



## Department of Energy

Office of Civilian Radioactive Waste Management  
Office of Repository Development  
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North Las Vegas, NV 89036-8629

QA: N/A  
Project No. WM-00011

OCT 29 2003

OVERNIGHT MAIL

**ATTN: Document Control Desk**  
Chief, High-Level Waste Branch, DWM/NMSS  
U.S. Nuclear Regulatory Commission  
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STATUS OF ACTIONS FROM THE U.S. DEPARTMENT OF ENERGY MAY 29,  
2003, LETTER TO THE U.S. NUCLEAR REGULATORY COMMISSION (NRC)  
CONCERNING THE YUCCA MOUNTAIN PROJECT

Reference: Ltr, Chu to Virgilio, dtd 5/29/03

In the referenced letter, the U.S. Department of Energy (DOE) provided "details of actions being taken to ensure that our License Application meets NRC expectations for completeness, accuracy, and compliance with quality assurance requirements." Enclosures 1, 2 and 3 to this letter provide the present status of those actions.

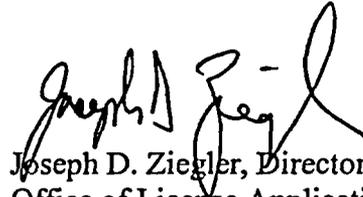
Please note that we are changing our actions regarding safety conscious work environment (SCWE) surveys. Based on discussions with our independent survey expert, we have determined that ongoing, standardized surveys on a periodic basis may be inappropriate. Therefore, we are suspending quarterly surveys and will evaluate the need to maintain annual surveys after the next program-wide survey, planned for the summer of 2004.

In addition to the progress described above in completing actions outlined in the May 29, 2003, letter, we are also transitioning the five focus areas of the Management Improvement Initiative to direct line management ownership. The management systems to attain and monitor the desired performance are being put in place and we will keep NRC informed of our progress.

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There are no new regulatory commitments in the body or the enclosures of this letter. Please direct any questions concerning this letter and its enclosures to Neal K. Hunemuller at (702) 794-5081 or April V. Gil at (702) 794-5578.



Joseph D. Ziegler, Director  
Office of License Application and Strategy

OLA&S:NKH-0069

Enclosures:

1. Status of Actions From the May 29, 2003, Letter, Chu to Virgilio
2. Two charts:
  - "Management Assessment of Progress towards LA"
  - "Status of LA Data, Codes, and Models" (pertaining to Action No. 1 in enclosure 1)
3. CD with the results of the annual OCRWM Program-wide SCWE survey (pertaining to Action No. 10 in enclosure 1)

OCT 29 2003

cc w/encls:

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**ENCLOSURE**

**Status  
Of  
Actions  
From the  
May 29, 2003 Letter,  
Chu to Virgilio**

**ENCLOSURE**

**Status of Actions from the May 29, 2003 Letter, Chu to Virgilio**

The U.S. Department of Energy (DOE) letter from Dr. Margaret S. Y. Chu to Mr. Martin J. Virgilio of the U.S. Nuclear Regulatory Commission (NRC), dated May 29, 2003, provided “details of actions being taken to ensure that our license application meets NRC expectations for completeness, accuracy, and compliance with quality assurance requirements.” This enclosure describes the status of those actions.

**Action No. 1:**

*OCRWM is committed to submitting a license application that complies with 10 Code of Federal Regulations Part 63 and in which data, software, and models used in our safety analyses meet or exceed applicable quality assurance requirements.*

**Status: Open**

This action will remain open until DOE submits the license application. Two charts, “Management Assessment of Progress Toward LA” and “Status of LA Data, Codes, and Models,” reflecting September 2003 information are attached (enclosure 2) to provide the present status of (1) the percentage complete for five major pre-licensing components and (2) data qualification, code qualification, and model validation, respectively.

**Action No. 2:**

*We will present our planned approach [to completing the technical work called for in the key technical issue (KTI) agreements], showing the grouping of KTI agreements and the reschedule for submittal of agreement responses, to the NRC by June 30, 2003.*

**Status: Closed**

The DOE provided to the NRC the planned approach to completing the technical work called for in the KTI agreements, showing the grouping of KTI agreements and the reschedule for submittal of agreement responses, in a letter from Joseph D. Ziegler to the Chief, High-Level Waste Branch, DWM/NMSS, dated June 23, 2003. The agreement responses scheduled through September have been submitted.

**Action No. 3:**

*We will have an effective trend report by September 30, 2003, that will allow us to monitor procedural compliance trends, identify causes of non-compliance, and take prompt corrective action as necessary.*

**Status: Open**

Condition Reports (CRs), the documents used to identify conditions adverse to quality in the CAP, have now been cause coded using the cause codes from the DOE Occurrence Reporting and Processing System (ORPS). The ORPS cause codes provide successive branching of causes, i.e., Apparent Cause, Contributing Cause, and Root Cause. This permits discrimination of causal factors so that more effective corrective actions can be identified and implemented.

## Enclosure – Status of Actions from the May 29, 2003 Letter, Chu to Virgilio

As an initial pilot of the ORPS cause codes, CRs from May 2002 to May 2003 were re-coded using the ORPS cause codes. The success of this effort was previously described to the NRC at the July 15, 2003, DOE/NRC Quarterly Quality Assurance Meeting.

The most recent trend report was issued on September 5, 2003. This improved trend report used the ORPS cause codes and demonstrated the continued ability to monitor procedure compliance and identify causes of non-compliance.

Additional improvements made include:

- The trend reporting procedure, AP-16.3Q, *Trend Evaluation and Reporting*, was revised to change the trend reporting frequency from semiannually to quarterly and to require that CRs be initiated for adverse trends.
- Procedure AP-16.4Q, *Causal Analysis and Corrective Action Plan Development*, was revised to improve the cause analysis process and to link the ORPS cause codes to the cause analysis, thereby ensuring more accurate cause coding of the CRs. Training on the revised cause analysis procedure was completed for the initial group of personnel.
- Procedure AP-16.1Q, *Condition Reporting and Resolution*, was revised to include requirements to improve the timeliness and consistency of trend coding.

Notwithstanding the improvements completed and the issuance of the most recent trend report, the effectiveness of the trend reports remains to be demonstrated. This action will remain open until we verify improvement through subsequent trend reports (e.g., two sequential reports indicate we are monitoring procedural compliance trends and identifying causes of non-compliance).

### Action No. 4:

*We are currently streamlining the review and revision process for procedures through enhancements to the governing Administrative Procedure 5.1Q, Procedure Preparation, Review, and Approval. This will be completed and implemented by July 30, 2003.*

### Status: Closed

Procedure AP-5.1Q was revised in Revision 4 to streamline the procedure development process. This procedure revision became effective on July 18, 2003. A summary of the Revision 4 changes involving procedure review and revision process streamlining is as follows:

- Utilized procedure 'flow' recommendations from Institute of Nuclear Power Operations AP-907, *Processes and Procedures Process Description* (Need, Prepare, Review, Approve);
- Removed non-requirement administrative steps;
- Process flowchart was simplified;
- Removed processing of Office of Civilian Radioactive Waste Management (OCRWM) plans from procedure.

Action No. 5:

*When this procedure [AP-5.1Q] has been updated [to streamline the review and revision process for procedures], we will screen other procedures for needed improvements, starting with a prioritized mission-critical subset.*

Status: Open

Program procedures were reviewed using a uniform screening process to determine revision priority. As part of the prioritization process, appropriate ownership was also determined to support improved procedural review time and strengthen line authority. On August 7, 2003, the Director of OCRWM approved the prioritization and revision schedule and made it applicable to the entire program.

Revisions of all Priority I procedures are underway, with a scheduled completion date of 11/30/03, at which time we will consider this action complete. Lower priority procedure revisions will continue per the prioritization schedule.

Action No. 6:

*We will have a single, improved Corrective Action Program implemented by September 30, 2003. The Corrective Action Program includes self-assessment and lessons learned components as well as methods to identify and correct adverse conditions.*

Status: Closed

On September 29, 2003, the DOE implemented a new, software based, single entry point Corrective Action Program (CAP). Procedure AP-16.1Q, *Condition Reporting and Resolution*, was revised to implement an integrated corrective action process reflecting the software to be utilized for initiation, processing and closure of all conditions previously managed by AP-16.1Q, as well as those previously managed by superseded procedures. This revision superseded procedures AP-15.2Q, *Control of Nonconformances*, AP-15.3Q, *Control of Technical Product Errors*, and AP-REG-004, *Condition/Issue Identification and Reporting/Resolution System*. This single entry point CAP consolidates the following processes into one process:

- Condition Reports (CRs) – the process to document and resolve conditions adverse to quality;
- Condition/Issue Identification and Reporting/Resolution System (CIRS) – the process to document and resolve conditions that do not fall within the scope of the Quality Assurance program;
- Technical Error Reports (TERs) – the process to document and resolve errors in technical documents;
- Nonconformance Reports (NCRs) – the process to document and resolve hardware and sample conditions adverse to quality.

All open reports from the CR, CIRS, TER and NCR processes were migrated into the new database.

The new CAP includes the following attributes:

- The process continues to allow anyone on the project to initiate a CR;
- Provides for screening of the CR for significance and assignment;
- Ensures management is informed in a timely manner of significant conditions adverse to quality;
- Directs the performance of causal analysis based on the significance of the condition;
- Directs the development and implementation of corrective actions based on the causal analysis;
- Provides linkage to the self-assessment and lessons learned programs.

The new CAP categorizes CRs into one of four levels (A, B, C, or D) based on the significance of the condition with Level A being the most significant condition. The category determines the level of causal analysis that is performed with root cause analysis required for Level A, apparent cause for Levels B and C, no cause analysis required for Level D (opportunities for improvement). The open CRs, i.e., the conditions adverse to quality, were categorized as Level A (formerly known as Corrective Action Reports, or CARs) or Level B (formerly known as Deficiency Reports, or DRs).

Action No. 7:

*Goals under this improved [corrective action] program will be to prepare and approve 90 percent of corrective actions within 30 days of initiation for deficiency reports (DRs) and corrective action reports (CARs); to complete the corrective actions for DRs in fewer than 60 days on average; and to complete the corrective actions for CARs in fewer than 100 days on average.*

Status: Open

The process for monitoring the goals specified for identifying and completing corrective actions associated with the CAP within the selected time periods were incorporated into procedure AP-16.1Q, *Condition Reporting and Resolution*. This procedure includes notes in appropriate procedure locations specifying the subject goals.

Performance indicators are in place to monitor corrective action preparation, approval and completion. These performance indicators are presented to the NRC at the DOE/NRC Quarterly Quality Assurance Meetings. This action will remain open until the performance indicators show sustained improvement toward achieving the goals.

Action No. 8:

*These internal surveys [to monitor progress in developing a safety conscious work environment] will be performed on a quarterly basis and the results will be made available to NRC.*

Status: Closed

Two quarterly Safety Conscious Work Environment (SCWE) surveys have been completed and distributed to employees in March and June 2003. These quarterly surveys targeted 25% of the OCRWM population. Results of the second survey showed

slight improvement in all theme areas (SCWE, Employee Concerns Program (ECP), Corrective Action Program, Employee Responsibility and Management Expectations). The second survey also showed a greater response rate. Results of the second survey were made available to OCRWM employees in an August 12, 2003, letter from W. John Arthur, III.

As discussed under Action No. 10 below, we have also just completed a program-wide independent survey. We are currently working with our independent contractor to determine the appropriate form, content and timing of future surveys. Consequently, we have determined to not retain routine, quarterly surveys.

Action No. 9:

*We are planning to implement additional [SCWE] training to increase managers' effectiveness in receiving and acting upon concerns.*

Status: Open

SCWE-related training will be based on a review of survey results and comparison with improvement plans now being developed. To date, SCWE-related training has focused on communicating management expectations, and detection and prevention of retaliation. For example, SCWE expectations were reiterated at the July 10, 2003, Office of Repository Development (ORD)/Bechtel SAIC Company, LLC (BSC) management offsite. Additionally, approximately eight hours of training on detection and prevention of retaliation was provided to senior ORD/BSC managers in August 2003, and summarized at the OCRWM-wide management offsite in September 2003.

Additionally, ongoing planning efforts to improve our SCWE are underway, and include targeted training for specific components of our workforce. We will keep NRC informed of our progress.

Action No. 10:

*In addition to quarterly internal [SCWE] surveys, we plan to have external experts conduct annual Program-wide surveys, the first of which is planned for this summer.*

Status: Closed

The project retained an independent survey expert, International Survey Research, LLC (ISR) to conduct a comprehensive survey of the work environment targeting 100% of the workforce. The results of this survey were received and distributed throughout the project the week of October 6, 2003. A compact disc with the survey results is attached (enclosure 3). We are currently evaluating the results of this survey and implications for action. As part of our evaluation, we are working with ISR to determine the appropriate form, content and timing of future surveys. Nonetheless, we will perform at least one additional annual program-wide survey in fiscal year 2004.

Action No. 11:

[We are continuing to strengthen mechanisms to hold individuals accountable for the quality, timeliness, effectiveness, procedural compliance, and safety of their work

products and processes.] *Individuals and organizations will have performance criteria for these elements built into their appraisals and evaluations.*

Status: Closed

The following paragraph was included in each performance element of the fiscal year 2004 performance appraisal/management plans of DOE [Yucca Mountain Project (YMP)] employees:

“The tasks, objectives, and/or activities related to this performance element will be evaluated, although not exclusively, by the following performance indicators, as applicable: quality, timeliness, effectiveness, procedural compliance, safety, and SCWE principles in the performance of work.”

Additionally, performance elements for licensing culture and compliance with the QARD were added for each employee. Supervisors and managers performance standards, which already had many of these elements, were revised to emphasize these criteria.

DOE also communicated these expectations to all direct contractors and the U.S. Geological Survey via letters from the Contracting Officer. Direct contractors are required to demonstrate how they will incorporate the individual accountability into their performance appraisals and evaluations.

The YMP Management and Operations contractor, Bechtel SAIC Company, LLC (BSC), revised its Employee Recognition Awards Program to include accountability criteria (i.e., quality, timeliness, effectiveness, procedural compliance, and safety of their work products and processes) consistent with the individual performance evaluation criteria. BSC provided training for its managers and supervisors on the new criteria. This training was completed on October 2, 2003. BSC managers and supervisors met with BSC employees to explain the new criteria. Effective October 1, 2003, BSC employee performance is being measured against the individual accountability criteria.

In addition, the National Laboratories and Subcontractors are required to include individual accountability criteria (i.e., quality, timeliness, effectiveness, procedural compliance, and safety of their work products and processes) into their employee performance evaluations. This was done as follows:

1. National Laboratories, which perform work that is related to the YMP License Application, were sent a Special Condition provision for inclusion in their respective contracts informing them that they must incorporate the criteria for individual accountability into their employee performance evaluations. The provision includes the definitions and the performance criteria.
2. BSC Subcontractors and companies with Technical Service Agreements, which provide staff augmentation to BSC, were sent a change notice for inclusion in their Technical Service Agreements incorporating requirements identical to that of the National Laboratories.

3. Companies with Technical Service Agreements and Subcontractors, which perform YMP-related services at their own facilities, were sent a change notice for inclusion in their Technical Service Agreements that holds the company accountable for meeting the performance criteria. BSC will review the Subcontractors' performance based on the criteria, and appropriate action based on the terms of the contract will be taken when Subcontractors are not meeting the criteria.

Action No. 12:

*Demonstrated actions that exceed these expectations [i.e., performance appraisal criteria specifying individual accountability for the quality, timeliness, effectiveness, procedural compliance, and safety of their work products and processes] will be recognized. Failure to meet these expectations will be addressed vigorously.*

Status: Closed

For DOE personnel, the existing YMP awards system is utilized to recognize YMP personnel whose performance exceeds expectations. The ORD established an Organizational and Personnel Advisory Team to ensure consistency and fair application of personnel actions. In addition, the federal personnel system is utilized to address performance and actions that do not meet performance expectations.

For BSC personnel, the recognition and rewards program was revised to accommodate the new performance criteria. BSC employees were notified of recognition program changes in the electronic newsletter *BSC Today* on the BSC website. The new program became effective on October 1, 2003. Also beginning on October 1, 2003, BSC implemented a communication plan designed to raise employee awareness of the recognition program, encourage managers and employees to nominate deserving individuals or teams for recognition, and to reinforce the new criteria on accountability. Planned communications include articles in *BSC Today* and *The Portal* (bi-weekly YMP electronic newsletter), Employee Recognition Awards Program Committee member presentations in organizational staff meetings, an employee contest for new award ideas, Brown Bag lunch sessions, and information in BSC New Hire Orientation.

Also, the BSC disciplinary and prudence process is in place to address performance and actions that do not meet performance expectations. This process includes progressive discipline for employees that violate policies or standards of conduct. It also includes training and mentoring for employees who fail to meet performance expectations. In addition, a prudence committee evaluates serious employment actions before they are taken with the aim of ensuring that fairness, consistency, legal and SCWE considerations are evaluated in reaching recommendations.

Action No. 13:

*We will provide a report to employees semi-annually to highlight successes, communicate lessons learned, and underscore our commitment to accountability.*

Enclosure – Status of Actions from the May 29, 2003 Letter, Chu to Virgilio

Status: Open

The initial report was issued on October 15, 2003, utilizing the existing bi-weekly electronic YMP newsletter distributed to project personnel called "*The Portal*." The plan is to provide feedback to the employees each October and April. The initial report outlined the rationale for the changes and highlighted the new performance evaluation criteria, explained the prudency process and emphasized the recognition programs for recognizing individuals and groups that exhibit performance that exemplifies commitment to safety, quality, procedural compliance, effectiveness, SCWE and timeliness. This action will remain open until a process has been established to ensure semi-annual reports are issued.

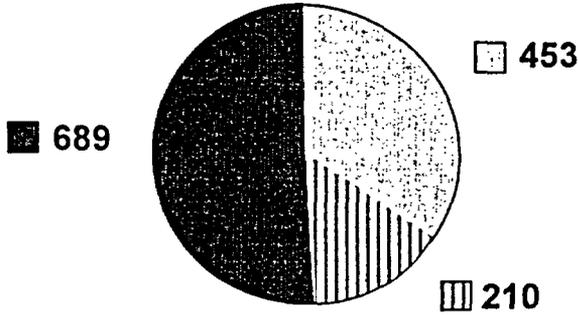
# Management Assessment of Progress towards LA

	<u>COMPONENT</u>	<u>% COMPLETE</u>	<u>% PLANNED</u>	<u>WEIGHT</u>
•	KTI Agreement Closure	42% (of 190) <sup>1</sup>	42%	10%
•	LA Document	7%	7%	20%
•	Preclosure Safety Assessment	51%	51%	10%
•	TSPA-LA	63%	70%	30%
•	Design	<u>40%</u>	<u>48%</u>	<u>30%</u>
•	TOTAL % COMPLETE	42%	46%	100%

- <sup>1</sup> Based on assumption that at least 65% of 293 (190) agreements will be considered complete by the NRC before LA submittal.  
All agreements will be addressed with NRC by LA submittal.  
NRC has identified 41 high risk-significant agreements (4 complete) and 92 medium risk-significant agreements (20 complete).

# Status of LA Data, Codes, and Models <sup>1</sup>

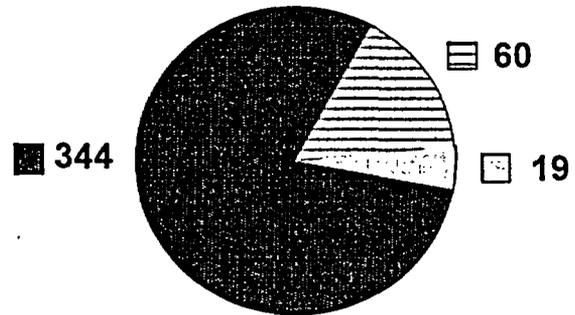
Data (Estimate)



**Total Datasets: 1,352**

- Qualified: 689 (51%)
- ▨ Being Verified: 453 (34%)
- ▧ Being Developed: 210 (15%)\*

Codes (Estimate)

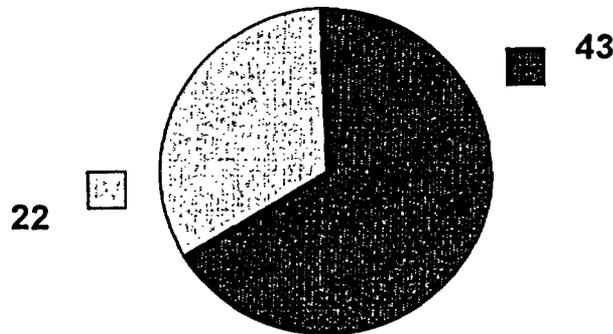


**Total Codes: 423**

- ▨ Qualified & Verified: 60 (14%)
- Qualified (Legacy/re-testing): 344 (81%)
- ▧ Developing/verifying: 19 (5%)

\*Estimated number of additional datasets that will be developed as models approach completion

## Model Reports <sup>2</sup>



**Total Model Reports Directly Supporting LA: 65**

**Model Reports Completed: 43 (66%)**

<sup>1</sup>Status of qualification activities for LA and completion of reports

<sup>2</sup>Model Reports may contain multiple models