

**SUMMARY OF THE
U.S. NUCLEAR REGULATORY COMMISSION / U.S. DEPARTMENT OF ENERGY
QUARTERLY MANAGEMENT MEETING
IN LAS VEGAS, NEVADA
MAY 11, 2004**

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 May 11, 2004. The purpose of this meeting was to discuss the overall progress of the project at the proposed geologic repository site at Yucca Mountain, Nevada. The meeting was hosted at the Bechtel SAIC Company, LLC (BSC) offices in Las Vegas, Nevada, with video and audio connections to NRC headquarters in Rockville, Maryland, and the Center for Nuclear Waste Regulatory Analyses (CNWRA) in San Antonio, Texas. Other participants included representatives from the Nuclear Energy Institute, NRC Region IV, General Accounting Office (GAO), State of Nevada, Nevada Nuclear Waste Task Force, Clark County, the press, and interested members of the public.

NRC Program Update

Ms. Margaret Federline, Deputy Director, Office of Nuclear Materials Safety and Safeguards, NRC, began her remarks by discussing recent changes in NRC senior management as well as reorganization of the Division of Waste Management and the creation of the Division of High Level Waste Repository Safety (DHLWRS). She mentioned that Mr. Bill Reamer will serve as Division Director with Messrs. Elmo Collins and Lawrence Kokajko serving as Deputy Directors of this Division. She added that the DHLWRS will be the NRC's central point for receipt and review of DOE's license application. After discussing recent organizational changes in NRC, she briefly discussed three topics: (1) NRC's evaluation of DOE technical documents, specifically, analysis and model reports (AMRs); (2) NRC staff's activities regarding the risk insight initiative; and (3) a recently issued Staff Requirement Memorandum (SRM) by the Commission regarding the Package Performance Study.

Ms. Federline explained that the staff used its risk-insights baseline to select the AMRs believed to be of high or medium significance to repository performance. The NRC's three-part evaluation of DOE technical documents also included evaluation of the processes used in developing and controlling AMRs, and the effectiveness of recent corrective actions in eliminating recurring problems in the areas of models, software, and data. The NRC staff reported its findings in a public report, published in April 2004, and discussed them with DOE in detail in a public technical exchange on May 5, 2004. The NRC's evaluation of the DOE AMRs revealed some good practices by DOE; however, the staff identified some concerns with clarity, traceability, and transparency of the data used in the AMRs. The NRC staff report concluded that if the concerns with the quality of data persist, they could have an adverse impact on the NRC's ability to perform their review of the License Application (LA) and writing of a safety evaluation report (SER) within 18 months.

Regarding NRC staff's initiative to use risk information to prepare for the LA review, Ms. Federline remarked that the risk insights initiative will help the staff prioritize preclicensing activities and to make decisions relative to the inspection process. She added that the staff has made two presentations on this topic to the ACNW and is planning to update, and risk-inform the Integrated Issue Resolution Status Report in September.

In conclusion, Ms. Federline indicated that the Commission has informed the staff that it has approved testing of a full-scale transportation cask. In its SRM, the Commission has instructed the staff to conduct the tests realistically and conservatively, including a fully engulfing fire.

Mr. Bill Reamer, Director of the DHLWRS, NRC, discussed the status of Key Technical Issue (KTI) agreements. He indicated that DOE has submitted responses to 214 of 293 agreements. The NRC staff has reviewed and closed 99 KTI agreements and currently has 115 KTI responses in process. Mr. Reamer urged DOE to submit responses to the remaining 79 KTI agreements that DOE has not yet provided, and additional information on 40 others, as soon as possible. He also expressed concern about agreement responses that are planned to be submitted later than what had originally been indicated by DOE in its previous schedules.

Mr. Reamer provided a brief status of the NRC On-Site Representatives' annual open house, which was held in Pahrump, Nevada, on May 10, 2004. He explained that the purpose of this gathering was to offer the community an opportunity to meet with NRC personnel and ask questions regarding NRC's role during the LA review. He indicated that the open house was well received by the local citizens and mentioned that approximately 40 members of the public attended the meeting.

DOE Program Update

Dr. Margaret Chu, Director of DOE's Office of Civilian Radioactive Waste Management, began her remarks by providing an update from the DOE Program perspective. Specifically, she discussed recent DOE activities that included retaining the Hunton and Williams law firm as the legal services contractor as well as organization realignment at the Office of Repository Development (ORD) implemented by Mr. John Arthur. Dr. Chu stated that recent NRC management realignment, mentioned earlier by Ms. Federline, along with DOE organization realignment, were signs that the project is closer to licensing proceedings. She also commented on NRC staff's evaluation of DOE's technical documents, the Corrective Action Program (CAP), and certain process controls. Dr. Chu agreed with NRC staff's findings that the DOE LA's key supporting information and documents, including data, models, and software, need improvements for transparency, traceability, and consistency of the technical bases. Dr. Chu noted that DOE has responded to the General Accounting Office (GAO) Report concerning the DOE QA program and that it disagrees with GAO report conclusions.

She indicated DOE has transitioned the management improvement initiative (MII) goals to the ORD's line management day-to-day activities. Dr. Chu cited closure of corrective action reports (CARs) on software and data management as examples of improvements. Dr. Chu provided a summary of the status of populating the Licensing Support Network (LSN), transportation developments, and cask acquisition. She added that DOE has published a Notice of Intent to develop an environmental impact statement (EIS) on rail alignment in the Caliente corridor and

to provide the schedule for EIS scoping meetings. DOE began making documents available to the NRC on May 5 for indexing prior to initial certification, which is expected to occur June 23, 2004. The DOE has begun cask design comparisons and is evaluating existing designs against future needs to ensure the safe transport of high level waste.

Dr. Chu concluded by stating that DOE can meet the challenges ahead and will develop an application that meets the NRC's expectations for quality.

Mr. Reamer commented that the NRC agrees with the GAO report conclusion that DOE should continue to focus on quality; however, it is up to DOE to determine how this will be done. He inquired as to whether QA oversight would continue once the CAP has transitioned to the line organization. Denny Brown, DOE-OQA, responded that QA oversight would include audits and Surveillances and QA will screen the Level C Condition Reports (CRs) during the transition period. OQA will continue to review Level A and B CRs after the transition period.

Yucca Mountain Project Update

Messrs. John Arthur and John Mitchell provided an update of the Yucca Mountain Project (YMP). Mr. Arthur indicated the purpose of the meeting was to summarize DOE's continuing improvements and accomplishments since the February 19, 2004, Management Meeting, and to discuss DOE's path forward to make the appropriate LSN certification and submit the LA. Mr. Arthur began by expanding on the DOE organization realignment presented earlier by Dr. Chu and indicated the importance of stabilizing the organization.

Mr. Arthur displayed the revised ORD reorganization that became effective on April 1, 2004. He highlighted the new roles of Mr. Richard Craun and Mr. Richard Spence and also mentioned that Mr. Mark Van Der Puy is now serving as the full-time ORD Safety Conscious Work Environment (SCWE) Coordinator and Mr. Ken Powers is the acting Director, Office of Business Support in addition to his other duties. DOE has selected Ms. Julie Goeckner, from DOE Richland, for the Employee Concerns Program Manager. Mr. Arthur indicated that Ms. Goeckner brings extensive experience in employee concerns management and will start in early July.

Mr. Arthur added that since the last Management Meeting in February, several major CRs have been closed, including, CR-16 (BSC(B)-03-C-107), on Data Management, on March 2 after 322 days, and CR-102 (CAR BSC-01-C-002), on Software, on March 30 after 1,033 days.

He also described DOE's plans for closing other level "A" CRs, such as, CR-99 (CAR-01-C-001), which is scheduled to be closed in July/August. He discussed progress in fostering a Safety Conscious Work Environment through continued management attention. Some of the recent actions he cited included:

- A memorandum signed by Dr. Chu on April 8, re-emphasizing to all employees the importance of safety conscious work environment,
- An ORD SCWE Policy, issued on April 26, to all ORD employees, contractor and sub-contractor employees to describe management expectations and responsibilities for an

SCWE. The key point of this policy is that safety is the overriding principle and that it guides ORD's activities,

- Completion of training for managers and supervisors in detecting and preventing retaliation and formation of eight solution-groups, and a pulse survey, emphasizing "Effective Methods to Detect and Prevent Retaliation."

Mr. Arthur indicated that the next step includes additional emphasis on line ownership of SCWE, a second program-wide survey to be conducted this fall, and heightened performance goals.

Mr. Arthur then covered the status of the DOE commitments listed in its 30-day letter to NRC. He indicated that DOE has closed 2 more of the 13 actions in its letter. Mr. Arthur stated the Disposal Decision Plan will soon be ready for external release and stated he expected to discuss it along with the construction schedule and surface design with NRC at a Technical Exchange in July.

Mr. Arthur stated that DOE's corrective action program is improving the ability of, and tools available to, the line organizations to perform trending analyses. He added that DOE has developed a Trend Analysis and Reporting Handbook that contains guidance on how to conduct trending analyses. The current trend is that over 50% of the condition reports are associated with four procedures regarding model development, scientific analysis, procedure development, and records management. The principal causal factors have been identified to be human performance and management. To improve human performance, he added that DOE is (1) sharing the lessons-learned with workers, (2) conducting pre-job briefings to underscore the importance of the work, and its linkage to the project mission, (3) providing enhanced training to ensure identified error patterns are addressed in training, and (4) simplifying and clarifying procedures in some cases for end-users. Mr. Arthur then mentioned several examples of improved performance in capturing Quality Assurance Requirements and Description (QARD) requirements in implementing documents, adequacy of the processes in QA procedures, completion time for Corrective Action Plans, and close-out rate for CRs.

Mr. Arthur briefly addressed the management assessment of LA progress since the last Management Meeting (68% complete through April). The estimated total page count for LA is 5,000+ pages. Mr. Arthur will be the DOE's authorized representative to sign the LA and submit it to NRC in accordance with Part 63 of Title 10 of Code of Federal Regulations (CFR).

Regarding the surface facilities design, Mr. Arthur indicated that stabilizing the design and inputs to the draft LA includes surface design re-configuration, and development of initial operating plans. These efforts will rely on extensive process experience from international facilities. An exhibit showed the planned surface facilities as well as recent additions and changes.

Mr. Arthur indicated one of the primary goals of the Regulatory Integration Team (RIT) is to centralize integration and production of the AMRs that will support the Total System Performance Assessment (TSPA) and the LA. He stated that 5 organizations were performing work for DOE in 5 different locations using 10 TSPA component models, and 104 AMRs. The RIT brings together 9 teams with support from Quality Engineering, Project Control, and

Operations under one project manager to evaluate and subsequently refine the AMRs that support TSPA-LA and the LA to improve integration, consistency, transparency, and traceability.

Mr. Arthur discussed the RIT's primary tasks and also indicated that the RIT is implementing the corrective actions for those CRs that have been initiated in conjunction with the NRC staff technical evaluation. Mr. Arthur stated that those concerns identified by the NRC had already been documented and entered into the improved single point-of-entry CAP.

Mr. John Mitchell, BSC General Manager, said that there would be a comparison of AMRs to LA sections and a testing of the data presented since many people will use it. He said the RIT will exist for about six months and then ongoing functions will transition to the long-term organization. He described the RIT as a single focused integration effort.

Ms. Federline asked how TSPA was integrated into the process to determine the robustness of key areas. Mr. Mitchell responded that individuals involved in the RIT come from organizations previously involved with TSPA. Ms. Federline questioned whether some of the RIT processes were on the LA preparation critical path. Mr. Ziegler responded that a portion of the RIT was on the critical path.

The NRC raised a question regarding the various deliverable dates, specifically, how complete the draft LA will be by July 2004, when some of the building blocks are going to be completed after the draft document is delivered. Mr. Mitchell responded that DOE (RIT) has a list of what has to be completed soon to facilitate a timely submittal of the LA. In addition, a large manpower effort supports the activities necessary to meet the deliverable dates. Additionally, the July deliverable is a draft LA and will be complete enough to allow the LA review process by DOE management to begin. The NRC also remarked that it was unclear as to how the LA preparation efforts are being integrated to meet the schedule. The DOE responded that it is watching the LA schedule carefully to make sure the right level of quality is factored into schedule and deliverables. Dr. Chu remarked that making real-time decisions is a critical part of the whole process. Mr. Mitchell commented that the Program has been gathering information for a number of months to support the LSN requirements. Mr. Ziegler commented that the Project is gathering momentum, the CAP program is an asset, and key steps are coming to fruition.

Regarding the integration of information, the NRC asked whether DOE would put supporting documents and information into the LA. Mr. Ziegler responded that this was discussed at the Level of Design Detail Technical Exchange held earlier and that DOE had responded that the LA will be a stand-alone document. He added that the support information (not included in the LA) would be available for NRC review separately.

Mr. Arthur briefly discussed the trending performed by the Project. He indicated that there was an improvement in performance related to human performance and that tools such as lessons learned and management briefings were utilized in improving performance. The NRC staff questioned DOE concerning the difference between the trending exhibits and those concerning trend patterns of human performance. The DOE responded that the difference involved the levels of implementation and was not about the adequacy of procedures or processes.

The NRC asked DOE whether or not real-time surveillance will be conducted and whether the RIT process was a quality-affecting process. DOE responded that the current phase of the RIT process is not a quality-affecting process but that parts of the RIT process will involve quality-affecting activities and will be governed by applicable procedural controls (such as resolution to technical issues and revisions of AMRs). Mr. Dennis Brown (DOE) also indicated that the two QA organizations are involved in the RIT process by providing daily oversight activities through Quality Engineers who identify potential QA issues.

In conclusion of this portion of the meeting, DOE noted the May 3, 2004 meeting on Performance Indicators (PIs) provided additional insights to the NRC staff on the development of the management tool DOE is using to determine areas requiring additional management attention. DOE also noted that the metrics would evolve to reflect changes in the Program.

LA Status

Mr. Joseph Ziegler, Director, Office of License Application and Strategy, reported progress in DOE's preparation of the LA as well as in the technical areas of data qualification, software verification, and model validation. Mr. Ziegler provided a comparison of percentage completion for actions related to the LA from January 2004 to April 2004. The comparison also provided discussion of recent progress in LA preparation through April 2004. For instance, the reported April 2004 TSPA percentage complete appeared low, but that was due to the RIT review effort and DOE expects to be back on schedule soon. Similarly, Mr. Ziegler provided a comparison of the reported progress for data-set qualification, software qualification, and model development since the last NRC/DOE Management Meeting. Mr. Ziegler indicated that DOE was able to reduce the total number of required data-sets and software reported for this management meeting through an evaluation of the data-sets and software that are actually supporting the LA safety analysis.

Mr. Ziegler then provided a discussion of LA content and level of detail, and addressed the status of the KTI Agreements. Mr. Ziegler reaffirmed that all KTI Agreements will be addressed prior to LA submittal. The LA's level of detail will be that which is necessary and sufficient to support a risk-informed review of preclosure safety and postclosure performance by the NRC and the determinations required for granting the construction authorization. Mr. Ziegler also stated that DOE is acting more like a "typical" NRC licensee as demonstrated by its supporting the NRC's 3-week technical evaluation of AMRs and the CAP.

Mr. Ziegler provided a comparison of the November 2003 and April 2004 schedule for KTI Agreement response submittals to the NRC. He also provided the NRC risk ranking of the remaining KTI Agreement response submittals from the April 2004 schedule broken down by month. A summary of the KTI Agreements status was also provided, categorized by KTI issue.

Finally, Mr. Ziegler provided an overview of recent and near-term project interactions with the NRC. He included subjects of future interactions that need to be scheduled with the NRC.

NRC staff made the following comments to DOE:

- Reminded DOE that the LA needs to be complete and of high quality;

- Staff would like to see how the RIT will address staff's quality concerns identified during its 3-week technical evaluation of DOE AMRs and the CAP;
- Self-assessment of management processes by DOE is a good practice;
- Continue to put emphasis on decision-schedule; and
- The NRC will provide an update to DOE regarding the Joint NRC/DOE Classification Guideline.

NRC staff asked whether information not relied on in the LA, such as unqualified data-sets, software or models would be available. Mr. Ziegler responded that data-sets, software and models not qualified and therefore not used in the LA, will be in the LSN.

The NRC staff expressed concern with the available time for NRC review of KTI Agreements to be submitted this summer, prior to LA submittal. Mr. Ziegler explained that such KTI Agreement responses by DOE would be stand-alone responses. The NRC staff also indicated that DOE would not have enough time to respond to any questions by NRC after its initial reviews. Mr. Ziegler suggested that resolution of KTI Agreements not closed before August 2004 could be carried over into the licensing process. NRC staff stated they will not agree at this time to reviewing KTI Agreements as part of LA review. NRC staff asked the rationale for selecting topical areas for future DOE/NRC interactions. Mr. Ziegler indicated that the future interactions, in several cases, were requested by NRC to keep the NRC staff updated with the latest project information, and the others were to clarify or resolve prelicensing issues.

Quality Assurance Program Update

Mr. Dennis Brown (DOE) presented an overview of the quarterly QA meeting from May 4 and indicated the meeting was very productive. The meeting included discussion of on-going issues, improvements in the CAP, and CR-16 (CAR BSC-03-C-107) and CR-102 (CAR BSC-01-C-002) closures.

Mr. Brown discussed improvements in the CAP which resulted primarily from increased management involvement, implementation of a CAP oversight committee, and implementation of a senior management review committee for complex CRs. Mr. Brown noted that trending of human performance issues has shown a positive trend.

Mr. Brown reported the status of the recent and planned QARD revisions. Revision 14 was an internal revision to reflect the new organization and became effective April 1, 2004. Revision 15 to the QARD is currently under NRC review. He noted that one item of interest in Revision 15 is that QA will no longer review Level "C" CRs. Revision 0 of the new QA requirements document that will form the QA basis for repository licensing is under development with an expected submittal date to the NRC by late June. This revision will be in conformance to 10 CFR 63, Appendix G.

Mr. Brown also provided an update regarding QA activities including; legacy software retesting, model validation, a new time-out policy for AMRs' quality reviews, and schedule of future joint Office of Quality Assurance (OQA)/DOE Environmental Management (EM) audits.

Mr. Fred Brown (NRC) agreed that last week's quarterly QA meeting was very productive.

NRC staff asked Mr. Brown (DOE) what QA audits were scheduled in the near future. Mr. Brown responded that joint OQA/EM audits of activities related to the YMP were planned for the West Valley Demonstration Project (in May), the Idaho National Engineering and Environmental Laboratory (in June) along with other DOE sites later in the year.

NRC staff acknowledged that the increased level of management attention to CR corrective actions has had a positive effect. NRC staff also acknowledged closure of CR-102 (CAR BSC-01 C-002) and CR-016 (CAR BSC-03-C-107) and that NRC is interested in CR-99 (CAR BSC-01-C-001) closure actions and actions to prevent recurrence.

NRC staff inquired about the balance between performance-based and compliance-based audits. Mr. Brown (DOE) responded that technical staff is utilized for performance-based audits. Mr. Arthur added that the YMP leadership council also provides their input concerning the balance of different audit types.

Mr. Brown (DOE) noted that human performance was now a primary indicator on the panel. NRC staff questioned the color (white) of the past month's human performance indicator on the annunciator panel. Mr. Brown (DOE) responded by stating the color was based on the fact that the human performance indicator was a new metric on the annunciator panel and white for the previous months indicates no data. Mr. Fred Brown (NRC) added that this performance indicator was a good indicator to monitor.

Public Comments

Ms. Judy Treichel, Nevada Nuclear Waste Task Force, requested a copy of the NRC's DHLWRS organizational chart along with contact information. The NRC handed out the requested information at the meeting.

Mr. Steve Frishman, State of Nevada, wanted to know the effort involved with establishing the RIT. The DOE responded that the RIT consisted of approximately 150 individuals for 6 months at a cost of approximately 10 to 11 million dollars. Mr. Frishman also asked what RIT team members would be doing if they weren't involved on the RIT. DOE responded that they would be performing similar activities as part of their regular duties.

Mr. Arthur noted that there were significant improvements toward providing quality AMRs. Mr. Frishman indicated that there is a requirement that KTI Agreements must be completed before NRC review of the LA. Mr. Ziegler (DOE) took exception to the comment and responded that, as DOE has committed, KTI Agreements will be addressed before LA submittal.

Ms. Treichel indicated that the on-going scoping meetings on the railroad corridor need to be more formal; that the NRC should not start the 90-day review clock for LA acceptance until after January 1, 2005, due to the year-end holidays and that selected members of the public should have been allowed to observe the NRC 3-week technical evaluation of AMRs and the CAP. Ms. Treichel cited a November 2003 meeting in which Mr. Martin Virgilio (NRC) stated that an NRC policy toward public observation of NRC technical evaluations was being developed.

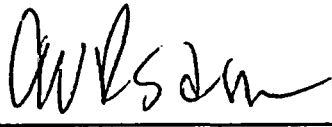
Lastly, Ms. Treichel questioned why the QARD revision level is being brought back to zero rather than calling it Revision 16.

Mr. Bill Reamer (NRC) responded to Ms. Treichel's statement concerning public observation of NRC technical evaluations by stating that the NRC has no plans to change the method by which technical evaluations are performed and that NRC has no plans to conduct additional technical evaluations of DOE's AMRs.

Closing Remarks

The NRC had no closing remarks.

Mr. Arthur (DOE) concluded by thanking all for attending this meeting. The next Management Meeting will be held in Rockville, Maryland, in August. He stated that several technical exchanges are anticipated before August to keep the NRC aware of new and updated information for the project.

 Date: 6/16/04

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