

ENCLOSURE

**SUMMARY OF  
U.S. NUCLEAR REGULATORY COMMISSION/U.S. DEPARTMENT OF ENERGY  
QUARTERLY MANAGEMENT MEETING  
January 23, 2003**

Introduction:

The U.S. Nuclear Regulatory Commission (NRC) and U.S. Department of Energy (DOE) held a public Quarterly Management Meeting for the Yucca Mountain Project (YMP) on January 23, 2003. The meeting was held at the NRC headquarters in Rockville, Maryland. Video connections were established with the DOE Office of Repository Development (ORD) in Las Vegas, Nevada, and the Center for Nuclear Waste Regulatory Analyses (CNWRA) in San Antonio, Texas. Audio connections were also made available. Participants included representatives from the NRC, DOE, Bechtel SAIC Co. LLC (BSC), State of Nevada, Nuclear Energy Institute, and members of the public. Copies of the agenda and a list of attendees are attached as Attachments 1 and 2, respectively.

Opening Remarks:

Dr. Margaret Chu, Director of DOE's Office of Civilian Radioactive Waste Management (OCRWM), opened the meeting with an update of the recently implemented reorganization to better focus the program on licensing. This includes the creation of an additional OCRWM deputy director position, based in Las Vegas (the Deputy Director of the ORD), filled by John Arthur. Also, John Mitchell will be the new Bechtel SAIC Company, LLC (BSC) General Manager effective February 2003. Dr. Chu emphasized the use of the Management Improvement Initiative (MII) as a tool to improve the quality of products and ensure the program is ready for submitting a license application (LA). The most recent Quality Assurance (QA) Management Assessment of the program found the QA program to be adequate and effective, but contained recommended actions for improvement. Dr. Chu expects significant progress in key program areas including implementation of the concepts of the MII, Licensing Support Network, and integrated schedules for completion of Key Technical Issue (KTI) agreements. She noted that timely feedback from NRC on its review of DOE submittals and schedule for completion of the reviews are important. In addition, DOE is very interested in NRC's schedule for completion and release of the Yucca Mountain Review Plan (YMRP).

Margaret Federline, Deputy Director of NRC's Office of Nuclear Material Safety and Safeguards, made introductory remarks focusing on three areas: 1) Progress on key program areas since the October 2002 meeting; 2) DOE's implementation of its MII; and 3) resolution of the KTI agreements before LA. Public technical exchanges were held in Nevada in November 2002 on: the EIS process for each agency's role in fulfilling its National Environmental Policy Act (NEPA) responsibilities, and repository design issues. Although a productive exchange occurred on design issues during the meeting, much more public dialogue is needed to help ensure confidence that DOE will submit a high quality and complete LA. A very productive second public technical exchange on the licensing support network (LSN) and electronic submissions issues was held with DOE in Nevada in December 2002. This is a clear success area for the

two agencies during calendar year 2002 and NRC management appreciates the efforts of all individuals involved. Regarding DOE's implementation of the MII, Ms. Federline stated that DOE should be establishing a track record which demonstrates that problems identified in the MII are being effectively addressed. Specifically, as of December 31, 2002, fewer than 50% of the milestones established in the MII were reported within DOE as "completed on time." It is recognized that DOE needs flexibility to focus its efforts on program activities that support its LA strategy and, as a result, schedule slippages may occur. However, DOE must also establish a track record that it is making real progress, and it is difficult to establish such a track record if schedule slippages persist. Ms. Federline also expressed concerns that DOE has not developed a revised set of performance indicators.

Ms. Federline also stated that it is essential that public interactions continue between NRC and DOE and that the frequency be increased during calendar years 2003 and 2004 to help ensure that DOE provides adequate responses to the agreements. NRC believes that more frequent communications between NRC and DOE both before and after agreement responses are submitted to NRC will help ensure more timely closure of agreements. In summary, future quarterly management meetings need to become more problem solving sessions and Ms. Federline challenged staff at both DOE and NRC to find ways of discussing and resolving problems.

John Arthur, DOE's new Deputy Director for ORD, made introductory remarks and outlined his management philosophy and organizational approach. Mr. Arthur stated that completing and submitting a LA is his first priority. He understands that NRC expects more than just a high-quality LA, in that, DOE must have an operating environment like a licensee. The near-term focus is on completing the realignment within the ORD and emphasis is on the importance of communication, both internally and externally. A key aspect of his support for the MII is fully instilling a Safety Conscious Work Environment (SCWE). He looks forward to continuing interactions with the NRC, with a growing emphasis on performance as demonstrated through effective metrics.

Janet Schlueter (NRC) provided an update on the program milestones since the October meeting. In addition to the public technical exchanges, the 10 CFR Part 63 final amendment on "unlikely events" was issued and an observation audit of BSC was conducted. Regarding the YMRP, NRC received approximately 1000 comments and staff has nearly completed its work resolving those comments and modifying the YMRP. The schedule calls for submitting the YMRP to the Commission in February 2003 and once the Commission approves the document, NRC staff will make any changes and publish a NUREG within 4-6 weeks of receiving Commission direction. Completion of these activities will result in an estimated release of the YMRP in May 2003.

Regarding KTI agreement resolution, Ms. Schlueter stated the NRC is looking for ways to increase the efficiency of NRC reviews of DOE submittals. More frequent communications would help reduce the cycle of information exchange where NRC sends letters needing additional information to DOE responses. NRC supports the use of risk information to prioritize the agreements and focus its program, and believes that DOE is on the right track regarding the use of risk information to close agreements. NRC staff reviewed DOE's risk prioritization report and the three agreement submittals held in abeyance of that review. NRC

will follow up with a letter on the three agreements, followed by a separate letter on more specific comments on the risk prioritization report.

NRC is continuing to develop the scope and focus of its inspection program and NRC is looking for ways to integrate risk information and performance assessment insights to focus on those areas most important to repository performance. The NRC Region IV office, located in Arlington, Texas, will be the lead organization for NRC inspections.

NRC plans to update the HLW program's communication/public outreach plan by late spring of 2003 to ensure that it meets current goals and objectives, and to continue to identify opportunities for public outreach on NRC's roles, responsibilities and regulatory program.

Presentations:

Gene Runkle (DOE) provided the status of the MII document (Attachment 3). Mr. Runkle described the five key areas for improvement in the MII (Project Roles, Responsibilities, Authority, and Accountability; QA Programs and Processes; Project Procedures; Corrective Action Program; and SCWE). The effectiveness indicators are being refined and will be updated. Resolution of two corrective action reports (CAR), CAR-001 and CAR-002, regarding models and software respectively, are scheduled for completion by April 2004. DOE held a leadership retreat on January 21, 2003. DOE management is focused on implementing change, and is looking for early measures of progress.

Ms. Schlueter asked for more information regarding completion of MII actions and the verification process. Mr. Runkle responded that all actions must be completed, including training; then, a team would verify the actions. Regarding effectiveness reviews, Mr. Runkle stated that internal and external teams will look at the MII effectiveness indicators. Eighteen of the 25 MII actions scheduled for completion by December 2002 are complete. The remaining seven actions are scheduled for completion by February 2003. Bob Latta (NRC) asked DOE to clarify its commitment to allow NRC staff to review Quality Assurance Requirements and Description (QARD) changes that represented reductions in commitments prior to implementation and asked if Rev. 13 of the QARD would be submitted to NRC. Denny Brown (DOE) said this commitment was still in effect; however, DOE's initial assessment of Rev. 13 did not show a reduction in commitments, but rather a strengthening of requirements. Ms. Schlueter asked if QARD, Rev. 14, will be shared with NRC staff prior to being issued. Mr. Brown stated that it would, and also suggested that a technical exchange may be needed to discuss this topic.

Mr. Runkle stated the MII independent evaluation of SCWE found a decrease in the number of employee concerns and that the 80 concerns reflected in December 2001 related to contractor transition have been investigated and reported complete. Mr. Latta asked if DOE has conducted surveys to determine if Project personnel have confidence in the employee concerns program and if they feel they have a good understanding of the SCWE program. Although no surveys have been performed to date, Mr. Arthur said that he believes surveys are of value; however, before conducting surveys, the DOE/BSC management team needs to evaluate the proper approach, with the goal of reinitiating a survey within the next six months or so. With respect to the effectiveness of the SCWE program, Don Pearman (BSC) stated

that the project has been asked, next week, to perform a comprehensive review of SCWE training effectiveness to confirm the workforce's understanding of SCWE, and to ensure that consistent understanding of training, roles, and responsibilities are in place.

Wes Patrick (CNWRA) asked if DOE is looking at trends, not just the static values of the statistics, as for effectiveness indicators. Dr. Chu said that trends are absolutely important to help DOE see where it is at with regard to program improvements.

Larry Campbell (NRC) stated DOE's work on effectiveness indicators was a good start, but expressed concern that several lower tier systems recently implemented for minor errors, e.g., technical error reports, could mask deficiencies. At the previous day's QA meeting, DOE described Software Deficiency Notices and NRC asked if trends related to these items would be tracked. Dr. Chu stated DOE needs common sense in improving products and examine true performance indicators to track progress. Russ Dyer (DOE) stated that a new single deficiency documentation system scheduled to begin implementation in February includes all levels of QA deficiencies.

Bill Reamer (NRC) stated that DOE provided a very thorough description of the status of actions to implement MII and that NRC understands that it is generally important to DOE to ensure that actions stay on track so that the MII becomes the management tool that Dr. Chu believes is necessary. Mr. Reamer noted that the DOE discussion should have been focused on effectiveness indicators to reveal how well the MII is being implemented. He stressed the need for DOE to discuss "bad news" and problems in more detail. He also emphasized that DOE has been talking about important plans and actions for two years on this Project and he encourages DOE to focus on results at the next quarterly management meeting to be held in April 2003. Dr. Chu stated that she agreed with Mr. Reamer that DOE needs to focus a discussion of results during the April meeting and less on the MII's plan, processes, and procedures. Mr. Arthur also agreed with Mr. Reamer's comments and he stated that he wants to focus not only on CARs but good practices that are being implemented in the program, and will present high-level metrics and performance results at the next meeting.

Mr. Reamer asked for more information related to the completion of corrective actions for CARs -001 and -002, which are scheduled for completion by April 2004. Dr. Jean Younker (BSC) stated the Project needs to wait to get TSPA modeling bases in place and demonstrate that model results support site recommendation through independent review to complete TSPA-LA.

Mr. Reamer requested examples of SCWE issues and Mr. Don Beckman (BSC) cited examples of employee conduct issues requiring enhanced training.

Judy Treichel (Nevada Nuclear Waste Task Force) asked for the meaning of "independent evaluation of QARD" (Slide 6). Mr. Runkle replied the QARD was reviewed by an independent team of contractors directed by Dr. Chu, and were not YMP employees.

Joseph Ziegler (DOE) presented the Yucca Mountain LA status (Attachment 4). He stated that a LA scheduled for submission to NRC by December 2004 would be greatly facilitated by NRC

issuing the final YMRP as soon as possible, acceptance of the risk-informed approach to resolve some KTI agreements, and pre-application interactions between DOE and NRC. Examples of suggested pre-application interactions were proposed by Mr. Ziegler in the areas of design and engineering topics, igneous activity characterization, and performance confirmation. Mr. Ziegler stated that DOE is on schedule and will keep moving forward with interactions involving NRC staff. DOE is concerned about the timely completion of the YMRP and requested that it be made public when it is under review by the Commission to allow DOE access to it as the LA is being developed. Mr. Ziegler also noted, related to discussion in an earlier presentation, that the model validation and software development approach extends out to next year because completion of a significant number of modeling and software activities is necessary in order to confirm that the corrective actions are effective before the related CARs can be closed.

Mr. Ziegler stated that DOE needs to ensure a mutual understanding with NRC on the remaining KTI agreements and on other areas such as the level of design detail necessary at the LA stage and performance confirmation. DOE wants to discuss needed interactions and get them scheduled. Ms. Schlueter stated that NRC will consider DOE's list of proposed interactions, propose additional topics, and work with DOE to establish a schedule, emphasizing the importance of interdisciplinary meetings with the right technical staff to ensure efficient and effective interactions. Performance confirmation interactions are being discussed for February and April 2003, and NRC will send out public meeting notices when scheduled.

Mr. Timothy Gunter (DOE) provided an overview of the KTI status (Attachment 5). DOE plans to address all 293 agreements prior to submission of a LA. Of the 146 agreements completely or partially submitted to date, NRC staff has responded that 28 agreements need additional information prior to completing the agreement, 34 are currently being reviewed by NRC staff, and 66 have been closed by NRC as of January 14, 2003. For improving responses to agreement items, DOE has conducted several "self-assessments," and recently initiated another one in response to a letter sent by NRC on December 19, 2002, regarding a DOE submittal on updated geologic and hydrogeologic cross-sections in the area of Nye County wells that would support flow and transport modeling. DOE is looking at ways to improve and streamline the issue resolution process and is developing improved consistency of agreement responses to better facilitate NRC review. Mr. Gunter also stated that responses to six additional agreements have been sent to NRC this week. DOE will keep NRC notified of any schedule changes, and upcoming interactions will continue to enable common understanding for the intent and ultimate closure of agreements.

Ms. Schlueter stated the only geoscience related interaction proposed by DOE is for igneous activity and asked if there will be opportunities for staff to discuss other geoscience KTIs as well as encouraging the use of risk informing. Larry Campbell (NRC) requested DOE make more progress with integrating information across KTIs. NRC staff found several examples of the need for a multi-KTI effort for interactions which was discussed during the Structural Deformation and Seismicity (SDS) Appendix 7 meeting held in December 2002 on fractures, and in the agreement responses resulting in the DOE self-assessment discussed earlier. Mr. Gunter acknowledged the importance of an integrated and consolidated approach to ensure adequate responses. Ms. Schlueter agreed with the need to ensure that NRC and DOE staff understands the intent of agreements or additional information needs, and obtain

any changes to the delivery schedule. King Stablein (NRC) stated some agreements will be addressed by Analysis Model Reports (AMR) but staff has not had the chance to engage DOE on their AMR preparations. Mr. Ziegler stated that there had recently been some miscommunications and that April Gil will take the lead to reschedule container life and source term (CLST) interactions to address NRC concerns in this area. Dan Rom (NRC) stated the need to keep NRC involved in DOE plans and schedules related to issue resolution and associated agreement items. Given the LA schedule, NRC staff need adequate time to review and respond to agreements.

David Esh (NRC) provided initial feedback on the use of risk information by the DOE to close agreements. NRC staff reviewed three agreement responses recently submitted by DOE (TSPAI.3.03, TSPAI.3.19, USFIC.3.01), and the risk prioritization report. Letters will be forthcoming with NRC comments on both the general approach to resolving agreements using risk information and the risk prioritization report

Mr. Esh encouraged the use of a risk-informed, performance-based approach to issue resolution. NRC believes DOE is headed in the right direction, but that NRC needs additional information, most of which should be readily available. NRC is also trying to risk-inform the issue resolution process. The additional information needs, together with its own independent assessments, will allow NRC staff to risk-inform its reviews. The three additional information needs were:

- 1) Enhanced consideration of the combined effects of uncertainties.
- 2) Enhanced description of sensitivity analyses.
- 3) Presentation of uncertainty/variability in the results; for example, show the 5th/95th percentiles.

Mr. Esh stated that consistent with comments made during the QA meeting by Mr. Ziegler, NRC would like DOE to provide, at a future date, a confirmatory analyses with the final, fully-qualified PA model that supports the conclusions made from the results of the current model.

Mr. Brown provided a summary of the subjects discussed during the Quarterly QA Meeting which was held on January 22, 2003 (Attachment 6).

Mr. Gunter discussed the status of previous action items, and three new action items were identified and agreed to by NRC and DOE. The current status of these action items are listed in Attachment 7.

#### Closing Remarks:

In closing, Dr. Chu stated that everyone is looking for the right metrics to determine the health of the program. The MII tool was implemented to standardize the process. For the next quarterly management meeting, Dr. Chu suggested that DOE will not provide presentations on the MII process, but focus more on vital indicators for project performance and results of

implementing the MII. The KTI resolution process needs to be efficient and effective for both DOE and NRC. Dr. Chu encouraged the NRC in its efforts to improve their review of DOE submittals. Mr. Arthur will provide metrics and outcomes at the next quarterly management meeting.

Mr. Gunter stated the next quarterly management meeting is tentatively being planned for the last week of April 2003 in Las Vegas.

Mr. Reamer thanked DOE for the information presented and reiterated the successes stated previously by Ms. Federline on the EIS and repository design technical exchanges. Mr. Reamer suggested that what is important is not how DOE implements the MII but how a track record is established, and he agreed with Dr. Chu's proposal that a change is needed in the focus for information presented at the next meeting. Mr. Reamer requested scheduling upcoming interactions to facilitate attendance of the appropriate staff and management. Ms. Schlueter reiterated the NRC supports the use of risk to close agreements and that DOE appears to be heading in the right direction. Also, NRC owes DOE three review letters on the following topics: 1) the three agreements held in abeyance while staff review of the risk prioritization report was underway 2) the risk prioritization report, and 3) DOE's December 2002 sensitivity studies letter.

 Date: 2/11/03

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