



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

July 30, 2007

MEMORANDUM TO: Aby Mohseni, Deputy Director
Licensing and Inspection Directorate
Division of High-Level Waste Repository Safety
Office of Nuclear Material Safety and Safeguards

FROM: Jack D. Parrott, Senior On-Site Licensing Representative /RA/
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Division of High-Level Waste Repository Safety
Office of Nuclear Material Safety and Safeguards

J. Vincent Everett, Senior Inspector /RA/
Fuel Cycle and Decommissioning Branch
Division of Nuclear Material Safety, Region IV

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION ON-SITE LICENSING
REPRESENTATIVES' REPORT ON THE YUCCA MOUNTAIN
PROJECT, FOR APRIL 1, 2007, THROUGH JUNE 30, 2007

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The OR quarterly report highlights a number of Yucca Mountain Project activities of potential interest to NRC staff. The ORs continue to respond to requests from NRC Headquarters staff to provide various documentation and feedback related to Key Technical Issues (KTIs) and their resolution. During this reporting period, the ORs continued to observe matters associated with Yucca Mountain site activities, KTIs, and audits. The ORs also attended various meetings and accompanied NRC staff on visits to Yucca Mountain.

In accordance with 10 *Code of Federal Regulations* 2.390 of NRC's "Rules of General Applicability," a copy of this letter will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system, "Agency-wide Documents Access and Management System" (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions about this report or its enclosure(s) please call Jack D. Parrott at (702) 794-5047, or J. Vincent Everett at (817) 860-8198.

Enclosure(s):

1. "U.S. Nuclear Regulatory Commission On-Site Licensing Representatives' Report Number OR-07-02, for the reporting period of April 1, 2007, through June 30, 2007"
2. Table 1: "U.S. NRC On-Site Licensing Representatives' Tracking Report for Open Items Followed in OR Report(s)"

Memorandum to A. S. Mohseni, Deputy Director, LID, from J. Parrott, and J. V. Everett dated:
July 30, 2007

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Office of Nuclear Material Safety and Safeguards

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U.S. NUCLEAR REGULATORY COMMISSION
ON-SITE LICENSING REPRESENTATIVES' REPORT
NUMBER OR-07-02
FOR THE REPORTING PERIOD OF
APRIL 1, 2007, THROUGH JUNE 30, 2007

Enclosure 1

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ON-SITE LICENSING REPRESENTATIVES' REPORT
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ACRONYMS AND ABBREVIATIONS

<u>Acronym</u>	<u>Meaning:</u>
ADAMS	Agency-wide Documents Access and Management System
BSC	Bechtel SAIC Company, LLC
CAP	Corrective Action Program
CFR	<i>Code of Federal Regulations</i>
CNWRA	Center for Nuclear Waste Regulatory Analyses
CR	Condition Report
DTN	Data Tracking Numbers
DOE	U.S. Department of Energy
EIS	Environmental Impact Statement
ESF	Exploratory Studies Facility
ICN	Interim Change Notice
KTI	Key Technical Issue
LA	License Application
NRC	U.S. Nuclear Regulatory Commission
OCRWM	Office of Civilian Radioactive Waste Management
OQA	Office of Quality Assurance
OR	On-Site Representative
PA	Performance Assessment
PSHA	Probabilistic Seismic Hazard Analysis
QA	Quality Assurance
QARD	Quality Assurance Requirements and Description
TAD	Transport, Aging, and Disposal
TDMS	Technical Data Management System
USTC	U.S. Transport Council

EXECUTIVE SUMMARY

SITE ACTIVITIES AND DATA ACQUISITION

The Yucca Mountain Project is continuing its drilling program to obtain data on the geotechnical and seismic properties of the area beneath planned waste handling facilities. At the end of this reporting period, the U.S. Department of Energy (DOE) completed nine of the 15 Phase I boreholes and started 19 of the approximately 60 Phase II boreholes.

On June 21, 2007, DOE conducted the first underground quarterly entry since site curtailment. A U.S. Nuclear Regulatory Commission (NRC) On-site Representative (OR) participated in this event with no unusual conditions observed.

On June 27, 2007, NRC staff conducted a publicly noticed Yucca Mountain site visit to observe geotechnical and seismic testing field activities at the proposed surface operations area.

QUALITY ASSURANCE AND ENGINEERING

NRC staff reviewed the *Thermal Testing Measurements Report* (TDR-MGR-HS-000002, Rev. 1), dated February 2007, to evaluate the qualification status of relative humidity data collected during the large block test, single heater test, and drift scale test performed from 1996 to 2005. All relative humidity data was found to be appropriately categorized concerning its qualification status.

DOE implemented its Quality Assurance Requirements and Description, Revision 18, on October 2, 2006, which replaced Revision 16. DOE did not implement Revision 17, although DOE reviewed 12 draft versions of Revision 17 from May 2004 to March 2006. The change history provided with Revision 18 only described the changes since Revision 17, Draft F. No change history was provided for the revisions prior to Revision 17, Draft F, back to Revision 16.

NRC Open Item OR-OI-06-07 is closed. This open item concerned the failure to process clarifications related to the content and completeness of a CR record package in accordance with requirements in DOE/BSC procedures.

GENERAL ACTIVITIES

On May 8 - 10, 2007, NRC management and staff, new to the NRC's High-Level Waste Repository Safety Program, attended an NRC-led geologic field trip to Yucca Mountain and the adjacent area. The trip included a visit to the Exploratory Studies Facility and onsite discussions of volcanism, seismicity, flooding, landslides, and groundwater.

On May 22, 2007, an OR attended the US Transport Council's (USTC) workshop on "Nevada Transportation," held in Las Vegas, Nevada. Representatives of Affected Units of Government in Nevada, vendors of various services for spent fuel storage and transportation, DOE staff, members of the USTC, and others attended the workshop. Workshop attendees made the various presentations. Most of the meeting discussions centered on: (1) decisions to be made regarding transportation in Nevada; (2) the economic impacts; (3) the importance of

communications; (4) concerns of the State of Nevada; and (5) the status of the Nevada and national transportation projects.

On May 23, 2007, the ORs observed a public meeting of the Nevada Commission on Nuclear Projects in Las Vegas, Nevada.

By letter dated May 24, 2007, NRC Region IV informed OCRWM of the June 2007 completion date of Mr. Robert Latta's assignment to the NRC OR Office. In the letter, Region IV identified Mr. Vincent Everett as a temporary OR.

REPORT DETAILS

INTRODUCTION

The principal purpose of the On-Site Representatives' (ORs') quarterly report is to provide U.S. Nuclear Regulatory Commission (NRC) managers, staff, and contractors information on U.S. Department of Energy's (DOE's) activities related to: (1) repository design; (2) performance assessment (PA); (3) performance confirmation; and (4) environmental studies. The primary focus of this OR report is on DOE's programs for: (1) subsurface and surface-based testing; (2) PA; (3) data management systems; (4) environmental studies; and (5) quality assurance (QA). Relevant information includes new technical data, DOE's plans and schedules, and the status of activities to support preparation of the License Application (LA). The ORs also take part in activities associated with resolving Key Technical Issues (KTIs).

This report covers the period of April 1, 2007, through June 30, 2007.

OBJECTIVES

The ORs' missions are to act as points of prompt information exchange, and to identify preliminary concerns with site investigations and potential licensing issues. The ORs carry out these roles by gathering and evaluating information, identifying concerns, and bringing significant issues to NRC management's attention. The ORs also focus on issues such as design controls, data management systems, PA, and KTI resolution. A primary OR role is to identify areas, whether in site studies, activities, or procedures, that may be of interest or concern to the NRC staff.

1. SITE ACTIVITIES AND DATA ACQUISITION

1.1 On-Site Drilling Activities

The Project is conducting a two-phase drilling program to obtain data on the geotechnical, and seismic properties of the area beneath planned waste-handling facilities. This is being done to provide confirmatory data for the Post-Closure Probabilistic Seismic Hazard Analysis (PSHA) and engineering design for building foundations, and ground motion inputs (i.e., seismic hazard curve development) for building design calculations. At the end of this reporting period, the Project completed nine of the 15 Phase I boreholes. In late March 2007, the Project implemented Phase II of this drilling program. As of the end of this reporting period, the Project started 19 of approximately 60 Phase II boreholes.

1.2 Underground Entry

As of April 1, 2007, the Project curtailed underground activities, and halted all routine access to that part of the Exploratory Studies Facility (ESF) beyond the Bow Ridge Fault (just past Alcove 2). The curtailment plan included provisions for scheduled quarterly entries to the underground. The first one of these entries was conducted on June 21, 2007. An OR participated in this event. The entry activities included the maintenance of the devices used for data collection from the remaining instruments monitoring

conditions in Alcove 5 (the heated drift test), and at Niche 3 in the ESF. The entry also included traversing the entire ESF by train. No unusual conditions were observed. The next quarterly entry is tentatively scheduled for September 20, 2007.

1.3 NRC Site Visit

On June 27, 2007, NRC conducted a publicly noticed site visit to Yucca Mountain, to observe field activities at the proposed surface operations area. NRC and Center for Nuclear Waste Regulatory Analyses personnel observed the geotechnical and seismic testing being conducted at various locations across the site. The activities observed included vertical seismic profiling, down-hole seismic testing, spectral analysis of surface wave testing, non-linear stress wave investigations, and borehole core-sample processing at the sample management facility.

2. **OUTREACH ACTIVITIES**

N/A this reporting period.

3. **QA AND ENGINEERING**

3.1 Review of the Qualification Status of Relative Humidity Data Collected During the Large Block Test, Single Heater Test and Drift Scale Test

NRC staff reviewed the *Thermal Testing Measurements Report* (TDR-MGR-HS-000002, Rev. 1), dated February 2007, to evaluate the qualification status of relative humidity data collected during the large-block test, single-heater test, and drift-scale test performed from 1996 to 2005. NRC staff found humidity measurements recorded in all three tests, some at elevated temperatures. NRC staff has not accepted DOE's basis for calibrating relative humidity probes above 70° C. Therefore, NRC staff do not consider relative humidity data collected at temperatures above 70° C as qualified. This issue is documented in correspondences between the NRC and DOE (ADAMS Accession No. ML053470527, dated January 9, 2006, and ML070540044, dated March 15, 2007).

The large-block test included temperatures up to 125° C. Vaisala Humicap humidity sensors were used for the collection of the humidity data. The data collected were listed in the *Thermal Testing Measurements Report*, Table 4-1, "Input Data Tracking Numbers (DTNs) for the Large Block Test." Only one set of data included relative humidity measurements. This data set was listed as unqualified in the table. The data were also presented graphically in Figure 6.1-16, "Relative Humidity Measured by the Humicap in LBT Borehole WH-2 as a Function of Time." This figure was also listed as unqualified.

Two sets of humidity data were collected during the single-heater test. These data were listed as qualified in Table 4-2, "Input DTNs for the Single Heater Test." The data were collected in boreholes 16 and 18. The humidity data collected during the single-heater test was collected at temperatures between 25° C and 52° C. These temperatures were within the range currently accepted by NRC. The data were collected using Vaisala Model HMP235-A Humicap humidity sensors.

Several sets of humidity data were collected during the drift-scale test. Temperatures during the drift-scale test reached approximately 205° C at the drift wall with maximum temperatures of approximately 300° C measured in the vicinity of the heat sources. Humidity measurements were collected at 48 locations during the experiment using Phys-Chem Scientific EMD-2000 Micro-Relative-Humidity Sensors. Use of this model sensor in the drift-scale test was described in the *Drift Scale Test As-Built Report* (MOL.19981104.0137), Sections 5.1.3.2 and 7.1.1.3. In July 2001, a scoping study was conducted to measure temperature and relative humidity on the cool side of the heated drift. This experiment is discussed in Section 6.3.2.6 of the *Thermal Testing Measurements Report*. Thirty-eight Rotronic HygroClip relative humidity/temperature sensors were used in this experiment. In April 2005, additional experiments using the Rotronic HygroClip relative humidity/temperature sensors were conducted. The maximum temperature during these experiments was 60°C. The data collected during the drift-scale test were listed in Table 4-3, "Input DTNs for the Drift Scale Test." Sixteen sets of data were listed that included humidity measurements. All sixteen sets were identified as unqualified. Two additional sets of data [Document Input Reference Sheets 169255 and 169246] listed in Table 4-3 as qualified for temperature and pressure were also listed in Table 6.3-1; however, they were listed in Table 6.3-1 as including relative-humidity data, in addition to the temperature and pressure data. A review of these two data sets in the Technical Data Management System (TDMS) found data listed as qualified for temperature and pressure only. No relative-humidity data were provided in the TDMS files. None of the relative-humidity data collected during the drift-scale test experiments was listed as qualified in any of the reports reviewed.

Based on the NRC staff's review of the data presented in the *Thermal Testing Measurements Report*, DOE appropriately categorized the qualification status of all relative-humidity data presented and did not list any relative-humidity data collected above 70°C as qualified.

3.2 QARD Revision 18 Change History

DOE implemented its QARD Revision 18 on October 2, 2006, which replaced Revision 16. DOE did not implement Revision 17, although DOE reviewed 12 draft versions of Revision 17 from May 2004 to March 2006. The Revision 17 drafts and the issued Revision 18 of the QARD incorporated the requirements of 10 CFR Part 63. Previous versions of the QARD were developed in accordance with 10 CFR Part 60.

When documents that specify quality requirements are revised, the documents are required to include a change history. The requirement for including a change history was specified in QARD Section 6.2.6.D, which states: "Requirements documents shall require that a history of changes to QA program documents, including the reason for the changes, be documented and maintained." The change history for QARD Revision 18, provided on page 3 of the QARD, stated that Revision 18 was developed to comply with 10 CFR 63.142 and NUREG-1804, and that it was a complete rewrite. Attached to QARD Revision 18 was a table entitled "QA Program Commitment Reduction Evaluation." This table provided an analysis of changes incorporated into Revision 18 and included a detailed list of the changes along with an evaluation that the changes did not reduce commitments in the QARD. However, this evaluation was performed by comparing the new Revision 18 against the Revision 17, Draft F version of the QARD,

dated April 4, 2005. No analysis was provided for the changes made between Revision 16 and the Draft F, Revision 17.

QARD requirements cannot be satisfied through the use of draft documents. Including only the changes between Draft F of Revision 17 and the final issued Revision 18 does not meet the requirement of QARD Section 6.2.6.D. The change history included in Revision 18 must reflect the changes made since the last implemented version of the QARD, which was Revision 16.

3.3 Review of OR Open Items

OR-Open Item 06-07: As written in Section 3.7 of the OR Report No. OR-06-02, dated September 26, 2006, (ADAMS Accession # ML062490356) three issues were associated with this NRC open item. The first issue related to CR 6036, "Incomplete Corrective Action Program Condition Report Record Package" (issued on July 11, 2005) concerning what comprises a complete package for a CR being submitted to the records processing system. The concern identified in CR 6036 was that information relative to how the final decision for the corrective action was reached, such as rejected responses or recommended action that were not accepted, was being omitted in the final records package. CR 6036, closed on August 8, 2006, concluded that a records package for CRs were complete with the final description of actions and steps taken that resolved the issue and that no regulatory requirements, including site procedures and the QARD, required in-process drafts to be included in the final record submitted to the records process center.

NRC OR meetings with BSC personnel responsible for processing CRs and submitting the reports to the records process center, determined that even though the final package going to the records process center included only the final resolution of issues, the background information was not deleted from the CAP system and will be available for inspection during the potential LA review. In addition, on June 5, 2007, a letter was issued to BSC by DOE directing that the information in the CAP system be kept for the life of the Project. Therefore, since no QARD requirements mandate that draft or interim resolution of issues must be sent to the records process center as part of the final package, and since all in-processing records are being maintained electronically in the CAP system, the first issue related to this NRC open item is resolved.

The second issue involved whether the Director of OQA appropriately prepared and processed a clarification of the QARD in accordance with QARD and BSC procedural requirements. Procedure LP-2.2Q-OCRWM, "Development and Maintenance of Quality Assurance Requirements, Programs and Specification Documents," Revision 3, Interim Control Notice (ICN) 0, was in effect when CR 6036 was issued. Revision 3, ICN 5, was in effect when the NRC open item was established. Both documents required QA program clarifications to be processed in accordance with Section 5.9 of the procedure. Section 5.9 provided the process for issuing a clarification of the QARD. However, as stated in Section 5.9, documentation was only required for clarification of a QARD requirement, not procedural requirements, such as those in Procedure AP-16.1Q, "QA Records." As such, a clarification of what constituted a QA record, as defined in Procedure AP-16.1Q, was not required to be processed in accordance with Procedure LP-2.2Q-Office of Civilian Radioactive Waste Management (OCRWM), Section 5.9. This resolves the second issue of the open item.

The third issue of the NRC open item related to the need for DOE to consider whether modifications of the documentation requirements as discussed above, could have impacts on other documentation and reporting requirements outside the established QA area. DOE legal staff reviewed this issue and confirmed that records related to the CAP, including the in-processing information that is part of the resolution of a CR, should be maintained for "derivative discovery." DOE issued a letter dated June 5, 2007, to BSC directing that information associated with CRs be maintained as electronically retrievable. The OR confirmed with the DOE and BSC staff responsible for the CAP system and for processing completed condition reports, that all data has been historically kept and is available for retrieval, and will continue to be kept and maintained retrievable, consistent with the June 5, 2007, memo. This commitment resolves the third issue associated with the NRC open item.

By resolution of the three aspects of NRC Open Item 06-07, as discussed above, the NRC considers this open item closed.

4. **GENERAL ACTIVITIES**

4.1 May Field Trip

On May 8 - 10, 2007, NRC management and staff new to the NRC's High-Level Waste Repository Safety Program, attended an NRC-led geologic field trip to Yucca Mountain and the adjacent area. The trip included a visit to the Exploratory Studies Facility and onsite discussions of volcanism, seismicity, flooding, landslides, and groundwater.

4.2 US Transport Council's Workshop on Nevada Transportation

On May 22, 2007, an NRC OR attended the USTC workshop on "Nevada Transportation," held in Las Vegas, Nevada. Representatives of affected units of government in Nevada, vendors of various services for spent fuel storage and transportation, DOE staff, members of the USTC, and others attended the workshop. Workshop attendees made the various presentations. Most of the meeting discussions centered on: (1) decisions to be made regarding transportation in Nevada; (2) the economic impacts; (3) the importance of communications; (4) concerns of the State of Nevada; and (5) the status of the Nevada and national transportation projects.

In DOE's presentation regarding national transportation, status items are: 1) the draft national transportation plan will be out this summer for comment with a plan to finalize it by the end of the year; 2) DOE has the manufacturer's comments on the Transport, Aging, and Disposal (TAD) canister specifications, and DOE is doing proof-of-concept evaluations; 3) TAD-based transportation systems are being developed; 4) no procurement of rolling stock will occur this year but a request for information will go out to the manufacturers; and 5) DOE is studying the location of rail support facilities.

Regarding Nevada transportation, DOE's points were that: 1) the earthwork and the Beatty Wash bridge will be the most challenging construction aspects and take the longest time, but no "heroic" engineering will be needed to build a rail line in Nevada; 2) the rail will be constructed sequentially, rather than start at each end and meet in the

middle; 3) the rail Environmental Impact Statement (EIS) will include the final impact results; and 4) DOE is working on integrating the proposed Nevada rail line with existing rail operations, the Supplemental EIS for Yucca Mountain, and the Geologic Repository Operations Area.

There was also a discussion of the TAD canister by a representative from a cask manufacturer. The TAD will be based on the current canister designs and upgraded to be compliant with 10 CFR Part 63. This will allow for lessons learned from canister fabrication, transportation, licensing, and operation to be incorporated into the design. DOE has no plans for legal weight TAD canisters (for truck) but could be accommodated if needed.

The presentations are posted by USTC at: <http://www.ustransportcouncil.org/>.

4.3 Nevada Commission on Nuclear Projects

On May 23, 2007, the NRC ORs observed a public meeting of the Nevada Commission on Nuclear Projects in Las Vegas, Nevada. The meeting included staff reports from the Nevada Agency for Nuclear Projects, a review of its pending legal actions, a presentation on the implications for the Las Vegas Valley from high-level waste rail transportation on the Caliente route, and a report from Clark County, Nevada, on its Yucca Mountain oversight activities.

4.4 OR Representation

In a letter dated May 24, 2007, NRC Region IV informed OCRWM of the June 2007 completion date of Mr. Robert Latta's assignment to the NRC OR Office. In the letter, Region IV identified Mr. Vincent Everett as a temporary NRC OR until the completion of training and certification of Mr. Latta's replacement. While Mr. Everett will be the primary Region IV OR during this period, he will be dividing his work activities between the Las Vegas office, and NRC's Region IV office in Arlington, Texas.

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OPEN ITEMS NUMBER (For Tracking Only)	BRIEF DESCRIPTION OF OPEN ITEMS	OPEN ITEM OR REPORT NO.:	DATE OPEN ITEM CLOSED
AOI-OCRWM-OQA-05-20-02	Revise procedure AP-3.13Q to reflect 10CFR63.21 requirements related to completeness of information necessary for LA review.	OR-05-03	
AOI-OCRWM-OQA-05-20-01	Procedural controls for "preliminary" classification of Engineering calculations will be revised to clearly define the designation of completed calculations suitable to support the requisite safety analysis.	OR-05-03	
AOI-YMSCO-ARC-02-12-01	Identifies the need for DOE OQA to ensure that procedure development and review process include a documented evaluation to verify compliance with the requirements of the YMP's QARD.	OR-03-01	OR Report No: OR-03-03 August 15, 2006
OR Open Item 07-01	Failure to take prompt corrective actions related to documenting CAQs in the CAP system and initiating a RCA in response to QA Program inadequacies identified in Level A, CR 1041	OR-07-01	

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OPEN ITEMS NUMBER (For Tracking Only)	BRIEF DESCRIPTION OF OPEN ITEMS	OPEN ITEM OR REPORT NO.:	DATE OPEN ITEM CLOSED
OR Open Item 06-10	BSC had not implemented effective requirements management system for the QMD sections that were reviewed during an audit, indicating inadequate corrective actions for previous conditions identified in CRs - signify emerging adverse trends.	OR-06-04	
OR Open Item 06-09	Based on OR review of the RCA for CR7395, it was determined that the RCA for CR7395 does not support the stated conclusions nor does it adequately address the extent of the condition and impact.	OR-06-03	
OR Open Item 06-08	The Project has failed to maintain adequate procedural controls related to the assignment of event codes to condition reports as required by the QARD, Section 16.2.6a	OR-06-03	OR Report No.: OR-07-01 April 30, 2007
OR Open Item 06-07	Failure to process clarification related to the content and completeness of a CR record package in accordance with requirements of LP2.2Q, is identified as a deficiency. Clarification in response does not comply with the requirement.	OR-06-02	OR Report No.: OR-07-02 July 30, 2007

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OPEN ITEMS NUMBER (For Tracking Only)	BRIEF DESCRIPTION OF OPEN ITEMS	OPEN ITEM OR REPORT NO.:	DATE OPEN ITEM CLOSED
OR Open Item 06-06	Establish a relationship between actions to address deficiencies in requirements management processes and changes to the Engineering Design organizations.	OR-06-02	OR Report No: OR-06-02 September 26, 2006
OR Open Item 06-05	Despite the existence of numerous CRs related to requirements management, BSC did not effectively describe the planned and completed CA that would resolve the deficiencies currently being overseen by DOE's IRPT.	OR-06-02	OR Report No: OR-06-02 September 26, 2006
OR Open Item 06-04	Based on Audit Observation of Software Control (OQA-BSC-06-10), requesting a basis and justification for the continued use of the output from software on the baseline that has not undergone IV&V remediation.	OR-06-02	
OR Open Item 06-03	Based on Audit Observation of Software Control (OQA-BSC-06-10), requesting a description of DOE's remediation processes related to the approximately 35 legacy codes.	OR-06-02	

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OPEN ITEMS NUMBER (For Tracking Only)	BRIEF DESCRIPTION OF OPEN ITEMS	OPEN ITEM OR REPORT NO.:	DATE OPEN ITEM CLOSED
OR Open Item 06-02	Requirements Flow-Down and Procedure Adequacy and Audit Observation: Involved the inconsistent use of quality-affecting document designators that indicated inadequate corrective actions related to similar conditions documented in CR3448.	OR-06-01	
OR Open Item 06-01	Requirements Flow-Down and Procedural Adequacy Audit Observation: Concerned discrepancy in the definition of the term "requirement" in a BSC desktop instruction, which was inconsistent with the requirements for design input control defined in QARD Section 3.2.1.	OR-06-01	OR Report No: OR-06-04 January 31, 2007
OR Open Item 05-02	Pending Project response to the discovery of potential falsification of QA records, completion of second and third initiatives described in the work plan.	OR-05-03	OR Report No: OR-07-01 April 30, 2007
OR Open Item 05-01	Inconsistencies in the root cause statements developed by the root cause analysis team, specifically the root cause related to traceability and transparency issues. Pending resolution of the apparent discrepancies in the root cause analysis for CR3235 identified in this Open Item.	OR-05-02	
OR Open Item 04-01	A concern regarding the safety analysis of the ground support system in the ESF.	OR-04-01	OR Report No: OR-04-04 October 27, 2004

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OPEN ITEMS NUMBER (For Tracking Only)	BRIEF DESCRIPTION OF OPEN ITEMS	OPEN ITEM OR REPORT NO.:	DATE OPEN ITEM CLOSED
OR Open Item 03-06	Based on the review of CR756, twelve quality-affecting procedures were approved without meeting the applicable QARD	OR-03-05	OR Report No: OR-04-04 March 4, 2005
OR Open Item 03-05	The continued use of unqualified software in quality affecting technical products appears to be in conflict with the governing requirements of the implementing procedures and the QARD.	OR-03-04	OR Report No: OR-06-04 January 31, 2007
OR Open Item 03-04	With a tentative date of mid-June, to evaluate CAR BSC(B)03-0-107, the RCD has not acted on this CAR in a timely manner and it has remained opened for 4 months without evaluation.	OR-03-03	OR Report No: OR-03-05 January 12, 2004
OR Open Item 03-03	An evaluation in DOE's progress in implementing corrective actions associated with CAR BSC(B)0-01-C-001, concerning model validation, the OR reviewed TAPS (approx. 43 models). Based on the results, it could not be established if the evaluation criteria will result in the development of models with adequate confidence for the LA.	OR-03-02	OR Report No: OR-05-02 July 12, 2005

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OPEN ITEMS NUMBER (For Tracking Only)	BRIEF DESCRIPTION OF OPEN ITEMS	OPEN ITEM OR REPORT NO.:	DATE OPEN ITEM CLOSED
OR Open Item 03-02	During a review of the MII confirmation packages, it was identified that the action statement execution task descriptions and completion schedules for many of the reviewed pkgs had been modified without appropriate justification. Therefore, pending the resolution of this apparent deviation from a commitment to administer the MII in accordance with the requirements of AP-5.1Q, this issue is identified as this OR Open Item.	OR-03-02	OR Report No: OR-04-02 July 8, 2004
OR Open Item 03-01	This Open Item is based on issues on separate ORs: (1) the effective resolution of concerns related to inadequate personnel training; (2) the failure to establish an effective transition plan; and (3) the evaluation of the SCWE issues.	OR-03-01	OR Report No: OR-03-04 October 20, 2003
OR Open Item 02-13	The current status of corrective and preventive actions associated with CAR No.; BSC-02-C-01 revealed that not all corrective actions stated had been completed.	OR-02-05	OR Report No: OR-03-05 January 12, 2004
OR Open Item 02-12	Contrary to requirements of the QARD Supplement III 2.4.C, AP-SIII.2Q inappropriately allows for the use of unqualified data. BSC QA procedure change control program failed to identify this issue.	OR-02-05	OR Report No: OR-04-06 March 4, 2005

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OR Open Item 02-11	Based on surveillance not identifying specific problems with software functionality for codes tested 7, including NUFT, did not pass ITP and/or VTP surveillance.	OR-02-05	OR Report No: OR-03-06 February 16, 2004
OR Open Item 02-10	Pending appropriate evaluation and documentation of the design control attributes associated with requirements of 10CFR63.44 and 10CFR Part 21.	OR-02-04	
OR Open Item 02-09	Pending revision of engineering procedures to include appropriate design verification considerations.	OR-02-04	OR Report No: OR-03-06 February 18, 2004
OR Open Item 02-08	The required performance of annual audits justification for delaying a scheduled audit of YMSCO for 3 months, with an additional extension, does not appear to be adequately supported. Deviation from requirement of sub-section 18.2.1E of the QARD.	OR-02-04	OR Report No: OR-02-06 January 23, 2003
OR Open Item 02-07	Model Validation Impact Assessment addressed the effect of inappropriately validated models on TSPA-SR. Many cases of impact assessments used TSPA-SR results to evaluate the local impacts. It's unclear how this practice evaluated the cumulation impact of all the models in question.	OR-02-01	OR Report No: OR-03-06 February 18, 2004

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OPEN ITEMS NUMBER (For Tracking Only)	BRIEF DESCRIPTION OF OPEN ITEMS	OPEN ITEM OR REPORT NO.:	DATE OPEN ITEM CLOSED
OR Open Item 02-06	Unqualified Data Impact Assessment - NRC staff identified unqualified data that could be replaced with qualified data for the performance assessment. For the risk-significant components, an evaluation of unqualified data replaced with qualified data would help determine if efforts should be undertaken to qualify the removed data.	OR-02-01	OR Report No.: OR-03-06 July 8, 2004
OR Open Item 02-05	Provisions are in place that allow for model validation to continue past issuance of the documentation. The models used in the performance assessment should have adequate support for their representation at the time the performance assessment documentation is issued.	OR-02-01	OR Report No: OR-03-06 February 18, 2004
OR Open Item 02-04	A number of criteria have been developed related to various forms of review. If a review is relied on for model validation, it should be directed at validating the model and it should encompass the full body of information to the extent practical.	OR-02-01	OR Report No: OR-03-01 April 14, 2003
OR Open Item 02-03	More objective criteria (comparison to data not used in the development of the model), typically resulting in higher confidence in model validation are not distinguished from the more subjective, problematic criteria.	OR-02-01	OR Report No: OR-03-02 June 11, 2004

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OR Open Item 02-02	Current process controls specify that one or more of nine criteria may be used to validate a model. All the criteria should increase confidence in the modeling process; some criteria do not appear to be appropriate for addressing whether the model is valid for its intended use.	OR-02-01	OR Report No: OR-03-01 April 14, 2003
OR Open Item 02-01	Failure to properly include the specific issues identified in the Concerns Program Final Report in the resolution process may result in not adequately addressing the original employee's concern.	OR-02-01	OR Report No: OR-02-06 January 23, 2003