Department of Energy
Washington, DC 20585

April 5, 2004

Mr. Martin J. Virgilio, Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Two White Flint North
Rockville, MD 20852

Dear Mr. Virgilio:

The Office of Civilian Radioactive Waste Management (OCRWM) initiated Management Improvement Initiatives (MII) in 2002 to address specific needs for improvement in management systems, quality processes, and organizational roles and responsibilities. MII was envisioned as a springboard for change, with the intention that improvement initiatives would be transitioned into line management activities for ongoing implementation once the initial MII action plans were completed.

We have completed, validated, and independently assessed the commitments we made in the MII, as detailed in the enclosed memorandum from John Arthur, Deputy Director, Office of Repository Development. We have transitioned and institutionalized MII-related actions and have established a baseline to foster and sustain continuous improvement. We are continuing forward with the management structure, processes, and culture in place that will, I believe, enable us to perform as a license applicant to the Nuclear Regulatory Commission.

I appreciate the views and feedback provided by the Commission as we implemented the MII, and I look forward to continued productive interactions.

Sincerely,

Margaret S.Y. Chu, Ph.D.
Director
Office of Civilian Radioactive
Waste Management

Enclosure:
1. Memorandum from W. John Arthur, III, to Margaret S.Y. Chu

NMSS07
WM-11

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Enclosure

Memorandum from W. John Arthur, III,
to Margaret S.Y. Chu

Department of Energy
Office of Civilian Radioactive Waste Management
Office of Repository Development
1551 Hillshire Drive
Las Vegas, NV 89134-6321

QA: N/A

APR 02 2004

MEMORANDUM FOR: Dr. Margaret S. Y. Chu (RW-1)

FROM: W. John Arthur, III, Deputy Director

SUBJECT: Management Improvement Initiatives (MII) Implementation and Transition

This memorandum is to inform you that the Program has completed the actions described and established in the Office of Civilian Radioactive Waste Management (OCRWM) MII for five programmatic areas. The five MII action plans included the areas of Roles, Responsibilities, Authority, and Accountability; Quality Assurance (QA) Program; Program Procedures; Corrective Action Program (CAP); and Safety Conscious Work Environment. The actions taken that provide a basis for completion and transition of the MII activities include the following:

A. Program managers have completed all 29 action statements set forth in the five MII Action Plans, and six additional actions addressed by our contractor, Bechtel SAIC Company, LLC (BSC). (see enclosure 1, Appendix A)

B. We confirmed completion of these actions through an independent confirmation approach, *OCRWM Management Improvement Initiatives Confirmation Review Process*, which required responsible managers to demonstrate the completion of their commitments with sufficient objective evidence to support implementation of each action. (see enclosure 1, Appendix A)

C. We have completed Transition Checklists for the five MII Action Plans in accordance with *OCRWM Management Improvement Initiatives Transition Approach*. This approach provided management reviews by our Leadership Council (LC) of actions taken by responsible managers to institutionalize the required actions and incorporate the necessary performance metrics to support a sound basis for closure. (see enclosure 1, Appendix B)

D. In 2003, we developed Performance Indicators (PI) that incorporate and improve upon the original MII effectiveness indicators from 2002. The PIs allow us to monitor and improve performance on a continuous basis. These and other PIs are reviewed at the Office of Repository Development (ORD) Monthly Operating Review (MOR). Essential to improved performance and future successes is the continuous update and refinement of the metrics to ensure meaningful and timely

measurement of our performance and quality program effectiveness as the Program proceeds. Enclosure 1 provides the specific PIs that are utilized for the five management programmatic areas of MII (see enclosure 1, Appendix B, pages 10, 15, 24, 32 and 40 for specific PIs for the identified MII areas). I am also enclosing the Yucca Mountain Project (YMP) Annunciator Panel (enclosure 2) presented at the March Monthly MOR.

E. We performed an Independent Assessment, IA-ORD-2004-001, of the MII process, that concluded the intent of the MII action statements has been met and the actions were appropriately closed.

F. We completed an Independent Review of the MII transition and effectiveness. The Independent Review Report (see enclosure 1) recommended that we consider the actions in MII completed and move on with long-term implementation. The review also had recommendations that are consistent with other assessment results and are being tracked and resolved by our CAP process.

G. We have closed Corrective Action Report BSC-01-C-002 (pertaining to software problems) and related Condition Reports as of March 30, 2004.

The MII incorporated, by reference, two Corrective Actions (CA) to address QA deficiencies. As stated earlier, BSC-01-C-002 (pertaining to software problems) has been closed, but not all the actions for completing BSC-01-C-001 (relative to models) have been completed. Since this CA is being managed under the Program's formal CA processes, we are confident that it will be closed in advance of completion of modeling activities supporting the License Application.

Also, as you are aware, within the last year we have had four independent assessments and reviews of the Program that resulted in some recommendations for improvement. In response, we have developed plans under the auspices of our LC to ensure that recommendations and actions identified by these other Program evaluations were appropriately reviewed, dispositioned, and integrated into our day-to-day work and controls. These independent Program reviews are complementary to our MII efforts and will continue in the future, consistent with the program's philosophy and commitment to oversight, continued improvement, and timely effective CA.

Key to our future success will be our ability to self-identify problems, as well as provide the necessary checks and balances with internal controls. To ensure we have the necessary oversight, CAP, and trending processes in place in order for the ORD to monitor and self assess our performance, I have established a new organization, the Office of Performance Management and Improvement (OPM&I). The OPM&I will assist in developing our continuous improvement culture and assessing future performance as the ORD transitions to an engineering, construction, and procurement phase of the Program.

Effective April 2004, Richard E. Spence became the Acting Director of OPM&I, reporting directly to me.

In summary, the intent of the MII was to provide initial management focus on key functional areas and was envisioned to be transitioned into ongoing line activities. We have completed the MII actions consistent with our original commitment as well as performed confirmation and other confidence building actions relative to these activities. We have closed the CA on software, and we are moving toward closure of the remaining CA on models. We believe we have transitioned and institutionalized the MII-related actions to achieve our initial goals and have established a baseline to foster and sustain continuous improvement. Per the Management Improvement Initiatives Transition Approach (enclosure 3), I recommend your acceptance of the completion and transition.

Should you have any questions regarding this memorandum, please contact Richard E. Spence of my staff at (702) 794-1455.

ORD:RES-0964

Enclosures:
1. MII Independent Review Report, March 19, 2004
2. YMP Annunciator Panel
3. *OCRWM Management Improvement Initiatives Transition Approach*, Rev. 1, December 2003

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Enclosure 1

Management Improvement Initiative (MII)
Independent Review (IR)

Department of Energy
Office of Civilian Radioactive Waste Management
Office of Repository Development
1551 Hillshire Drive
Las Vegas, NV 89134-6321

QA: NA

MAR 26 2004

MEMORANDUM FOR: Dr. Margaret S. Y. Chu (RW-1)

FROM: W. John Arthur, III
Deputy Director

SUBJECT: Management Improvement Initiatives (MII) Independent Review (IR)

This memorandum is to inform you that the Office of Repository Development sponsored the IR performed on the *OCRWM Management Improvement Initiatives*, PLN-CRW-AD-000009, as required by Section 6.1.3 of the MII. The preliminary results of this report were briefed to the Leadership Council on March 16, 2004. A copy of the report is enclosed for your information.

Please note that no new actions are required as a result of this report. However, it is our expectation that the actions put in place from the MII and transitioned into our normal management process will result in continued Program improvement. Essential to improved performance and future success will be our vigilance to update and refine our metrics to ensure meaningful and timely measure of our performance and quality program effectiveness as the Program proceeds.

If you have any questions on the IR, please contact Richard E. Spence at (702) 794-1455.

ORD:RES-0955

Enclosure:
OCRWM Management Improvement Initiatives (MII)
Independent Review Report

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OCRWM Management Improvement Initiatives (MII)
Independent Review Report

March 19, 2004

Performed Onsite by
Longenecker & Associates Inc.

Under contract to

Booz Allen Hamilton Inc.
1551 Hillshire Drive
Las Vegas, NV 89134

Enclosure

EXECUTIVE SUMMARY

The Department of Energy's (DOE's) Yucca Mountain Project (YMP), located in Las Vegas, Nevada, is transitioning from site characterization to licensing application for constructing and operating a geologic repository. To prepare for the position of a successful U. S. Nuclear Regulatory Commission (NRC) licensee that meets mandated requirements for safely operating a high-level nuclear waste repository, the DOE developed five Management Improvement Initiatives (MII) as follows:

1. Program Roles, Responsibilities, Authority, and Accountability (R2A2)
2. Quality Assurance Programs and Processes (QAPP)
3. Program Procedures
4. Corrective Action Program (CAP)
5. Safety-Conscious Work Environment (SCWE).

A total of 29 action statements, including 6 statements with similar responsibilities for the management and operations contractor Bechtel-SAIC Company, LLC, were prescribed for implementing the MII as DOE's commitment to the NRC.

An Independent Review (IR) was conducted to assess effectiveness of the implementation. Based on interviews with YMP management and document review, the IR team assessed each Initiative in two parts:

- Implementing the Action Statements – Did the implementation meet objectives of the MII; were the actions timely, thorough, and complete; and if there was a change from original requirements, what was the impact.

- Transitioning to Long-Term Management – Was a program in place and appropriate for managing long-term commitments and attaining a level of performance expected of an NRC license applicant; and were Performance Indicators (PIs) understood and did they effectively correspond to the Effectiveness Indicators prescribed in the MII.

The IR team observations and recommendations (as appropriate) are listed below:

1. Program Roles, Responsibilities, Authority, and Accountability (R2A2)

- Implementing the Action Statements

Observations:

Requirements for all six action statements were met to support the objective of the R2A2 Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the MII. There was a change of original schedules and execution task descriptions within 4 action statements. The changes deleted open-ended, on-going activities and interim actions that would not add value to nor detract from the intent of the implementation of the MII, and were documented. The IR Team considers this change justifiable and traceable.

- Transitioning to Long-Term Management

Observations:

Line managers have the R2A2 to implement long-term commitments of the MII. The current R2A2 Responsible Managers serve as champions to resolve issues and help line managers focus on a common goal. Because the transition process has just been completed, it is difficult to measure the full effect of the R2A2 Initiative. However, measures appear to be in place to strengthen emphasis by management in this area.

Performance Indicators for R2A2 are not prescribed for Responsible Managers of the R2A2 Initiative. Instead, PIs for R2A2 are prescribed for line managers and incorporated into their Monthly Operating Reviews. The current Trend Evaluation Report (1st quarter FY 2004) indicated no R2A2-related condition reports, thereby exceeding the standard (condition reports show a decreasing trend) of the Effectiveness Indicators for the R2A2 Initiative.

2. Quality Assurance Programs and Processes (QAPP)

- Implementing the Action Statements

Observations:

Requirements for all five action statements were met to support the objective of the QAPP Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the MII. With the re-aligned organization and transition to long-term management, MII implementation has become a high priority and will require substantial dedication to performance indicator evaluation and subsequent modification for effectiveness.

There was a change of original schedules and execution task descriptions within two action statements. DOE deleted periodic meetings and self-assessments because performance of periodic management self-assessments and management reviews while appropriate for long-term activities, were not considered necessary to satisfy the MII action statement. The IR Team considers this change justifiable and traceable.

Recommendation:

As the responsibility for the corrective action program is transferred to the line organizations, a well-documented and pro-active oversight program should be implemented to carefully track program effectiveness and compliance to applicable procedures.

- Transitioning to Long-Term Management

Observations:

Performance Indicators (PIs) for the QAPP were developed to improve action timeliness. The PIs will need to be refined to increase objectivity and time-tested, so that effectiveness can be measured. The current Trend Evaluation Report (1st quarter FY 2004) does not provide data to evaluate the two Effectiveness Indicators described above, because the report analyzes conditions without identification of the origin (self-identified or not) or priority.

3. Program Procedures

- Implementing the Action Statements

Observations:

Requirements for all four action statements were met to support the objective of the Program Procedures Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the MII. There appeared to be a lack of management attention to MII implementation in the past, and changes in managers responsible for action statements could have contributed to the delay. With the re-aligned organization and transition to long-term management, MII implementation has become a high priority.

There were administrative changes in Responsible Managers at both DOE and BSC for three action statements and all changes have been documented. There was a major change of original schedules and execution task descriptions within one action statement. Instead of using respective sets of procedures and hierarchies for developing, approving, and revising procedures, the DOE and BSC agreed to 1) use only the DOE set at that time, 2) refine the definitions of Administrative and Line Procedures, and 3) eliminate unnecessary levels of reviews, as the means to meet the objective of the Program Procedures Initiative. The IR Team reviewed the change and considers this change justifiable. However, as the YMP proceeds to construction and operation stages, a separate set of procedures and hierarchy should be used.

Recommendation:

The YMP considers development of a separate set of procedures and hierarchy for BSC to enhance effectiveness of contractor operation.

- Transitioning to Long-Term Management

Observations:

The current DOE/BSC Responsible Managers for the Program Procedures Initiative are well aware of the improvement needed in several areas and are arranging for an expert team to develop procedures that can reduce or eliminate human errors. They are also continuing to streamline procedures to increase user-friendliness and reduce procedure

processing time from 9 months to approximately 3 months. These are commendable efforts to enhance effectiveness of program procedures.

Performance Indicators (PIs) for Program Procedures were developed recently. The PIs will need to be refined to increase objectivity and time-tested, so that effectiveness can be measured. The current Trend Evaluation Report (1st quarter FY 2004) indicated a generally decreasing trend in procedure-related condition reports (CRs), and the major cause of the CRs as human performance errors in implementing the procedures.

4. Corrective Action Program (CAP)

- Implementing the Action Statements

Observations:

Requirements for all four action statements were met to support the objective of the CAP Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the MII. Interviews with CAP Responsible Managers indicated that multiple corrective action management systems in the past had caused confusion and delay in implementing CAP actions. With the development of a single CAP and transition to long-term management of an integrated corrective action system, implementation will become more effective.

There were administrative changes in Responsible Managers at both DOE and BSC for three action statements and all changes have been documented. There were changes in an original action statement schedule and treatment of legacy data, based on lessons learned. The rationale for the changes was documented and the IR Team considers this change justifiable and traceable.

- Transitioning to Long-Term Management

Observations:

Senior management at DOE/BSC and Responsible Managers for the CAP Initiative are well aware of the improvement needed in several areas and have launched an aggressive and integrated Corrective Action Program to identify software system changes to make the software more user-friendly, improve tools and skills for trending, strengthen self-assessment/reporting, and improve timeliness of corrective action. Because the program is in an early stage, it is difficult to obtain a full measure of effectiveness. However, current attention from senior management and the strong commitment of CAP line managers appear to build the confidence for successful implementation. There are a number of CRs to improve documentation and processes, including CAP program and procedures, self-assessment, and performance measurement. These CRs have estimated completion dates between March and August 2004. Progress is being made to obtain closures on schedule.

In the interview with the IR Team, onsite representatives from NRC expressed concerns regarding quality of technical products and adequacy of corrective actions. The IR

Team believes that technical errors and inconsistencies, and the lack of transparency and traceability, are all contributors to poor quality. Recurrence of conditions is an indicator of ineffective corrective action. The NRC level of confidence could be raised if the YMP demonstrates that it can strengthen these areas.

Performance Indicators (PIs) for CAP are being developed to improve self-reporting culture, timely corrective action/resolution, and to prevent repeated events (recurrence of deficiency). The PIs will need to demonstrate objectivity and focus on outcomes, to measure adequacy and effectiveness of the Corrective Action Program.

The current Trend Evaluation Report (1st quarter FY 2004) includes an analysis of recurring conditions. The analysis did not reveal ineffective corrective actions or procedures, but indicated that human performance error was the major contributor to recurrence. The main cause of human performance error was inadequate documentation (poor quality and/or lack of transparency) of technical reports due to insufficient self-checking. Senior management is actively pursuing improvement in this area.

5. Safety-Conscious Work Environment (SCWE)

- Implementing the Action Statements

Observations:

Requirements for all ten action statements were met to support the objective of the SCWE Initiative but missed the target dates for completion prescribed in the MII. There was a change in requirements in one action statement. The DOE did not establish additional or stand alone procedures for escalation of issues, but did provide rationale that existing project procedures and policy provide adequate means to escalate and resolve issues. The IR Team considers this change justifiable and traceable.

- Transitioning to Long-Term Management

Observations:

The SCWE program relies on the CAP process to achieve the goals for self-reporting and timely resolution of conditions. At this time the CAP program has not obtained sufficient data to quantitatively evaluate effectiveness. The current Trend Evaluation Report (1st quarter FY 2004) does not provide data to evaluate the Effectiveness Indicators; the 2nd quarter FY 2004 trend report may provide sufficient information to evaluate effectiveness.

The IR Team also reviewed the recently developed Performance Indicator (PI) Annunciator Panel structure and performed a sample analysis to assess effectiveness of the PI approach. The IR Team observation was that the structure and definitions of high-level PIs were adequate at this stage of the project. However, much of the underlying rationale for the lower-level PIs was not documented. This lack of documentation was common across all PIs developed for the MII. The IR team therefore recommends documentation to demonstrate transparency, traceability, and

objectivity; balancing timeliness, quality, and effectiveness in developing the PIs; and establishing a basis for assigning colors in the Annunciator Panel and the requirements to be met for changing colors.

In conclusion, the IR team recognizes that while good progress is being made, a number of areas still need improvement. It is an enormous task to change the culture of a large project from scientific analysis to regulatory compliance, and it will take time to achieve a full and meaningful measure of effectiveness. Future planning should allow for a more realistic schedule that reflects the time needed to complete actions. The IR Team recommends that OCRWM:

1. Consider the actions in MII have been completed and move on with long-term implementation of MII commitments.

2. Focus on continuous enhancement of a Corrective Action Program that meets or exceeds applicable requirements in 10CFR63, Subpart G, *Quality Assurance.*

3. Ensure accountability for improving transparency, traceability, consistency, and quality of technical products so that the technical products will be defensible.

4. Refine Performance Indicators so that the effectiveness of accomplishing the stated Initiative and goals/objectives can be readily measured.

5. Perform periodic reviews/assessments as part of the continuous improvement and oversight efforts to support management transition expectations.

CONTENTS

Page

ACRONYMS xv

1. PURPOSE 1

2. BACKGROUND 1

3. SCOPE OF THE INDEPENDENT REVIEW 5

4. ASSESSMENT OF THE EFFORTS TO IMPLEMENT THE MII 6

4.1 PROGRAM ROLES, RESPONSIBILITIES, AUTHORITY, AND ACCOUNTABILITY (R2A2) 6
4.1.1 Implementing the Action Statements 6
4.1.2 Transitioning to Long-Term Management 7
4.2 QUALITY ASSURANCE PROGRAMS AND PROCESSES (QAPP) 8
4.2.1 Implementing the Action Statements 8
4.2.2 Transitioning to Long-Term Management 10
4.3 PROGRAM PROCEDURES 11
4.3.1 Implementing the Action Statements 11
4.3.2 Transitioning to Long-Term Management 12
4.4 CORRECTIVE ACTION PROGRAM (CAP) 14
4.4.1 Implementing the Action Statements 14
4.4.2 Transitioning to Long-Term Management 15
4.5 SAFETY-CONSCIOUS WORK ENVIRONMENT (SCWE) 17
4.5.1 Implementing the Action Statements 17
4.5.2 Transitioning to Long-Term Management 19

5. ASSESSMENT OF THE EFFORTS TO ENHANCE EFFECTIVENESS 20

5.1 PERFORMANCE INDICATORS (PI) 20
5.1.1 Purpose and Function 20
5.1.2 Effectiveness of Approach 21

6. CONCLUSIONS AND RECOMMENDATIONS 23

7. LIST OF DOCUMENTS REVIEWED 23

CONTENTS (CONTINUED)

APPENDIX A – DOE AND BSC MII CONFIRMATION TEAM ACTION STATEMENT STATUS LOG A-1

APPENDIX B – MII TRANSITION CHECKLISTS B-1

APPENDIX C – SCHEDULE OF IR TEAM INTERVIEWS C-1

APPENDIX D – IR TEAM MEMBERS D-1

FIGURES

Page

1. Management Review and Transition Process 4

B-1. 2.3 Quality Assurance Performance Indicators B-17

B-2. Performance Indicators – Procedures B-25

B-3. 2.4 Corrective Action Management System Performance Indicators B-32

B-4. SCWE Performance Indicator Metric Tree B-41

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TABLES

Page

1. Roles, Responsibilities, Authority, and Accountability Action Plan 6

2. Quality Assurance Programs and Processes Action Plan 9

3. Program Procedures Action Plan 11

4. Corrective Action Program Plan 14

5. Safety-Conscious Work Environment Action Plan 18

B-1. Roles, Responsibilities, Authority and Accountability (R2A2) B-1

B-2. Quality Assurance Programs and Processes (QAPP) B-12

B-3. Program Procedures (PP) B-20

B-4. Corrective Acton Program (CAP) B-27

B-5. Safety-Conscious Work Environment (SCWE) B-36

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ACRONYMS

BSC	Bechtel SAIC Company, LLC
CAP	Corrective Action Program
CAR	Corrective Action Report
CR	Condition Report
CT	Confirmation Team
DOE	U.S. Department of Energy
DR	Deficiency Report
HIRD	Harassment, Intimidation, Retaliation, or Discrimination
HQ	Headquarters
IR	Independent Review
LC	Leadership Council
MDS	Metric Definition Sheet
MII	Management Improvement Initiatives
NRC	U.S. Nuclear Regulatory Commission
OCRWM	Office of Civilian Radioactive Waste Management
OQA	Office of Quality Assurance
ORD	Office of Repository Development
PI	Performance Indicator
QA	Quality Assurance
QAPP	Quality Assurance Programs and Processes
QARD	Quality Assurance Requirements and Description
R2A2	Roles, Responsibilities, Accountability, and Accountability
RM	Responsible Manager
SCWE	Safety-Conscious Work Environment
TAT	Transition Assurance Team
YMP	Yucca Mountain Project

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1. PURPOSE

The purpose of this document is to provide a report on the Independent Review (IR) to evaluate the effectiveness of implementing DOE-OCRWM Management Improvement Initiatives (MII). The IR is a step in the transition process to enhance effectiveness of managing MII commitments that were made by the Director of OCRWM to the Nuclear Regulatory Commission.

2. BACKGROUND

In 1998, senior Yucca Mountain Project (YMP) managers recognized that science products developed during the earlier years of the Program, while technically adequate, may not have the full pedigree or traceability necessary to support a license application. As a result, management began to implement a Program transition from a scientific research-driven environment to a project environment subject to nuclear regulatory examination leading to a license to construct and operate a nuclear waste repository. This transition was further facilitated by acquiring a new contractor, Bechtel SAIC Company, LLC (BSC), who assumed management and operations responsibilities in February 2001.

During the period May through August 2001, YMP conducted formal root cause analyses that further identified weaknesses in management systems, quality processes, and organizational roles and responsibilities. These analyses addressed quality issues associated with model validation and software qualification activities, and discrepancies identified in the Total System Performance Assessment for Site Recommendation and related technical products.

As a result, the Director of OCRWM and the senior management team recognized the need for OCRWM Program-level management initiatives to improve program Roles, Responsibilities, Authority, and Accountability (R2A2), clarify elements of the QA program, Safety-Conscious Work Environment (SCWE), and improve the effectiveness of its implementation and related procedural programs. In an effort to identify and address relevant weaknesses and methods to improve in these areas DOE submitted the OCRWM Management Improvement Initiatives (OMII) to the NRC on January 31, 2002. However, the OMII was not acceptable and in July 2002, the OMII was replaced with the Management Improvement Initiatives (MII) . The MII introduced a foundation of continuous improvement with the goal of ensuring YMP work products consistently meet quality objectives, and satisfy the regulatory requirements and product pedigree acceptable to a commercial licensing process.

The Program's current conditions and limitations were analyzed to determine the programmatic areas where improvement was needed, and five key areas for improvement were identified. From these five key areas, action plans were developed to support the objective, desired condition and approach identified in the MII. These action plans addressed the Program's weaknesses including the lower-level individual deficiencies and recommended actions, with the intent that underlying causes for the larger management issues would be corrected.

The objectives for each of the five management improvement areas were identified in the MII as follows:

Program Roles, Responsibilities, Authority, and Accountability (R2A2) – Clearly define R2A2 across the OCRWM Program to define ownership of and accountability for Program functions, and to successfully support the licensing process.

Quality Assurance Programs and Processes (QAPP) – The OCRWM QA program implements applicable regulatory requirements and the associated QA processes to support effective line organization implementation of quality practices that ensure the quality of technical products to support the license application.

Program Procedures – Institute more effective and efficient work control procedures consistent with standard nuclear industry practices. Procedures are user friendly and provide sufficient guidance with a minimum of administrative burden to allow compliance with safety and quality requirements as a routine part of daily business.

Corrective Action Program (CAP) – Implement a single Corrective Action Program to ensure deficiencies and needed improvements are identified, prioritized, and documented, and that timely and effective corrective actions are taken to preclude recurrence of adverse conditions.

Safety-Conscious Work Environment (SCWE) – Foster and sustain an environment in which employees feel free to raise concerns without fear of reprisal, and with confidence that issues will be addressed promptly and appropriately.

The MII specified that a review and closure process would be instituted to ensure the action plans were implemented and effective in improving performance. As part of the MII closure process and prior to advising the NRC of the final closure results, a MII Confirmation Team (CT) was formed in September 2002 to validate completion of the MII actions. The CT efforts resulted in the development of an action statement status log (Appendix A) and supporting document reviews and checklists to confirm completion of action statements.

In a joint Leadership Council meeting in November 2003, it was agreed that MII activities be transitioned to line management and processes, and that DOE establish the approach for how to manage an efficient transition of MII commitments (see MII Transition Approach and resulting Transition Checklists provided in Appendix B). In doing so, DOE expected to achieve a greater level of confidence in the effectiveness of MII actions while ensuring the following near-term transition objectives:

- Commitments have been or will be effectively and orderly transitioned by the Responsible Managers (RMs) from MII (and other related assessments) into day-to-day line management structures and processes.

- The necessary tools and organizations are in place to support continual improvement such that work products consistently meet quality objectives and are fully defensible.

- Improvement initiatives are well integrated within processes, provide useful performance metrics, and provide for a sound basis for effectiveness and closure determinations by the Director of OCRWM.

- Activities affecting long-term implementation of initiatives have been well established and planned, and form sufficient bases for an independent review to be conducted.

- DOE and BSC senior management, through the Leadership Council (LC), have objectively evaluated the baseline achievements of the MII commitments and paths forward for transition to line management.

- Actions affecting transition, effectiveness, and finality of MII are traceable and transparent to NRC and others, as they advance and are incorporated into long-term programs and processes.

The transition process requires line managers to identify those Performance Indicators (PIs) that were developed and used as part of the YMP Monthly Operating Review process. To assess the effectiveness of the MII process in achieving desired objectives, the Office of Civilian Radioactive Waste Management (OCRWM) commissioned an Independent Review. As applicable, some of these PIs were mapped (cross-walked) to the original MII Effectiveness Indicators prescribed by the Director of the OCRWM. The IR Team assessment will be based mainly on the original MII Effectiveness Indicators as a standard to evaluate the effectiveness of MII implementation. Results of this and other independent reviews/assessments will be used by DOE management to determine overall program and MII effectiveness. The management review and transition process are summarized in the flowchart in Figure 1 below.

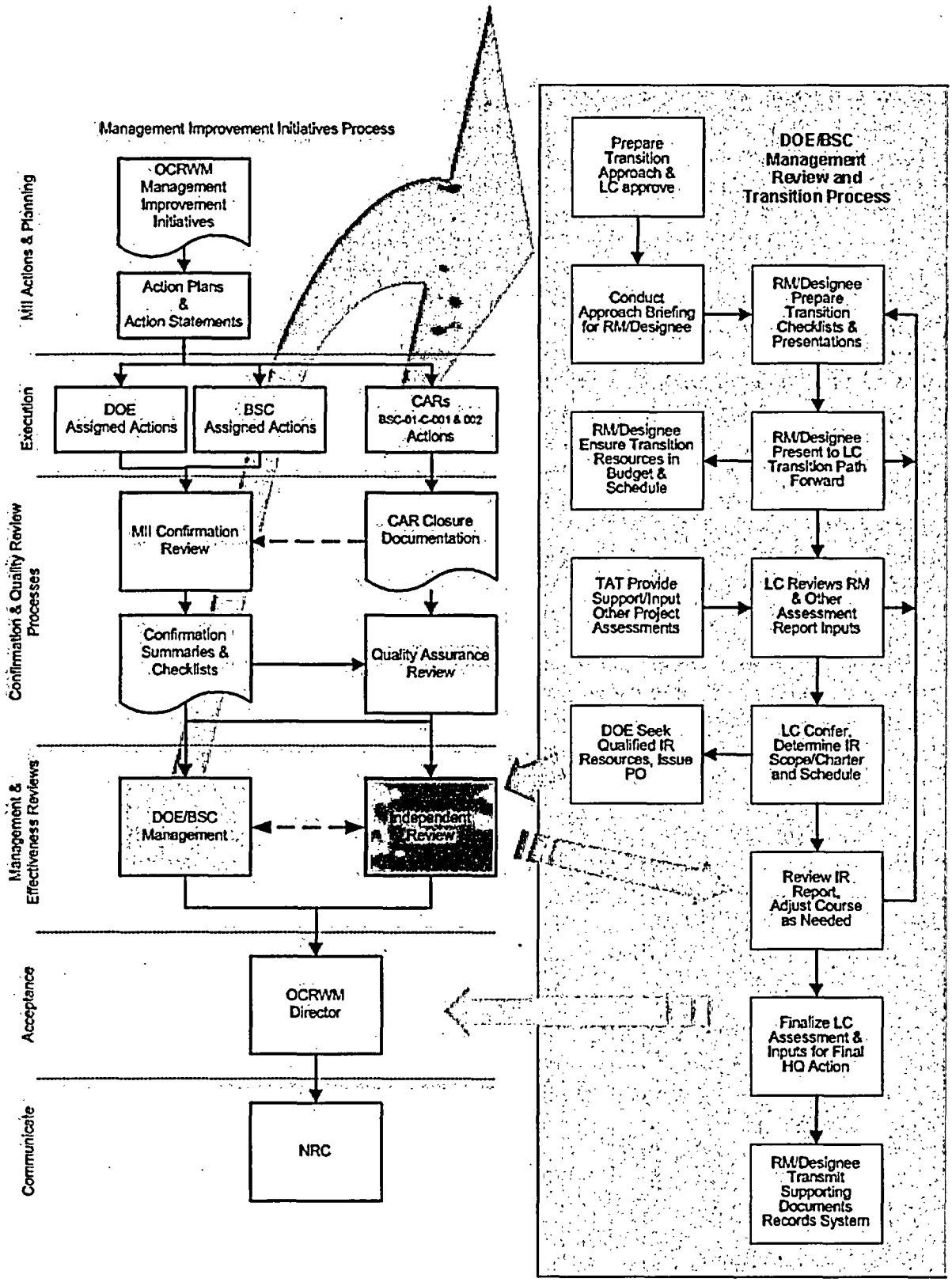

Figure 1. Management Review and Transition Process

3. SCOPE OF THE INDEPENDENT REVIEW

The task of the Independent Review (IR) team is to assess Program effectiveness in implementing the MII. This task requires performing the following activities using the products generated as part of the confirmation and transition processes of the MII, and other supporting documentation, as required:

- Determine if the completion of the 29 action statements (including 6 statements with similar BSC responsibilities) in MII supported the stated "objectives."
- Assess the thoroughness of the approach and implementation activities cited in the Transition Checklists by the Responsible Managers that demonstrate meeting the action plan "objectives."
- Evaluate changes in direction of action statement requirements for impact upon the original "objectives" or "desired condition" described in the MII.
- Evaluate by interview how the action plans and action statement requirements will (or will be) transition for long-term effectiveness, including assessing that roles and responsibilities necessary to achieve successful transition are in place and understood.
- Review performance or effectiveness indicators/metrics developed, and assess if those indicators/metrics provided sufficient information to support measuring effectiveness and product quality to management expectations.

This IR report documents the evaluation of the MII implementation and effectiveness including observations and recommendations for management consideration. The report also addresses any activities or key issues that may either favorably or unfavorably affect transition of the action statements into standard management systems.

The IR report will provide an analysis of the degree to which the MII process improved each of the five key MII action plan areas. Specifically, the IR report will provide an assessment of the completeness of implementing the 29 action statements and the effectiveness of transitioning the implementation to long-term management. The IR team observations (through interviews with YMP management and document review) and recommendations (as appropriate) will be included within Section 4 and Section 5, and overall conclusions and recommendations will be presented in Section 6.

4. ASSESSMENT OF THE EFFORTS TO IMPLEMENT THE MII

4.1 PROGRAM ROLES, RESPONSIBILITIES, AUTHORITY, AND ACCOUNTABILITY (R2A2)

4.1.1 Implementing the Action Statements

- **Action Status**

The R2A2 Initiative was developed because the OCRWM organization, processes, procedures, and skills were structured to support the scientific studies required to determine site suitability. This structure has led to confusion over R2A2 as the YMP transitions toward obtaining a license for repository construction. Therefore, the objective of the R2A2 Initiative is to clearly define R2A2 through realigning the OCRWM organization and management approach to support licensing activities. This objective would be met by completing six action statements in the R2A2 Action Plan, as shown in Table 1 below.

Table 1. Roles, Responsibilities, Authority, and Accountability Action Plan

No.	Action Statement	Responsible Manager	Target Date
1.1	DOE will issue a policy statement identifying the expectations of OCRWM management.	Chu (DOE Headquarters [HQ])	8/02
1.2	DOE will clarify R2A2 within the OCRWM organization to ensure commensurate authority accompanies assigned responsibilities.	Chu (DOE HQ) Dyer (DOE YMP)	9/02
1.3	DOE staff will be oriented through various communications methods to the realigned organization and the associated R2A2. This realignment will allow DOE to manage overall Program performance and hold BSC accountable for performance (i.e., quality, schedule, and cost).	Runkle (DOE HQ) Dyer (DOE YMP)	10/02
1.4	BSC staff will be oriented to the realigned organization and the associated R2A2.	Pearman (BSC)	10/02
1.5	DOE will issue a *Program Manual* that provides the implementing requirements that will guide the organization realignment to support the licensing process.	Runkle (DOE HQ) Dyer (DOE YMP) Pearman (BSC)	10/02
1.6	DOE annual performance appraisals will be revised to reflect manager performance criteria relative to the appropriate R2A2.	Runkle (DOE HQ)	12/02

The MII Confirmation Team reviewed the status of action statements in Table 1, and confirmed that all actions have been completed (see Action Statement Status Log in Appendix A).

- **Effectiveness of Implementation**

The IR Team reviewed the Action Statement Status Log and the R2A2 Transition Checklist (see Appendix B) provided by the DOE and BSC Responsible Managers of the R2A2 Initiative, and interviewed the Responsible Managers (see Appendix C) regarding implementation of the action statements. To assess effectiveness of the implementation, the IR Team considered whether or not the actions met the objectives (including impact of change in direction of action statement requirements), were thorough and complete, and were implemented in a timely manner. The following is a summary of the IR Team observations:

Observations:

Requirements for all six action statements were met to support the objective of the R2A2 Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the Management Improvement Initiatives (see Appendix A). There was a change of original schedules and execution task descriptions within action statements 1.1, 1.2, 1.3, 1.5, and 1.6. The changes deleted open-ended, on-going activities and interim actions that would not add value to nor detract from the intent of the implementation of the MII, and were documented in the R2A2 Transition Checklist as well as in the confirmation process documentation. The IR Team considers this change justifiable and traceable (e-mail from Gene Runkle to Robert Wemheuer)

4.1.2 Transitioning to Long-Term Management

- **Action Status**

The Management Improvement Initiatives Transition Approach describes a path forward for transitioning long-term commitments contained in the R2A2 Initiative into day-to-day, line management processes. The DOE/BSC Responsible Managers of the R2A2 Initiative described their transition approach in the R2A2 Transition Checklist, and identified a metric to measure effectiveness of implementing long-term commitments. On March 2, 2004, DOE and BSC Responsible Managers for this MII Action Plan certified the actions taken are complete and that adequate management systems are in place to assure continued implementation of the requirements described in the transition plans.

- **Effectiveness of Implementation**

The IR Team reviewed the R2A2 transition approach, PIs, and plan for continued oversight, monitoring and transition activities. The IR Team also interviewed the R2A2 Responsible Managers regarding implementation of their approach and plan. To assess effectiveness of the transition, the IR Team considered whether or not R2A2 was in place and appropriate for managing long-term commitments and attaining a level of performance expected of an NRC license applicant. The IR Team also reviewed the PIs developed by the R2A2 Responsible Managers and the Trend Evaluation Report to

evaluate if the PIs were understood and effectively correspond to the Effectiveness Indicators prescribed in the Management Improvement Initiatives as follows:

1. Program quality and schedule performance show consistently improving trends.

2. Deficiency Reports (DRs) and Corrective Action Reports (CARs) related to R2A2 show a consistently decreasing trend to within established control limits.

The IR Team assessment resulted in the following observations:

Observations:

Line managers have the R2A2 to implement long-term commitments of the MII. The current R2A2 Responsible Managers serve as champions to resolve issues and help line managers focus on a common goal. Because the transition process has just been completed, it is difficult to measure the full effect of the R2A2 Initiative across the entire spectrum of the program. However, measures appear to be in place to strengthen emphasis by management in this area, for example, changes made to performance appraisal processes, improve clarity of R2A2 in procedures and accountability in CR assignments.

Performance Indicators (PIs) for R2A2 are not prescribed for Responsible Managers of the R2A2 Initiative. Instead, PIs for R2A2 are prescribed for line managers and incorporated into their Monthly Operating Reviews. The current Trend Evaluation Report (1st quarter FY 2004) indicated no R2A2-related DRs or CARs, thereby exceeding the standard (show a consistently decreasing trend) of the Effectiveness Indicators for the R2A2 Initiative.

4.2 QUALITY ASSURANCE PROGRAMS AND PROCESSES (QAPP)

4.2.1 Implementing the Action Statements

- **Action Status**

The QAPP Initiative was developed because the OCRWM performance requires improvement to support the mission of safe, high-quality design, construction, and operation of a high-level waste repository that meets the NRC requirements for a license. Therefore, the objective of the OCRWM QA program is to implement the applicable regulatory requirements and the associated QA processes to support effective line organization implementation of quality practices that ensure the quality of technical products to support the license application. The objective would be met by completing five action statements in the QAPP Action Plan, as shown in Table 2 below.

Table 2. Quality Assurance Programs and Processes Action Plan

No.	Action Statement	Responsible Manager	Target Date
2.1	DOE will issue a policy statement identifying the expectations of OCRWM management, including line management's ownership of the QA program as the principal means of achieving quality. (This action will be completed in conjunction with R2A2 actions)	Chu (DOE HQ)	8/02
2.2	DOE will clarify R2A2 within the OCRWM organization, including the R2A2 for DOE and BSC QA. (This action will be completed in conjunction with R2A2 actions)	Chu (DOE HQ)	9/02
2.3a	DOE and BSC respective staffs will be oriented to the realigned DOE and BSC QA R2A2s through various communication methods. (This action will be completed in conjunction with R2A2 actions)	Runkle (DOE HQ)	10/02
2.3b	DOE and BSC respective staffs will be oriented to the realigned DOE and BSC QA R2A2s through various communication methods. (This action will be completed in conjunction with R2A2 actions)	Pearman (BSC)	10/02
2.4	The QARD will be reviewed and revised as necessary to ensure that applicable requirements are identified, documented, and traceable to regulatory drivers. (Internal and external review cycle will follow.)	Runkle (DOE HQ)	11/02
2.5	DOE annual performance appraisals will be revised to include performance criteria that address line management's responsibility to implement the OCRWM QA program.	Runkle (DOE HQ)	12/02

The MII Confirmation Team reviewed the status of action statements in Table 2, and confirmed that all actions have been completed (see Action Statement Status Log in Appendix A).

- **Effectiveness of Implementation**

The IR Team reviewed the Action Statement Status Log and the QAPP Transition Checklist (see Appendix B) provided by the DOE and BSC Responsible Managers of the QAPP Initiative, and interviewed the Responsible Managers (see Appendix C) regarding implementation of the action statements. To assess effectiveness of the implementation, the IR Team considered whether or not the actions met the objectives (including impact of change in direction of action statement requirements), were thorough and complete, and were implemented in a timely manner. The following is a summary of the IR Team observations and recommendation:

Observations:

Requirements for all five action statements were met to support the objective of the QAPP Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the Management Improvement Initiatives (see Appendix A). With the re-aligned organization and transition to long-term management, MII implementation has become a high priority and will require substantial dedication to performance indicator evaluation and subsequent modification for effectiveness.

There was a change of original schedules and execution task descriptions within action statements 2.1 and 2.4. DOE deleted periodic meetings and self-assessments from these action statements. The DOE noted that performance of periodic management self-assessments and management reviews while appropriate for long-term activities, were not considered necessary to satisfy the MII action statement. The IR Team considers this change justifiable and traceable (e-mail from Dennis Brown to R. Memheuer).

Recommendation:

As the responsibility for the corrective action program is transferred to the line organizations, a well-documented and pro-active oversight program should be implemented to carefully track program effectiveness and compliance to applicable procedures.

4.2.2 Transitioning to Long-Term Management

- **Action Status**

The *Management Improvement Initiatives Transition Approach* describes a path forward for transitioning long-term commitments contained in the QAPP Initiative into day-to-day, line management processes. The DOE/BSC Responsible Managers of the QAPP Initiative described their transition approach in the QAPP Transition Checklist, and developed performance Indicators (PIs) to measure effectiveness of implementing long-term commitments. On March 2, 2004, DOE and BSC Responsible Managers for this MII Action Plan certified the actions taken are complete and that adequate management systems are in place to assure continued implementation of the requirements described in the transition plans.

- **Effectiveness of Implementation**

The IR Team reviewed the QAPP transition approach, PIs, and plan for continued oversite, monitoring, and transition activities. The IR Team also interviewed the QAPP Responsible Managers regarding implementation of their approach and plan. To assess effectiveness of the transition, the IR Team considered whether or not program procedures were in place and appropriate for managing long-term commitments and attaining a level of performance expected of a NRC license applicant. The IR Team also reviewed the PIs developed by the QAPP Responsible Managers and the Trend Evaluation Report to evaluate if the PIs were understood and effectively correspond to the Effectiveness Indicators prescribed in the Management Improvement Initiatives as follows:

1. Number of high-priority self-identified DRs and CARs compared to the total number of high-priority identified DRs and CARs (self-identified/total identified goal is greater that 80 percent).

2. Average closure time for high-priority corrective action DRs and CARs and the number of delinquent corrective actions for high-priority QA-related DRs and CARs show a decreasing trend to within established control limits.

Observation:

Performance Indicators (PIs) for the QAPP were developed to improve action timeliness. The PIs will need to be refined to increase objectivity and time-tested, so that effectiveness can be measured. The current Trend Evaluation Report (1st quarter FY 2004) does not provide data to evaluate the two effectiveness indicators described above, because the report analyzes conditions without identification of the origin (self-identified or not) or priority.

4.3 PROGRAM PROCEDURES

4.3.1 Implementing the Action Statements

- **Action Status**

The Program Procedures Initiative was developed because the OCRWM procedures were typically overly prescriptive and inefficient. Therefore, the objective of the Program Procedures Initiative is to institute more effective and efficient work control procedures consistent with standard nuclear industry practices. The objective would be met by completing four action statements in the Program Procedures Action Plan, as shown in Table 3 below.

Table 3. Program Procedures Action Plan

No.	Action Statement	Responsible Manager	Target Date
3.1	DOE will clarify R2A2 within the OCRWM organization, including clear identification of the work scope and responsibilities for procedure development and implementation of each organization. (This action will be completed in conjunction with R2A2 actions; see Section 5.1.)	Chu (DOE HQ)	9/02
3.2a	DOE and BSC will review their respective procedure sets and define procedure hierarchies based on their work requirements.	Horton (DOE YMP)	10/02
3.2b	DOE and BSC will review their respective procedure sets and define procedure hierarchies based on their work requirements.	Williams (BSC)	10/02
3.3a	New or revised procedures will be issued in compliance with OCRWM requirements using a phased approach.	Horton (DOE YMP)	Starting 11/02
3.3b	New or revised procedures will be issued in compliance with OCRWM requirements using a phased approach.	Williams (BSC)	Starting 11/02
3.4a	Personnel that will use the new or revised procedures will be trained prior to implementing the procedures.	Van Der Puy (DOE YMP)	Starting 11/02
3.4b	Personnel that will use the new or revised procedures will be trained prior to implementing the procedures.	Williams (BSC)	Starting 11/02

The MII Confirmation Team reviewed the status of action statements in Table 3, and confirmed that all actions have been completed (see Action Statement Status Log in Appendix A).

- **Effectiveness of Implementation**

The IR Team reviewed the Action Statement Status Log and the Program Procedures Transition Checklist (see Appendix B) provided by the DOE and BSC Responsible Managers of the Initiative, and interviewed the Responsible Managers (see Appendix C) regarding implementation of the action statements. To assess effectiveness of the implementation, the IR Team considered whether or not the actions met the objectives (including impact of change in direction of action statement requirements), were thorough and complete, and were implemented in a timely manner. The following is a summary of the IR Team observations and recommendation:

Observations:

Requirements for all four action statements were met to support the objective of the PP Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the Management Improvement Initiatives (see Appendix A). Interviews with Program Procedures Responsible Managers indicated that there was a lack of management attention to MII implementation in the past, and changes in managers responsible for action statements could have contributed to the delay. With the re-aligned organization and transition to long-term management, MII implementation has become a high priority.

There were administrative changes in Responsible Managers at both DOE and BSC for three action statements and all changes have been documented. There was a major change of original schedules and execution task descriptions within action statement 3.2. Instead of using respective sets of procedures and hierarchies for developing, approving, and revising procedures, the DOE and BSC agreed to 1) use only the DOE set at that time, 2) refine the definitions of Administrative and Line Procedures, and 3) eliminate unnecessary levels of reviews, as the means to meet the objective of the Program Procedures Initiative. This change was documented in the Program Procedures Transition Checklist as well as in the confirmation process documentation. The IR Team reviewed the change, discussed with the DOE/BSC Responsible Managers, and considers this change justifiable (e-mail from Mark Van Der Puy to R. Wemheuer) because a single set at this stage of the program is workable. However, as the YMP proceeds to construction and operation stages, a separate set of procedures and hierarchy should be used.

Recommendation:

The YMP considers development of a separate set of procedures and hierarchy for BSC to enhance effectiveness of contractor operation.

4.3.2 Transitioning to Long-Term Management

- **Action Status**

The Management Improvement Initiatives Transition Approach describes a path forward for transitioning long-term commitments contained in the Program Procedures Initiative

into day-to-day, line management processes. The DOE/BSC Responsible Managers of the Program Procedures Initiative described their transition approach in the Program Procedures Transition Checklist, and developed performance Indicators (PIs) to measure effectiveness of implementing long-term commitments. On March 5, 2004, DOE and BSC Responsible Managers for this MII Action Plan certified the actions taken are complete and that adequate management systems are in place to assure continued implementation of the requirements described in the transition plans.

- **Effectiveness of Implementation**

The IR Team reviewed the Program Procedures transition approach, PIs, and plan for continued oversight, monitoring, and transition activities. The IR Team also interviewed the Program Procedures Responsible Managers regarding implementation of their approach and plan. To assess effectiveness of the transition, the IR Team considered whether or not program procedures were in place and appropriate for managing long-term commitments and attaining a level of performance expected of a NRC license applicant. The IR Team also reviewed the PIs developed by the Program Procedures Responsible Managers and the Trend Evaluation Report to evaluate if the PIs were understood and effectively correspond to the Effectiveness Indicators prescribed in the Management Improvement Initiatives as follows:

1. Decreasing number of DRs and CARs with a cause code of ineffective procedures.

2. Average cycle time for procedure revisions shows a decreasing trend to within established control limits.

3. Average age of procedure Interim Change Notices shows a decreasing trend to within established control limits.

The IR Team assessment resulted in the following observations:

Observations:

The current DOE/BSC Responsible Managers for the Program Procedures Initiative are well aware of the improvement needed in several areas including hierarchy (need better structure for BSC) and approval processing time (too long). They are arranging for an expert team to develop procedures that can reduce or eliminate human errors. They are also continuing to streamline procedures to increase user-friendliness, for example, reducing a corrective action program procedure from 87 pages to 16 pages by restructuring and moving the administrative part into an Administrative Guide (to be developed). Procedure system experts have benchmarked YMP procedures vs. nuclear industry procedures and have improved document hierarchy. Actions taken so far since the MII include elimination of unnecessary approval sign-offs, prescription of more objective (requirement-driven) criteria for approval, and the procedure processing time has been reduced from 9 months to approximately 3 months. These are commendable efforts to enhance effectiveness of program procedures.

Performance Indicators (PIs) for Program Procedures were developed recently to improve procedure quality, action timeliness, and compliance. The PIs will need to be refined to increase objectivity and time-tested, so that effectiveness can be measured. A more detailed discussion of the PIs is presented in Section 5.1. The current Trend Evaluation Report (1st quarter FY 2004) indicated a generally decreasing trend in procedures-related condition reports (CRs), and the major cause of the CRs is human performance errors in implementing the procedures. This causal factor will be discussed in the IR Team assessment of the Corrective Action Program (Section 4.4).

4.4 CORRECTIVE ACTION PROGRAM (CAP)

4.4.1 Implementing the Action Statements

- **Action Status**

The CAP Initiative was developed because multiple corrective action management systems existed in the OCRWM for identifying, tracking, and resolving condition as documented in the Condition Reports (CRs). The objective of the CAP Initiative is to implement a single Corrective Action Program to ensure deficiencies and needed improvements are identified, prioritized, and documented, and that timely and effective corrective actions are taken to preclude recurrence of adverse conditions. This objective would be met by completing four action statements in the CAP Plan, as shown in Table 4 below.

Table 4. Corrective Action Program Plan

No.	Action Statement	Responsible Manager	Target Date
4.1	The Director of OQA will be assigned responsibility and held accountable for a single improved OCRWM Corrective Action Program.	Chu (DOE HQ)	8/02
4.2	DOE will form a task team to establish the Program requirements and specifications for the Corrective Action Program.	Horton (DOE YMP)	9/02
4.3	BSC will implement a single OCRWM Corrective Action Program consistent with nuclear industry practices, including tracking, trending, reporting, and closure verification processes.	Pearman (BSC)	2/03
4.4	BSC will define and implement a self-assessment program, a lessons learned program, and a method to identify and correct adverse conditions.	Pearman (BSC)	3/03

The MII Confirmation Team reviewed the status of action statements in Table 4, and confirmed that all actions have been completed (see Action Statement Status Log in Appendix A).

- **Effectiveness of Implementation**

The IR Team reviewed the Action Statement Status Log and the CAP Transition Checklist (see Appendix B) provided by the DOE and BSC Responsible Managers of the CAP Initiative, and interviewed the Responsible Managers (see Appendix C) regarding implementation of the action statements. To assess effectiveness of the

implementation, the IR Team considered whether or not the actions met the objectives (including impact of change in direction of action statement requirements), were thorough and complete, and were implemented in a timely manner. The following is a summary of the IR Team observations:

Observations:

Requirements for all four action statements were met to support the objective of the CAP Initiative. All actions were confirmed by the Initiative Responsible Managers as completed, but missed the target dates for completion prescribed in the Management Improvement Initiatives (see Appendix A). Interviews with CAP Responsible Managers indicated that multiple corrective action management systems in the past had caused confusion and delay in implementing CAP actions. With the development of a single CAP and transition to long-term management of an integrated corrective action system, implementation will become more effective.

There were administrative changes in Responsible Managers at both DOE and BSC for three action statements and all changes have been documented. There were changes in an original action statement (4.3) schedule and treatment of legacy data, based on lessons learned. The rationale for the changes was documented and the IR Team considers this change justifiable and traceable.

4.4.2 Transitioning to Long-Term Management

- **Action Status**

The Management Improvement Initiatives Transition Approach describes a path forward for transitioning long-term commitments contained in the CAP Initiative from the QA organization into day-to-day, line management processes. The DOE/BSC Responsible Managers of the CAP Initiative described their transition approach in the CAP Transition Checklist, and developed preliminary Performance Indicators (PIs) to measure effectiveness of implementing long-term commitments. On March 1, 2004, DOE and BSC Responsible Managers for this MII Action Plan certified the actions taken are complete and that adequate management systems are in place to assure continued implementation of the requirements described in the transition plans.

Over the last year, several independent assessments were conducted on the OCRWM Program, and recommended actions were incorporated into the integrated CAP, as appropriate, for tracking and timely closure.

- **Effectiveness of Implementation**

The IR Team reviewed the CAP transition approach, PIs, and plan for continued oversight/monitoring/transition activities. The IR Team also interviewed the CAP Responsible Managers regarding implementation of their approach and plan. Additionally, the IR Team interviewed two senior NRC onsite representatives at the YMP to obtain their views on the CAP effectiveness and NRC expectations. To assess effectiveness of the transition, the IR Team considered whether or not the single CAP

system was in place and appropriate for managing long-term commitments and attaining a level of performance expected of a NRC license applicant. The IR Team also reviewed the PIs developed by the CAP Responsible Managers and the Trend Evaluation Report to evaluate if the PIs were understood and effectively correspond to the Effectiveness Indicators prescribed in the Management Improvement Initiatives as follows:

1. Number of repetitive conditions (decreasing trend).

2. Average closure duration for high-priority DRs and CARs (decreasing trend to within established control limits).

3. Less than 10 percent of the high-priority DRs and CARs closures are delinquent.

The IR Team assessment resulted in the following observations and recommendations:

Observations:

Senior management at DOE/BSC and Responsible Managers for the CAP Initiative are well aware of the improvement needed in several areas, including software (too cumbersome), corrective actions (recurrence of deficiencies), and self-reporting (insufficient). They have launched an aggressive and integrated Corrective Action Program to identify software system changes to make the software more user-friendly, improve tools and skills for trending, strengthen self-assessment/reporting, and improve timeliness of corrective action. Because the program is in an early stage, it is difficult to obtain full measure effectiveness. However, current attention from senior management and the strong commitment of CAP line managers appear to build the confidence for successful implementation. There are a number of CRs to improve documentation and processes, including CAP program and procedures, self-assessment, and performance measurement. These CRs have estimated completion dates between March and August, 2004. Progress is being made to obtain closures on schedule.

In the interview with the IR Team, onsite representatives from NRC expressed concerns regarding quality of technical products and adequacy of corrective actions. The IR Team believes that technical errors and inconsistencies, and the lack of transparency and traceability, are all contributors to poor quality. Recurrence of conditions is an indicator of ineffective corrective action. The NRC level of confidence could be raised if the YMP demonstrates that it can strengthen these areas. An example is the closure of CR 943 which is related to an NRC Open Item 03-02. This condition report indicated several changes to the MII were not documented to meet the intent of OCRWM Director's commitment (to the NRC). A review by the IR Team indicated that all changes in direction from the original MII have been documented and justified in the Transition Checklists, with supporting documents in the confirmation process documentation. The NRC onsite representative would consider closure of the Open Item if this information was made available, and the related Condition Report CR 943 is satisfactorily closed by the Responsible Managers.

Performance Indicators (PIs) for CAP are being developed to improve self-reporting culture, timely corrective action/resolution, and to prevent repeated events (recurrence of deficiency). The PIs will need to demonstrate objectivity and focus on outcomes to measure adequacy and effectiveness of the Corrective Action Program.

The current Trend Evaluation Report (1st quarter FY 2004) includes an analysis of recurring conditions. The analysis did not reveal ineffective corrective actions or procedures, but indicated that human performance error was the major contributor to recurrence. The main cause of human performance error was inadequate documentation (poor quality and/or lack of transparency) of technical reports due to insufficient self-checking. Senior management is actively pursuing improvement in this area, including issuance of new QA procedures on models and scientific analyses, and directing a team of subject experts from national laboratories and regulatory staff to review/revise the Analysis and Modeling Reports of the YMP. This team is expected to perform self-checking to bring consistency in quality of the technical reports, transparency and traceability of the data, and compliance with procedural requirements.

4.5 SAFETY-CONSCIOUS WORK ENVIRONMENT (SCWE)

4.5.1 Implementing the Action Statements

- **Action Status**

The SCWE Initiative was developed because the OCRWM performance requires an environment in which employees feel free to raise concerns without fear of harassment, intimidation, retaliation, or discrimination (HIRD) and with confidence that issues will be addressed promptly and appropriately. Therefore, the objective of the OCRWM SCWE program is to implement the environment of consistent workforce awareness, skills, and accountability that allows employees to raise concerns with confidence and to cultivate a trusted alternate path for effective and timely resolution of employee concerns. The objective would be met by completing ten action statements in the SCWE Action Plan, as shown in Table 5 below.

Table 5. Safety-Conscious Work Environment Action Plan

No.	Action Statement	Responsible Manager	Target Date
5.1	On April 30, 2002, the OCRWM Program Director and the YMP Project Manager issued a revised and expanded SCWE policy. This policy has been communicated to employees through meetings and project communiqués. The YMP Project Manager and the BSC Deputy General Manager are designated as SCWE change champions.	Chu (DOE HQ)	Completed 5/02
5.2	DOE will implement SCWE and employee concerns program performance metrics into BSC contract assessment.	Runkle (DOE HQ)	Completed 7/02
5.3	DOE will modify the BSC contract and other DOE contracts to require the implementation of the Program SCWE policy requirements.	Runkle (DOE HQ)	8/02 – BSC 10/02 – Others
5.4	DOE will eliminate the backlog of open OCRWM employee concerns and shorten the life-cycle for addressing concerns.	Runkle (DOE HQ)	8/02
5.5	DOE will establish a DOE policy and procedures regarding expectations to escalate issues in an expedient manner.	Dyer (DOE YMP)	8/02
5.6	BSC will establish a BSC policy and procedures regarding expectations to escalate issues in an expedient manner.	Pearman (BSC)	8/02
5.7a	DOE and BSC will develop and/or revise SCWE-related Program-wide employee and supervisor/manager training modules based upon nuclear industry practices.	Van Der Puy (DOE YMP)	8/02
5.7b	DOE and BSC will develop and/or revise SCWE-related Program-wide employee and supervisor/manager training modules based upon nuclear industry practices.	Turner (BSC)	8/02
5.8	BSC will establish internal BSC mechanisms for reporting, investigating, and resolving employee concerns.	Pearman (BSC)	9/02
5.9a	DOE and BSC will conduct employee and supervisor/manager SCWE training.	Van Der Puy (DOE YMP)	12/02
5.9b	DOE and BSC will conduct employee and supervisor/manager SCWE training.	Turner (BSC)	12/02
5.10	An external SCWE expert group will evaluate YMP-wide SCWE.	Chu (DOE HQ)	7/03

The MII Confirmation Team reviewed the status of action statements in Table 5, and confirmed that all actions have been completed (see Action Statement Status Log in Appendix A).

- **Effectiveness of Implementation**

The IR Team reviewed the Action Statement Status Log and the SCWE Transition Checklist (see Appendix B) provided by the DOE and BSC Responsible Managers of the SCWE Initiative, and interviewed the Responsible Managers (see Appendix C) regarding implementation of the action statements. To assess effectiveness of the implementation, the IR Team considered whether or not the actions met the objectives (including impact of change in direction of action statement requirements), were thorough and complete, and were implemented in a timely manner. The following is a summary of the IR Team observations:

Observations:

Requirements for all ten action statements were met to support the objective of the SCWE Initiative. All actions were confirmed completed, but missed the target dates for completion prescribed in the Management Improvement Initiatives (see Appendix A). With the re-aligned organization and transition to long-term management, MII implementation through an integrated CAP process and a structured approach for handling employee concerns regarding SCWE issues has become a high priority and includes very high goals for the line organization self-reporting of conditions.

There was a change in direction of Action Statement Requirements that were modified in action statement 5.5. The DOE did not establish additional or stand –alone procedures for escalation of issue, but did provide rationale that existing project procedures and policy provide adequate means to escalate and resolve issues. The IR Team considers this change justifiable and traceable (e-mail from Mark Van Der Puy to R. Wemheuer).

4.5.2 Transitioning to Long-Term Management

- **Action Status**

The MII actions were designed to provide the initial framework for achieving necessary SCWE awareness, skills, and accountability within the OCRWM workforce. Now that the initial SCWE framework is in place, the MII initiatives have transitioned to a detailed SCWE transition plan to ensure appropriate follow-through of MII objectives. The SCWE action plan is endorsed by the OCRWM Leadership Council and details specific follow-through actions designed to sustain continued SCWE awareness, skills development, and personal accountability by focusing on the four essential elements of a safety conscious work environment (SCWE Four Pillars):

- Management support of employees raising concerns without fear of retaliation
- Effective normal problem resolution processes through the Differing Professional Opinion process and the CAP
- Effective alternate problem resolution processes through Employee Concerns Program and OCRWM Concerns Program
- Effective methods to detect and prevent retaliation through designation and training of members of the SCWE Review Team

DOE and BSC Responsible Managers for this initiative described their transition approach in the SCWE Transition Checklist, and developed preliminary Performance Indicators to measure effectiveness of implementing long-term commitments. On March 1, 2004, DOE and BSC Responsible Managers for this MII Action Plan certified the actions taken are complete and that adequate management systems are in place to assure continued implementation of the requirements described in the transition plans.

- **Effectiveness of Implementation**

The IR Team reviewed the SCWE transition approach, PIs, and plan for continued oversight, monitoring, and transition activities. The IR Team also interviewed the SCWE Responsible Managers regarding implementation of their approach and plan. To assess effectiveness of the transition, the IR Team considered whether or not the SCWE was in place and effective in attaining a level of performance expected of a NRC license applicant. The IR Team also reviewed the PIs developed by the SCWE Responsible Managers and the Trend Evaluation Report to evaluate if the PIs were understood and effectively correspond to the Effectiveness Indicators prescribed in the Management Improvement Initiatives as follows.

1. The number of substantiated HIRD employee concerns (generally decreasing).

2. The cycle time for addressing employee concerns is less than 30 days for routine concerns and less than 90 days for HIRD concerns that involve complex issues or complex concerns.

3. The external evaluation SCWE assessment results show positive changes.

The IR Team assessment resulted in the following observations:

Observations:

The SCWE program relies on the CAP process to achieve the goals for self-reporting and timely resolution of conditions. The integrated CAP recently implemented is expected to provide a more efficient resolution process of problems that are self-reported, so that employee concerns regarding SCWE can receive timely and proper management action. However, at this time the CAP program has not obtained sufficient data to quantitatively evaluate effectiveness. The current Trend Evaluation Report (1st quarter FY 2004) does not provide data to evaluate the Effectiveness Indicators described above. The 2nd quarter FY 2004 trend report may provide sufficient information to evaluate effectiveness.

5. ASSESSMENT OF THE EFFORTS TO ENHANCE EFFECTIVENESS

5.1 PERFORMANCE INDICATORS (PI)

5.1.1 Purpose and Function

The purpose of the Performance Indicators (PIs) is to provide a comprehensive management tool that also contains critical information to track performance in each of the five MII areas. It can generate a wealth of statistical information to monitor effectiveness of the business and project management systems used by the YMP and provide senior managers a tool to focus on areas needing improvement.

The PIs were developed by key management and supervisory personnel at YMP, using a structured and iterative process documented in final form by Metric Definition Sheets (MDS) for

each PI. The MDS for each PI included definitions of the high-level PI and weighted data that roll-up to the numerical performance of the PI manifested by a color scheme of blue, green, yellow and red. The scale of performance is described by the following: blue is sustaining good performance for at least six months, green indicates performance is good, yellow indicates a concern that requires attention, and red indicates a significant concern or deficiency that requires significant evaluation, planning and response.

An Annunciator Panel was developed to include PIs in the following areas:

- **Work Execution** (Lagging Indicators) – Areas that represent the "core business" of the YMP Project organization. The specifics that make up this part of the annunciator panel will change over time as the project moves from Licensing and Engineering to Construction and then Operation and Maintenance.

- **Management** (Leading Indicators) – this area contains indicators for the major groups, functions and programs that support the "core business" groups included in the Work Execution zone of the Annunciator Panel. These inputs are not as likely to change as the Project moves from phase to phase. Many of the annunciator inputs represent long-term programs, processes and organizational effectiveness areas that will continue to work in support of the Project regardless of the operational phase.

Within each of the above areas, the annunciator panel consists of two parts:

- **Primary Annunciators** – The Annunciator Panel performance indicators that focus on the critical indicators supporting mission-critical activities.

- **Secondary Annunciators** – Annunciator inputs supported by third and fourth level indicators that are "rolled-up" to fill the upper levels.

This format was frozen by DOE so that lower level indicators could be developed and populated in the panel. Future changes will be allowed after considerations and approval by senior management. However, current PIs supporting each of the five MII areas were presented as part of the MII Transition Checklists.

5.1.2 Effectiveness of Approach

- PI Sample Analysis

The IR Team reviewed the PI Annunciator Panel structure and the manual used to train the employees to develop the PIs. The IR Team was briefed by responsible personnel and reviewed selected MDSs to determine if adequate basis and sufficient data were included in the MDSs to support the "roll-up" of underlying PIs. The IR Team performed a sample analysis by reviewing the MDSs for SCWE in detail and additional information provided by the developer of the MDSs. The IR Team also interviewed responsible managers for each of the Primary PIs on the Annunciator Panel to assess the degree of understanding of the purpose of the PIs and the basis for the development of each PI. The following is a summary of the IR Team observations and recommendations:

Observations:

The IR Team recognizes the enormous effort and commitment required to develop, deploy and maintain the PI Annunciator Panel. The IR Team also acknowledges that the Annunciator Panel carries potential paradigms from similar applications in the U.S. Nuclear Power Program that may introduce interpretations (by regulators and stakeholders) of the color changes regarding performance for each indication.

The following example illustrates this paradigm. A change in a PI color indication on a control panel at an operating nuclear power plant occurs because a measurement of temperature, pressure or radiation level exceeds an administrative or critical set-point that requires immediate actions described in the plant Technical Specifications. Set-points are supported by thorough and objective technical analyses and Technical Specifications are established in the Safety Analysis to support license application. In contrast, the Annunciator Panel used by the YMP is a management tool and typical of PI panels used in other industries by management. It is not however, subject to the same level of technical analysis and rigor supporting an operating nuclear power plant control room as illustrated in the paradigm. A change from green to yellow on the YMP Annunciator Panel indicates that the system is able to find a problem before the variance affects the objectives or outcomes of established goals, and the problem may not require an immediate response. Furthermore, the PI annunciator panel basis will evolve and change as the rationale for the underlying basis is adjusted to track project critical data and adjust to new definitions of performance and effectiveness. Management may plan to periodically change trigger points (to initiate a color change) for the purpose of establishing more accurate indications of performance or to adjust the sensitivity to respond sooner.

The IR Team believes that the structure and definitions of high-level PIs are adequate at this stage of the project. However, much of the underlying rationale for the lower level PIs were not documented in the MDSs, especially when the rationale was based on best judgment. As transition proceeds and personnel leaves the Project, and as the lower level PIs are adjusted to enhance performance, the original rationale and basis will not be traceable. This lack of documentation was common across all PIs developed for the MII.

Recommendations:

1. Document the rationale and analysis for developing all PIs to demonstrate transparency, traceability, and objectivity. In this way, positive attributes of the PI system can be preserved, the data can be defensible, and the paradigm from nuclear power plant application can be overcome.

2. In developing PIs for each MII action area, consider the balance among timeliness of action, quality of product, and effectiveness of implementation.

3. For each PI, establish (and document) a basis for assigning colors in the Annunciator Panel and the requirements to be met for changing colors.

6. CONCLUSIONS AND RECOMMENDATIONS

Over the last 15 months, the YMP has made considerable efforts to complete all action statement requirements described in the Management Improvement Initiatives. The commitment of the new senior managers at both DOE and BSC, the transition to line management for long-term implementation of the MII, the establishment of a single, integrated, Corrective Action Program, and the development of a Performance Indicator system are all commendable efforts to ensure YMP work products meet quality objectives for a successful licensing application.

While progress is being made, the IR Team observed a number of areas needing improvement. It is an enormous task to change the culture of a large project from scientific analysis to regulatory compliance, and it will take time to achieve a full and meaningful measure of effectiveness. Future planning should allow for a more realistic schedule that reflects the time needed to complete actions. The IR Team recommends that OCRWM:

1. Consider the actions in MII have been completed and move on with long-term implementation of MII commitments.

2. Focus on continuous enhancement of a Corrective Action Program that meets or exceeds applicable requirements in 10CFR63, Subpart G, *Quality Assurance.*

3. Ensure accountability for improving transparency, traceability, consistency, and quality of technical products so that the technical products will be defensible.

4. Refine Performance Indicators so that the effectiveness of accomplishing the stated Initiative and goals/objectives can be readily measured.

5. Perform periodic reviews/assessments as part of the continuous improvement and oversight efforts to support management transition expectations.

7. LIST OF DOCUMENTS REVIEWED

BSC Management Improvement Initiative Implementation Approach Confirmation Process Guideline, Rev. 2, BSC, Las Vegas, Nevada, July 9, 2003.

BSC Management Improvement Initiatives Implementation Approach, PLN-MAS-AD-000002, Rev. 1, U.S. DOE-OCRWM, Las Vegas, Nevada, June 2003.

Condition Report Record Report, YMP Corrective Action Program, CR #1942 and CR #1944, February 26, 2004.

Condition Report Status List, YMP Corrective Action Program, CR #943, February 10, 2004.

Corrective Action Report No. BSC-01-C-001, DOE-OCRWM, April 27, 2001.

Corrective Action Report No. BSC-01-C-002, DOE-OCRWM, June 7, 2001.

Correspondence, Management Improvement Initiatives Effectiveness Indicators, Russell Dyer, DOE-OCRWM – Yucca Mountain Site Characterization Office, to Margaret Chu, DOE-OCRWM, October 15, 2002.

Correspondence, Margaret Chu, DOE-OCRWM, to Martin Virgilio, NRC – Office of Nuclear Material Safety and Safeguards, May 29, 2003; April 5, 2002; and July 19, 2002.

Correspondence, Martin Virgilio, NRC, to Margaret Chu, DOE, October 3, 2002.

Correspondence, Richard Meserve, NRC, to Robert Card, DOE, November 13, 2001.

Correspondence, Technical Direction to Bechtel SAIC Company, LLC, Contract Number DE-AC28-01RW12101, Procedure Transition, TLD No. 03-017, John Arthur, III, DOE-OCRWM-ORD, to J. T. Mitchell, BSC, April 7, 2003.

Correspondence, Transmittal of Independent Assessment Report IA-ORD-2004-001 on the Confirmation of Closure of Management Improvement Initiatives Items, Richard Spence, DOE-OCRWM-ORD, to W. J. Arthur, III, DOE-OCRWM-ORD, March 2, 2004 (including the Independent Assessment Report and associated MII confirmation and documentation packages).

DOE and BSC MII Confirmation Team Action Statement Status Log, February 18, 2004.

E-mail from Gene Runkle to Robert Wemheuer, "Request to Supplement the MII Closure Packages with Additional Clarifications for MII Action Statements", dated 08/04/2003 12:34 PM

E-mail from Dennis Brown to R. Memheuer, "Request to Supplement the MII Closure Packages with Additional Clarification for MII Action Statements 2.1 and 2.4", dated August 1, 2003

E-mail from Mark Van Der Puy to R. Wemheuer, "Request to Supplement the MII Closure Packages with Additional Clarifications for MII Action Statements 3.1 and 3.2", dated August 4, 2003.

E-mail from Mark Van Der Puy to R. Wemheuer, " Request to Supplement the MII Closure Packages with Additional Clarification for MII Action Statement 5.5", dated August 4, 2003.

Implications for Repository Quality Assurance for Reactor Licensing Litigation, Francis Cameron, U.S. NRC, April 5, 1989.

Management Description, GM-1.00, Bechtel SAIC Company, Las Vegas, Nevada, February 2004.

Management Improvement Initiatives (MII) Overview, February 2004.

Management Improvement Initiatives Confirmation Review Process, *Rev. 2, U.S. DOE-OCRWM, Washington, D.C., May 2003.*

Management Improvement Initiatives Transition Approach, Rev. 1, U.S. DOE-OCRWM, Washington, D.C., December 2003.

Management Improvement Initiatives Transition Checklists, Tables 1 to 5, Draft, February 25, 2004.

Management Improvement Initiatives, PLN-CRW-AD-000009, U.S. DOE-OCRWM, Washington, D.C., July 2002.

MII Confirmation Team, Monthly Report, January 2004.

Monthly Operating Review (MOR) Draft Report, U.S. DOE-OCRWM, February 26, 2004.

OCRWM MII Schedule, December 4, 2003.

ORD Assessments and Surveys – 2003, U.S. DOE-OCRWM, Las Vegas, Nevada, 2003.

ORD/BSC Management Meeting, PowerPoint Presentation, March 4, 2004.

Quality Assurance, 10CFR63 Subpart G, 10CFR63.141-144, November 2, 2001.

Review of Condition Reports and Quality Observations Involving AP-SI.1Q, AP-SI.1Q Software Management Adverse Condition Study, PowerPoint Presentation, September 2003.

Trend Evaluation Report, First Quarter FY 2004, Bechtel-SAIC Co., Las Vegas, Nevada, February 2004.

Yucca Mountain Key Performance Indicator Improvement Project, Final Report, Performance Improvement International, San Clemente, California, August 2003.

Yucca Mountain Project Evaluates Past Initiatives to Help Ensure Future Success, Lessons Learned Notification, OCRWM-LL-2002-026, DOE-OCRWM, April 30, 2002.

Yucca Mountain Project Evaluates the Development and Submittal Process of OCRWM Management Improvement Initiatives to the NRC, Lessons Learned Notification, OCRWM-LL-2002-066, DOE-OCRWM, July 2, 2002.

Yucca Mountain Review Plan, Final Report, NUREG-1804, Rev. 2, U.S. NRC, Office of Nuclear Material Safety and Safeguards, Washington, D.C., July 2003.

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APPENDIX A

DOE/BSC MII CONFIRMATION TEAM ACTION STATEMENT STATUS LOG

APPENDIX A

DOE AND BSC MII CONFIRMATION TEAM ACTION STATEMENT STATUS LOG

DOE and BSC MII Confirmation Team Action Statement Status Log

DOE and BSC MII Confirmation Team
Action Statement Status Log

MII Item	Action Statement Description	Organization	Responsible Mgr	MII Completion Date	Request Form Required	Date of Confirmation (Summary Sheet and Request for Confirm)	*Confirmation Status (C, IP, IP-CT, IP-RM)	Comments
	R2A2							**All R2A2 Statements have been confirmed**
1.1	DOE will issue a policy statement identifying the expectations of OCRWM management.	DOE	Chu	08/02	Y	CS-03/14/03 RFC-04/01/03	Closed	This document was confirmed complete on 03/31/2003. Confirmation Notice sent by R. Wernheuer 03/31/2003. NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.
1.2	DOE will clarify R2A2 within the OCRWM organization to ensure commensurate authority accompanies assigned responsibilities.	DOE	Chu	09/02	Y	CS-03/14/03 RFC-03/19/03	Closed	This document was confirmed complete on 03/22/2003. Confirmation Notice sent by R. Wernheuer 03/24/2003. NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.
1.3	DOE staff will be oriented through various communications methods to the realigned organization and the associated R2A2. This realignment will allow DOE to manage overall Program performance and hold BSC accountable for performance (i.e., quality, schedule, and cost	DOE	Runkle	10/02	Y	CS-03/14/03 RFC-04/01/03	Closed	The document was confirmed complete on 03/31/2003 Confirmation Notice sent by R. Wernheuer 03/31/2003 NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.
1.4	BSC staff will be oriented to the realigned organization and the associated R2A2.	BSC	McCullough	10/02	Y	CS-05/20/03 RFC-05/20/03	Closed	This document was confirmed complete on 05/29/2003 Confirmation Notice sent by R. Wernheuer 05/30/2003
1.5	DOE will issue a Program Manual that provides the implementing requirements that will guide the organization realignment to support the licensing process.	DOE	Runkle	10/02	Y	CS-03/14/03 RFC-04/21/03	Closed	The document was confirmed complete on 03/21/2003 Confirmation Notice sent by R. Wernheuer 04/22/2003
1.6	DOE annual performance appraisals will be revised to reflect manager performance criteria relative to the appropriate R2A2.	DOE	Runkle	12/02	Y	CS-03/14/03 RFC-03/19/03	Closed	The document was confirmed complete on 03/26/2003 Confirmation Notice sent by R. Wernheuer 03/31/2003 NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.

*Confirmation Status
C - Closed
IP - In Process
IP-CT - In Process with Confirmation Team
IP-RM - In Process with Responsible Manager

1

3/19/2004

DOE and BSC MII Confirmation Team Action Statement Status Log (Continued)

DOE and BSC MII Confirmation Team
Action Statement Status Log

MII Item	Action Item Description	Organization	Responsible Mgr	MII Completion Date	Request Date Closure	Date for Confirmation Summary Sheet and Request for Closure	Confirmation Status (Closed, Open, Pending)	Comments
	R2A2							**All R2A2 Statements have been confirmed**
1.1	DOE will issue a policy statement identifying the expectations of OCRWM management.	DOE	Chu	08/02	Y	CS-03/14/03 RFC-04/01/03	Closed	This document was confirmed complete on 03/31/2003. Confirmation Notice sent by R. Wernheuer 03/31/2003. NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.
1.2	DOE will clarify R2A2 within the OCRWM organization to ensure commensurate authority accompanies assigned responsibilities.	DOE	Chu	09/02	Y	CS-03/14/03 RFC-03/19/03	Closed	This document was confirmed complete on 03/22/2003. Confirmation Notice sent by R. Wernheuer 03/24/2003. NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.
1.3	DOE staff will be oriented through various communications methods to the realigned organization and the associated R2A2. This realignment will allow DOE to manage overall Program performance and hold BSC accountable for performance (i.e., quality, schedule, and cost	DOE	Runkle	10/02	Y	CS-03/14/03 RFC-04/01/03	Closed	This document was confirmed complete on 03/31/2003 Confirmation Notice sent by R. Wernheuer 03/31/2003 NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.
1.4	BSC staff will be oriented to the realigned organization and the associated R2A2.	BSC	McCullough	10/02	Y	CS-05/20/03 RFC-05/20/03	Closed	This document was confirmed complete on 05/29/2003 Confirmation Notice sent by R. Wernheuer 05/30/2003
1.5	DOE will issue a Program Manual that provides the implementing requirements that will guide the organization realignment to support the licensing process.	DOE	Runkle	10/02	Y	CS-03/14/03 RFC-04/21/03	Closed	This document was confirmed complete on 03/21/2003 Confirmation Notice sent by R. Wernheuer 04/22/2003
1.6	DOE annual performance appraisals will be revised to reflect manager performance criteria relative to the appropriate R2A2.	DOE	Runkle	12/02	Y	CS-03/14/03 RFC-03/19/03	Closed	This document was confirmed complete on 03/26/2003 Confirmation Notice sent by R. Wernheuer 03/31/2003 NRC OR OI-03-02 addressed in memo from G. Runkle dated 8/04/03.

*Confirmation Status
C - Closed
IP - In Process
IP-CT - In Process with Confirmation Team
IP-RM - In Process with Responsible Manager

DOE and BSC MII Confirmation Team Action Statement Status Log (Continued)

DOE and BSC MII Confirmation Team
Action Statement Status Log

MII Item	Action Statement Description	Organization	Responsible Mgr	MII Completion Date	Request for Closure	Date for Confirmation Summary Sheet Date Request for Closure	*Confirmation Status	Comments
	Program Procedures							**All PP Statements have been confirmed.**
3.1	DOE will clarify R2A2 within the OCRWM organization, including clear identification of the work scope and responsibilities for procedure development and implementation of each organization. (This action will be completed in conjunction with R2A2 actions;	DOE	Chu	09/02	Y	CS-04/10/03 RFC04/10/03	Closed	This document was confirmed complete on 04/23/2003 Confirmation Notice sent by R. Wemheuer 04/23/2003
3.2	DOE will review their respective procedure sets and define procedure hierarchies based on their work requirements.	DOE	VanDerPuy	10/02	Y	CS-04/10/03 RFC-04/10/03	Closed	This document was confirmed complete on 04/16/2003 Confirmation Notice sent by R. Wemheuer 04/16/2003
3.2B	BSC will review their respective procedure sets and define procedure hierarchies based on their work requirements.	BSC	Sorensen	10/02	Y	CS-05/16/03 RFC-05/20/03	Closed	This document was confirmed completed on 05/27/2003 Confirmation Notice sent by R. Wemheuer 05/28/2003
3.3	New or revised procedures will be issued in compliance with OCRWM requirements using a phased approach.	DOE	VanDerPuy	Start 11/02	N	CS-06/10/03 (Rev 3) RFC-11/25/03	Closed	This document was confirmed complete on 12/02/2003 Confirmation Notice was sent by R. Wemheuer 12/02/2003
3.3B	New or revised procedures will be issued in compliance with OCRWM requirements using a phased approach.	BSC	Sorensen	Start 11/02	N	CS-05/16/03 RFC-11/24/03	Closed	This document was confirmed complete on 12/02/2003 Confirmation Notice was sent by R. Wemheuer 12/02/2003
3.4	Personnel that will use the new or revised procedures will be trained prior to implementing the procedures.	DOE	VanDerPuy	Start 11/02	N *	CS-06/10/03 (Rev 3) RFC-11/25/03	Closed	This document was confirmed complete on 12/02/2003 Confirmation Notice was sent by R. Wemheuer 12/02/2003
3.4B	Personnel that will use the new or revised procedures will be trained prior to implementing the procedures.	BSC	Sorensen	Start 11/02	N	CS-05/16/03 RFC-11/24/03	Closed	This document was confirmed complete on 12/02/2003 Confirmation Notice was sent by R. Wemheuer 12/02/2003

*Confirmation Status
C - Closed
IP - In Process
IP-CT - In Process with Confirmation Team
IP-RM - In Process with Responsible Manager

DOE and BSC MII Confirmation Team Action Statement Status Log (Continued)

DOE and BSC MII Confirmation Team
Action Statement Status Log

[illegible]	Action Statement Description	Organization	Responsible Mgr	NT Completion Date	Required for Closure	Date for Confirmation Summary Sheet and Request for Closure	Confirmation Status*	Comments
	Corrective Action Program							**All CAP Statements have been confirmed.**
4.1	The Director of OQA will be assigned responsibility and held accountable for a single improved OCRWM Corrective Action Program.	DOE	Chu	08/02	Y	CS-04/07/03 RFC-04/09/03	Closed	This document was confirmed complete on 04/10/2003 Confirmation Notice sent by R. Wernheuer 04/10/2003
4.2	DOE will form a task team to establish the Program requirements and specifications for the Corrective Action Program.	DOE	Brown	09/02	Y	CS-11/18/02 RFC-04/02/03	Closed	This document was confirmed complete on 02/19/2003 Confirmation Notice sent by R. Wernheuer 02/25/2003
4.3	BSC will implement a single OCRWM Corrective Action Program consistent with nuclear industry practices, including tracking, trending, reporting, and closure verification processes.	DOE/BSC	Brown/Sorensen	02/03	Y	CS-07/10/03 RFC - 10/22/03	Closed	This document was confirmed completed on 10/29/2003. Confirmation Notice sent by R. Wernheuer 10/29/2003.
4.4	BSC will define and implement a self-assessment program, a lessons learned program, and a method to identify and correct adverse conditions.	BSC	Sorensen	03/03	Y	CS-06/27/03 RFC - 08/27/03	Closed	This document was confirmed complete on 07/09/2003 Confirmation Notice sent by R. Wernheuer 07/14/2003

*Confirmation Status
C - Closed
IP - In Process
IP-CT - In Process with Confirmation Team
IP RM - In Process with Responsible Manager

DOE and BSC MII Confirmation Team Action Statement Status Log (Continued)

DOE and BSC MII Confirmation Team
Action Statement Status Log

Item	Action Statement Description	Organization	Responsible Mgr	Completion Date	Required for Closure	Date of Confirmation Request Sent to Confirmer	*Confirmation Status	Comments
	Safety Conscious Work Environment							**All SCWE Statements have been confirmed**
5.1	On April 30, 2002, the OCRWM Program Director and the YMP Project Manager issued a revised and expanded SCWE policy. This policy has been communicated to employees through meetings and Project communiqués. The YMP Project Manager and the BSC Deputy General Manager are designated as SCWE change champions.	DOE	Chu	completed	Y	CS-01/07/03 RFC-03/31/03	Closed	This document was confirmed complete on 01/29/2003 Confirmation Notice sent by R. Wernheuer 02/07/2003
5.2	DOE will implement SCWE and employee concerns program performance metrics into BSC contract assessment.	DOE	Runkle	completed	Y	CS-10/29/02 RFC03/31/03	Closed	This document was confirmed complete on 01/08/2003 Confirmation Notice sent by R. Wernheuer 02/07/2003
5.3	DOE will modify the BSC contract and other DOE contracts to require the implementation of the Program SCWE policy requirements.	DOE	Runkle	08/02(BSC) 10/02(other)	Y	CS-10/29/02 RFC03/31/03	Closed	This document was confirmed complete on 01/08/2003 Confirmation Notice sent by R. Wernheuer 02/07/2003
5.4	DOE will eliminate the backlog of open OCRWM employee concerns and shorten the life-cycle for addressing concerns.	DOE	Runkle	08/02	Y	CS-01/08/03 RFC-03/31/03	Closed	This document was confirmed complete on 02/11/2003 Confirmation Notice sent by R. Wernheuer 02/13/2003
5.5	DOE will establish a DOE policy and procedures regarding expectations to escalate issues in an expedient manner.	DOE	VanDerPuy	08/02	Y	CS-04/10/03 RFC-04/10/03	Closed	This document was confirmed complete on 04/10/2003 Confirmation Notice sent by R. Wernheuer 04/10/2003 Associated with OR Open Item 03 02 and CR-943
5.6	BSC will establish a BSC policy and procedures regarding expectations to escalate issues in an expedient manner.	BSC	Sorensen	08/02	Y	CS-11/21/02 RFC-04/01/03	Closed	This document was confirmed complete on 01/16/2003 Confirmation Notice sent by R. Wernheuer 02/07/2003
5.7	DOE will develop and/or revise SCWE-related Program-wide employee and supervisor/manager training modules based upon nuclear industry practices.	DOE	VanDerPuy	08/02	Y	CS-10/29/02 RFC04/01/03	Closed	This document was confirmed complete on 01/16/2003 Confirmation Notice sent by R. Wernheuer 02/10/2003
5.7B	BSC will develop and/or revise SCWE-related Program-wide employee and supervisor/manager training modules based upon nuclear industry practices.	BSC	Sorensen	08/02	Y	CS-11/21/02 RFC-04/01/03	Closed	This document was confirmed complete on 01/29/2003 Confirmation Notice sent by R. Wernheuer 02/07/2003
5.8	BSC will establish internal BSC mechanisms for reporting, investigating, and resolving employee concerns.	BSC	Sorensen	09/02	Y	CS-11/21/02 RFC-04/01/03	Closed	This document was confirmed complete on 02/20/2003 Confirmation Notice sent by R. Wernheuer 02/25/2003
5.9	DOE will conduct employee and supervisor/manager SCWE training.	DOE	VanDerPuy	12/02	Y	CS-04/08/03 RFC-04/10/03	Closed	This document was confirmed complete on 04/16/2003 Confirmation Notice sent by R. Wernheuer 04/21/2003
5.9B	BSC will conduct employee and supervisor/manager SCWE training.	BSC	Sorensen	12/02	Y	CS-01/07/03 RFC-01/07/03	Closed	This document was confirmed complete on 03/26/2003 Confirmation Notice sent by R. Wernheuer 03/27/2003
5.10	An external SCWE expert group will evaluate YMP-wide SCWE.	DOE	Chu	07/03	Y	CS-01/07/03 RFC-11/17/03	Closed	This document was confirmed complete on 11/19/2003 Confirmation Notice sent by R. Wernheuer 11/19/2003

*Confirmation Status
C - Closed
IP - In Process
IP-CT - In Process with Confirmation Team
IP-RM - In Process with Responsible Manager

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APPENDIX B

MII TRANSITION CHECKLISTS

APPENDIX B

MII TRANSITION CHECKLISTS

Table B-1. Roles, Responsibilities, Authority and Accountability (R2A2)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the R2A2 section of the MII.	Complete
	1.B – How did your completion of the Action Statement requirements in MII Table 1 support the "objectives" and attain the "desired condition" stated in the R2A2 section of the MII?	Complete

1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the R2A2 section of the MII.

The Management Improvement Initiative, Revision 0, dated July 2002, identified the need to clearly define R2A2 across OCRWM to define ownership of and accountability for Program functions, and to successfully support the licensing process. OCRWM processes were structured to support scientific studies but were not aligned to support the effort after site characterization to move towards a licensing environment. The lack of a structure to support a move towards licensing led to confusion over R2A2.

1.B – How did your completion of the Action Statement requirements in MII Table 1 support the "objectives" and attain the "desired condition" stated in the R2A2 section of the MII?

Completion of the actions in the MII relative to R2A2 were structured to ensure that the OCRWM organization is aligned to support licensing activities. This was accomplished through development of an infrastructure that clarified R2A2. The clarification supports the development of an organization in which managers understand and accept their responsibilities.

Table B-1. Roles, Responsibilities, Authority and Accountability (R2A2) (Continued)

		Status
What did you do?	2.A – Describe the approach and implementation activities you used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 1 of the MII.	Complete
	2.B – If you changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	Complete

2.A – Describe the approach and implementation activities you used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 1 of the MII.

The approach defined in the MII, called for DOE to realign the OCRWM organization and management approach, including realignment of the DOE and BSC relationship, clarification of management's R2A2, and definition of expectations of management and management processes. Specific details are to:

Realign OCRWM Organization to:

- Streamline DOE's management structure and oversight functions
- Reinforce the DOE role of setting goals and expectations, providing policy guidance, and measure performance
- Ensure integration across the various Program elements, including effective interfaces within the DOE, with involved states and federal organizations, and with other organizations
- Assign a single point of responsibility for each critical Program function, including QA, Program procedures, Corrective Action Program Management, and SCWE.

Clarify and strengthen the OCRWM relationship with BSC to ensure that DOE establishes Program goals and performance expectations for the contractor and then holds the contractor accountable for performing the necessary work. DOE and BSC will realign their respective organizations to focus on this manner of doing business to support the licensing process. Rigor and discipline will be employed to ensure that direction provided to contractors is provided only by a contracting officer or contracting officer's representative.

Clarify management R2A2 within the OCRWM organization to ensure that managers understand their respective roles and responsibilities and that commensurate authority accompanies assigned responsibilities. Managers will be held accountable for fulfilling their responsibilities.

MII Table 1, Roles, Responsibilities, Authority, and Accountability delineated six primary actions. Each primary action was supported by a series of sub-tier actions. This synopsis focused on the completion and effectiveness of the primary actions. Sub-tier actions were called out only as necessary. It should be noted, however, that successful completion of each sub-tier action has been reviewed and objective evidence of completion is documented in the Confirmation Team files.

Action 1–1 DOE will issue a policy statement identifying the expectations of OCRWM management.

The MII defined that completion of this action will be demonstrated through issuance of a Policy clarifying management expectations. DOE Policy, "Management Expectations", POL-RW-2002-004 was approved on September 6, 2002.

Action 1–2 DOE will clarify R2A2 within the OCRWM organization to ensure commensurate authority accompanies assigned responsibilities.

The MII stated that completion of this action will be demonstrated through Program Manual (Phase 2 Letter Report), Management Alignment Plan, communication of content to management and staff, and roll out of enhanced Effectiveness Indicators. Ongoing implementation will be performed to support ongoing effectiveness and independent reviews.

- Program Manual, Phase 1, was issued August, 2002
- Phase 2 letter report, was issued September, 2002
- Management Alignment Process for Management Improvement Initiatives, OCRWM, was issued October, 2002
- A series of pre-briefings and final briefings were held from September 9, 2002 to September 11, 2002
- Initial Effectiveness Indicators in relation to R2A2 have been developed, including: Organizational Culture, Internal Communications, SCWE, Corrective Action Management System, Management Framework, Self-Reporting Culture

Action 1–3 DOE staff will be oriented through various communications methods to the realigned organization and the associated R2A2. This realignment will allow DOE to manage overall Program performance and hold BSC accountable for performance (i.e., quality, schedule, and cost).

The MII stated that completion of this action will be demonstrated through development, issuance and implementation of the Communication Plan.

- MII Communication Plan, was issued October, 2002.
- Self-Assessment on MII Communication was completed in October, 2003.

Action 1–4 BSC staff will be oriented to the realigned organization and the associated R2A2.

The MII stated that completion of this action will include BSC implementation of any necessary organization realignments, BSC clarification of R2A2 relative to its organization consistent with the OCRWM Program Manual, and communication within BSC of the DOE and BSC organization alignments and associated R2A2. The following documented completion of this action:

- BSC Organization Chart
- Program Manual, Phase 3
- Modified New Employee Orientation Course
- Modified BSC Management Description Document (To be incorporated in BSC Management Plan)
- R2A2 Announcement
- R2A2 Overview Slides
- Rolling Quality Focus Briefings
- Rolling Quality Focus Follow-up Material
- Interoffice Memorandum, dated May, 2003 re: Areas of Management Emphasis

Action 1–5 DOE will issue a Program Manual that provides the implementing requirements that will guide the organization realignment to support the licensing process.

The MII stated that completion of this Action will include the Program Manual (all phases), along with information relating to meetings and events of the Director and senior management team during roll-out.

- Program Manual, Phase 1, 2 and 3 were finalized. Program Manual, Phase III, was issued April, 2003
- September 11, 2003 All-hands meetings provided orientation on R2A2.

Key sub-tier actions included:

- Series of announcements, e-mails on organization clarification and realignments were issued.
- POL-RW-2002-003, Quality Assurance Program Responsibilities, were issued September, 2002
- POL-RW-2002-004, Management Expectations, dated September, 2002

Action 1–6 DOE annual performance appraisals will be revised to reflect manager performance criteria relative to the appropriate R2A2.

The MII stated that completion of this action will include copies of the approved criteria that are included in the new performance appraisal packages, listing of affected personnel by grade and position, e.g., SES, Supervisor, as well as sub-activity documentation, meeting minutes, interoffice memorandum, announcements, copies of presentation materials, etc. used to facilitate communication. Additionally, information will include inputs to MII Effectiveness Indicators and any established feedback on MII implementation to assist in future effectiveness and independent reviews. Implementing actions were:

- March, 2003 memo defining Federal Manager/Supervisory positions subject to completion of this action

- Affirmation from Gene Runkle, Program Improvement Manager, that appraisal plans for all managers/supervisors were modified to address Quality Assurance and Safety Conscious Work Environment endorsement and implementation.

2.B – If you changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.

The following e-mail statement, dated 3/18/03, was included in the confirmation packages for MII 1-1-, 1-2, 1-3, 1-5 and 1-6:

"All five forms have been revised. In several instances, open-ended items have been removed since these activities would never get to closure. Additionally, scheduling self-assessments for individual MII actions has been removed because of a broad self-assessment of the composite of MII actions is scheduled for the week of September 22-26, 2003. This can be verified in the YMP intranet"

In addition, a memo dated 8/4/03 from Gene Runkle to the Confirmation Team outlined the following:

A supplemental review of the deltas between the initial and final action statement scheduled and execution task descriptions for the subject MII action summaries was performed. The following clarification are being submitted to supplement the MII closure packages to provide a better understanding regarding the management decisions made in determining the actions necessary to meet the intent of the MII action statements. The clarifications are not intended to alter or modify the underlying intent of the MII Action Statements.

Clarifications for MII Action Statements 1.1, 1.2, 1.3, 1.6

In the original Action Statement Schedules and Execution Task Descriptions, DOE indicated that the ongoing activities, such as periodic meetings and periodic self-assessments would be performed to meet the intent of MII Action Statements. Considering the open-ended nature of the ongoing activities, management determined that the objective evidence to satisfy the activities would be indeterminate because of the uncertainty associated with the timing and scheduling of periodic meetings. Thus, the ongoing activities were subsequently deleted. Although meetings were held, and in some cases are ongoing (e.g., Rolling Quality Focus) to reinforce management's expectations, such ongoing activities were not considered necessary to satisfy the MII action statement. Performance of periodic management self-assessments and management reviews while appropriate for long-term activities, were not considered appropriate for this MII action statement and therefore deleted from the action statement schedules and execution task descriptions.

In addition to ongoing activities, interim actions (e.g., team meetings and reviews) were also deleted whereby the interim actions were not deemed critical to the development of the objective evidence necessary to demonstrate implementation of the MII action statement.

In summary, the information submitted to demonstrate implementation of the MII action statement was considered by the Responsible Manager to be the necessary and distinct objective evidence to support closure of the action statement."

Table B-1. Roles, Responsibilities, Authority and Accountability (R2A2) (Continued)

		Status
How are you transitioning the MII commitments into the line management process?	3.A – Describe how you are transitioning the MII Action Plan and Statement requirements into long term management processes.	Complete
	3.B – Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	Complete
	3.C – Did you develop any specific performance or effectiveness indicators/metrics to measure the effectiveness of the transition of the R2A2 MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric you developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If you did not develop a specific indicator/metric, describe your plan or alternative means (such as management reviews, self-assessments, etc.) that you will use to provide sufficient information to allow for effectiveness monitoring of the R2A2 MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	Complete
	3.D – What is your plan for continued R2A2 oversight, monitoring, and transition activities? Describe your required actions, or actions necessary to be completed by other affected organizations, to complete the transition. Include your cost and schedule requirements. Address if you have incorporated these resource requirements into the appropriate project budgets, work packages and schedules.	Complete

3.A – Describe how you are transitioning the MII Action Plan and Statement requirements into long term management processes.

Completion of R2A2 actions specified in the MII created a structure in which senior management could accommodate the clarification of R2A2. The development and distribution of the Program Manual, Phase 3 provided a tool in which senior management defined organizational structure, in addition to interface and performance expectations. In structuring this Program Manual, the intent was to produce a document that would be useful and serve as a readily available resource to understand the organizational roles and responsibilities in the context of our program mission. The objective of the Program Manual is to communicate the organizational structure, interfaces, and roles and responsibilities of OCRWM Program participants in meeting program and mission requirements. Management expectations outlined in the Program Manual focus on the responsibilities for quality management in all aspects of our work, improved integration across the various program elements, and the establishment of clearly defined responsibilities and accountabilities of line managers for achieving program goals.

As a result of recent assessments (i.e., Office of Independent Assessment and Oversight, Booz Allen Hamilton Performance Management Assessments) recommendations have been made that will strengthen the use of the Program Manual. These recommendations include ensuring revisions are reviewed by affected organizations; placing the document under the document control system; and working on the flowdown of information to lower-tier documents. Though areas for improvement have been identified, the content of the document and its use within the

organization was consistently determined to be defensible. Placing the document under the document control system will institutionalize the Program Manual. As a result, all changes and revisions will be undertaken in a controlled manner. In addition, the document will be available for reference Program-wide on the OCRWM Program Documents Database (OPDD). The OPDD will contain the most recent version of the Program Manual and is the primary Program database for all-current documents and plans.

In addition to creation of the Program Manual, the R2A2 MII actions committed to a series of communication activities to share information on the content of the MII, the organizational structure, and individual R2A2 elements. While it is acknowledged that communication relative to the specific components of the MII could have been improved, the actions have prompted the institutionalization of several ongoing, highly effective communication tools.

The senior management team has also convened joint DOE/BSC Rolling Quality Focus Meetings to raise and discuss issues, define management expectations, and promote open communication between the mid-level and senior management team. Recently, these meetings have transitioned to ORD Quarterly Management Meetings. The meetings have covered key topics related to R2A2 and accountability and have also included discussions related to SCWE, Assessment Results, Countdown to LA, Organization Structure, Organizational Interfaces, etc. To date, four meetings have been held with the next meeting tentatively scheduled for March 4, 2004.

Senior and mid-level managers are tasked with sharing the information from the ORD Quarterly Management meetings throughout their organizations. To assist in this effort, internal web-sites are populated with videos and presentation material from the meetings. ORD weekly updates often include a synopsis of the meeting and provide a hyper-link for staff to access the information. DOE and BSC Management will continue to hold these ORD Quarterly Management meetings, as they have proven effective in disseminating information and gathering feedback on management's views.

BSC has initiated a Management System Improvement project. The objective of this initiative it to augment the management systems definition to provide greater clarity on how we operate and thus, help managers and supervisors better understand their respective roles and responsibilities. Specifically, BSC issued a Management Description Document on January 31, 2004 and an R2A2 Management Directive will be issued by March 31, 2004.

Actions related to accountability played a key role in the R2A2 area of the MII. While the MII actions were limited to the modification of performance appraisal plans of supervisors/managers, changes in this area have substantially surpassed the original MII commitments. Management actions generated outside of the MII, have resulted in the modification of all DOE and contractor performance appraisals to capture performance ratings in relation to SCWE and QA implementation. These changes have been included in performance plans at all levels in the organization. Since

these performance appraisals are the basis for evaluating performance (both individually and organization-wide) they are "living documents" that will be referenced and updated during future review cycles.

From an accountability perspective, DOE has also established a Monthly Operating Review (MOR) to provide the Deputy Director, ORD, with a status/accounting of activities critical to the success of the Project with emphasis on those that require immediate decisions or intervention by senior management. The MOR format is based on a Performance Indicator reporting approach which utilizes an annunciator panel - linked to key activities and the WBS. Degraded or adverse performance warranting a significant level of management attention, resources, or improvement are presented by the Responsible Managers to the senior management team on a monthly basis.

In addition, critical milestones, objectives, and measurements were established in partnership between OCRWM and the Contractor organization and linked to strategic, multi-year, and annual goals of the organization. They were incorporated into the Performance Evaluation and Measurement Plan (PEMP). Key milestones have been established for the remainder of the BSC contract; however, the specific subset of business and management functions selected will change from time to time, to reflect their current importance to the overall performance of the contract, their potential for being problem areas, and/or current degree of concern for performance.

3.B – Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?

As in all organizations, the clarification of roles, responsibilities, authority and accountability will be an ongoing process. The completion of the MII actions resulted in the development of the necessary infrastructure to support future organizational changes and clarification efforts in the future. Due to the inherent shifts in priorities that this program will face (licensing, construction, and operation), it is anticipated that DOE and contractor organizations will continually be working to ensure R2A2 issues are addressed.

Though it is anticipated that R2A2 issues will continue to be a challenge for OCRWM as it moves towards licensing, the MII was successful in creating the infrastructure necessary for R2A2 clarification. R2A2 issues and opportunities for improvement are currently being worked through line management processes. Therefore, no further actions are required to achieve a successful transition.

3.C – Did you develop any specific performance or effectiveness indicators/metrics to measure the effectiveness of the transition of the R2A2 MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative?

While metrics specifically labeled R2A2 have not been developed, a series of metrics that can offer evidence of progress in this area, are currently being utilized. The metrics currently available have been determined sufficient to recommend closure of MII Table 1.

Metric 2.7.2, "Measurement of Project's schedule efficiency in the accomplishment of planned YMP activities" provides an overall measure of the Project's effectiveness in meeting commitments.

The following seven specific measurements which feed 2.7.2 are:

2.7.2.1 Measures the Yucca Mountain Project Schedule Performance Index based on favorable and unfavorable schedule performance.

2.7.2.1.1 Measures the Project Support Performance of Budgeted Cost of Work Performed to Project Support Budgeted Cost of Work Scheduled based on a scheduled cost less than budget by a factor >1 as favorable.

2.7.2.1.2 Measures the License Schedule Performance of Budgeted Cost of Work Performed to Budgeted Cost of Work Scheduled based on scheduled cost being less than budget by a factor >1 as favorable.

2.7.2.1.3 Measures the Safety Analyses Schedule Performance of Budgeted Cost of Work Performed to Budgeted Cost of Work Scheduled based on scheduled cost less than budget by a factor >1 as favorable.

2.7.2.1.4 Measures the Repository Facilities Schedule Performance based on the Budgeted Cost of Work Performed to Budgeted Cost of Work Scheduled based on scheduled cost less than budget by a factor >1 as favorable.

2.7.2.1.5 Measures the Site Operations Schedule Performance based on the Budgeted Cost of Work Performed to Budgeted Cost of Work Scheduled based on scheduled cost less than budget by a factor >1 as favorable.

2.7.2.2 Measures the Quality Assurance Budgeted Cost of Work Performed to Budgeted Cost of Work Scheduled with Scheduled Cost less than budget by a factor >1 as favorable.

3.D – What is your plan for continued R2A2 oversight, monitoring, and transition activities?

BSC and DOE senior management recognize that R2A2 issues will continue to be a primary focus of their management responsibilities. In addition to utilizing the metrics previously defined, DOE and BSC will continue to refine documents necessary for the clarification of roles. DOE and BSC are currently formulating a path forward to consolidate lower-tier documents that define the organization structure. It is anticipated that R2A2 issues will remain a critical issue as we move towards licensing. However, completion of the MII actions provided a means in which DOE was able to baseline available information. Any progress or regression in this area can now be readily identified.

DOE and BSC will continue use of self-assessments, management assessments and trending through the Corrective Action Program to identify positive or negative trends relative to R2A2. This information, in addition to program-wide industry benchmarking efforts will ensure continuous improvement in this area.

Certification

"I believe that the actions taken in completing the R2A2 Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Signature on file_____
Suzanne Mellington – DOE **Date**

Signature on file_____
Margaret McCullough – BSC **Date**

Table B-2. Quality Assurance Programs and Processes (QAPP)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the QAPP section of the MII.	Complete
	1.B – How did the completion of the Action Statement requirements in MII Table 2 support the "objectives" and attain the "desired condition" stated in the QAPP section of the MII?	Complete

1.A. – The current conditions before actions are summarized as:

- Quality was being inspected in by QA rather than routinely implemented by the line;
- Line counted on QA to identify quality problems and has not routinely adopted quality as their responsibility, nor was that responsibility emphasized to them. As a result, the line had limited ownership and accountability;
- The QARD had not been used by the line as a requirements document, rather they had relied strictly on procedures;
- Also, the QARD was described as containing a combination of requirements, commitments, and guidance that was confusing and difficult for some to implement. M&O did not recognize the need for a requirement document from DOE and demonstrated difficulty in implementing it.
- Finally, there was no clear delineation of responsibility between DOE and BSC QA organizations since BSC did not have their own QA program.

1.B. – Action Statements in MII and steps taken to support the "Objectives" by:

- Providing top down management communication of quality objectives - senior OCRWM management has communicated the need for all managers to be responsible for quality;
- Multiple means of extensive communication used that included rolling quality focus meetings, INTRANET and email communications with all levels of personnel participating;
- Communications clearly define roles and responsibilities and expectations and included a formal policy and a phased Quality Program Manual (involving senior managers in the development);

- Responsibility was passed down through individual performance appraisals to assure accountability; and
- QARD was evaluated to confirm that it met the necessary quality requirements and was traceable back to regulatory drivers.

1.B. (continued) – Completion of the MII Action Plan has attained the "Desired Condition" through:

- Improved focus on line management's responsibilities and accountability for implementing quality at all levels, including the working level.

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 2 of the MII.	Complete
	2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	Complete

2.A. – The approach and implementation activities used to meet the Action Plan objective include:

- Improved focus on line management's responsibilities and accountability for implementing quality at all levels, including the working level;
- Clearly defined QA's R2A2s - both QA and line understand their roles and responsibilities and are accepting responsibility;
- All personnel being held accountable for implementing QA through performance measurement system;
- QARD contains necessary quality requirements clearly identified and traceable to source documents;
- Increased self identification of Conditions adverse to quality;
- Weekly Management meetings to review late items;
- DOE/BSC joint QA management meetings to discuss common QA concerns;
- Increased emphasis on DOE/BSC QE support to the DOE & BSC line organizations; and
- A reviewed and revised QARD that assures applicable requirements are identified and are clearly traceable to requirement documents.

Table B-2. Quality Assurance Programs and Processes (QAPP) (Continued)

2.B. – No changes in direction or Action Statement Requirements that were modified

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements are being transitioned into long-term management processes.	Complete
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	Complete
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the QAPP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the QAPP MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	Complete
	3.D - What is the plan for continued QAPP oversight, monitoring, and transition activities? Describe required actions necessary to complete the transition. Include cost and schedule requirements. Address if these actions have been incorporated into the appropriate project budgets, work packages and schedules.	Complete

3.A. – The Action Plan and Statement Requirements are being transitioned long-term through the realigned R2A2s.

3.B. – There are no further changes to existing R2A2 necessary to achieve a successful transition.

3.C. – Specific performance or effectiveness indicators/metrics developed include:

Performance indicators have been developed to measure the quality, timeliness, and compliance with the new systems and processes implemented as a result of the corrective actions identified in the MII. These performance indicators are being evaluated on an ongoing basis.

The metrics used to measure the effectiveness of Project implementation of a quality program as documented by reviews, audits, surveillance and other assistance or oversight activities performed by QA organization are found in section 2.3, "Quality Assurance".

The specific measures include the following:

2.3.1 Technical Product Compliance: Measurement of the Quality Engineering effectiveness in assisting the line organization in implementing the QA Program by verifying quality of in-process work and provides feedback to the line organization.

2.3.1.1 Quality Engineering In-Process Reviews for BSC Repository Design Documents: Measurement of the number of satisfactory attributes divided by the total number of attributes reviewed (X 100).

2.3.1.2 Quality Engineering In-Process Reviews for BSC Performance Assessment Documents: Measurement of the number of satisfactory attributes divided by the total number of attributes reviewed (X 100).

2.3.1.3 QE Procurement Reviews – Monitor for compliance of in-process documents developed by the Procurement department in BSC. Measurement of number of checklist attributes satisfactory divided by total number of attributes reviewed (X100)

2.3.2 Verification of Quality Performance: Measurement of the effectiveness and accountability of the Line Organizations in implementing Project quality requirements.

2.3.2.1 Acceptable Inspection and Monitoring of Site Processes and Activities: Measurement of the number of processes and activities evaluated as acceptable divided by total number of processes and activities evaluated (X 100).

2.3.2.2 Percentage of Approved Corrective Action Plans Developed for Level A & B Condition Reports: Measurement of the number of condition reports due for corrective action plan development during the month that were prepared and approved in the first time pass divided by the total number of condition reports due for corrective action plan development during the month.

2.3.2.3 Successful Corrective Action Verification: Measures the total number of corrective actions determined acceptable upon completion of verification during the month divided by the total number of corrective actions reviewed for verification during the month (X 100).

2.3.4 Quality Procedure Process Health: Measurement of the ability of the Project workforce to develop and follow the applicable implementing procedures necessary for the success of the Program.

Table B-2. Quality Assurance Programs and Processes (QAPP) (Continued)

2.3.4.1 Adequacy of QARD Requirements in Implementing Documents: Measurement of the number of conditions with cause codes (A5/B2/C05 and C07) assigned divided by the total number of cause codes assigned to Q condition reports (X 100) providing the percentage of less than adequate QARD Requirements.

2.3.4.2 Adequacy of Process in Q Level Documentation: Measures the percentage of Q-level processes that are less than adequate by a count of the number of Q-CRs with applicable cause codes (A5/B1& B2) divided by the Total number of cause codes assigned A5/B1/C02, C05, C06, C07 and A5/B2/C02, and C08.

Table B-2. Quality Assurance Programs and Processes (QAPP) (Continued)

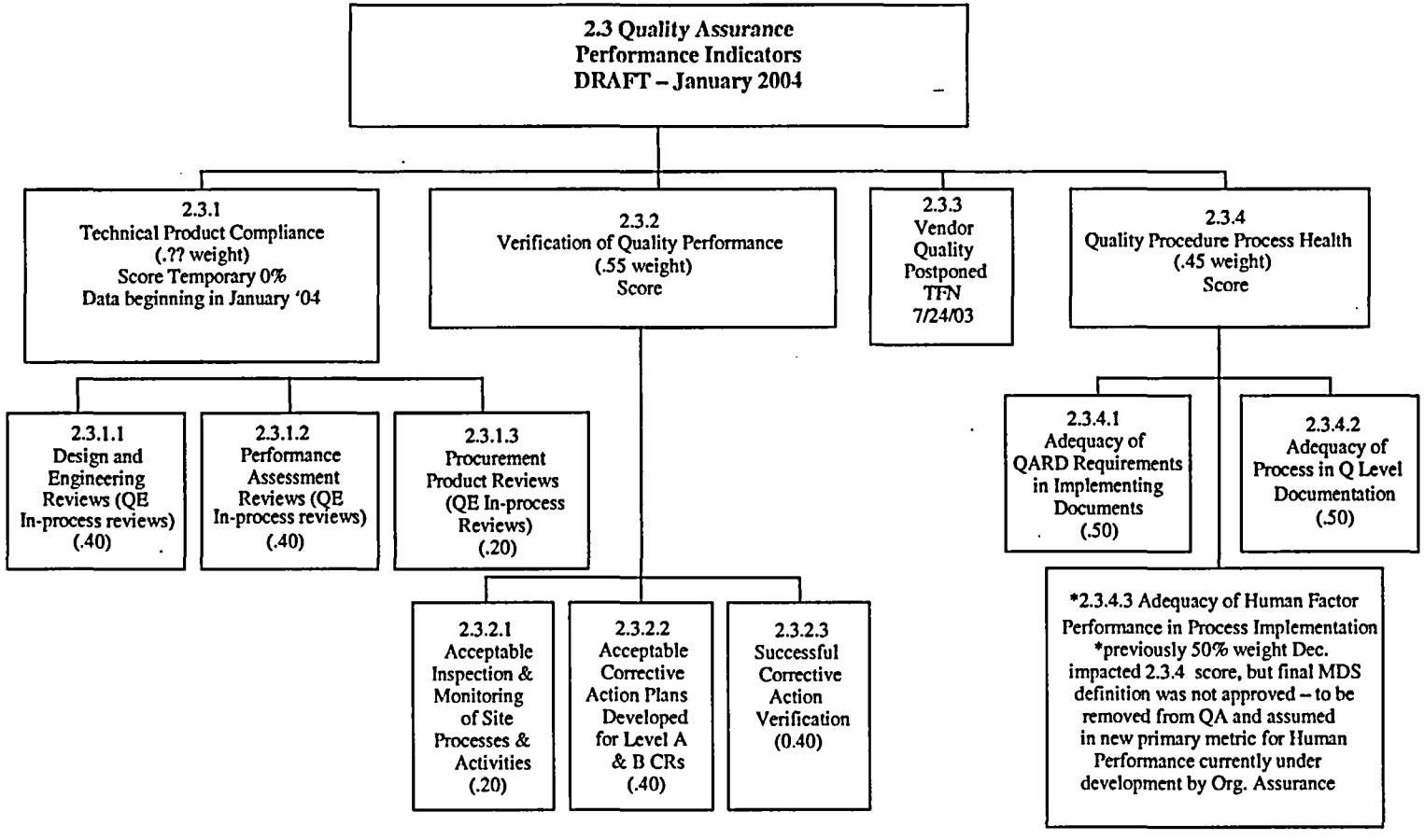

Figure B-1. 2.3 Quality Assurance Performance Indicators

3.D. – Additional actions to execute/complete successful transition

- Continue to define OQA oversight role in the QA Program to allow for independence and standardization.
- Consider long-term integration of the Quality Engineering function into the DOE/BSC line organizations
- Routine review of indicators to determine if changes in performance indicators are necessary
- Continued support to both the OQA and BSC line is provided through Quality Assurance support
- Management attention to performance indicators in MOR Meeting
- Traceability matrices are currently under development for 10CFR Part 63 and other regulatory requirement documents that form the basis for the OCRWM QARD Revision 15.
- Sufficient resources and currently approved Project budgets and work packages support planned on-going actions
- No cost and schedule requirements have been identified that need to be incorporated into the baseline
- Action Plan is considered complete therefore no activities have any potential to impact transition and add schedule/cost
- There are no transition delays or other project actions events or barriers that would impede progress or maintain current conditions
- Routine management oversight meetings already established is the preventive measures/ mitigation strategies to reduce risks/impacts to transition
- Independent review of QARD by external consultant determined that no significant issues existed and was not difficult or confusing - contrary to the MII statements. Organizational R2A2s were revised to be consistent with realignments and minor clarification of regulatory drivers were necessary
- Results of independent assessments performed by QAMA and the Management Assessment are being evaluated and plans developed where appropriate

Certification

"I believe that the actions taken in completing the QAPP Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Signature on file_____
R.D. Brown – DOE **Date**

Signature on file_____
Michael Mason – BSC **Date**

Table B-3. Program Procedures (PP)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the PP section of the MII.	Complete
	1.B – How did the completion of the Action Statement requirements in MII Table 3 support the "objectives" and attain the "desired condition" stated in the PP section of the MII?	Complete.

1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the PP section of the MII.

At the time the MII was written, it was believed that Project procedures were typically overly prescriptive and inefficient, with many procedures having unnecessary and repetitive administrative requirements. It was also believed that National Laboratory and USGS personnel did not think their comments were being addressed in the procedure review cycle.

1.B – How did the completion of the Action Statement requirements in MII Table 3 support the "objectives" and attain the "desired condition" stated in the PP section of the MII?

The objective of the Program Procedures action plans was as follows:

Institute more effective and efficient work control procedures consistent with standard nuclear industry practices. Procedures are user-friendly and provide sufficient guidance with a minimum of administrative burden to allow compliance with safety and quality requirements as a routine part of daily business.

The Desired Condition was described as follows:

An effective and efficient set of separate DOE and BSC procedures are implemented that address the applicable requirements, are commensurate with the complexity and safety and quality significance of the task, and fully support licensing activities. DOE and BSC have separate and distinct procedure sets to control their respective activities.

Completion of the Action resulted in an improved approach for the development and management of program procedures that:

- Improves procedure effectiveness and efficiency by focusing on expected quality assurance and technical requirements; removing inappropriate or non-essential administrative processes, and revising the procedure format to enhance clarity and usage;

- Clearly assigns roles and responsibilities for procedure ownership, and requires responsible line managers to revise their procedures according to a prioritized schedule by June 30, 2005
- Clarifies requirements and responsibilities for consideration and disposition of review comments; and
- Better reflects nuclear industry standards for procedure development, and allows BSC to more easily import proven corporate processes.

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 3 of the MII.	Complete
	2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	Complete

2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 3 of the MII.

There were four Action Statements associated with this Action Plan:

1. DOE will clarify R2A2 within the OCRWM organization, including clear identification of the work scope and responsibilities for procedure development and implementation of each organization. (This action will be completed in conjunction with R2A2 actions; see Section 5.1.)
2. DOE and BSC will review their respective procedure sets and define procedure hierarchies based on their work requirements.
3. New or revised procedures will be issued in compliance with OCRWM requirements using a phased approach.
4. Personnel that will use the new or revised procedures will be trained prior to implementing the procedures.

General R2A2s for nineteen functional areas were described in the OCRWM Program Manual (Phase I, dated August 2002), with procedural responsibilities addressed under the functional area of "Program Planning, Organization and Management". DOE and BSC subsequently agreed that the existing structural hierarchy of Administrative and Line Procedures (APs and LPs) provided sufficient flexibility and autonomy to enable each organization to manage its own work (TDL NO. 03-017). However, to achieve the Objectives and Desired Condition, it was also determined that AP-5.1Q, *Procedure Preparation, Review, And Approval* needed to be revised. AP-5.1Q Revision 4, ICN 0 was effective July 18, 2003. Following that revision of AP-5.1Q, a prioritized approach to revising all other procedures was finalized and approved by Director, OCRWM (August 7, 2003)

and issued to BSC (TDL NO. 03-036). To date, all Priority I procedures have been completed as scheduled. Training to Priority I procedures was accomplished, where required, in accordance with AP 2.1Q, Personnel Training and Qualification. As Priority II and III procedures are completed, AP-2.1Q requires an analysis of training needs.

2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.

There were several changes with regard to designated action statement responsible managers and target dates. However, the most important change was the determination that DOE and BSC did not really need separate and distinct sets of procedures to allow sufficient autonomy and efficiency in developing and approving procedures or procedure revisions. Rather, DOE and BSC agreed that refining the definitions of Administrative and Line Procedures and eliminating unnecessary levels of review would meet the intent of the Objective without causing undo disruption of the workforce and management systems currently in place.

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements are being transitioned into long-term management processes.	Complete
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	Complete
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the PP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc., and against what benchmarks. *If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the PP MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.*	Complete
	3.D - What is the plan for continued PP oversight, monitoring, and transition activities? Describe required actions necessary to complete the transition. Include your cost and schedule requirements. Address if these actions have been incorporated into resource requirements in the appropriate project budgets, work packages and schedules.	Complete

3.A – Describe how the MII Action Plan and Statement requirements are being transitioned into long-term management processes.

R2A2s for procedure development and control are defined at a programmatic level, with the OCRWM Program Manual, Final - Phase III (April 10, 2003) providing the most recent assignments for procedures. However, there are apparent conflicts between the Phase III Program Manual and other R2A2 documents, including LP-1.1Q OCRWM and the OCRWM Mission and Function Statements. These inconsistencies are being addressed in the management prioritization of recommendations received from several recent reviews now underway by the YMP Joint Leadership Council, and entered into the corrective action program (prerequisite for closure).

Specific R2A2s are in AP-5.1Q, Procedure Preparation, Review and Approval. This procedure is maintained current and controlled in accordance with the QARD. Additionally, each procedure has been assigned to a line manager (TDL NO. 03-036) with the Procedure Responsibility matrix (PRM) administratively available on the OCRWM Plans and Procedures Database and controlled using the approval process set forth in AP 5.1Q and AP 6.1Q.

TDL NO. 03-036 also establishes a revision schedule for each procedure and will be administered by the ORD Office of Performance Management and Improvement.

AP-5.1Q requires procedure developers to ensure training requirements are considered when determining an effective date for a procedure. The process for determining training needs has been systematized in AP-2.1Q, Personnel Training and Qualifications.

Performance metrics have been established to enable management to monitor the effectiveness of actions taken in response to this MII initiative on procedure quality, processing timeliness, and compliance.

3.B – Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?

Future administration will be by the ORD Office of Performance Management and Improvement after reorganization expected to become effective March 1, 2004.

3.C – Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the PP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative?

Performance indicators have been developed to measure the quality, timeliness, and compliance with the new systems and processes implemented as a result of the corrective actions identified in the MII. These performance indicators are being evaluated on an ongoing basis.

The metrics used to measure the effectiveness of Procedures are found in section 2.5.1, "Procedures". The definition of the 2.5.1 metric is "A measure of the overall effectiveness of the Procedure Management System to provide timely, accurate and adequate instruction on workforce processes critical to the safety and success of the Program.

The seven specific measurements that feed this high level metric are:

2.5.1.1 Measurement of the Project's ability to provide high quality and accurate procedures that match the needs of the user. This measure is an aggregate measurement based on weighted results of 2.5.1.1.1 and 2.5.1.1.2.

2.5.1.1.1 Measurement of Project's ability to provide accurate procedures that contain all required steps reported as a six month average of the sum of [# of procedures coded a missing step CRs + # of procedures coded as incorrect step CRs] / Total # of procedures].

2.5.1.1.2 Measurement of Project's ability to maintain a balance between changes to procedures and overall procedure stability reported as a six-month average of the lifetime in days of all Procedures.

2.5.1.2 Measurement of Project's ability to revise procedures in a timely and controlled manner. This measure is an aggregate measurement based on weighted results of 2.5.1.2.1, 2.5.1.2.2 and 2.5.1.2.3.

2.5.1.2.1 Measurement of Project's ability to provide a timely method for revision of procedures reported as a six-month average of [Total number of DARs dispositioned within 5 days / Total # of DARs].

2.5.1.2.2 Measures ability to make Interim Changes to procedures in a timely manner reported as a six-month average of [Working Days between the DAR approval to proceed and the effective date] / Total # of Procedure ICN actions].

Table B-3. Program Procedures (PP) (Continued)

2.5.1.2.3 Measurement of the Project's ability to provide a timely method of making revisions to procedures reported as a six-month average of [Working Days between DAR approval to proceed and effective date] / [Total # of Procedure revision actions].

Performance Indicators - Procedures

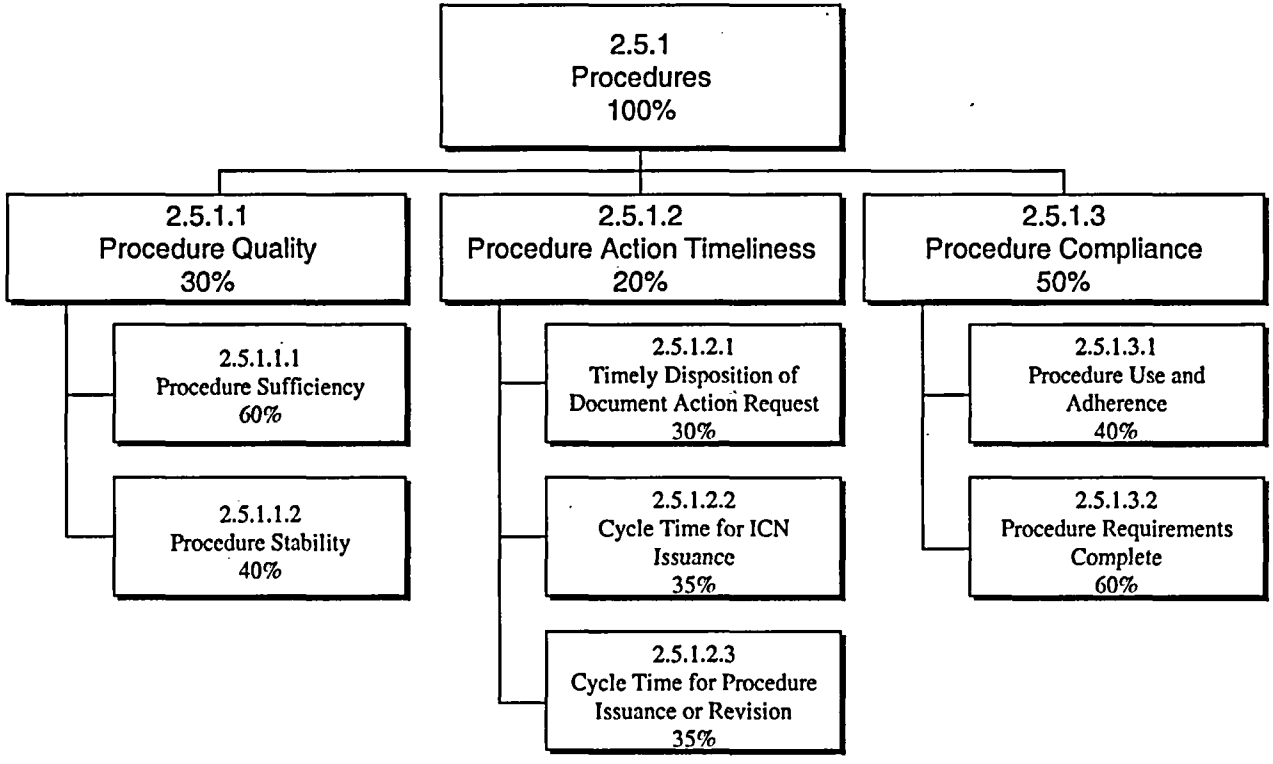

Figure B-2. Performance Indicators – Procedures

3.D – What is the plan for continued PP oversight, monitoring, and transition activities? Describe required actions necessary to complete the transition. Include your cost and schedule requirements. Address if these actions have been incorporated into resource requirements in the appropriate project budgets, work packages and schedules.

As part of the ongoing management efforts to prioritize recommendations from recent reviews, an action plan has been developed to continue the efforts to improve the OCRWM procedure management system. This action plan has been approved by the Leadership Council for implementation, and has been entered in the corrective action program (prerequisite for closure).

Also as part of the ongoing management efforts to prioritize recommendations from recent reviews, an action plan has been developed to resolve the apparent discrepancies between R2A2 documents, and has been entered in the corrective action program (prerequisite for closure).

Certification

"I believe that the actions taken in completing the PP Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Signature on file_____
Richard E. Spence – DOE **Date**

Signature on file_____
Maureen Mendez – BSC **Date**

Table B-4. Corrective Acton Program (CAP)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the CAP section of the MII.	Complete
	1.B – How did the completion of the Action Statement requirements in MII Table 4 support the "objectives" and attain the "desired condition" stated in the CAP section of the MII?	Complete

1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the CAP section of the MII.

The condition identified in MII section 5.4, "Corrective Actions Program" was that there were multiple management systems for various types of issues. Identification of an issue was not as simple and as straightforward as it needed to be because, to some degree, project personnel needed to have a fundamental understanding of which system to use before the issue could be identified. Responsible management had multiple systems, with various priority and categorization schemes, to manage, track, and status. The condition was not viewed as conducive to a culture that identifies its own issues, analyzes and develops effective and timely corrective actions, understands broader implications through the identification and analysis of trends, and learns from its own and related industry experience.

1.B – How did the completion of the Action Statement requirements in MII Table 4 support the "objectives" and attain the "desired condition" stated in the CAP section of the MII?

The purpose of MII section 5.4 "Corrective Actions Program" was to implement a single, integrated, Corrective Action Program (CAP) across the Project. The CAP was to be inclusive of not only the 'tool' used to actually track deficiencies and corrective actions but also system improvements in trending, self-assessments, and root cause analysis. The intent was to put in place a program that in the future would function at a level comparable with nuclear industry practices.

The objective and desired conditions stated in the MII have been achieved by implementation of the new program and processes. The objectives, as outlined in 1.A, and desired conditions have been met in the following manner.

- A single CAP has been established. This action has integrated several tracking systems into one process, and all open legacy issues have been migrated into the new CAP. The result has been the ability of management to go to one source to determine status of all project deficiencies, and the responsible manager.

- The new process allows deficiencies and adverse conditions to be readily evaluated, prioritized, and categorized according to safety and quality significance, and places a single individual, at the manager level, assignment of responsibility and action.

- The new system is the integrated method that management on the project uses to conduct business. The CAP requires management involvement in the corrective action process so that the appropriate corrective actions are identified and completed in a timely manner.

The CAP, the resulting performance indicators, and the trending process are linked together to require routine evaluation of adverse conditions. Management has used this integrated process to communicate lessons learned to personnel.

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 4 of the MII.	Complete
	2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	Complete

2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 4 of the MII.

The approach and implementation was straightforward in actions, intent and expected results, as described in 1.B. A system has been put in place that meets the intended improvements in the CAP as identified in the MII. A detailed description and complete series of implementation events can be found in the MII closure documentation packages 4-1, 4-2, 4-3, and 4-4. The actions statements were completed in the following manner.

Action 4–1 The Director of OQA will be assigned responsibility and held accountable for a single improved OCRWM Corrective Action Program.

The Director of OQA was assigned, and carried out, responsibility for a single improved CAP. OQA personnel led changes in the system and were responsible for integration of several procedures into a single process for the CAP, 'AP 16.1Q'. QA was also instrumental in modifying the trending process and has supported the line in improvements in lessons learned, root cause and management oversight of the CAP.

Action 4–2 DOE will form a task team to establish the program requirements and specifications for the Corrective Action program.

A joint DOE-BSC team established system requirements and evaluated current process in use in the commercial nuclear industry. Two systems went through a final analysis and after input by representatives of industry and an evaluation by this DOE-BSC team a tool was chosen to implement at the project. This tool is in current use at commercial nuclear industry facilities today. When matured, the process will enable the project to function at a level consistent with nuclear industry practices.

Action 4–3 BSC will implement a single OCRWM Corrective Action Program consistent with nuclear industry practices, including tracking, trending, reporting, and closure verification processes.

BSC has implemented a single OCRWM CAP. Features of the improved CAP include an integrated identification methodology, and tracking, trending, reporting, and closure verification processes.

Action 4–4 BSC will define and implement a self-assessment program, a lessons learned program, and a method to identify and correct adverse conditions.

The intent of the MII was to improve the corrective action system as well as integration of a single entry system. As a result, there are defined and implemented self-assessment, 'AP 2.20Q', and lessons-learned programs, 'AP-REG-001'. Management attention was focused on these two areas to improve existing processes. The CAP program integrated existing processes into one program to make it easier for employees to identify adverse conditions, regardless of the their quality designation.

2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.

There were no significant changes to the direction planned or in any of the action statements from the MII. However, administrative changes were made as follows:

- Changes in responsible managers at both DOE and BSC.
- Action schedule activities were modified to develop a more comprehensive CAP process.
- Closed legacy data was not migrated to the new CAP database as originally planned. Trending may require manual drilling of data from the old system.

Table B-4. Corrective Acton Program (CAP) (Continued)

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements are being transitioned into long term management processes.	Complete
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	Complete
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the CAP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the CAP MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	Complete
	3.D - What is the plan for continued CAP oversight, monitoring, and transition activities? Describe required actions necessary to be completed to complete the transition. Include your cost and schedule requirements. Address if these actions have been incorporated into resource requirements in the appropriate project budgets, work packages and schedules.	Complete

3.A – Describe how the MII Action Plan and Statement requirements are being transitioned into long-term management processes.

The MII actions taken have resulted in an industry comparable, single integrated system to identify, track, trend, and apply lessons learned in an effort to prevent adverse conditions. The tools for this integrated process are functional and include the CAP software, procedures for implementation of the software; assessments, lessons learned, and root cause analysis. Senior management oversight of the process and adverse conditions is maintained through the BSC open items oversight committee and the DOE/BSC Management Review Committee. Both DOE and BSC management have clearly articulated their expectations with respect to the CAP to all employees and specifically to project management. These expectations have been incorporated into the personnel performance appraisal process.

3.B – Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?

Future changes needed in R2A2 regarding the CAP include:

- Continued movement of responsibility for the CAP system to Line management from QA
- Assurance of accountability of line management for identifying, mitigating, and correcting adverse conditions
- Continued enhancements of the tools used to be more user-friendly and responsive to management needs (e.g. reporting, assignment of tasks, etc.)
- The metrics for CAP will require additional effort to improve balance and effectiveness (leading) measures.

3.C – Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the CAP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative?

See flowchart next page.

Table B-4. Corrective Acton Program (CAP) (Continued)

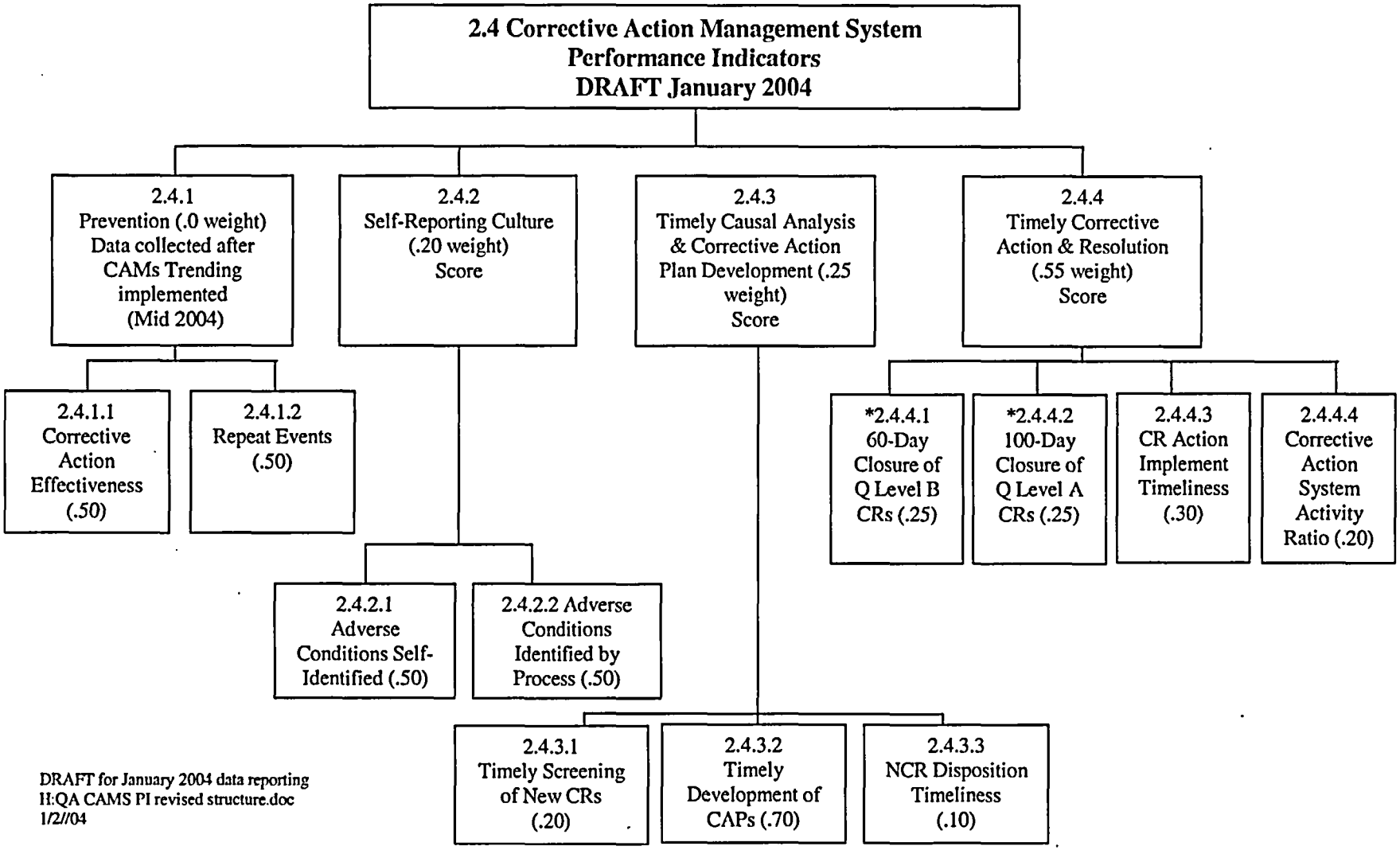

Figure B-3. 2.4 Corrective Action Management System Performance Indicators

The metrics used to measure the effectiveness of the CAP system are primarily found in section 2.4, 'Corrective Action Management System'. The definition of the 2.4 metric is "Measurement of effectiveness in utilizing the overarching corrective action management system and management assessments in identifying and resolving adverse conditions in a timely and efficient manner. The 5 specific measurements, which feed this high level metric, are:

- 2.4.1 'Prevention' This metric has been developed but will not have trend data until July 2004. The definition is on the prevention of adverse conditions.

- 2.4.2 'Self Reporting Culture'. The definition of this metric is "The corrective action process functions to identify adverse conditions and provide corrective actions sufficient to prevent recurrence." High performance systems have a high probability that management will self-identify adverse conditions rather than relying on oversight organizations. This metric will track the self-identification results for the Project." The metric has two subparts: 2.4.2.1, the percentage of adverse conditions that are self-identified and, 2.4.2.2, the percent of adverse conditions identified by source of origin. The data for each of these measures is sufficiently mature as to present an accurate measurement over the past 6 months.

- 2.4.3 'Causal Analysis and CAP Development'. The definition for this metric is "The corrective action system functions to identify and correct adverse conditions. An effective system ensures timely and accurate screening of conditions, to provide adequate time for management to analyze and develop appropriate corrective action plans. This metric is a rollup measurement of the timeliness of corrective action screening & plan development, and dispositioning of Non-conformance report (NCR). The metric has three subparts: 2.4.3.1, Timely screening of new condition reports (CRs), 2.4.3.2, Timely Corrective Action Plans, and 2.4.3.3, NCR Disposition Timeliness. Both 2.4.3.2 and 2.4.3.3 are indicators with a history of data and are mature enough to suggest trends.

- 2.4.4 'Timely and Effective Corrective Action and Resolution'. The definition for this metric is "Adverse conditions are expected to be corrected in a timely manner." In addition to tracking the performance goals for timely completion and closure, leading indicators are included in this metric to determine if there are problems in the organization's ability to meet the commitments. These indicators measure time to complete all actions within designated timeframes, and tracks the backlog of open CRs. The metric has four subparts: 2.4.4.1, Open Condition Report Average Age, 2.4.4.2, Level A CR's Average Days Open, 2.4.4.3, Condition Report Action Implementation Timeliness, and 2.4.4.4, Corrective Action System Activity.

3.D – What is the plan for continued CAP oversight, monitoring, and transition activities?

In addition to the metrics, self-assessments of the CAP will be conducted on a routine basis. Continued senior management level of attention on the CAP is required in order to mature the processes in the manner required to have a system performing at a comparable level with nuclear industry practices. There are no additional resources currently identified that are necessary to fully transition this section of the MII. However, to take the program to the next stage of development, a "learning culture" needs to be implemented. Resource needs (an outside consultant familiar with the INPO processes) have been identified for FY 2004 and are expected to be within current budgets.

Continuing emphasis by management needs to be focused on the following ongoing issue areas to ensure full integration of the original desired conditions.

- The tool used to track adverse conditions needs to be modified by senior management to be more "user-friendly".
- Line management needs to focus more on the effectiveness of the process that is minimizing recurrence of deficiencies. Current attention has been on the process integration and timeliness, which is appropriate in start-up of a new system, but needs to be re-focused on the long-term effectiveness of corrective actions.
- Line management is not finding and self-identifying the appropriate level of deficiencies through the self-assessment process at the expected level of performance.
- Senior management needs to better define the acceptable tolerance level for missed and late actions and hold responsible managers accountable in accordance with this expectation.
- Line Management needs to focus on cause assessment and root cause management using the existing system set in place as a result of the MII actions.
- Senior management needs to monitor the CAP process through metrics and the oversight committees (MRC and BSC Oversight Committee).

Certification

"I believe that the actions taken in completing the CAP Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Signature on file_____
Richard E. Spence – DOE **Date**

Signature on file_____
Dennis Sorensen – BSC **Date**

Table B-5. Safety-Conscious Work Environment (SCWE)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the SCWE section of the MII.	Complete
	1.B – How did the completion of the Action Statement requirements in MII Table 5 support the "objectives" and attain the "desired condition" stated in the SCWE section of the MII?	Complete

1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the SCWE section of the MII.

- OCRWM personnel do not have a consistent understanding and awareness of SCWE expectations.
- OCRWM personnel do not consistently demonstrate skills needed to fulfill SCWE expectations.
- OCRWM personnel have not been consistently held accountable to SCWE expectations.
- The OCRWM Concerns Program has not consistently fulfilled its purpose to provide an alternate path for effective and timely resolution of employee concerns.

1.B – How did the completion of the Action Statement requirements in MII Table 5 support the "objective" and attain the "desired condition" stated in the SCWE section of the MII?

- The "*objective*" of the SCWE section of the MII was to foster and sustain an environment in which employees feel free to raise concerns without fear or retaliation, and with confidence that issues will be addressed promptly and appropriately.
- The "*desired condition*" of the SCWE section of the MII was consistent OCRWM workforce awareness, skills, and accountability to support an environment in which employees feel free to raise concerns without fear or retaliation, and with confidence that issues will be addressed promptly and appropriately. Furthermore, the OCRWM and BSC Concerns Programs provide a trusted alternate path for effective and timely resolution of employee concerns.

- The MII defined 10 specific actions to support the objective and attain the desired condition stated in the MII. These actions were designed to provide the initial framework for achieving necessary SCWE awareness, skills, and accountability within the OCRWM workforce. The actions ranged from publication of an enhanced SCWE policy statement by the OCRWM Program Director, to development of SCWE training modules and SCWE performance indicators, ECP improvements, and involvement of external SCWE expertise. The MII actions have been implemented, and have been effective in providing the initial framework for achieving necessary SCWE awareness, skills, and accountability, as described more fully in paragraph 2.A below. Now that the initial SCWE framework is in place, the MII initiative follow-through has transitioned to a detailed SCWE action plan described in paragraph 3.A below.

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 5 of the MII.	Complete
	2.B – If any MII Action Statement requirement changed direction or was modified in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	Complete

2.A – Describe the approach and implementation activities used to meet the Action Statement objective. Include discussion of Action Statement requirements contained in Table 5 of the MII.

Table 5 Action Statement	Approach and Implementation
1. On April 30, 2002, the OCRWM Program Director and the YMP Project Manager issued a revised and expanded SCWE policy. This policy has been communicated to employees through meetings and project communiqués. The YMP Project Manager and the BSC Deputy General Manager are designated as SCWE change champions.	Senior management established an enhanced SCWE policy and clearly communicated expectations to all OCRWM personnel. Additional SCWE policy enhancements to more clearly align with the SCWE Four Pillars model are included in the SCWE action plan described in paragraph 3.A below.
2. DOE will implement SCWE and employee concerns program performance metrics into BSC contract assessment.	SCWE and employee concerns program performance metrics were implemented as Functional Standards into the BSC contract, PEMP.
3. DOE will modify the BSC contract and other DOE contracts to require the implementation of the Program SCWE policy requirements.	BSC and other DOE contracts were modified to invoke SCWE policy requirements. Will continue to strengthen contract clauses in SCWE Action Plan (3.A, below).
4. DOE will eliminate the backlog of open OCRWM employee concerns and shorten the life cycle for addressing concerns.	Additional management and staff resources were applied to OCP to eliminate backlog and shorten the time required to process concerns. See also Item 8, below.

Table B-5. Safety-Conscious Work Environment (SCWE) (Continued)

Table 5 Action Statement	Approach and Implementation
5. DOE will establish a DOE policy and procedures regarding expectations to escalate issues in an expedient manner.	DOE Management determined that current DOE policies and procedures provide sufficient guidance regarding expectations to escalate issues in an expedient manner (see paragraph 2.B below).
6. BSC will establish a BSC policy and procedures regarding expectations to escalate issues in an expedient manner.	BSC developed procedure LP-GEN-001.
7. DOE and BSC will develop and/or revise SCWE-related Program-wide employee and supervisor/manager training modules based upon nuclear industry practices.	SCWE awareness training based on nuclear industry practices was provided to DOE and BSC and other contractor personnel during the Fall 2002. Additional skills training and mentoring of OCRWM managers, supervisors, and employees is included as part of the SCWE action plan described in paragraph 3.A below.
8. BSC will establish internal BSC mechanisms for reporting, investigating, and resolving employee concerns.	BSC implemented procedures and staffing for an internal Employee Concerns Program (ECP). Additional ECP staffing is included as part of the SCWE action plan described in paragraph 3.A below.
9. DOE and BSC will conduct employee and supervisor/manager SCWE training.	SCWE awareness training based on nuclear industry practices was provided to DOE and BSC and other contractor personnel during the Fall 2002. Additional skills training and mentoring of OCRWM managers, supervisors, and employees is included as part of the SCWE action plan described in paragraph 3.A below.
10. An external SCWE expert group will evaluate YMP-wide SCWE.	An external survey company was obtained to perform an independent evaluation of SCWE perceptions at OCRWM. Industry experts (Griffin, Huey) were obtained to provide independent evaluation and guidance related to SCWE improvement at OCRWM. The results of independent industry expert evaluation and additional SCWE enhancement actions are included in the SCWE action plan described in 3.A below.

2.B – If any MII Action Statement requirement changed direction or was modified in the implementation of the plan, document the change, and explain the reason and why it met the original objective of the MII.

Action Statement 5-5 – DOE Management determined that current DOE policies and procedures provided sufficient guidance regarding expectations to escalate issues in an expedient manner.

Table B-5. Safety-Conscious Work Environment (SCWE) (Continued)

		Status
How are you transitioning the MII commitments into the line management process?	3.A – Describe how the MII Action Plan and Statement requirements are being transitioned into long-term management processes.	Complete
	3.B – Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	Complete
	3.C – Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the SCWE MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the SCWE MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	Complete
	3.D – What is the plan for continued SCWE oversight, monitoring, and transition activities? Describe any required actions to complete the transition. Include cost and schedule requirements. Address if these resource requirements have been incorporated into the appropriate project budgets, work packages and schedules.	Complete

3.A Describe how the MII and Action Statement requirements are being transitioned into long term management processes.

The MII actions were designed to provide the initial framework for achieving necessary SCWE awareness, skills, and accountability within the OCRWM workforce. Now that the initial SCWE framework is in place, the MII initiatives have transitioned to a detailed SCWE action plan to ensure appropriate follow-through of MII objective. The SCWE action plan is endorsed by the OCRWM Leadership Council and details specific follow-through actions designed to sustain continued SCWE awareness, skills development, and personal accountability by focusing on the four essential elements of a safety conscious work environment (SCWE Four Pillars):

- Management support of employees raising concerns without fear of retaliation
- Effective normal problem resolution processes (CAP, DPO)
- Effective alternate problem resolution processes (OCP, ECP)
- Effective methods to detect and prevent retaliation (SCWE Review Team)

Senior management will review the collective significance of SCWE performance indicators on a quarterly basis to sustain of a robust SCWE at all OCRWM facilities, and to identify needed adjustments and corrections.

3.B – Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?

Need to ensure that organizational descriptions capture the latest set of assignments of R2A2. (e.g., MII talks about YMP Project Manager – no such position anymore.) Responsibility for ensuring the SCWE Action Plan has been assigned to Mark Van Der Puy (DOE) and Randall Huey (BSC), with oversight by the Leadership Council.

3.C – Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the SCWE MII commitments into the long-term management process and do they measure the full breadth of the improvement initiative?

SCWE performance indicators were developed to provide an objective measure of how well OCRWM is performing in each of the SCWE Four Pillar areas, as shown on the metric tree below.

Table B-5. Safety-Conscious Work Environment (SCWE) (Continued)

SCWE Performance Indicator Metric Tree

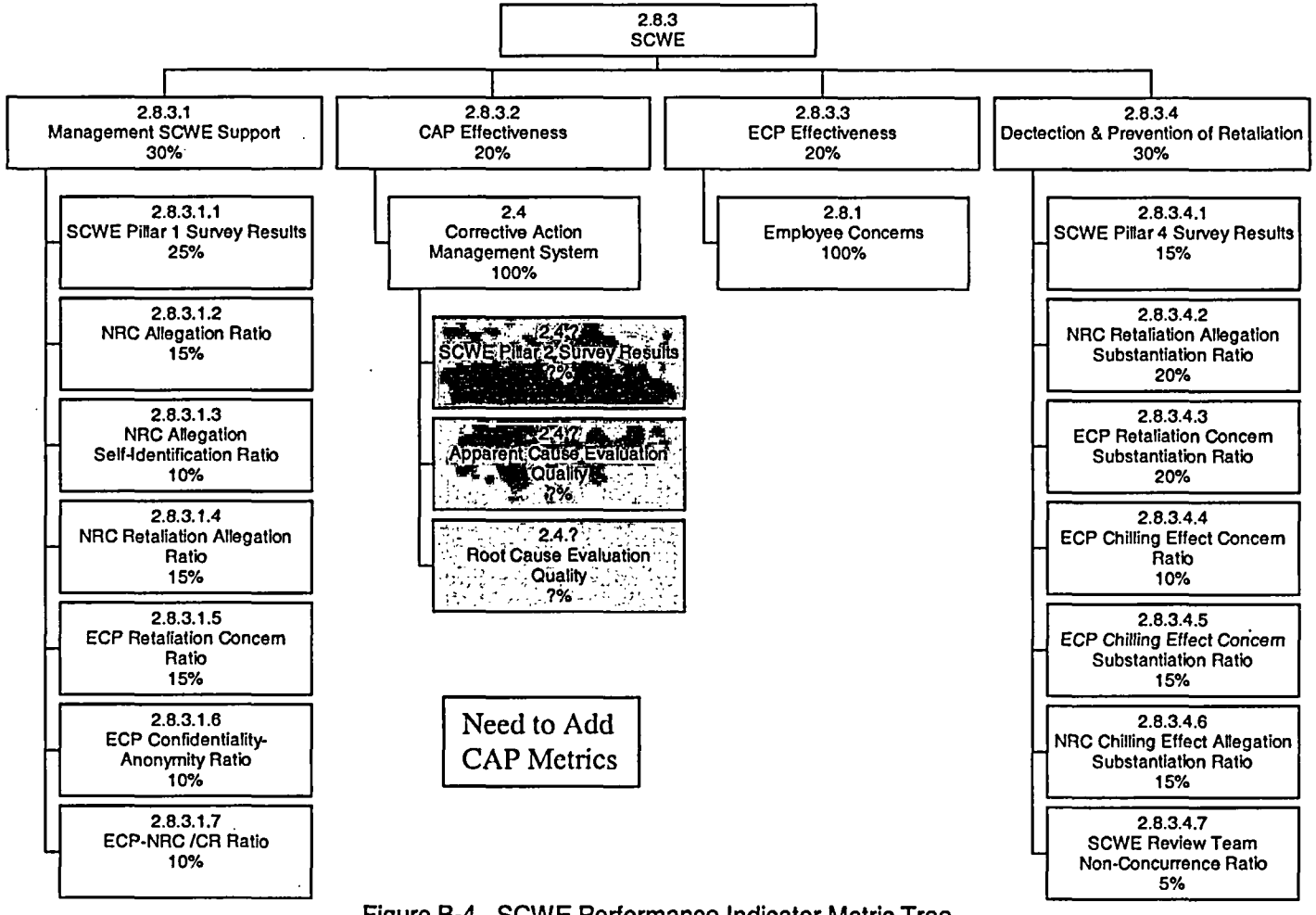

Figure B-4. SCWE Performance Indicator Metric Tree

A description of each of the SCWE performance metrics is provided below.

Pillar 1 – Management Support of Workers Raising Concerns Without Fear of Retaliation

1-1 SCWE survey results for Pillar 1

The SCWE survey result performance indicator is intended to provide a measure of worker confidence in management support of a SCWE, and worker willingness to raise problems and concerns without fear of retaliation. The SCWE survey results for Pillar 1 = (# of Pillar 1 survey questions with positive response)/(Total # of Pillar 1 survey questions).

1-2 NRC allegation ratio

The NRC allegation ratio performance indicator is intended to provide a measure of worker willingness to use OCRWM normal and alternate problem identification and resolution processes to address concerns, in lieu of taking concerns to the NRC. The allegation ratio = (# of NRC allegations in last 3 months) / (industry average # of allegations in last 3 months).

1-3 NRC referred allegations self-identified by OCRWM

The self-identification performance indicator is intended to provide a measure of YMP self-identification of NRC allegation issues, indicating that YMP workers independently recognized and addressed issues that were taken to the NRC. The self-identification ratio = (# of self-identified NRC referred allegation issues in last 3 months) / (# of substantiated NRC referred allegation issues in last 3 months).

1-4 NRC retaliation allegation ratio

The NRC retaliation allegation ratio performance indicator is intended to provide a measure of perceived retaliation against YMP workers. The retaliation allegation ratio = (# of NRC retaliation allegations in last 3 months) / (industry average # of retaliation allegations in last 3 months).

1-5 ECP retaliation concern ratio

The ECP retaliation concern ratio performance indicator is intended to provide a measure of perceived retaliation against YMP workers. The retaliation concern ratio = (# of ECP retaliation concerns in last 3 months) / (total # of ECP concerns in last 3 months).

1-6 ECP confidentiality-anonymity ratio

The confidentiality-anonymity concern ratio performance indicator is intended to provide a measure of the reluctance of YMP workers to be identified as being involved with the raising of safety or quality concerns. The confidentiality-anonymity concern ratio = (# of ECP concernees requesting confidentiality or anonymity in last 3 months) / (total # of ECP concerns in last 3 months).

1-7 ECP –NRC / CR ratio

The ECP-NRC / CR ratio performance indicator is intended to provide a measure of the reluctance of YMP workers to utilize normal problem resolution processes to address safety or quality concerns. The ECP-NRC / CR ratio = (total # of ECP and NRC concerns in last 3 months) / (total # of CRs and ECP and NRC concerns in the last 3 months).

Pillar 2 – Effective Normal Problem Resolution Processes

The Pillar 2 metric is a direct rollup from the overall CAP metric

Pillar 3 – Effective Alternate Problem Resolution Processes

The Pillar 3 metric is a direct rollup from the overall ECP metric

Pillar 4 – Effective Detection and Prevention of Retaliation

4-1 SCWE survey results for Pillar 4

The SCWE survey result performance indicator is intended to provide a measure of worker confidence in management's effectiveness in detecting and preventing retaliation and chilling effect in the workplace. The SCWE survey results for Pillar 4 = (# of Pillar 4 survey questions with positive response)/(Total # of Pillar 4 survey questions).

4-2 NRC retaliation allegation substantiation ratio

The NRC retaliation allegation substantiation ratio performance indicator is intended to provide a measure of management effectiveness in preventing substantiated NRC allegations of retaliation against YMP workers. The NRC retaliation allegation substantiation ratio = (# of substantiated NRC retaliation allegations in last 3 months) / (# of NRC retaliation allegations in last 3 months).

4-3 ECP retaliation concern substantiation ratio

The ECP retaliation concern substantiation ratio performance indicator is intended to provide a measure of management effectiveness in preventing substantiated ECP concerns of retaliation against YMP workers. The ECP retaliation concern substantiation ratio = (# of substantiated ECP retaliation concerns in last 3 months) / (# of ECP retaliation concerns in last 3 months).

4-4 ECP chilling effect concern ratio

The ECP chilling effect concern ratio performance indicator is intended to provide a measure of the degree to which chilling effect is a concern among ECP users. The ECP chilling effect concern ratio = (# of ECP chilling effect concerns in last 3 months) / (total # of ECP concerns in last 3 months).

4-5 ECP chilling effect concern substantiation ratio

The ECP chilling effect substantiation ratio performance indicator is intended to provide a measure of the degree to which chilling effect is confirmed by evaluation of ECP concerns. The ECP chilling effect substantiation ratio = (# of ECP chilling effect substantiations in last 3 months) / (# of ECP chilling effect concerns in last 3 months).

4-6 NRC chilling effect allegation substantiation ratio

The NRC chilling effect substantiation ratio performance indicator is intended to provide a measure of the degree to which chilling effect is confirmed by evaluation of NRC referred allegations. The NRC chilling effect substantiation ratio = (# of NRC chilling effect substantiations in last 3 months) / (# of NRC chilling effect referred allegations in last 3 months).

4-7 SCWE Review Team non-concurrence ratio

The SCWE Review Team non-concurrence ratio performance indicator is intended to provide a measure of the degree to which YMP managers understand the SCWE expectations of SCWE Review Team to detect and prevent retaliation in the workplace. The SCWE Review Team non-concurrence ratio = (# of SCWE Review Team non-concurrences in last 3 months) / (# of SCWE Review Team reviews in last 3 months)

3.D What is the plan for continued SCWE oversight, monitoring, and transition activities?

The SCWE Review Team will provide continued SCWE oversight, monitoring, and recommended needed actions to sustain a robust SCWE at all OCRWM facilities.

The SCWE action plan defines additional SCWE improvement actions that have been prioritized by the OCRWM Leadership Team, based on evaluation of the overall benefit of the identified actions and the implementation complexity (including schedule and cost) of those actions. Upon endorsement by the OCRWM Leadership Council, any additional resource requirements to implement those actions will be incorporated into the appropriate project budgets.

Certification

"I believe that the actions taken in completing the SCWE Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Signature on file_____
Russell Dyer – DOE **Date**

Signature on file_____
Randall Huey – BSC **Date**

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APPENDIX C

SCHEDULE OF IR TEAM INTERVIEWS

APPENDIX C

SCHEDULE OF IR TEAM INTERVIEWS

Name	Subject Area	Position Title	Interview Date/Time
Robert Latta/ Jack Parrot	NRC Licensing	Senior Onsite Licensing Representative	March 4, 2004/ 8:15 a.m.
Richard E. Spence	CAP, Procedures & MII	MII Transition Assurance Team Manager	March 4, 2004/ 2:00 p.m.
John Arthur	Management Processes	DOE, Deputy Director ORD	March 5, 2004/ 9:00 a.m.
Maureen Mendez	Procedures	BSC, Business Systems Manager	March 5, 2004/ 10:30 a.m.
Dennis Sorensen	CAP & MII	BSC, Organizational Assurance Manager	March 5, 2004/ 11:30 a.m.
Randall Huey	SCWE	BSC, SCWE Manager	March 5, 2004/ 1:30 p.m.
Cindy Wagner	Performance Indicators	BSC, Performance Indicators Specialist	March 5, 2004/ 2:30 p.m.
John Mitchell	Management Processes	BSC, General Manager	March 8, 2004/ 9:30 a.m.
Margaret (Peggy) McCullough	R2A2	BSC, Deputy General Manager	March 8, 2004/ 10:30 a.m.
Joseph Ziegler	Licensing	DOE, License Application & Strategy Director	March 8, 2004/ 1:00 p.m.
Suzanne Mellington	R2A2	DOE, Facility Operations Director	March 9, 2004/ 10:00 a.m.
Mark Van Der Puy	SCWE	DOE, Project Support Director	March 9, 2004/ 11:00 a.m.
Sam Horton	Quality Assurance	BSC, Special Projects Manager (representing Michael Mason, QA Director)	March 9, 2004/ 1:00 p.m.
R. Denny Brown	Quality Assurance	DOE, Quality Assurance Director	March 9, 2004/ 4:00 p.m.

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APPENDIX D

IR TEAM MEMBERS

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APPENDIX D

IR TEAM MEMEBERS

Team Lead: Kitty R. Gandee

Team Member: Grant J. McCallum

Onsite Independent Review Dates: March 1, 2004 through March 16, 2004

RESUME OF KITTY GANDEE

McCallum & Associates Inc.
2950 George Washington Way Suite C
Richland, WA 99352
[redacted]

Experience summary: Ms. Gandee is a highly experienced professional with a broad based background in project management, integrated planning, regulatory and contractual compliance, and communication. She has over 25 years of experience in various positions of nuclear waste management including environmental and safety regulations, engineering systems design, engineering processes and procedures, facility planning and inspection, and management systems development and assessments.

SELECTED RESPONSIBILITIES AND ACHIEVEMENTS

- Conducted Independent Review of Yucca Mountain Project's effectiveness in implementing the Management Improvement Initiatives (MII). The action plans and statements in the MII are commitments made by the Director of the DOE-OCRWM to the Nuclear Regulatory Commission.
- Authored new and revised existing Company Directives and Organizational Procedures to bring Nevada Test Site operations into compliance with Federal regulations and current DOE orders regarding nuclear facility safety.
- Supported development of the new Safety Equipment List for Hanford Tank Farms based on current regulatory requirements. The new SEL would save multimillion dollars in maintenance and replacement costs in the future.
- Conducted management assessment and strategic planning for environmental permitting of the Waste Treatment Plant (WTP) at Hanford. Developed the communication strategy (among Hanford Contractors and with DOE and Regulators) to enhance permitting efficiency.
- Performed ES&H reviews on all design and procedure changes to ensure compliance with the Authorization Basis for the WTP. Conducted management assessment of the safety analyses for design and construction of the WTP.
- Conducted planning for the DOE Condition Assessment Survey (CAS) project at Hanford Site. Inspected 30 facilities in the 200, 300, and 400 Areas including laboratories, warehouses, fire stations, and electrical distribution stations using DOE and industry guidelines to gather information for DOE budget planning.
- Prepared System Design Description (SDD) of the Cross-Site Transfer System at Hanford that transfers the radioactive wastes from Tank Farms to the WTP for vitrification. This SDD was used as the model for developing all other SDDs on underground transfer systems for Hanford Tank Farms.
- Developed extensive data tables and managed quality of data for construction, operation, and deactivation of Supplemental Treatment facilities that would be used to accelerate the closure of Hanford Tank Farms.
- Prepared the optimization strategy for closure of the central plateau at the Hanford Site. The central plateau (~75 square miles) consists of over 900 excess facilities and over 1,400 radioactive/hazardous waste sites.
- Represented the Contracts Department in review and approval of all WTP Project deliverables to ensure regulatory and contractual compliance. Developed the process and system to manage all the WTP deliverables (over 130 submittals) and assisted in implementing the process to deliver all products to DOE on schedule.

- Led project teams to prepare four major DOE documents to ensure safe operation of the New Production Reactor. These documents included the Environmental Requirements Document, the National Environmental Policy Act (NEPA) Compliance Procedure, the Occupational Safety and Health Requirements Document, and the draft Environmental Impact Statement for Construction and Operation of the New Production Reactor. All documents were issued on or ahead of schedule.
- Directed large project team (102 members) to produce a major Environmental Impact Statement (EIS) that supports President Clinton's decision on nuclear weapons path forward. Conducted project planning and stakeholder interaction, wrote the Executive Summary and various sections of the EIS. Completed project and obtained the President's approval ahead of schedule.
- Developed the acceptance criteria and negotiated transition of DOE site facilities from defense production to cleanup. Led project team to establish DOE's Economic Development Program and chaired working groups to resolve community economic development issues.
- As Special Technical Assistant to Congressman Sid Morrison, the Under Secretary of Energy, and the General Manager of the Waste Treatment Plant (WTP) Project at Hanford, provided technical/strategic advice and prepared legislation, hearings, speeches, reports, and action plans to address and resolve significant issues. The General Manager's speech on the WTP was considered the best paper in Waste Management 2000 conference.
- Managed the preparation and issuance of the Hanford Defense Waste EIS by the DOE. Wrote the Executive Summary and reviewed/revised all sections of the document. Presented the EIS to DOE internal and external reviewers (EPA, NRC, Citizens Forum, etc.) and resolved comments.
- Led a project team to restart the Critical Mass Laboratory (at Department of Energy's Hanford Site) that was shut down due to violation of materials safeguards regulations. The team completed all corrective actions; the Laboratory passed all inspections and obtained approval for restart ahead of schedule.
- Conducted materials safeguards inspection for all nuclear materials laboratories in the 300 Area of the Hanford Site and prepared inspection reports. Obtained outstanding commendation from the DOE-Richland Assistant Manager of Operations.

WORK HISTORY

<u>McCALLUM & ASSOCIATES INC, Richland, Washington</u>
Consultant, 12/2002 – Present

<u>SCIENCE APPLICATIONS INTERNATIONAL CORPORATION, Richland Division</u>
Senior Nuclear Project Engineer, 1997-2002

<u>U.S. DEPARTMENT OF ENERGY, Washington D.C.,</u> 1990-1997

- **Senior Project Manager** (1995-1997) for the Storage and Disposition of Weapons-Usable Fissile Materials Programmatic EIS
- **Director** (1994) of Economic Development Program Office
- **Director** (1993) of Office of Facility Policy, Planning, and Acceptance, Office of Environmental Management
- **Special Technical Assistant** (10/92-1/93) to the Under Secretary of Energy
- **Director** (1991-1992) of Environment, Office of New Production Reactors
- **Director** (1991) of Design Division, Office of Light Water Reactor, Office of New Production Reactors

U.S. HOUSE SCIENCE, SPACE, AND TECHNOLOGY COMMITTEE
Republican Staff Representative of the Energy Subcommittee and Special Hanford Assistant to Congressman Sid Morrison (WA), 1987-1990

U.S. DEPARTMENT OF ENERGY, Richland, WA
Senior Nuclear Engineer, 1983-1987

BATTELLE PACIFIC NORTHWEST LABORATORY, Richland, WA
Research Engineer, 1978-1983

EDUCATION

- M.S. Nuclear Engineering, Oregon State University
- M.L.S. Library Science, University of Pittsburgh
- M.S. Materials Engineering, University of Maryland
- B.S. Metallurgical Engineering, Chen Kung University, Taiwan

LANGUAGES

- Chinese (Native Language - Mandarin and Cantonese) and Japanese

CLEARANCE

- DOE-Q Clearance expired 1999.

RESUME OF GRANT J. MCCALLUM

McCallum & Associates Inc.
2950 George Washington Way Suite C
Richland, WA 99352
[redacted]

Experience Summary - Mr. McCallum has over 28 years of engineering and project management experience with Westinghouse, General Electric, Kaiser Engineers and various engineering and consulting companies. Mr. McCallum has provided services and completed projects for clients in the Commercial Nuclear Power and the Department of Energy GOCO complex. A summary of recent tasks includes the development of a Safety Analysis report, the performance of Operational Readiness Reviews and Assessments, authoring engineering reports, performing management assessments, and providing project management services to various engineering and construction projects. Mr. McCallum started a consulting company in 1992, has managed all facets of a technical services firm for the last ten years, is accomplished with oral and written communication and is effective in both office and field assignments.

McCallum & Associates Inc. Vice President – Richland Washington 1995 to present

SELECTED RESPONSIBILITIES AND ACHIEVEMENTS

- Conducted Independent Review of Yucca Mountain Project's effectiveness in implementing the Management Improvement Initiatives (MII). The action plans and statements in the MII are commitments made by the Director of the DOE-OCRWM to the Nuclear Regulatory Commission.
- Developed the new baseline for the CH2M Hill Hanford Accelerated Tank Closure Demonstration Project including cost and resource estimates for all activities and deliverables. The Project was completed on schedule and under budget.
- Directed a team of engineers and estimators to develop technical and cost estimates for various alternatives to accelerate the closure of Hanford Tank Farms. These data packages formed the basis for developing the Environmental Impact Statement for Accelerated Closure of Hanford Tanks.
- Assessed adequacy of design and engineering deliverables by contractors and advised the Director of Quality (RPP-WTP Project) on acceptability of deliverables.
- Performed Safety Analysis of the Cementation process for the Plutonium finishing Plant (PFP) at Hanford. The Cementation process was an option for safe storage and transportation of the plutonium from PFP
- Conducted Operational Readiness Reviews (ORR) of plutonium stabilization at the PFP and Readiness Assessments (RA) of tank waste retrieval processes to ensure safe cleanup of Hanford wastes.
- Performed analysis to resolve non-conformance reports and propose corrective action in support of licensing actions at the Zimmer Nuclear plant.
- Directed Power ascension tests at two operating Nuclear power plants and provided direction and support to the operating staff in resolution of NSSS performance tests. Certified Senior Reactor Operator (SRO) for a GE BWR-6 Nuclear reactor.
- Managed and directed fifteen engineers and scientists to develop safety analysis for project related AE nuclear designs.

- Managed development of the Local Area Network (LAN) at Hanford and provided technical support for procurement, installation and startup of LAN/WAN computer systems for Lockheed Environmental Services, Duke Engineering and Services and The Digital Image. Project managed the LAN deployment, including interviewing and hiring permanent staff for turnover to the client.
- Performed construction management activities to ensure successful completion of commercial building designs and facility upgrades in Richland Washington.

KAISER ENGINEERS HANFORD COMPANY – Richland, Washington
Manager Safety Analysis Department, 1988 to 1992

DOE HQ – Germantown, Maryland
Principle Engineer on loan to DOE (Kaiser Hanford Engineers) 1988-1989

GENERAL ELECTRIC – King of Prussia, Pennsylvania
Startup Test Engineer (SRO) –Limerick Nuclear Plant, Hope Creek Nuclear Plant. 1985 to 1987

TAD TECHNICAL SERVICES – Monroe, Michigan
Quality Engineer – At the Fermi II Nuclear Plant, 1984

MID COLUMBIA ENGINEERS – Richland, Washington
Quality Engineer - Zimmer Nuclear Plant, WPPSS Nuclear Plant WNP-2 1982 - 1983
Field Engineer –WPPSS Nuclear Plant WNP-1 1980-1982

WESTINGHOUSE HANFORD COMPANY – Richland, Washington
Health Physics Analyst - 1976 to 1980

OREGON STATE UNIVERSITY – Corvallis, Oregon

HP Technician - 1973-1976

EDUCATION

- BS, Nuclear Engineering, Oregon State University

SECURITY CLEARANCE

- DOE-Q Clearance expired 1993

COMMUNITY SERVICE

- Richland Rotary, 1992 to present (Status – *Active*)
- Three Rivers Community Foundation (Status – *Active*)
- Junior Achievement, Board Member (Status – Inactive)
- Tri-City Science and Technology Park, Board Member (Status – Inactive)
- Toastmasters International, Area Governor (Status – Inactive)
- Tri-City Academy of Ballet, Board Member (Status – Inactive)

Enclosure 2

Yucca Mountain Project (YMP) Annunciator Panel from March Monthly Operating Review

Yucca Mountain Project Annunciator Panel

Performance Indicators based on data for: February 2004

Work Execution

Primary	Secondary					Focus Areas
Y Y Y Y * 1.1 Licensing Y	Y G G G 1.1.1 License Application Development Y	G G G G 1.1.2 NRC Interactions G	Y Y R R 1.1.3 License Support Network Input R	G G G G * 1.1.4 NRC Commitments G	R R R Y 1.1.5 Key Technical Issues Y	V V V G FA1 Safeguards G
Y Y Y G * 1.2 Engineering/ Design Y	R R Y Y * 1.2.1 Surface Facilities Y	Y G G G * 1.2.2 Subsurface Facilities G	G G G G * 1.2.3 Engineered Barriers G	B V G G * 1.2.4 Reqts & Integration Management G		
Y Y Y Y * 1.3 Safety Analysis Y	Y Y Y R 1.3.1 TSPA R	G G G Y 1.3.2 Performance Confirmation Y	R G G G 1.3.4 Preclosure Safety Analysis B > G	Y Y R R 1.3.5 AMR Production R		
	Y R R R 1.3.6 Data Qualification Y	G G Y Y * 1.3.7 Model Validation R	G G Y Y 1.3.8 Software Qualification Y			
G G G G * 1.4 Site Operations G L	Y G G G 1.4.1 Site Engineering G	G G G G 1.4.2 Site Construction G	G G G Y 1.4.3 Site Maintenance G	Y G Y G * 1.4.4 Operations G L	B B G G * 1.4.5 Bechtel Nevada B > G L	V V V V 1.4.6 Site Critical Systems D

Management

Primary	Secondary					Focus Areas
G G G G 2.1 Project Support G						
V V G G 2.2 Safety, Health, and the Environment Y	V V G G 2.2.1 Incidents Y	V V G G 2.2.2 ES&H Program Awareness G	V V G G 2.2.3 ES&H Reporting B > G			
G G Y Y 2.3 Quality Assurance G	2.3.1 Technical Product Compliance	G Y Y Y 2.3.2 Verification of Quality G	B B G G 2.3.4 Quality Procedure Adequacy B > G			
R R R R 2.4 Corrective Action Mgmt System R	V V D D 2.4.1 Prevention D	R R R R 2.4.2 Self Reporting Culture R	R R R R 2.4.3 Causal Analysis & CAP Development R	Y Y Y R 2.4.4 Timely & Effective CAR R	V V D D 2.4.5 CAP Performance & Infrastructure D	
V V G G * 2.5 Management Framework G L	V V G G 2.5.1 Procedures B > G	V V D D 2.5.2 Requirements Management D	V V G Y * 2.5.3 Management Programs G L			
Y Y Y Y 2.7 Project Management Y	Y Y Y Y 2.7.1 Cost Performance (Overall CPI) Y	Y Y Y Y 2.7.2 Schedule Performance (Overall SPI) Y	G G G G 2.7.3 Scope Baseline B > G	G Y Y Y 2.7.4 Risk & Contingency G	Y Y Y Y 2.7.5 Key Deliverable Critical Path Float R	
V V Y Y * 2.8 Organizational Climate G L	V V G G 2.8.1 Employee Concerns G	V V V Y 2.8.2 Safety Culture Y	V V Y Y 2.8.3 SCWE Y L	V V V D 2.8.5 Internal Communicatio G		

Primary	Secondary	
G Y G G * 3.1 External G	V V V Y * 3.1.2 External Communicatio G	G Y G G 3.1.5 Funding B > G

Key

History

* trend

Metric Title

Late Indicators

* Indicates a change to metric this month.

B Exceptional performance that exceeds all requirements and expectations for the desired outcome, maintained for more than six months.

G Good performance which meets or exceeds requirements and expectations. The status code "B > G" indicates that the score would be Blue, but has not demonstrated sustained performance.

Y Yellow is used to denote:
-Performance which warrants increased management attention and resources to achieve desired results or to reverse a negative trend.
-Acceptable performance that relies on a set of conditions which could change and send performance into the "Red" category.

R Degraded or adverse performance warranting significant level of management attention, resources, and improvement

L Gray for Late - Updated metric not provided by due date.

D Approved metric not yet reporting data.

V Insufficient data or metric definition is not yet approved

B G Y R A lettered history tile with a white background indicates the point at which a change occurred in the underlying metrics. The performance reported in the history tiles to the left of the point of change should be used with caution. A change is defined as a change to the intent of the metric definition, threshold, weighting, calculation, data source(s) used in the calculation, or the deletion/addition of a sub-metric.

▲ | ▼ Trend indicators are based on a rolling average of six months of data. If there are not six data points because the metric is new or has been changed, then the trend is based upon the data available, or is indicated as neutral.

C01

Performance Indicator Color Scale

Based on a 4 point scale (primary and secondary metrics)

Blue Rating - 3.50 - 4.00 score; exceptional performance that exceeds all requirements and expectations for the desired outcome, maintained for more than six months

Green Rating - 2.50 - 3.49 score; effective performance that meets or exceeds requirements or expectations

Yellow Rating - 1.50 - 2.49 score; borderline of declining performance requiring increased management attention and resources to achieve desired performance or to reverse a negative trend

Red Rating - 0.00 - 1.49 score; degraded or adverse performance warranting significant level of management attention, resources, and improvement

White Rating - no score; insufficient data or not applicable

Gray Rating - no score; data submitted late

Performance Indicator Summary from Prior Month

Eight performance indicators improved this month. Seven went from yellow to green which were Site Maintenance, Quality Assurance, Verification of Quality, Management Programs, Risk/Contingency, Organizational Culture, and External Communications. Data Qualification improved from red to yellow.

Five performance indicators declined in performance this month. LA development, Engineering/Design, Safety and Health, and Incidents went from green to yellow. Key Deliverables/ Critical Path float went from yellow to red.

All other performance indicators had no color grading change for the month.

Enclosure 3

Management Improvement Initiative Transition Approach

QA: N/A

Office of Civilian Radioactive Waste Management

MANAGEMENT IMPROVEMENT INITIATIVES TRANSITION APPROACH

Revision 1

December 2003

U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Washington, D.C.

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

Prepared by:

Dr. Robert F. Wemheuer
Transition Assurance Team Member

Date

Robert E. Sweeney
Transition Assurance Team Member

Date

Approval:

C. Dennis Sorensen
Manager of Organizational Assurance
Bechtel SAIC Company, LLC

Date

Richard E. Spence
Transition Assurance Team Manager and
Special Assistant to Deputy Director of ORD
U.S. Department of Energy

12/08/03
Date

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CHANGE HISTORY

Revision Number	Interim Change No.	Effective Date	Description of Change
0	0	11/24/2003	Initial issue
1	0	12/10/2003	Incorporate Leadership Council input to group presentations by the 5 MII Action Plans and assign designees for the original MII Action Plan Responsible Managers.

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CONTENTS

Page

ACRONYMS ix

1. INTRODUCTION 1

2. PURPOSE 1

3. DEFINITIONS 2

4. SCOPE 2

5. ROLES AND RESPONSIBILITIES 4
   5.1 DEPARTMENT OF ENERGY 4
   5.2 BECHTEL SAIC COMPANY, LLC 4
   5.3 LEADERSHIP COUNCIL 5
   5.4 TRANSITION ASSURANCE TEAM 5

6. TRANSITION APPROACH 5
   6.1 TRANSITION PLANNING, REVIEW, AND COORDINATION 5
   6.2 MANAGEMENT REVIEW 5
   6.3 IR & RECOMMENDATIONS 6
   6.4 DOCUMENTATION OF TRANSITION 6
   6.5 ISSUE RESOLUTION 6
   6.6 TRANSITION PERFORMANCE 6
   6.7 COMMUNICATIONS 7
   6.8 CHANGE CONTROL 7

7. RECORDS 7

8. REFERENCES 8

APPENDIX A TRANSITION CHECKLIST TEMPLATE A-1

FIGURES

Page

Figure 4-1. Management Review and Transition Process Summary 3

TABLES

Page

A-1. Roles, Responsibilities, Authority and Accountability (R2A2) A-1

A-2. Quality Assurance Programs and Processes (QAPP) A-4

A-3. Program Procedures (PP) A-7

A-4. Corrective Action Program (CAP) A-10

A-5. Safety-Conscious Work Environment (SCWE) A-13

ACRONYMS

BSC	Bechtel SAIC Company, LLC
CAP	Corrective Action Program
CAR	Corrective Action Request
DOE	U.S. Department of Energy
DR	Deficiency Report
HQ	Headquarters
IR	Independent Review
LC	Leadership Council
MII	Management Improvement Initiatives
NRC	U.S. Nuclear Regulatory Commission
OCRWM	Office of Civilian Radioactive Waste Management
OQA	Office of Quality Assurance
ORD	Office of Repository Development
PP	Program Procedures
QA	Quality Assurance
QAPP	Quality Assurance Programs and Processes
QARD	Quality Assurance Requirements and Description
R2A2	Roles, Reposibilities, Accountability, and Accountability
RM	Responsible Manager
SCWE	Safety-Conscious Work Environment
TAT	Transition Assurance Team
USGS	U.S. Geological Survey

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1. INTRODUCTION

On July 19, 2002, the Director of the Office of Civilian Radioactive Waste Management (OCRWM) issued *Management Improvement Initiatives* (MII) (DOE 2002). The MII was developed to improve implementation of OCRWM quality assurance requirements and establish a foundation for continuous program improvement in five areas. The ultimate goal of the MII was to ensure that Yucca Mountain Project work and Bechtel SAIC Company, LLC (BSC) products consistently meet quality objectives and are fully defensible.

There were 29 Action Statements within five Action Plans stated in the MII. In addition, Action Statements associated with Corrective Action Reports BSC–01-C-001 and BSC-01-C-002 were included as part of the MII. To support evidence that the baseline MII commitments were complete, a Confirmation Team was established by OCRWM management to provide a mechanism to evaluate, confirm, and document completion of the initial actions (DOE 2003b).

As noted in the MII, experts from outside the Department of Energy (DOE) would review overall effectiveness of the MII action plans. DOE management plans, as agreed in the Leadership Council meeting of November 18, 2003, are to transition actions to line management and processes. Using the results of the independent review, along with the results from the confirmation and transition processes and other associated reviews, DOE will assess MII effectiveness and advise the U.S. Nuclear Regulatory Commission (NRC) on MII closure based on these activities.

2. PURPOSE

The purpose of this document is to establish the approach for how the DOE will establish and manage an efficient transition of MII commitments. In doing so, DOE expects to achieve a high level of confidence in the eventual closure and effectiveness of MII actions while meeting the following near-term objectives:

- Commitments have been or will be effectively and orderly transitioned by the Responsible Managers (RMs) from MII (and other related assessments) into day-to-day line management structures and processes.

- The necessary tools and organizations are in place to support continual improvement such that work products consistently meet quality objectives and are fully defensible.

- Activities affecting long-term implementation of initiatives have been well established and planned, and form sufficient bases for an independent review to be conducted.

- DOE and BSC senior management, through the Leadership Council (LC), have objectively evaluated the baseline achievements of the MII commitments and paths forward for transition to line management and processes.

- Improvement initiatives are well integrated within processes, provide useful performance metrics, and provide for a sound basis for effectiveness and closure determinations by the Director of OCRWM.

- Actions affecting transition, effectiveness, and finality of MII are traceable and transparent to NRC and others, as they advance and subsume into long-term programs and processes.

3. DEFINITIONS

The definitions contained in the *Quality Assurance Requirements and Description* document (DOE 2003a) apply to this process. Additional terms are defined below.

Action Plan Responsible Manager–The DOE manager assigned responsibility for completion of the action plans described in the MII. *Action Statement Responsible Manager*–The DOE or BSC manager(s) assigned responsibility for completion of the action statements described in the MII.

DOE/BSC Management Review–A review by the LC of objective evidence presented by the Responsible Manager and/or Office of Repository Development (ORD)/BSC designees regarding the adequacy, quality, and effectiveness of implementation of the MII action for determining completion and transition.

MII Confirmation–The process used for reviewing and validating, or otherwise determining and documenting whether MII action items and related processes, services, or documents conformed to specified requirements or commitments of the MII.

4. SCOPE

This approach has been prepared to assist management with the transition of long-term commitments contained in the MII into management processes. The scope of this approach outlines the basic duties, responsibilities, and expectations for the RMs in preparing and presenting the path forward for the execution and documentation of transition, effectiveness, and ultimate finality decisions associated with their assigned MII actions.

The approach also provides the duties, responsibilities and criteria used by the LC for their evaluation of the remedial and corrective actions put in motion by the RMs to improve and sustain management initiatives and program performance. The scope of the approach will also support future MII effectiveness determinations of long-term activities to line management processes, including any future determination on closure that the OCRWM Director may provide to the NRC. Figure 4-1 generally illustrates the flow of activities associated with this approach with respect to the overall MII effort.

NOTE: This approach is intended to be a management process. The activities of the approach are separate from any that may have been or will be required by formal Office of Quality Assurance verifications or implementation of the Corrective Action Program. The LC review is not intended to be a surrogate or replacement for duties or responsibilities required of assigned line management or by OCRWM programs and procedures.

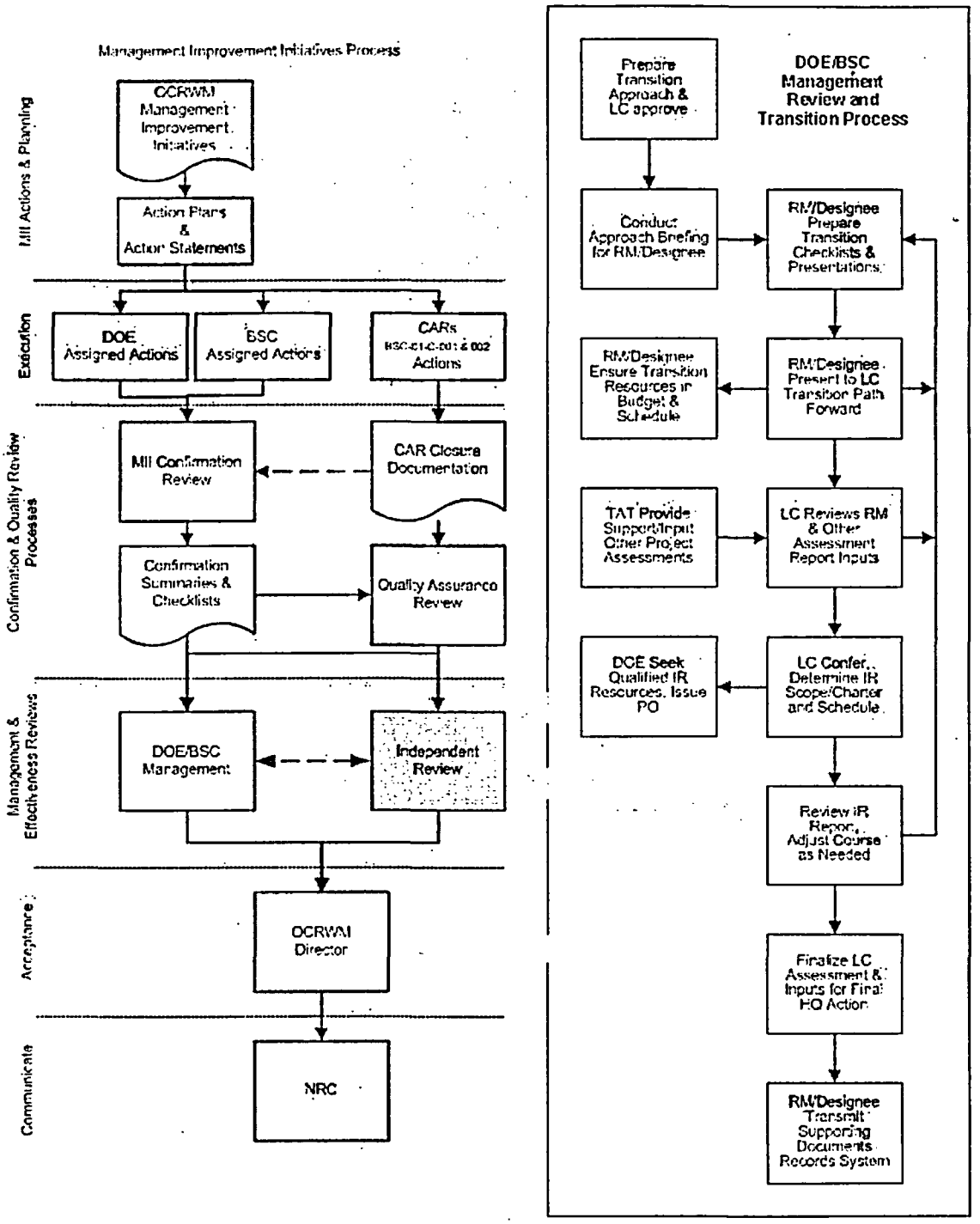

Figure 4-1. Management Review and Transition Process Summary

5. ROLES AND RESPONSIBILITIES

5.1 DEPARTMENT OF ENERGY

5.1.1 The Director, OCRWM, is responsible for overall execution and effectiveness of the MII, including oversight and authority on matters pertaining to the performance commitments and the transition to line management processes.

5.1.2 The Director of the ORD is responsible for meeting quality and performance objectives related to the Yucca Mountain Project, including leadership of the LC and integration with the OCRWM Director and Headquarters operations.

5.1.3 The DOE Transition Assurance Team Manager (TAT), as appointed by the Director of ORD, is responsible for administering this Approach and overseeing the MII Transition on behalf of the Director of ORD, including the participation as a member of the LC.

5.1.4 The MII designated Action Plan Responsible Managers and/or ORD designees are responsible and accountable for the planning, transitioning, and long-term oversight of the implementation of assigned MII actions within DOE to meet effectiveness and performance objectives.

5.1.5 DOE Action Statement Responsible Managers are assigned responsibility for the accomplishment of the various Action Statements that comprise the overarching Action Plans. These Managers are responsible for the planning, transitioning, documentation, and effective implementation of their respective Action Statements, including any assigned subtask actions required to complete the Action Statement.

5.2 BECHTEL SAIC COMPANY, LLC

5.2.1 The BSC General Manager is responsible for BSC activities covered under the DOE contract, as well as effective implementation of MII Action Statement tasks related to BSC's scope of work.

5.2.2 The BSC Manager of Organizational Assurance is responsible for supporting this approach on behalf of BSC and ensuring the long-term oversight of effective measures and corrective actions are transitioned effectively to and through BSC line management and processes. The Manager of Organization Assurance is a member of the TAT as well as a member of the LC.

5.2.3 BSC Action Statement Responsible Managers are assigned responsibility for the accomplishment of the various Action Statements that comprise the overarching Action Plans. These managers are responsible for the planning, transitioning, documentation, and effective implementation of their respective action statements, including any assigned subtask actions required to complete the action statement.

5.3 LEADERSHIP COUNCIL

The Leadership Council (LC), chartered on September 8, 2003, is the principal management partnership between the DOE and the BSC and to that end is responsible to provide a forum to discuss, assess, and make recommendations on initiatives; and oversee associated implementation, cost, schedule, and effectiveness aspects of those initiatives. Specifically, the LC will evaluate each RM's plans and actions with respect to transitioning and integrating each MII initiative to day-to-day line management and processes.

5.4 TRANSITION ASSURANCE TEAM

The TAT is responsible for assisting in execution of this approach, with the primary focus on integration support, consultation on MII confirmation activities; and assisting the LC on effecting MII transition, independent review, and closure activities. The TAT is comprised of a DOE senior manager designated as the TAT Manager, BSC's Manager of Organizational Assurance, and assigned technical support personnel with Management Improvement Initiative and oversight experience.

6. TRANSITION APPROACH

The LC will assess implementation of the MII action items upon presentation by the RM and/or ORD designee. The input provided to DOE and BSC senior management will support determination of the transition and effectiveness of the improvement initiatives.

6.1 TRANSITION PLANNING, REVIEW, AND COORDINATION

6.1.1 The TAT will prepare and maintain Transition Checklists for each MII Action Plan to track the status of action completions, presentations, and open issues. The TAT will coordinate with the LC and RMs or designee on scheduling briefings to the LC. The status column of the Transition Checklist will be used to document the satisfactory completion of each checklist topic, or indicate what additional information is required to assure a satisfactory completion.

6.1.2 TAT will work with RMs or designees to ensure they are aware of each assigned MII action and the requirements of this approach, including thoroughness and completion of, presentations, and records.

6.1.3 The TAT will coordinate activities such that they are integrated with ongoing execution schedules. When activities or schedules are found to be in conflict, the TAT shall contact the RM(s) or designee to discuss differences and arrangements to ensure LC expectations for closure.

6.2 MANAGEMENT REVIEW

6.2.1 RMs or designees should prepare for the LC by preparing answers to the questions in the Transition Checklists (see Appendix A). RMs or designees should also be prepared to make presentations to the LC based on the questions in the Checklists.

6.2.2 RMs or designees will be scheduled to present to the LC their plans and path forward to transition their respective actions to day-to-day line management and processes, including identification of required resources and impleme ntation schedules are in place.

6.2.3 LC will conduct the briefings and post-meeting follow-up in accordance with their charter.

6.2.4 Upon completion of the series of briefings by the RMs or designees, the LC will provide direction on establishing any follow-up initiatives, corrective actions, or improvements, as deemed necessary.

6.2.5 The LC will use the results of the RM or designee briefings to establish the charter, schedule, and direction for a contract to procure the services of a qualified entity (ies) to conduct an Independent Review (IR) of the implementation and effectiveness of MII actions.

6.3 IR & RECOMMENDATIONS

6.3.1 The IR will conduct management level evaluations of the MII implementation. These will be primarily conducted during LC meetings.

6.3.1 Upon completion of the IR, the LC will convene to assess the results of the IR, as well as consider the input of other internal and external assessments, and provide its recommendation to the Director of OCRWM for consideration.

6.4 DOCUMENTATION OF TRANSITION

6.4.1 Records and information prepared by the RM or designee will be, for the most part, documented in checklists and presentation material containing the type of information noted in Appendix A. Transition records shall be the responsibility of the RMs or designees and consistent with that information previously provided as part of the MII Confirmation Process.

6.4.2 If information or objective evidence provided for MII confirmation has been changed, modified, or altered by the RM or designee to support transition or this approach, such that the intent or factual bases may be questioned, the RM or designee must provide that information to the TAT and/or LC immediately for impact evaluation.

6.5 ISSUE RESOLUTION

6.5.1 Resolution shall be worked between the LC and the Responsible Manager(s) or designees to address any identified issues.

6.5.2 Resolutions shall be documented to the extent necessary to ensure a clear record is established as a basis for decision or escalated resolution.

6.6 TRANSITION PERFORMANCE

6.6.1 The TAT will brief the ORD and LC on transition status, as part of the bi-weekly ORD briefings. Any issues warranting management attention will be noted.

6.6.2 A brief monthly report will be prepared during the transition phase and include:

- Identification of potential issues affecting transition or MII commitments
- Highlights of accomplishments and planned transition activities
- Transition Metrics:
  - Actions Briefed to LC
  - Actions in Process
  - Actions Conferred by LC
  - Overall Percent Transition Complete

6.7 COMMUNICATIONS

Communications with respect to this approach will be the responsibility of the TAT Manager, and, primarily, will be conducted between the DOE and BSC senior management team represented by the LC, the TAT, and those assigned Responsible Managers or their designees.

6.8 CHANGE CONTROL

Change control of this process will be managed and maintained by the TAT Manager. This process may be modified by management directive, as Program changes require.

7. RECORDS

If not already submitted as part of the MII or MII Confirmation Process or Office of Quality Assurance verifications, information and records collected and used to support related LC and independent reviews, as well as this approach, shall be submitted to the Records Processing Center, by the Responsible Manager or designee for each action statement, in accordance with AP-17.1Q, *Record Source Responsibilities for Inclusionary Records*. This may include but is not limited to non-quality records, such as checklists, presentation summaries, and other supporting documents.

8. REFERENCES

DOE (U.S. Department of Energy) 2002. *Management Improvement Initiatives.* PLN-CRW-AD-000009. Washington, D.C.: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. ACC: MOL.20020729.0388

DOE 2003a. *Quality Assurance Requirements and Description.* DOE/RW-0333P, Rev. 13. Washington, D.C.: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. ACC: DOC.20030422.0003.

DOE 2003b. *Management Improvement Initiatives Confirmation Review Process, Revision 02.* Washington, D.C.: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. ACC: MOL. 20030709.0089.

AP-17.1Q, Rev. 2, ICN 3. *Record Source Responsibilities for Inclusionary Records.* Washington, D.C.: U .S. Department of Energy, Office of Civilian Radioactive Waste Management.

APPENDIX A
TRANSITION CHECKLIST TEMPLATE

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Table A-1. Roles, Responsibilities, Authority and Accountability (R2A2)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the R2A2 section of the MII.	
	1.B – How did the completion of the Action Statement requirements in MII Table 1 support the "objectives" and attain the "desired condition" stated in the R2A2 section of the MII?	

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 1 of the MII.	
	2.B – If any MII Action Statement requirements were changed or modified in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements are being transitioned into long term management processes.	
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the R2A2 MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the R2A2 MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	
	3.D - What is the plan for continued R2A2 oversight, monitoring, and transition activities? Describe required actions necessary to complete the transition. Include cost and schedule requirements. Address if actions have been incorporated into the appropriate project budgets, work packages and schedules.	

"I believe that the actions taken in completing the R2A2 Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Suzanne Mellington – DOE Date

Margaret McCullough – BSC Date

The following information is an excerpt from the *Management Improvement Initiatives* (DOE 2002) document in support of Table A-1.

5.1 PROGRAM ROLES, RESPONSIBILITIES, AUTHORITY, AND ACCOUNTABILITY

Objective: Clearly define R2A2 across the OCRWM Program to define ownership of and accountability for Program functions, and to successfully support the licensing process.

Current Condition: The OCRWM organization, processes, procedures, and skills are structured to support the scientific studies required to determine site suitability, rather than preparing OCRWM to support the activities necessary to license a repository. This structure has led to confusion over R2A2 as the Program transitions toward obtaining a license for repository construction.

Desired Condition: The OCRWM organization is aligned to support licensing activities in a manner that clarifies R2A2. Managers understand and accept their responsibilities and are accountable for results.

Approach: DOE will realign the OCRWM organization and management approach, including realignment of the DOE and BSC relationship, clarification of management's R2A2, and definition of expectations of management and management processes. The following are key elements of the organization realignment:

- Realign the OCRWM organization to:
  - Streamline DOE's management structure and oversight functions
  - Reinforce the DOE role of setting goals and expectations, providing policy guidance, and measuring performance of Program execution
  - Ensure integration across the various Program elements, including effective interfaces within the DOE, with involved states and federal organizations, and with other organizations
  - Assign a single point of responsibility for each critical Program function, including QA, Program procedures, Corrective Action Program management, and SCWE.
- Clarify and strengthen the OCRWM relationship with BSC to ensure that DOE establishes Program goals and performance expectations for the contractor and then holds the contractor accountable for performing the necessary work. DOE and BSC will realign their respective organizations to focus on this new way of doing business to support the licensing process. Rigor and discipline will be employed to ensure that direction provided to contractors is provided only by a contracting officer or contracting officer's representative.

- Clarify management R2A2 within the OCRWM organization to ensure that managers understand their respective roles and responsibilities and that commensurate authority accompanies assigned responsibilities. Managers will be held accountable for fulfilling their responsibilities.

- Prepare an OCRWM *Program Manual* that documents the OCRWM management processes, documents management R2A2, and addresses the responsibilities and interfaces for each of the requirements in the BSC contract.

An independent assessment process will provide feedback to senior OCRWM management regarding progress, issues, and recommendations for keeping the organization aligned and focused on the licensing effort during this important transition. In addition, the DOE annual performance appraisals for managers and supervisors will reflect performance criteria relative to their assigned roles and responsibilities to allow senior management to hold them accountable.

Table 1. Roles, Responsibilities, Authority, and Accountability Action Plan

Action Statement	Responsible Manager	Target Date
DOE will issue a policy statement identifying the expectations of OCRWM management.	Chu (DOE Headquarters [HQ])	8/02
DOE will clarify R2A2 within the OCRWM organization to ensure commensurate authority accompanies assigned responsibilities.	Chu (DOE HQ) Dyer (DOE YMP)	9/02
DOE staff will be oriented through various communications methods to the realigned organization and the associated R2A2. This realignment will allow DOE to manage overall Program performance and hold BSC accountable for performance (i.e., quality, schedule, and cost).	Runkle (DOE HQ) Dyer (DOE YMP)	10/02
BSC staff will be oriented to the realigned organization and the associated R2A2.	Pearman (BSC)	10/02
DOE will issue a *Program Manual* that provides the implementing requirements that will guide the organization realignment to support the licensing process.	Runkle (DOE HQ) Dyer (DOE YMP) Pearman (BSC)	10/02
DOE annual performance appraisals will be revised to reflect manager performance criteria relative to the appropriate R2A2.	Runkle (DOE HQ)	12/02

Effectiveness Indicators:

1. Program quality and schedule performance show consistently improving trends.

2. Deficiency reports (DRs) and CARs related to R2A2 show a consistently decreasing trend to within established control limits.

Responsible Manager: **M. Chu (DOE HQ)**

Signature _____ , Date 7/19/02

Table A-2. Quality Assurance Programs and Processes (QAPP)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the QAPP section of the MII.	
	1.B – How did the completion of the Action Statement requirements in MII Table 2 support the "objectives" and attain the "desired condition" stated in the QAPP section of the MII?	

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 2 of the MII.	
	2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements are being transitioned into long term management processes.	
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the QAPP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the QAPP MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	
	3.D - What is the plan for continued QAPP oversight, monitoring, and transition activities? Describe required actions necessary to complete the transition. Include cost and schedule requirements. Address if these actions have been incorporated into the appropriate project budgets, work packages and schedules.	

"I believe that the actions taken in completing the QAPP Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

R.D. Brown – DOE Date

Michael Mason – BSC Date

The following information is an excerpt from the *Management Improvement Initiatives* (DOE 2002) document in support of Table A-2.

5.2 QUALITY ASSURANCE PROGRAMS AND PROCESSES

Objective: The OCRWM QA program implements applicable regulatory requirements and the associated QA processes to support effective line organization implementation of quality practices that ensure the quality of technical products to support the license application.

Current Condition: Activities are currently being carried out in a quality manner; however, our performance requires improvement to fully support our mission of safe, high-quality design, construction, and operation of a high-level waste repository that meets the NRC requirements for a license. In some cases, quality is being achieved through the inspection process, or "inspected into" products by OQA, rather than being routinely implemented by the line organizations. The OCRWM *Quality Assurance Requirements and Description* (QARD), DOE/RW-0333P, contains a combination of requirements, commitments, and guidance that is confusing and difficult to implement.

Desired Condition: Roles and responsibilities for implementation of the QA program are clearly defined such that OQA and the line organizations understand their respective roles. The OCRWM QARD contains the necessary and sufficient quality requirements that are clearly identified and are traceable to source documents. Line management and individuals performing quality-related work understand the quality requirements applicable to their work and are held accountable for adherence to the requirements. Program procedures are user-friendly and provide sufficient guidance with a minimum of administrative burden to allow compliance with requirements and achievement of quality as a routine part of daily business.

Approach: The actions to improve quality focus on line management's responsibility and accountability for implementing quality at the working level. Clearly defining QA R2A2s will be accomplished as part of implementing the actions identified in Section 5.1. In addition, the QA program is being aligned with a logical flowdown of necessary and sufficient requirements through review and revision of the OCRWM QARD. This will ensure that applicable requirements are identified and documented, and that requirements in the QARD are generally traceable back to regulatory drivers. The QARD will be supplemented with policies where appropriate to communicate OCRWM management expectations. The QA program and processes will meet regulatory requirements for QA and will fully support the licensing process. Procedure improvements (addressed in Section 5.3) will institutionalize quality processes and ensure technical products are correct and support license application activities.

Table 2. Quality Assurance Programs and Processes Action Plan

Action Statement	Responsible Manager	Target Date
DOE will issue a policy statement identifying the expectations of OCRWM management, including line management's ownership of the QA program as the principal means of achieving quality. (This action will be completed in conjunction with R2A2 actions; see Section 5.1.)	Chu (DOE HQ)	8/02
DOE will clarify R2A2 within the OCRWM organization, including the R2A2 for DOE and BSC QA. (This action will be completed in conjunction with R2A2 actions; see Section 5.1.)	Chu (DOE HQ)	9/02
DOE and BSC respective staffs will be oriented to the realigned DOE and BSC QA R2A2s through various communication methods. (This action will be completed in conjunction with R2A2 actions; see Section 5.1.)	Runkle (DOE HQ) Pearman (BSC)	10/02
The QARD will be reviewed and revised as necessary to ensure that applicable requirements are identified, documented, and traceable to regulatory drivers. (Internal and external review cycle will follow.)	Runkle (DOE HQ)	11/02
DOE annual performance appraisals will be revised to include performance criteria that address line management's responsibility to implement the OCRWM QA program.	Runkle (DOE HQ)	12/02

Effectiveness Indicators:

1. Number of high-priority self-identified DRs and CARs compared to the total number of high-priority identified DRs and CARs (self-identified/total identified goal is greater than 80 percent).

2. Average closure time for high-priority corrective action DRs and CARs and the number of delinquent corrective actions for high-priority QA-related DRs and CARs show a decreasing trend to within established control limits.

Responsible Manager: G. Runkle (DOE HQ)

Signature / Date 7/18/02

Table A-3. Program Procedures (PP)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the PP section of the MII.	
	1.B – How did the completion of the Action Statement requirements in MII Table 3 support the "objectives" and attain the "desired condition" stated in the PP section of the MII?	

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 3 of the MII.	
	2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements is being transitioned into long term management processes.	
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the PP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the PP MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	
	3.D - What is the plan for continued PP oversight, monitoring, and transition activities? Describe required actions necessary to complete the transition. Include your cost and schedule requirements. Address if these actions have been incorporated into resource requirements in the appropriate project budgets, work packages and schedules.	

"I believe that the actions taken in completing the PP Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Mark Van Der Puy – DOE Date Maureen Mendez – BSC Date

The following information is an excerpt from the *Management Improvement Initiatives* (DOE 2002) document in support of Table A-3.

5.3 PROGRAM PROCEDURES

Objective: Institute more effective and efficient work control procedures consistent with standard nuclear industry practices. Procedures are user-friendly and provide sufficient guidance with a minimum of administrative burden to allow compliance with safety and quality requirements as a routine part of daily business.

Current Condition: Procedures are typically overly prescriptive and inefficient. In many cases, unnecessary and repetitive administrative requirements (e.g., rigid procedure format and redundant requirements in multiple procedures) overcome substantive content and impede work execution. In addition, the National Laboratories and USGS personnel do not feel their proposed procedure comments and revisions are adequately addressed.

In March 2002, DOE and BSC completed a joint evaluation of procedure ownership. As a result, many procedures have been transferred from DOE to BSC.

Desired Condition: An effective and efficient set of separate DOE and BSC procedures are implemented that address the applicable requirements, are commensurate with the complexity and safety and quality significance of the task, and fully support licensing activities. DOE and BSC have separate and discrete procedure sets to control their respective activities.

Approach: The realignment and streamlining of work processes and procedures begins with the clear identification of the work scope and responsibilities of each organization, principally DOE and BSC. (The laboratories and USGS will work in accordance with BSC procedures.) This will be accomplished as part of R2A2 actions identified earlier in this document. Both DOE and BSC will review their respective procedure sets and, where appropriate, procedures will be revised in accordance with the revision of the QARD described in Section 5.2 to reflect organizational realignment described in Section 5.1 and to make them more effective and efficient. Applicable procedures proven effective in the commercial nuclear industry will be adopted and tailored for use, as appropriate. New or revised procedures will be issued in compliance with requirements. Personnel that will use the new or revised procedures will be trained prior to implementing the new procedures. Procedure improvements will implement applicable regulatory requirements, and will fully support the licensing process.

Table 3. Program Procedures Action Plan

Action Statement	Responsible Manager	Target Date
DOE will clarify R2A2 within the OCRWM organization, including clear identification of the work scope and responsibilities for procedure development and implementation of each organization. (This action will be completed in conjunction with R2A2 actions; see Section 5.1.)	Chu (DOE HQ)	9/02
DOE and BSC will review their respective procedure sets and define procedure hierarchies based on their work requirements.	Horton (DOE YMP) Williams (BSC)	10/02
New or revised procedures will be issued in compliance with OCRWM requirements using a phased approach.	Horton (DOE YMP) Williams (BSC)	Starting 11/02 Starting 11/02
Personnel that will use the new or revised procedures will be trained prior to implementing the procedures.	Van Der Puy (DOE YMP) Williams (BSC)	Starting 11/02 Starting 11/02

Effectiveness Indicators:

1. Decreasing number of DRs and CARs with a cause code of ineffective procedures.
2. Average cycle time for procedure revisions shows a decreasing trend to within established control limits.
3. Average age of procedure Interim Change Notices shows a decreasing trend to within established control limits.

Responsible Manager: D. Horton (DOE YMP)

Signature / 7/18/02 Date

Table A-4. Corrective Action Program (CAP)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the CAP section of the MII.	
	1.B – How did the completion of the Action Statement requirements in MII Table 4 support the "objectives" and attain the "desired condition" stated in the CAP section of the MII?	

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 4 of the MII.	
	2.B – If the Project changed direction or modified any MII Action Statement requirements in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements are being transitioned into long term management processes.	
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the CAP MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. f a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the CAP MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	
	3.D - What is the plan for continued CAP oversight, monitoring, and transition activities? Describe required actions necessary to be completed to complete the transition. Include your cost and schedule requirements. Address if these actions have been incorporated into resource requirements in the appropriate project budgets, work packages and schedules.	

"I believe that the actions taken in completing the CAP Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Richard Spence – DOE Date

Dennis Sorensen – BSC Date

The following information is an excerpt from the *Management Improvement Initiatives* (DOE 2002) document in support of Table A-4.

5.4 CORRECTIVE ACTION PROGRAM

Objective: Implement a single Corrective Action Program to ensure deficiencies and needed improvements are identified, prioritized, and documented, and that timely and effective corrective actions are taken to preclude recurrence of adverse conditions.

Current Condition: Multiple corrective action management systems exist for identifying, tracking, and resolving deficiencies. The current systems require knowledge of various reporting systems and forms to report different categories of conditions. The current forms and processes required for identifying and fixing deficiencies are burdensome and do not yield useful reports that can be used by management to identify trends and corrective actions, prioritized schedules for completion, and responsible individuals. Routine self-assessments are not being used consistently to achieve continuous improvement. Root cause analyses are not embraced consistently as an effective tool to prevent recurrence of deficiencies or to identify and resolve broader management issues. Corrective actions are not completed in a timely manner.

Desired Condition: A single Program-wide Corrective Action Program exists that:

- Assists with the management of corrective actions and provides managers ready access to information about corrective actions, their closure status, and the assigned responsible individuals.
- Allows deficiencies and adverse conditions to be readily evaluated and prioritized and categorized according to safety and quality significance; and that allows individual assignment of responsibility and accountability for action.
- Is user-friendly and an integral part of the way line management conducts business, and allows actions to correct and minimize recurrence of the conditions to be identified and completed in a timely fashion.
- Allows trends to be evaluated and reported to management so they can anticipate and mitigate adverse conditions, communicate lessons learned, and facilitate improvement through the use of focused self-assessments.

Approach: Although implementation of corrective action is a line function, the Director of OQA will be assigned responsibility for and be held accountable for administration of the Corrective Action Program. This individual will be held accountable for ensuring the Corrective Action Program is substantially improved to function at a level consistent with nuclear industry practices. A DOE/BSC task team will define OCRWM's needs, will evaluate the current corrective action management systems, and will establish requirements and specifications for the single Corrective Action Program. BSC will be assigned the responsibility for implementation and day-to-day management of the single Corrective Action Program. In addition, OCRWM senior management will clearly communicate line management's responsibility and accountability to conduct self-assessments and identify needed improvements and conditions

adverse to quality and enter them into the Corrective Action Program (see Section 5.1). It is a line management function to identify, define, prioritize, and implement timely and effective corrective actions, and OCRWM senior management will hold line management accountable for successful execution of these functions. DOE and contractor employees will be made aware of the new, simplified, more effective Corrective Action Program and how to use it. OQA will be held accountable for administering and monitoring the effectiveness of the Corrective Action Program, including monitoring performance metrics such as the average time to close corrective actions, in addition to emergence and recurrence rates. OQA will provide a monthly report to OCRWM senior management so action can be taken if near-term improvements are not realized.

Table 4. Corrective Action Program Plan

Action Statement	Responsible Manager	Target Date
The Director of OQA will be assigned responsibility and held accountable for a single improved OCRWM Corrective Action Program.	Chu (DOE HQ)	8/02
DOE will form a task team to establish the Program requirements and specifications for the Corrective Action Program.	Horton (DOE YMP)	9/02
BSC will implement a single OCRWM Corrective Action Program consistent with nuclear industry practices, including tracking, trending, reporting, and closure verification processes.	Pearman (BSC)	2/03
BSC will define and implement a self-assessment program, a lessons learned program, and a method to identify and correct adverse conditions.	Pearman (BSC)	3/03

Effectiveness Indicators:

1. Number of repetitive conditions (decreasing trend).
2. Average closure duration for high-priority DRs and CARs (decreasing trend to within established control limits).
3. Less than 10 percent of the high priority DR and CAR closures are delinquent.

Responsible Manager: **M. Chu (DOE HQ)/R. Dyer for (DOE YMP)**

Signature 7/19/02 Date

7/18/02

Table A-5. Safety-Conscious Work Environment (SCWE)

		Status
What is being fixed?	1.A – Describe your interpretation of the problem that is being addressed in the "current conditions" statement in the SCWE section of the MII.	
	1.B – How did the completion of the Action Statement requirements in MII Table 5 support the "objectives" and attain the "desired condition" stated in the SCWE section of the MII?	

		Status
What did you do?	2.A – Describe the approach and implementation activities used to meet the Action Plan objective. Include discussion of Action Statement requirements contained in Table 5 of the MII.	
	2.B – If any MII Action Statement requirement changed direction or was modified in the implementation of the Plan, document the change, explain the reason and why it met the original objective of the MII.	

		Status
How are you transitioning the MII commitments into the line management process?	3.A - Describe how the MII Action Plan and Statement requirements are being transitioned into long term management processes.	
	3.B - Are there any required changes to existing Roles, Responsibilities, Authority and Accountability necessary to achieve a successful transition?	
	3.C - Were any specific performance or effectiveness indicators/metrics developed to measure the effectiveness of the transition of the SCWE MII commitments into the long-term management processes and do they measure the full breadth of the improvement initiative? For each indicator/metric developed, describe what the indicator is, what it measures, what does it mean, what is the fidelity and maturity of the underlying data, and how it supports measuring effectiveness, product quality, etc, and against what benchmarks. If a specific indicator/metric was not developed, describe the plan or alternative means (such as management reviews, self-assessments, etc.) that will be used to provide sufficient information to allow for effectiveness monitoring of the SCWE MII requirements or describe why a metric is not needed. Also, explain how continuation of the alternative means will be assured.	
	3.D - What is the plan for continued SCWE oversight, monitoring, and transition activities? Describe any required actions to complete the transition. Include cost and schedule requirements. Address if these resource requirements have been incorporated into the appropriate project budgets, work packages and schedules.	

"I believe that the actions taken in completing the SCWE Action Plan meet the intent of the MII, and that adequate management systems are in place to assure continued implementation of the requirements described therein."

Russell Dyer – DOE Date

Randall Huey – BSC Date

The following information is an excerpt from the *Management Improvement Initiatives* (DOE 2002) document in support of Table A-5.

5.5 SAFETY-CONSCIOUS WORK ENVIRONMENT

Objective: Foster and sustain an environment in which employees feel free to raise concerns without fear of reprisal, and with confidence that issues will be addressed promptly and appropriately.

Current Condition: Some personnel do not know what a SCWE is, and others behave in ways contrary to a SCWE. Some employees do not fully understand the OCRWM Concerns Program and expectations for implementation. Employee concerns are not consistently addressed in a timely manner. Management involvement in the evaluation of employee concerns and trends is less than adequate. However, currently senior management (OCRWM Director, YMP Project Manager, and BSC Deputy General Manager) is tracking progress on open employee concerns on a weekly basis.

Some managers and staff do not act consistently according to a common set of values and are not held accountable. This has led to overemphasis on meeting schedules, less-than-desired attention to quality, and some behaviors inconsistent with a SCWE. Conflicts between individuals and organizations are not resolved, leading to distractions in the workplace and delays in completing work products. An issue escalation process is not defined.

Desired Condition: An environment exists in which employees feel free to raise concerns without fear of harassment, intimidation, retaliation, or discrimination (HIRD), and with confidence that their issues will be addressed promptly. OCRWM organizations embrace a SCWE, and management enforces expected behaviors. Personal and organizational accountability focuses on sustaining a SCWE. Open communication exists, with conflicts identified and resolved in a timely manner at the lowest level possible, or escalated promptly, if necessary.

OCRWM Concerns Program processes provide for prompt, efficient, and effective means of prioritizing, addressing, and closing employee concerns. An environment exists in which employees willingly identify problems, prompt feedback occurs, and timely and effective resolution of concerns is routine. Affected management is involved in developing the proposed resolution to employee concerns.

The BSC Concerns Program is fully functional and focused on ensuring that employee concerns are addressed in a prompt and meaningful manner. Managers and supervisors are aware of their SCWE responsibilities and are held accountable for maintaining a SCWE.

Approach: OCRWM has issued a SCWE Policy that communicates senior management expectations. Program personnel will be trained on the SCWE Policy. The training will emphasize the relationship between a SCWE and nuclear safety. A SCWE will be sustained through continuous reinforcement and communications efforts. An issue escalation process will be developed, and decisions will be communicated. SCWE-type concerns will be monitored, tracked, and reported to senior management. Management will identify and enforce consequences of non-compliance through performance appraisals and/or disciplinary actions.

OCRWM will improve the performance and effectiveness of the OCRWM Concerns Program, and BSC will implement a BSC Concerns Program. Employees and managers will be trained and will develop an understanding of the SCWE policy requirements and how they relate to OCRWM work activities. Responsibilities and accountabilities of supervisors/managers to establish and maintain a work environment where employees can express their ideas and concerns without fear of HIRD will be strongly emphasized.

Table 5. Safety-Conscious Work Environment Action Plan

Action Statement	Responsible Manager	Target Date
On April 30, 2002, the OCRWM Program Director and the YMP Project Manager issued a revised and expanded SCWE policy. This policy has been communicated to employees through meetings and project communiqués. The YMP Project Manager and the BSC Deputy General Manager are designated as SCWE change champions.	Chu (DOE HQ)	Completed 5/02
DOE will implement SCWE and employee concerns program performance metrics into BSC contract assessment.	Runkle (DOE HQ)	Completed 7/02
DOE will modify the BSC contract and other DOE contracts to require the implementation of the Program SCWE policy requirements.	Runkle (DOE HQ)	8/02 – BSC 10/02 – Others
DOE will eliminate the backlog of open OCRWM employee concerns and shorten the life-cycle for addressing concerns.	Runkle (DOE HQ)	8/02
DOE will establish a DOE policy and procedures regarding expectations to escalate issues in an expedient manner.	Dyer (DOE YMP)	8/02
BSC will establish a BSC policy and procedures regarding expectations to escalate issues in an expedient manner.	Pearman (BSC)	8/02
DOE and BSC will develop and/or revise SCWE-related Program-wide employee and supervisor/manager training modules based upon nuclear industry practices.	Van Der Puy (DOE YMP) Turner (BSC)	8/02
BSC will establish internal BSC mechanisms for reporting, investigating, and resolving employee concerns.	Pearman (BSC)	9/02
DOE and BSC will conduct employee and supervisor/manager SCWE training.	Van Der Puy (DOE YMP) Turner (BSC)	12/02
An external SCWE expert group will evaluate YMP-wide SCWE.	Chu (DOE HQ)	7/03

Effectiveness Indicators:

1. Number of substantiated HIRD employee concerns (generally decreasing).
2. Cycle time for addressing employee concerns. Goal: Less than 30 days for routine concerns and less than 90 days for HIRD concerns that involve complex issues or complex concerns.
3. External evaluation SCWE assessment results show positive changes.

Responsible Manager: J. Ziegler (DOE YMP)

Signature, 7-18-02
Date