting and, hence, the level of public involvement. Notice will be given prior to the meeting, indicating whether it is a Category 1, 2, or 3 public meeting.

Mr. Steve Frishman asked DOE what happens if the DOE Inspector General finds a conflict of interest with the present law firm under contract. Mr. Kouts stated that if a conflict of interest is found, then DOE has federal legal staff and other law firms they can use for the licensing proceedings, such that no delays will occur. Mr. Frishman then asked the NRC if the EIS has to be adopted by the NRC as a prerequisite to accept the LA for docketing. Mr. Mohseni stated that the LA docketing acceptance determination is not affected by, and unrelated to, the EIS adoption decision.

Rod McCullum, NEI, asked the NRC if they can docket the LA before the EPA standard is issued. Mr. Weber stated that the NRC can docket the LA before the final EPA standard is issued.

Charles Fitzpatrick, Nevada, asked if the DOE is committed to distribute copies of the LA to the AULGs. Mr. Kouts replied that the DOE will provide copies of the LA to the various AULGs. The LA will most likely be electronically provided by either CD/DVD and/or web based.

Closing Remarks

Mr. Kokajko began NRC's closing remarks by stating that this may be the last QMM under the pre-licensing agreement; and over the years of conducting these meetings, many personnel changes have been made. The NRC has been clear to what is expected of the DOE and will make the final decision as to whether the application meets NRC's needs to initiate the technical review. Mr. Kokajko added that the DOE has taken LA quality seriously; however, the NRC is still concerned about transparency and traceability of data. Mr. Kokajko stated that the KTI mapping matrix needs to map each NRC KTI comment to the respective LA section and that the acceptability of the KTI mapping and the remaining Additional Information Needs (AINs) will

be reflected in the first round of RAIs.

Mr. Kokajko added that the timeliness and quality of RAI responses is critical, and a high quality LA will produce fewer RAIs.

Mr. Kouts delivered DOE's closing remarks by stating the DOE understands that timeliness and quality of RAI responses are critical. Mr. Kouts stated that an agreement is needed on the frequency of status and technical meetings during the NRC's review of the LA. The agenda for the post-LA submittal briefing needs to be developed and agreed upon. He added that the Director of OCRWM will transmit a letter to the NRC that will provide a justification for closure of Open Items 1 and 4 by mid-April 2008. DOE closed by stating that the Department is fully committed to submitting a high quality LA. Mr. Sproat added that he was pleased with the professionalism of the NRC and that personally he is committed to submitting a high quality LA.

 Date: 23 April 2008

Lawrence E. Kokajko, Director
Div. of High Level Waste Repository Safety
Office of Nuclear Material Safety and
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U.S. Nuclear Regulatory Commission

 Date: 4/21/08

William J. Boyle, Director
Regulatory Authority Office
Office of Civilian Radioactive Waste
Management
U.S. Department of Energy

**Consolidated Action Items
From NRC/DOE Quarterly Management Meetings
(March 25, 2007)**

Item No.	Action Item	Description	Status
1	MM 0402-C1	DOE will identify any to-be-verified data in the LA that needs to be qualified (if any) at the time of LA submittal (Commitment).	Open. DOE to provide closure letter to the NRC by mid April, 2008
2	MM 0506-01	DOE and NRC to determine the dates for the list of proposed technical interactions discussed during previous Management Meetings.	Open. This item will remain open as a continuing action and progress will be reported at future management meetings.
3	MM 0509-01	DOE/NRC to hold technical exchange after the DOE report addressing the USGS alleged falsification of documents has been released by the Secretary.	Open. The referenced report including the root cause, extent of condition, and action plan was issued and was handed out during the March 27, 2007, MM. Technical Exchange on Infiltration model scheduled for April 2, 2008 will close this item.
4	MM 0606-01	DOE and NRC to hold an interaction (management meeting or technical exchange - technical exchange preferred) on DOE's response to NRC's audit observation report (January 9, 2006) regarding the BSC's LLNL report.	Open. DOE to provide closure letter to the NRC by April 15, 2008
5	MM 0706-01	DOE and NRC to hold an interaction within a month after submittal of the LA to walk through the LA.	Open.
6	MM 0803-01	NRC to provide DOE with the number of copies of the LA that DOE needs to distribute to the CNWRA.	Open.
7	MM 0803-02	NRC to provide DOE with the number of copies of the LA that DOE needs to distribute to the AULGs.	Open.
8	MM 0803-03	NRC to provide the DOE with the number of copies of the Naval Nuclear Propulsion Program Technical Support Document that DOE needs to distribute to the NRC.	Open.

Note: The Quarterly Management Meeting action items are designated as "MM yymm-nn" where yy is the two digit year, mm is a two digit month and nn is a two digit action item number from that meeting.