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RAM Item No. - SUP-01 **Closed: Y**

Description of Issue - Problem Identification: Determine that the evaluation documents how long the issue existed, and prior opportunities for identification.

Description of Resolution - By letter dated April 18, 2002, FirstEnergy Nuclear Operating Company (FENOC) submitted its Root Cause Analysis Report of the reactor pressure vessel (RPV) head degradation in accordance with the Confirmatory Action Letter dated March 13, 2002. On May 7, 2002, the Nuclear Regulatory Commission (NRC) staff held a public meeting with FENOC representatives to discuss the technical aspects of the root cause analysis. Revision 1 of the Report was submitted by letter dated September 23, 2002. The Davis-Besse Root Cause Analysis Report provided a broad scope assessment of the "root cause," covering various programmatic, implementation and managerial issues, along with a description of the technical sequence of events from the initiation of cracking in the control rod drive mechanism (CRDM) nozzles to the formation of the cavity identified in March 2002. The NRC staff reviewed the report and based on the information currently available, the NRC staff concludes that the licensee's analysis presents a plausible scenario of the degradation at Davis-Besse. In the absence of direct physical evidence, the basis for the staff's conclusion is experience with past boric acid corrosion events and the extension of that knowledge to the extreme Davis-Besse case. Uncertainties with regard to the technical details of the RPV head degradation (including the sequence, rate and nature of the mechanisms that resulted in the degradation) preclude a definitive conclusion to the technical Root Cause Analysis Report. However, the level of understanding of the root cause is sufficient for this licensee to proceed with use of the replacement head from the canceled Midland plant.

In addition to the technical root cause reviews, the licensee also conducted seven individual assessments in the Management & Human Performance area as follows:

1. "Root Cause Analysis, Failure to Identify Significant Degradation to the Reactor Pressure Vessel Head," dated August 13, 2002;

2. "Root Cause Analysis, Failure in Quality Assurance Oversight to Prevent Significant Degradation of the Reactor Vessel Head," dated September 10, 2002;

3. "Root Cause Analysis, Lack of Operations Centrality in Maintaining, Assuring, and Communicating the Operational Safety Focus of Davis-Besse and Lack of Accountability of Other Groups to Operations in Fulfilling that Role," dated November 22, 2002;

4. "Root Cause Analysis, Assessment of Engineering Capabilities," dated January 3, 2003;

5. "Evaluation of FENOC Company Nuclear Safety Review Board," dated August 13, 2002;

6. "Evaluation of Corporate Management Issues," dated December 18, 2002; and

7. "Collective Significance Review of the Causal Factors Associated with the Reactor Pressure Vessel Head Degradation at Davis-Besse," dated March 17, 2003.

These reports were reviewed as part of the NRC's Management and Human Performance special inspections, and the results of those reviews are documented in Inspection Reports 50-346/02-15 and 50-346/02-18 dated February 6, 2003, and July 24, 2003, respectively. As stated in the July 24, 2003, letter to FENOC, the overall assessment was of appropriate depth and breadth to develop actions to correct and prevent recurrence of the management and human performance deficiencies associated with the reactor head degradation.

Reference Material - Confirmatory Action Letter Update E dated September 19, 2003 (ADAMS Accession No. ml032650662); NRC Inspection Report 50-346/02-15 (ADAMS Accession No. 030380037); NRC Inspection Report No. 50-346/02-18 (ADAMS Accession No. ml 032050528) and NRC Inspection Report No. 50-346/03-04 (ADAMS Accession No. ml 031320705).

RAM Item No. - SUP-02 **Closed: Y**

Description of Issue - Problem Identification: Determine that the evaluation documents how long the issue existed, and prior opportunities for identification.

Description of Resolution: See closure information for SUP-01 above.

Reference Material - None.

RAM Item No. - SUP-03 **Closed: Y**

Description of Issue - Problem Identification: Determine that the evaluation documents the plant specific risk consequences (as applicable) and compliance concerns associated with the issue(s) both individually and collectively.

Description of Resolution - Preliminary "Red" finding letter with attached significance determination results and inspection report 02-08.

Reference Material - Inspection Report 02-08 is ADAMS Accession No. ml022750524; preliminary "red" finding letter with attached significance determination results is ADAMS Accession No. ml030560426

RAM Item No. - SUP-04 **Closed: Y**

Description of Issue - Root Cause and Extent of Condition Evaluation: Determine that the problem was evaluated using a systematic method(s) to identify root cause(s) and contributing cause(s).

Description of Resolution: See closure information for SUP-01 above.

Reference Material - None.

RAM Item No. - SUP-05 **Closed: Y**

Description of Issue - Root Cause and Extent of Condition Evaluation: Determine that the root cause evaluation was conducted to a level of detail commensurate with the significance of the problem.

Description of Resolution: See closure information for SUP-01 above.

Reference Material - None.

RAM Item No. - SUP-06 **Closed: Y**

Description of Issue - Root Cause and Extent of Condition Evaluation: Determine that the root cause evaluation included a consideration of prior occurrences of the problem and knowledge of prior operating experience.

Description of Resolution: See closure information for SUP-01 above.

Reference Material - None.

RAM Item No. - SUP-07 **Closed: Y**

Description of Issue - Root Cause and Extent of Condition Evaluation: Determine that the root cause evaluation included consideration of potential common cause(s) and extent of condition of the problem.

Description of Resolution: See closure information for SUP-01 above.

Reference Material - None.

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RAM Item No. - SUP-08 **Closed: Y**

Description of Issue: Corrective Actions: Determine that appropriate corrective action(s) are specified for each root/contributing cause of that there is an evaluation that no actions are necessary.

Description of Resolution: Phase 1 and Phase 2 of the Management & Human Performance inspection specifically looked at the root causes and associated corrective actions. The team performed a 100% sample of root and contributing causes against corrective actions and determined that each root or contributing cause had an associated corrective action. The team considers this RAM item closed.

Reference Material - NRC Inspection Report Nos. 50-346/02-015 (ADAMS Accession No. ml030380037) and 50-346/02-018 (ADAMS Accession No. ml032050528).

RAM Item No. -SUP-09 **Closed: Y**

Description of Issue: Corrective Actions: Determine that the corrective actions have been prioritized with consideration of the risk significance and regulatory compliance.

Description of Resolution - Phase 1 and Phase 2 of the Management & Human Performance inspection specifically looked at the corrective actions. The team performed a 100% sample of corrective actions and determined that each had been appropriately prioritized with respect to its importance to safety. The team considers this RAM item closed

Reference Material: NRC Inspection Report Nos. 50-346/02-015 (ADAMS Accession No. ml030380037) and 50-346/02-018 (ADAMS Accession No. ml032050528).

RAM Item No. -SUP-10 **Closed: Y**

Description of Issue: Corrective Actions: Determine that a schedule has been established for implementing and completing the corrective actions.

Description of Resolution: Phase 1 and Phase 2 of the Management & Human Performance inspection specifically looked at corrective actions. The team performed a 100% sample of corrective actions and determined that each had been appropriately scheduled and were being appropriately tracked by the licensee. The team considers this RAM item closed.

Reference Material: NRC Inspection Report Nos. 50-346/02-015 (ADAMS Accession No. ml030380037) and 50-346/02-018 (ADAMS Accession No. ml032050528).

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RAM Item No. -SUP-11 **Closed: Y**

Description of Issue: Corrective Actions: Determine that quantitative or qualitative measures of success have been developed for determining the effectiveness of the corrective actions to prevent recurrence.

Description of Resolution - The licensee has developed a number of monitoring tools to assess the effectiveness of their corrective actions in the management and human performance (M&HP) area. The tools include surveys conducted by Quality Assurance and Employee Concern Program, and the Restart Readiness Review business practice (which is also being turned into a FENOC business practice to be implemented at least every two years). The surveys provide direct feedback from the staff and the restart readiness review process provides an integrated assessment of performance in the M&HP arena. The M&HP team reviewed the tools and determined that they were acceptable. These items were reviewed during M&HP Phase 3 inspection. The inspection confirmed that both quantitative and qualitative measures have been developed for monitoring the effectiveness of corrective actions in the management and human performance area. This RAM item is closed.

Reference Material: NRC Inspection Report No. 50-346/03-012 (ADAMS Accession No. ml040580673).

RAM Item No. - SUP-12 **Closed: Y**

Description of Issue - Independent Assessment of Extent of Condition and Generic Implications. Perform a focused inspection(s) to independently assess the validity of the licensee's conclusions regarding the extent of condition of the issues.

Description of Resolution - Extent of Condition inspection reports 02-09 and 02-12 and Management & Human Performance Phase I and II inspections (report nos. 02-15 and 02-18).
Reference Material - ADAMS Accession Nos. ml022560237 (02-09), ml023370132 (02-12), ml030380037 (02-15), and ml032050528 (02-18).

RAM Item No. - SUP-13 **Closed: Y**

Description of Issue - Strategic Performance Area(s) Identification: Using the information contained in the Assessment Action Matrix, identify the strategic performance areas for which performance has significantly declined (e.g. Reactor Safety, Radiation Safety, or Safeguards).

Description of Resolution - General panel activity resulting in issuance of the complete Restart Checklist, which addresses all areas where the plant's performance must be monitored and determined to be acceptable prior to authorizing restart. Latest version is Revision 2, issued on January 28, 2003.

Reference Material - ADAMS Accession No. ml030290155.

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RAM Item No. - SUP-14 **Closed: Y**

Description of Issue - Strategic Performance Area(s) Identification: Inspection Requirements 02.02, 02.07, and 02.08 should always be performed regardless of the strategic performance areas selected for review.

Description of Resolution - This item is redundant to the individual SUP items contained in SUPs 15 through 20, 104 and 105. As such, this item is being closed administratively as a duplicate.

Reference Material - None.

RAM Item No. - SUP-15 **Closed: Y**

Description of Issue - Determine whether licensee evaluations of, and corrective actions to, significant performance deficiencies have been sufficient to correct the deficiencies and prevent recurrence.

Description of Resolution - The team determined that the licensee's program for identifying, prioritizing, evaluating, and correcting performance deficiencies was adequate. However, the licensee's actions were repeatedly insufficient to identify the issue and prevent recurrence. The licensee's evaluations were inadequate and were based upon preconceived conclusions. The corrective actions identified from the inadequate evaluations were also inadequate. Also, few of the corrective actions had been in place long enough for either the team or the licensee to assess the overall effectiveness of the implemented corrective actions.

The CATI identified violations of 10 CFR 50, Appendix B, Criterion III and XVI, which involved the licensee not taking corrective actions to resolve previously documented non-cited violations. Additionally, the CATI identified numerous violations of very low safety significance (Green) and a Severity Level IV violation (relating to 10 CFR 50.59).

The team identified some improvements which the licensee had made in the CAP. Examples included the revised CAP procedure and the newly established CR analyst positions.

The licensee recognizing the extent of the inspection findings, developed improvement plans to address the identified deficiencies and provide additional barriers to ensure that engineering products were of acceptable quality. These plans were described in the licensee's Operational Improvement Plan, Operating Cycle 14. The plan includes the areas of concern identified by the team.

Reference Material -NRC Inspection Report 05000346/2003010, Section 4OA2(1).b (ADAMS Accession No. ml040680070).

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RAM Item No. - SUP-16 **Closed: Y**

Description of Issue - Review of Licensee Control Systems for Identifying, Assessing, and Correcting Performance Deficiencies: Evaluate the effectiveness of audits and assessments performed by the quality assurance group, line organizations, and external organizations.

Restart Checklist Item: 3.c

Description of Resolution - This inspection area was addressed by performance of the Programs Phase I and II inspections and the Corrective Action Team Inspection. Based on the results of those inspections both the Corrective Action Program and Quality Audit Program were reviewed and determined to be acceptable

Reference Material - NRC Inspection Report Nos. 50-346/2002-011 (ADAMS Accession No. ml031880844), 50-346/2003-009 (ADAMS Accession No. ml031880844), 50-346/2003-010 (scheduled to be issued during December 2003) and 50-346/2003-023 (ADAMS Accession No. ml033421074).

RAM Item No. - SUP-17 **Closed: Y**

Description of Issue - Review of Licensee Control Systems for Identifying, Assessing, and Correcting Performance Deficiencies: Determine whether the process for allocating resources provides for appropriate consideration of safety and compliance, and whether appropriate consideration is given to the management of maintenance backlogs and correction of work-arounds.

Description of Resolution - In reviewing post-restart backlog, the backlog inspection team determined that the licensee appropriately categorized the backlog as post-restart and noted that the deferred backlog did not have a high risk significance.

The backlog inspection team evaluated the licensee's use of PRA insights relating to the backlog of open work requests. Specifically the team reviewed a detailed risk evaluation of plant material condition backlog items completed by the licensee's PRA group. This assessment used overall conservative bounding values with respect to the potential affects of the known equipment backlog deficiencies on both initiating event frequencies and equipment mitigation capabilities. The team found the licensee's assessment conservative and represented a very low increase in core damage frequency considering the backlog of maintenance items at startup.

Detailed review of the backlogged items, review of self assessments, discussions with system engineers, management discussions, and system health meetings concerning the post-restart backlog assured the inspectors that the restart scooping process was satisfactory and deferred actions did not individually or collectively have a risk-significant impact on plant restart.

Reference Material - NRC Inspection Report Nos. 50-346/02-11 (ADAMS Accession No. ml031880844) and 50-346/03-24 (ADAMS Accession No. ml040060504).

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RAM Item No. - SUP-18 **Closed: Y**

Description of Issue - Review of Licensee Control Systems for Identifying, Assessing, and Correcting Performance Deficiencies: Evaluate whether licensee performance goals are congruent with those corrective actions needed to address the documented performance issues.

Description of Resolution - This inspection area was addressed by performance of the Head Replacement Inspection, Extent of Condition Phase I and II Inspections, Programs Phase I and II inspections and the Corrective Action Team Inspection. Issues were also reviewed. Additionally, the licensee's building blocks described in their Return to Service Plan were inspected and found acceptable. This included the Program Compliance, Management and Human Performance, System Health, Reactor Head Resolution, Containment Extent of Condition, and Restart Test Program. Based on the results of those inspections both the Corrective Action Program and Quality Audit Program were reviewed and determined to be acceptable

Reference Material - NRC Inspection Report Nos. 50-346/2002-007 (ADAMS Accession No. ml023370100), 50-346/2002-009 (ADAMS Accession No. ml022560237), 50-346/2002-011 (ADAMS Accession No. ml031880844), 50-346/2002-012 (ADAMS Accession No. ml023370132), 50-346/2002-014 (ADAMS Accession No. ml0030630314), 50-346/2002-015 (ADAMS Accession No. ml030380037), 50-346/2002-018 (ADAMS Accession No. ml032050528), 50-346/2003-009 (ADAMS Accession No. ml031880844), 346/2003-010 (scheduled to be issued during December 2003) and 50-346/2003-023 (ADAMS Accession No. ml033421074).

RAM Item No. -SUP-19 **Closed: Y**

Description of Issue: Review of Licensee Control System for Identifying, Assessing, and Correcting Performance Deficiencies: By reviewing selected aspects of the employee concerns program, ensure that employees are not hesitant to raise safety concerns and that safety significant concerns entered into the employee concern program receive an appropriate level of attention.

Description of Resolution: The Management & Human Performance (M&HP) team conducted extensive review of all cases entered into the employee concern program in 2003. The team concluded that the program (started in early 2003) was a significant improvement over the previous ombudsman program. The team also monitored results for surveys which ask questions regarding individual willingness to raise concerns. Both measures indicated that ~95% of individual reported that they understood that it was the responsibility and obligation to raise issues they believed to be safety significant. Individuals' understanding of this responsibility and obligation was independently verified by the M&HP Team through interviews. In this context "raise" indicates to any of the licensee's systems - e.g., management, corrective action program, employee concerns program (ECP). This RAM item is closed

Reference Material: IR 2003-012 & 2004-003

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RAM Item No. - SUP-20 **Closed: Y**

Description of Issue - Review of Licensee Control Systems for Identifying, Assessing, and Correcting Performance Deficiencies: Evaluate the effectiveness of the organization's use of industry information for previously documented performance issues.

Description of Resolution - This area was reviewed as part of the Programs Phase II inspection, which is documented in NRC Inspection Report 50-346/03-09. The inspectors verified that the Discovery Action Plan appropriately reviewed applicable regulatory, industry, and licensee guidance, as well as related Condition Reports and corrective actions, and had identified significant issues affecting the operating experience assessment program. The inspectors concluded that the review was critical and thorough. Furthermore, the inspectors concluded that the overall recommended corrective actions contained in the Integrated Action Plan report reasonably addressed significant program weaknesses identified by the licensee.

Reference Material - NRC Inspection Report 50-346/03-09 (ADAMS Accession No. ml031880844).

RAM Item No. - SUP-21 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Develop an information base to allow the review of the effectiveness of corrective actions by compiling performance information from the licensee's corrective action program, audits, self-assessments, licensee event reports (LERs), and the inspection report record (both the inspection reports and the PIM) for the time period.

Description of Resolution - The database being used is the inspection plan for the Corrective Action Team Inspection (CATI), which includes several examples of condition reports, corrective action documents, unresolved items, and LERs. The CATI inspection plan is attached to the March 14, 2003, meeting minutes of the Davis-Besse Oversight Panel.

Reference Material - Minutes for the March 14, 2003, Davis-Besse Oversight Panel Meeting.

RAM Item No. - SUP-22 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Develop an information base to allow the review of the effectiveness of corrective actions by reviewing the compiled information from SUP-21 and sort the issues by the key attributes.

Description of Resolution - Same basis for closure as SUP-21.

Reference Material - Minutes for the March 14, 2003, Davis-Besse Oversight Panel Meeting.

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RAM Item No. - SUP-23 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Select a system(s) for focus using the plant specific individual plant evaluation (IPE) and issues identified as part of the performance information.

Description of Resolution - The Safety System Design and Performance Capability Inspection selected the Service Water System, the 4160 volt Emergency Electrical Distribution System, and the High Pressure Injection System for review. The team reviewed the following attributes for these systems: (1) process medium (water, steam, and air); (2) energy sources; (3) control systems; and (4) equipment protection. The team verified that procedural instructions to operators were consistent with the operator actions required to meet, prevent, and/or mitigate design basis accidents. The team's review considered requirements and commitments identified in the Updated Final Safety Analysis Report (UFSAR), Technical Specifications (TS), design basis documents, and plant drawings. This review further verified that the required support functions for the selected systems would be available.

The team verified that the system needs for the selected systems were met. The supply of air, water, steam, and electrical power required by the TS were verified through a review of the design of the selected systems, and those systems providing support functions.

The team verified equipment for the selected systems required to operate and/or change state during accidents and events would have control power available. The team further reviewed the adequacy of alarm setpoints and verified that necessary instrumentation and alarms were available to operators for making necessary decisions in coping with postulated accident conditions. In addition, the team verified that the systems' standby alignments were consistent with assumptions in the operating procedures as well as design and licensing basis assumptions.

Reference Material - NRC Inspection Report No. 50-346/02-14 (ADAMS Accession No. ml030630314).

RAM Item No. - SUP-24 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Perform the following inspection requirements for each key attribute focusing on the selected system.

Description of Resolution - This item is redundant to the individual SUP items contained in SUPs 25 through 57. As such, this item is being closed administratively as a duplicate.

Reference Material - None.

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RAM Item No. - SUP-25 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Review inspection reports and critique findings from EP related event response and drills.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedure 71114.05 ("Correction of Emergency Preparedness Weaknesses and Deficiencies") provides the appropriate inspection guidance for this item. This Inspection Procedure was accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05. Additionally, Inspection Procedure 71114.01 ("Exercise Evaluation") provides the necessary guidance for this item. This Inspection Procedure was accomplished during this ROP cycle and documented in Inspection Report 50-346/03-14. Finally, a conversation was conducted with the acting EP Manager to discuss a potential negative trend (while still within the Green/acceptable band) in the Drill/Exercise Performance (DEP) Performance Indicator. The licensee has entered the item into the corrective action program and conducted remedial training for some of the recurring problems. Additionally, the licensee plans to address PI opportunities in upcoming Operator training. Finally, the licensee conducted a successful drill in October 2003 that provided four successful opportunities for the PI.

Reference Material - Inspection Report Nos. 50-346/2002-005 (ADAMS Accession No. ml022060551); and 50-346/2003-014 (ADAMS Accession No. ml031960596).

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RAM Item No. - SUP-26 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Review a summary of recent EP corrective actions.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable plant performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedures 71114.02 ("Alert and Notifications System Testing"), 71114.03 ("Emergency Response Organization Augmentation"), and 71114.05 ("Correction of Emergency Preparedness Weaknesses and Deficiencies") provide the appropriate inspection guidance for this item. These Inspection Procedures were accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05.

Reference Material - Inspection Report No. 50-346/2002-005 (ADAMS Accession No. ml022060551).

RAM Item No. - SUP-27 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Review licensee analyses of corrective actions related to specific findings and general audits where available.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedure 71114.05 ("Correction of Emergency Preparedness Weaknesses and Deficiencies") provides the appropriate inspection guidance for this item. This Inspection Procedure was accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05.

Reference Material - Inspection Report No. 50-346/2002-005 (ADAMS Accession No. ml022060551).

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RAM Item No. - SUP-28 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Review recent changes to the Emergency Plan (Plan) changes.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedure 71114.04 ("Emergency Action Level and Emergency Plan Changes") provides the appropriate inspection guidance for this item. This Inspection Procedure was accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05. Additionally, this Inspection Procedure was performed and documented in Inspection Report 50-346/01-16, dated March 8, 2002.

Reference Material - Inspection Report Nos. 50-346/2001-016 (ADAMS Accession No. ml020710594) and 50-346/2002-005 (ADAMS Accession No. ml022060551).

RAM Item No. - SUP-29 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Inspection Preparation: Develop an inspection plan to address concerns identified as well as the inspection requirements.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item.

Reference Material - None.

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RAM Item No. - SUP-30 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Design: Assess the effectiveness of corrective actions for deficiencies involving design.

Description of Resolution -The Corrective Action Team Inspection (CATI) was intended to assess the effectiveness of the licensee's actions to identify the deficiencies, evaluate the cause(s) and correct the problems in order to prevent recurrence. In order to make the above assessment, the team selected approximately 200 CRs which evaluated the licensee's actions to address deficiencies documented in licensee event reports (LERs), NRC Non-Cited Violations (NCVs), and NRC unresolved items (URIs) from previous inspections. The selected CRs also involved issues identified by the licensee as part of their system health readiness or latent issue reviews. The team's focus was on CRs which the licensee had identified as requiring resolution prior to the restart of the plant, with a further emphasis on those CRs which the licensee had determined to be "significant conditions adverse to quality (SCAQ)." The team specifically assessed the licensee's CAP in four separate areas:

- Identifying problems; including recognizing performance issues within the CAP itself;
- Categorizing and prioritizing problems, with a specific emphasis on the licensee's use of a process termed as "rollovers";
- Evaluating those problems; including assessing root and apparent causes, extent of conditions, operability and reportability;
- Correcting problems, including not only the originally identified problem but any issues identified as part of the evaluation, assessing the effectiveness of the corrective actions and actions taken to prevent recurrence.

In addition, the team assessed two areas where a number of problems were identified. These were :

- Engineering Resolution of Design Deficiencies and
- Procedure Quality and Adherence

Based on the team's review of these areas, the intent of this supplemental inspection area was covered.

Reference Material - NRC Inspection Report 50-346/03-10, (ADAMS Accession No. ml040680070).

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RAM Item No. - SUP-31 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Design: Select several modification to the system for review and determine if the system is capable of functioning as specified by the current design and licensing documents, regulatory requirements, and commitments for the facility.

Description of Resolution - The Safety System Design and Performance Capability Inspection selected the Service Water System, the 4160 volt Emergency Electrical Distribution System, and the High Pressure Injection System for review. The inspectors reviewed the selected systems including a review of calculations, drawings, specifications, vendor documents, Updated Final Safety Analysis Report, TS, emergency operating procedures, and temporary and permanent modifications. The NRC inspections concluded that the licensee's Latent Issues Reviews were performed in a manner sufficient to reasonably determine whether or not systems were capable of performing their safety functions during future plant operation.

Reference Material - NRC Inspection Report No. 50-346/02-14 (ADAMS Accession No. ml030630314).

RAM Item No. - SUP-32 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Design: Determine if the system is operated consistent with the design and licensing documents.

Description of Resolution - This inspection attribute was addressed by the performance of an in-depth design and performance capability review of the Service Water, High Pressure Injection, and 4160 Volt Electrical Distribution systems as part of the Safety System Design Inspection. The inspection is documented in NRC Inspection Report No. 50-346/02-14, dated February 26, 2003. Additionally, the program for Resolution of Open Design Questions, which was developed as a result of the discovery phase, was also reviewed as part of inspection 50-346/03-03. That inspection monitored and evaluated the extent of condition reviews generated as a result of design issues identified, and the NRC inspectors concluded that these extent of condition reviews were conducted in an appropriate manner with acceptable results.

Reference Material - NRC Inspection Report Nos. 50-346/02-14 (ADAMS Accession No. ml030630314) and 50-346/03-03 (ADAMS Accession No. ml032950012).

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RAM Item No. - SUP-33 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Design: Evaluate the interfaces between engineering, plant operations, maintenance, and plant support groups.

Description of Resolution - The restart readiness assessment team inspection conducted in December 2003 evaluated the interfaces between engineering, plant operations, maintenance, and plant support groups. Although the team noted problems where planned activities performed or controlled from the work control center were not properly coordinated with operations staff, none were significant from a plant or equipment safety standpoint. The team observed numerous interactions and interfaces between operations and other departments and noted that all the interactions were performed in a professional manner and support to operations was adequate.

Also, observations during rounds with non-licensed operators (NLOs) revealed a good working relationship between organizations. For example:

- Engineering Department was observed responding quickly and effectively to Operations Department issues discussed during the morning turnover meetings;
- Radiation Protection Department was observed providing the needed support to the NLOs;
- NLOs were observed providing input to the work control process; and
- NLOs in the field were observed appropriately challenging the maintenance staff particularly regarding work being completed in rooms containing protected equipment.

The inspection team also observed that system engineers showed an appropriate level of involvement in plant activities based on observed attendance at daily meetings and communication of technical information. The system engineering and design engineering organizations effectively coordinated their tasks through meetings and the corrective action program. Based on observations of day-to-day activities, there appeared to be a good work relationship between operations and other departments.

Reference Material - Inspection Report No. 50-346/03-11 (ADAMS Accession No. ml040360097).

March 22, 2004

RAM Item No. - SUP-34 **Closed: Y**

Description of Issue: Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Human Performance: Assess the effectiveness of corrective action for deficiencies involving human performance.

Description of Resolution: The Management & Human Performance (M&HP) team assessed the effectiveness of the licensee's corrective action to the deficiencies identified in the licensee's Management & Human Performance Root Cause Analyses. The team believes that continued attention and emphasis on basic safety conscious work environment concepts is necessary to continue the improvement in safety culture. The team has concluded that the corrective actions implemented to date, addressing the licensees Management & Human Performance Root Cause analyses, have been sufficiently effective to allow closure of restart checklist item 4.b. This RAM item is closed.

Reference Material: IR 2004-03

RAM Item No. - SUP-35 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Human Performance: Review specific problem areas and issues identified by inspections to determine if concerns exist in organizational practices such as pre-job briefings, control room team work, shift turnover, self-checking and procedural use and adherence.

Description of Resolution - The restart readiness assessment team inspections concluded that systems were operated consistent with the design and licensing documents, that specific problem areas and issues observed during the first restart readiness assessment team inspection, such as pre-job briefings, control room team work, shift turnover, self-checking and procedural use and adherence had been adequately resolved, and that corrective actions for deficiencies involving configuration control were acceptable. Around-the-clock observations of complex control room evolutions were observed by the restart readiness assessment team and the resident inspectors. No significant problems were observed during these observations. This item is considered closed for restart.

Reference Material - Memorandum, R. Skokowski to J. Grobe, February 6, 2004; Inspection Report 50-346/04-04.

March 22, 2004

RAM Item No. - SUP-36 **Closed: Y**

Description of Issue - IP 95003; 02.03.c.2.b: Review specific problem areas and issues identified by inspections to determine if concerns exist in training and qualifications.

Description of Resolution - Inspection activities, primarily in the area of Operations were documented in several inspection reports (05000346/2003002, 05000346/2003011, 05000346/2003017, 05000346/2003018, 05000346/2003022, 05000346/2003025). These inspection activities included assessing the biennial written examination and annual operating test results, observations of just-in-time training conducted prior to important plant evolutions, observations of operator performance during annual requalification simulator examinations, and the direct application of the training as demonstrated performance by operator in the plant.

The inspectors also reviewed training materials, developed to address demonstrated maintenance performance deficiencies, which were presented to maintenance personnel. The inspectors believe that the efforts in this area by some specific mid-level maintenance supervisors, were a key factor in the improvement of the maintenance department in the areas of work quality and procedure adherence.

The inspectors determined that, with some minor discrepancies, the licensee conducted operator training at an acceptable level to provide operators with the knowledge necessary to properly operate the plant systems. This item is resolved.

Reference Material - NRC Inspection Report Nos.: 50-346/03-02 (ADAMS Accession No. ml030690302); 50-346/03-11 (ADAMS Accession No. ml040360097); 50-346/03-17 (ADAMS Accession No. ml032721592); 50-346/03-18 (ADAMS Accession No. ml033080433); 50-346/03-22 (ADAMS Accession No. ml033570081); 50-346/03-25 (ADAMS Accession No. ml040290768).

March 22, 2004

RAM Item No. - SUP-37 **Closed: Y**

Description of Issue - IP 95003; 02.03.c.2.c: Review specific problem areas and issues identified by inspections to determine if concerns exist in communications.

Description of Resolution - Communication within the licensee's organization, both vertically and horizontally were challenged during the outage. These challenges primarily existed at the manager/first-line supervisor interface. The licensee implemented several initiatives to improve overall communications and alignment at the site. These included:

- frequent meetings between the FENOC Chief Operating Office and small groups of employees (4C Meetings);
- daily status e-mail from the Site Vice-President to the site staff;
- several all-hands meetings;
- timely site announcements on important issues; and
- preparing the site On-Line newsletter.

One particularly effective example included operations' recent practice of communicating performance standards and expectations internally and externally to other departments. Additionally, the added focus on developing a realistic, resource loaded work schedule, has increased staff confidence in understanding managements work expectations. These actions, along with organizational changes, have been acceptable in improving communications site wide.

Reference Material - None.

RAM Item No. - SUP-38 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Human Performance: Review specific problem areas and issues identified by inspections to determine if concerns exist in Control of Overtime and Fatigue.

Description of Resolution - The inspectors reviewed approximately 24 CRs, 130 overtime deviation request, and had discussions with representatives from Nuclear Quality Assessment and senior Davis-Besse management. Based on the information evaluated, the inspectors concluded that the licensee was meeting regulatory requirements in regards to the control of overtime for personnel during an extended outage. The inspectors found a number issues where management expectations, which were also described in the inspection report, were not being met regarding the control of overtime or the implementation of the overtime deviation process. However, the inspectors did not identify any significant issues that involved personnel performing safety-related functions.

Reference Material - Inspection Report No. 50-346/03-17 (ADAMS Accession No. ml032721592).

March 22, 2004

RAM Item No. - SUP-39 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Human Performance: Review specific problem areas and issues identified by inspections to determine if concerns exist in Human-System Interfaces including work area design and environmental conditions.

Description of Resolution - The attribute that affected human-system interface that contributed to the degradation of the reactor vessel head involved the service structure. Since the event occurred, the service structure was modified to ensure that all vessel penetration tubes were visible for inspection.

Reference Material - None.

RAM Item No. - SUP-40 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Human Performance: Conduct EP Emergency Response Organization Performance-Drills, in accordance with Inspection Procedure 82001, with a sampling of shift crews and management teams to assess their ability to implement the Emergency Plan.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Note that Inspection Procedure 82001 is obsolete and was replaced by Inspection Procedure 71114.01 ("Exercise Evaluation") in April 2000. The issue summarized in SUP-40 appears to encompass the biennial exercise inspection, off-hours augmentation drills, and the ERO and DEP Performance Indicators. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedures 71114.03 ("Emergency Response Organization Augmentation"), and 71151 ("Performance Indicator Verification") provide the appropriate inspection guidance for this item. These Inspection Procedures were accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05. Additionally, Inspection Procedures 71114.01 ("Exercise Evaluation") and 71151 ("Performance Indicator Verification") were also accomplished during this ROP cycle and documented in Inspection Report 50-346/03-14.

Reference Material - Inspection Report Nos. 50-346/2002-005 (ADAMS Accession No. ml022060551); and 50-346/2003-014 (ADAMS Accession No. ml031960596).

March 22, 2004

RAM Item No. - SUP-41 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Procedure Quality: Assess the effectiveness of corrective actions for deficiencies involving procedure quality.

Description of Resolution - Several inspections evaluated the effectiveness of corrective actions for deficiencies involving procedure quality. These included the Augmented Inspection Team Follow Up inspection, Extent of Condition Inspections Phase I and II, Effectiveness of Programs Inspection Phase I, and the Corrective Action Team Inspection (CATI). The licensee issued several condition reports regarding procedure quality or the lack of procedures where required, including CRs 02-07714, 02-09739, 02-06062, 02-06215, and 02-06064. The corrective actions were reviewed by the CATI, and determined to adequately address the deficiencies.

Reference Material - NRC Inspection Report No. 50-346/02-08 (ADAMS Accession No. ml022750524), NRC Inspection Report No. 50-346/02-09 (ADAMS Accession No. ml022560237), NRC Inspection Report No. 50-346/02-11 (ADAMS Accession No. ml031880844), NRC Inspection Report No. 50-346/02-12 (ADAMS Accession No. ml023370132), and NRC Inspection Report No. 50-346/03-10.

March 22, 2004

RAM Item No. - SUP-42 **Closed: Y**

Description of Issue - IP 95003; 02.03.f.3: Evaluate the quality of procedures and as applicable, determine the adequacy of the procedure development and revision process.

Description of Resolution - During the past year, the licensee has had some issues with procedure quality and procedure adherence and/or implementation. These issue were documented in several inspection reports.

Specific examples of poor procedure quality included:

- A self-revealing Non-Cited Violation of very low safety significance was identified for inadequate component restoration instructions contained in DB-SC-03122, "SFAS Component Testing Procedure," Revision 01. This resulted in the inadvertent operation, on separate occasions, of Borated Water Storage Tank Outlet Valves DH7A and DH7B during Safety Feature Actuation System (SFAS) individual component testing restoration activities for Core Flooding Tank to Sampling System Valve CF1545 and Nitrogen System to Containment Isolation Valve NN236. (Inspection Report 2003-013)
- A self-revealing Non-Cited Violation of very low safety significance was identified for failing to provide adequate procedural guidance for tightening fasteners internal to the high pressure injection pump. As a direct result, five socket head cap screws, located near the discharge of the pump, failed during pump testing. (Inspection Report 2003-015)
- A self-revealing Non-Cited Violation of very low safety significance was identified when it was determined that the procedure for testing the response time of the auxiliary feedwater pump 1 turbine did not adequately describe the acceptance criteria for successful completion of the test. (Inspection Report 2003-018)
- An NRC identified Non-Cited Violation of very low safety significance was identified when the inspectors discovered that procedural guidance which governed the performance of the Immediate Action Maintenance (IAM) process did not exist. (Inspection Report 2003-018)
- On September 5, 2003, during a plant heatup to establish test conditions for the reactor coolant system normal operating test, CF1B opened unexpectedly when reactor coolant system pressure increased to the valves automatic actuation set-point. (Inspection Report 2003-018; Minor Violation)

Specific examples of poor procedure adherence and/or implementation:

- An NRC identified Non-Cited Violation of very low safety significance was identified for the failure to properly implement procedures required for performing equivalency evaluations for components being replaced in safety related equipment. This resulted in the installation of relays into the Safety Features Actuation System (SFAS) cabinets that were not electrically rated for their specific application. (Inspection Report 2003-013)
- A self-revealing Non-Cited Violation of very low safety significance was identified for the failure to properly implement work instructions during the reinstallation of electrical conduit and the electrical termination of operating power and indication power to Loop 1 Reactor Coolant System High Point Vent Valves RC4608A and RC4608B. This resulted in the electrical power for each valve being swapped. Inspection Report 2003-013)
- A self-revealing Non-Cited Violation of very low safety significance was identified for failing to properly implement system procedures during the filling of the circulating water

system. Since three drain valves were improperly left open during the fill, approximately three inches of water flooded the 565' elevation of the turbine building. (Inspection Report 2003-015)

- A self-revealing Non-Cited Violation of very low safety significance was identified for failing to perform work in accordance with approved maintenance procedures during the installation of reactor coolant pump mechanical seal RTDs. As a direct result, the RTD tubing nuts were not installed to a sufficient tightness to provide a leak tight joint at normal operating pressure. (Inspection Report 2003-015)
- An NRC identified Non-Cited Violation of very low safety significance was identified when the inspectors discovered a significant amount of loose material in the containment building, subsequent to a final closeout inspection performed by senior licensee management. (Inspection Report 2003-018)
- An NRC identified Non-Cited Violation of very low safety significance was identified when the inspectors discovered that Operations management inappropriately authorized the performance of the IAM process to perform adjustments on 1 turbine driven auxiliary feedwater pump governor. (Inspection Report 2003-018)
- While performing Section 4.2 of DB-PF-03080, "AFW Check Valves AF1, AF2, AF15, and AF 16 Reverse Flow Tests," Revision 00, the initial system conditions, using the guidance stated in the procedure, could not be established to perform the test. To correct this condition, the test leader attempted to vent the upstream pressure seen by the valves. Steps for this venting were not in the procedure and the specific approval was not obtained from control room staff prior to manipulating the vent valves. (Inspection Report 2003-018; Minor Violation)
- While attempting to establish additional turbine plant cooling water flow through the generator hydrogen coolers utilizing procedure DB-OP-06263, "Turbine Plant Cooling Water System," Revision 03, a spill of approximately 80 gallons occurred due to vent and drains valves associated with the generator hydrogen coolers being inappropriately left open. (Inspection Report 2003-018; Minor Violation)

The resident staff has reviewed the corrective actions for each of these issues and found them to be adequate. The inspectors have noted improving trends in the areas of procedure quality and implementation, as evidenced by:

- the increased willingness of maintenance and operations personnel to submit conditions reports for deficient maintenance procedures;
- a decrease in the number of maintenance procedural non-compliances during work activities;
- significant improvements to integrated operational procedures (i.e., heatup, startup, cooldown); and
- a significant decrease (since the end of September, 2003) in the number of procedure related errors.

Based on the review of the corrective actions associated with the performance issues discussed above and the current licensee trends in the are of procedure quality, the inspectors determined that the licensee's performance in this area to be adequate.

Reference Material - NRC Inspection Report Nos.: 50-346/03-13 (ADAMS Accession No. ml031680985); 50-346/03-15 (ADAMS Accession No. ml032120360); 50-346/03-17 (ADAMS Accession No. ml032721592); 50-346/03-18 (ADAMS Accession No. ml033080433).

March 22, 2004

RAM Item No. - SUP-43 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Procedure Quality: Review a sample of Emergency Plan Implementing Procedure (EPIPs) changes against the requirements of the Plan and corrective action assessments. Determine if the EPIP change process is adequate in correcting EPIP related deficiencies and maintaining Plan commitments in EPIP instructions.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item.

Reference Material - None.

March 22, 2004

RAM Item No. - SUP-44 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Equipment Performance: Assess the effectiveness of corrective actions for deficiencies involving equipment performance, including equipment designated for increased monitoring via implementation of the Maintenance Rule.

Description of Resolution - The inspector reviewed the reference materials and interviewed the Maintenance Rule (MR) Program owner. The MR program received a comprehensive examination by the Program Review Board (PRB) as documented in reference 4. This covered the program purpose, ownership, scope, deviations from regulatory basis documents, implementation, performance indicators, recent improvements, assessments, and outstanding items assigned by the PRB. The inspector noted that the chairman of the PRB was especially qualified to evaluate the MR program since he was the senior operations engineer in the NRR MR section from 1995 until 2001. The PRB concluded that the program was in a condition ready to support restart and operation but identified a number of areas where the program needed improvement. Non-restart condition reports were written to document this areas. They included:

- upgrade scoping sheet descriptions for MR functions
- compare cycle 11 and 12 functional failures to cycle 13 functional failures for trending purposes
- upgrade the risk matrix tool
- develop and implement process to incorporate risk level changes from procedure changes into the Safety Monitor Program
- change to focus of the MR program from raw regulatory compliance to using the program to bring attention to deteriorating physical plant conditions and improving overall equipment reliability and unavailability
- the MR program did not have support from the total plant organization and needed to gain better support from Operations, Maintenance, PRA/PSA, Engineering
- MR program needed to establish metrics so as to understand how performance and condition monitoring are being evaluated, and with what frequency, so as to ensure compliance with evaluation under (a)(3) of the MR Rule.

The inspector interviewed the MR Program owner to assess his knowledge and ownership of the program, to learn his assessment of the program, and his plans for improvements. While he had only been the MR owner for approximately a year, he was knowledgeable and appeared committed to the program. He stated that plant engineers looked at the program favorably since an (a)(1) classification served to draw attention and resources to the system. This is consistent with the views of system engineers interviewed by the inspector during the MR Baseline Inspection in January 1997.

Based on the above, the inspector considered the MR program acceptable for plant operations.

Reference Material -10 CFR 50.65 - Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants; DB-PF-0003, Maintenance Rule; Maintenance Rule Program Manual; Program Readiness Baseline Assessment Package for Maintenance Rule Program, Revision 00, February 4, 2003

March 22, 2004

RAM Item No. - SUP-45 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Equipment Performance: Determine if the licensee has effectively implemented programs for control and evaluation of surveillance testing, calibration, and post-maintenance testing.

Description of Resolution - This attribute was inspected as part of the System Health and Safety System Design Inspections (SSDI), which were documented in inspection report nos. 50-346/2002-013 and 50-346/2002-014, respectively. The focus of the inspections was assuring the capability of safety significant structures, systems and components to support safe and reliable plant operation. Specifically, the inspections focused on review of activities as described in the "Davis-Besse System Health Assurance Plan." The plan consisted of three review programs: an Operational Readiness Review (ORR), a System Health Readiness Review (SHRR), and a Latent Issues Review (LIR). The inspection of this plan included reviewing the plans and procedures for the ORR, SHRR, and LIR, monitoring the work of the SHRR and LIR teams in-progress, monitoring Nuclear Oversight activities, attending review board meetings, and reviewing Condition Reports generated by the teams as reviews were conducted and discrepancies were identified. The inspectors also monitored training of reviewers, conducted walkdowns of selected systems, examined emergent issues, reviewed independent self-assessments of systems, and reviewed two SHRR reports. In addition, to assess the quality of your staff's reviews, the NRC conducted an in-depth design and performance capability review of the Service Water, High Pressure Injection, and 4160 Volt AC Electrical Distribution systems. The inspectors concluded that the System Health Assurance Plan was well-designed, plans and procedures were appropriate to the circumstances, the program was rigorously implemented, and quality assurance review by the Nuclear Oversight Department was adequate. Therefore, the staff concluded that the licensee had effectively implemented programs to identify and correct any deficiencies that may exist in the control and evaluation of surveillance testing, calibration, and post-maintenance testing.

Reference Material - Inspection Report Nos. 50-346/2002-013 and 50-346/2002-014 (ADAMS Accession No. ml030630314).

RAM Item No. - SUP-46 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Equipment Performance: Assess the operational performance of the selected safety system to verify its capability of performing the intended safety functions.

Description of Resolution - This assessment was done by the NRC as part of the SSDI. The SSDI was an in-depth design and performance capability review of the Service Water, High Pressure Injection, and 4160 Volt AC Electrical Distribution systems. The completion of the SSDI satisfied this suplmental inspection scope.

Reference Material - Inspection Report Nos. 50-346/2002-013 and 50-346/2002-014 (ADAMS Accession No. ml030630314).

March 22, 2004

RAM Item No. - SUP-47 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Equipment Performance: Review a sample of EP related equipment and facilities (including communications gear) against Plan commitments. Review the adequacy of the surveillance program to maintain equipment and facilities. Review the correction of deficiencies identified by the surveillance program.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. With the exception of the EPZ Alert and Notification (siren) System, the ROP places less emphasis on performing review of EP related facilities and equipment maintenance. However, aspects of reviews of records related to maintenance and surveillances of EP related equipment are addressed in Inspection Procedures 71114.02 ("Alert and Notifications System Testing"), 71114.03 ("Emergency Response Organization Augmentation"), and 71114.05 ("Correction of Emergency Preparedness Weaknesses and Deficiencies"). These Inspection Procedures provide the appropriate inspection guidance for this item and were accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05.

Reference Material - Inspection Report No. 50-346/2002-005 (ADAMS Accession No. ml022060551).

March 22, 2004

RAM Item No. - SUP-48 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Configuration Control: Assess the effectiveness of corrective actions for deficiencies involving configuration control.

Description of Resolution - The restart readiness assessment team inspections assessed configuration control (i.e. valve lineups) as did the resident inspection staff during Mode changes in December 2003 and January 2004. The restart readiness assessment team inspections concluded that specific problem areas and issues observed during the first restart readiness assessment team inspection, which included configuration control issues, were acceptable.

The resident inspectors reviewed the licensee's daily configuration risk assessments as part of their normal duties and concluded that equipment configurations had been properly listed in daily status sheets, that protected equipment had been identified and was being controlled where appropriate, and that significant aspects of plant risk were being communicated to the necessary personnel.

Reference Material - Memorandum, R. Skokowski to J. Grobe, February 6, 2004; Inspection Reports 50-346/04-04, 04-02, and 03-25.

March 22, 2004

RAM Item No. - SUP-49 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Configuration Control: Perform a walkdown of the selected system. In addition, if the selected system does not directly have a containment over-pressure safety function (such as containment spray), conduct an additional review of such a system. Independently verify that the selected safety system is in proper configuration through a system walkdown. Review temporary modifications to ensure proper installation in accordance with the design information.

Description of Resolution - Walkdowns of three selected systems were performed as part of the Safety System Design and Performance Capability Inspection. The selected systems were the Service Water System, the 4160 volt Emergency Electrical Distribution System, and the High Pressure Injection System. The team reviewed the following attributes for these systems: (1) process medium (water, steam, and air); (2) energy sources; (3) control systems; and (4) equipment protection. The team verified that procedural instructions to operators were consistent with the operator actions required to meet, prevent, and/or mitigate design basis accidents. The team's review considered requirements and commitments identified in the Updated Final Safety Analysis Report (UFSAR), Technical Specifications (TS), design basis documents, and plant drawings. This review further verified that the required support functions for the selected systems would be available.

The team verified that the system needs for the selected systems were met. The supply of air, water, steam, and electrical power required by the TS were verified through a review of the design of the selected systems, and those systems providing support functions.

The team verified equipment for the selected systems required to operate and/or change state during accidents and events would have control power available. The team further reviewed the adequacy of alarm setpoints and verified that necessary instrumentation and alarms were available to operators for making necessary decisions in coping with postulated accident conditions. In addition, the team verified that the systems' standby alignments were consistent with assumptions in the operating procedures as well as design and licensing basis assumptions.

Reference Material - NRC Inspection Report No. 50-346/02-14 (ADAMS Accession No. ml030630314)

March 22, 2004

RAM Item No. - SUP-50 **Closed: Y**

Description of Issue - IP 95003; Section 02.03.f.3: Determine that the work control process uses risk appropriately during planning and scheduling of maintenance and surveillance testing activities and the control of emergent work.

Description of Resolution - During 2003, the resident inspectors evaluated 21 samples utilizing the Maintenance Risk and Emergent Work inspection procedure [71111.13]. The inspectors reviewed the licensee's response to risk significant activities. Activities chosen were based on their potential impact on increasing overall plant risk. The inspections verified the planning, control, and performance of the work were done in a manner to control overall plant risk and minimize the duration where practical, and that contingency plans were in place, where appropriate. The licensee's daily configuration risk assessments, observations of shift turnover meetings and observations of daily plant status meetings were evaluated by the inspectors to verify that the equipment configurations had been properly listed, that protected equipment had been identified and was being controlled where appropriate, and that significant aspects of plant risk were being communicated to the necessary personnel.

During these inspections, the inspectors identified a finding of very low safety significance when the Operations management inappropriately authorized the performance of the Immediate Action Maintenance Process to perform adjustments on turbine driven auxiliary feedwater pump 1 governor. Additionally, another finding of very low safety significance was identified when the inspectors discovered that procedural guidance which governed the performance of the Immediate Action Maintenance process did not exist. These findings were documented in Inspection Report No. 50-346/03-18. The corrective actions for these performance deficiencies were evaluated by the inspectors and found to be acceptable.

Based on these documented inspection activities and day-to-day observations of how the licensee incorporates risk insights into work scheduling, the inspectors determined that the licensee performs this function in a satisfactory manner.

Reference Material - NRC Inspection Report No. 50-346/03-18 (ADAMS Accession No. ml033080433).

March 22, 2004

RAM Item No. - SUP-51 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Configuration Control: Determine whether the primary and secondary chemistry control programs adequately control the quality of plant process water to ensure long-term integrity of the reactor coolant pressure boundary.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. No inspections beyond the baseline are intended for this item.

Reference Material - None.

RAM Item No. - SUP-52 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Configuration Control: Assess the programs and controls (tracking systems) in place for maintaining knowledge of the configuration of the fission product barriers including: containment leakage monitoring and tracking, containment isolation device operability (valves, blank flanges), and reactor coolant leak-rate calculation and monitoring.

Description of Resolution - These areas were assessed as part of the NRC's inspections of the licensee's containment Integrated Leak Rate Test, and Normal Operating Pressure/Temperature test. Containment leakage was found to be well within allowable limits, and the licensee's program for monitoring and determining reactor coolant leakage was determined to be well implemented.

Reference Material - Inspection Report Nos. 50-346/2003-05 (ADAMS Accession No. ml032230339) and 50-346/2003-023, which is scheduled to be issued in December 2003.

March 22, 2004

RAM Item No. - SUP-53 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Configuration Control: Review the results of the plant specific IPE relative to the system(s) selected. Determine if the IPE is being maintained to reflect actual system conditions regarding system capability and reliability.

Description of Resolution - The backlog inspection team reviewed the tracking of modification activities that would require updating of the PRA to reflect actual plant conditions/operation. Relative to PRA updating following a modification, the team found that the design control process specified the issuance of a condition report if a modification could affect the PRA. The condition reports were then reviewed by the PRA staff to determine the need for a PRA update. In some cases the CR was issued long before the modification was actually installed and used as a tracking mechanism. The team noted that recent modifications to the HPI system did not required an update to the PRA, because the modifications were restoring the systems to conditions already assumed in the PRA.

Reference Material - NRC Inspection Report 50-346/03-024 (ADAMS Accession No. ml040060504).

RAM Item No. - SUP-54 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Emergency Response Organization Readiness: Assess the effectiveness of corrective actions for deficiencies involving ERO readiness.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedures 71114.03 ("Emergency Response Organization Augmentation"), and 71114.05 ("Correction of Emergency Preparedness Weaknesses and Deficiencies") provide the appropriate inspection guidance for this item. These Inspection Procedures were accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05.

Reference Material - Inspection Report No. 50-346/2002-005 (ADAMS Accession No. ml022060551).

March 22, 2004

RAM Item No. - SUP-55 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Emergency Response Organization Readiness: Verify that adequate staffing is available on shift for emergencies.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedures 71114.03 ("Emergency Response Organization Augmentation"), and 71114.05 ("Correction of Emergency Preparedness Weaknesses and Deficiencies") provide the appropriate inspection guidance for this item. These Inspection Procedures were accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05.

Reference Material - Inspection Report No. 50-346/2002-005 (ADAMS Accession No. ml022060551).

RAM Item No. - SUP-56 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Emergency Response Organization Readiness: Verify the capability to activate and staff the emergency response facilities and augment the response organization within the requirements of the licensee emergency response plan.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. Inspection Procedure 71114.03 ("Emergency Response Organization Augmentation") provides the appropriate inspection guidance for this item. This Inspection Procedure was accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05.

Reference Material - Inspection Report No. 50-346/2002-005 (ADAMS Accession No. ml022060551).

March 22, 2004

RAM Item No. - SUP-57 **Closed: Y**

Description of Issue - Assessment of Performance in the Reactor Safety Strategic Performance Area: Key Attribute - Emergency Response Organization Readiness: Verify licensee ability to meet Emergency Plan goals for activation by implementing Inspection Procedure 71114.03, "Emergency Response Organization Augmentation." If this inspection procedure has been implemented recently, the inspector may exercise judgement as to the need to implement the inspection procedure as part of the 95003 inspection effort. If Attachment 95003.01 is being implemented, there are additional requirements under this key attribute to consider.

Description of Resolution - Inspection Procedure (IP) 95003 states in the Inspection Guidance section that "...certain inspection guidance is only applicable if problems are identified in that area." The Resource Estimate for IP 95003 also states that "Not all areas will be performed during each inspection." Discussions with the author/owner of the procedure confirmed that the scope of the procedure is geared towards an operating plant, not a plant in the MC 0350 status. The intent of the procedure wording is to provide for flexibility in the planning of which inspection areas to focus on, not to mandate inspection activities for each line item suggested in IP 95003. Based on acceptable licensee performance in the Emergency Preparedness strategic area, no inspections beyond the baseline are intended for this item. The threshold or entry conditions for the performance of Attachment 95003.01 were not met; therefore, this attachment will not be performed for Davis-Besse. Inspection Procedure 71114.03 ("Emergency Response Organization Augmentation") provides the appropriate inspection guidance for this item. This Inspection Procedure was accomplished during this ROP cycle and documented in Inspection Report 50-346/02-05.

Reference Material - Inspection Report No. 50-346/2002-005 (ADAMS Accession No. ml022060551).

RAM Item No. - SUP-58 **Closed: Y**

Description of Issue - Assessment of Performance in the Radiation Safety Strategic Performance Area.

Description of Resolution - Per Inspection Procedure 95003, no special inspection is required in this strategic arena as there have been no red findings that would put the licensee into this portion of the action matrix for this strategic arena. In addition, as a result of two white findings, a special inspection was completed per Inspection Procedure 95002, and the results of that inspection do not indicate that further inspection per 95003 is warranted. Therefore, this item is being closed as it is not required.

Reference Material - None.

March 22, 2004

RAM Item No. - SUP-59 **Closed: Y**

Description of Issue - Assessment of Performance in the Safeguards Strategic Performance Area.

Description of Resolution - Per Inspection Procedure 95003, no special inspection is required in this strategic arena as there have been no red findings that would put the licensee into this portion of the action matrix for this strategic arena. Since the terrorist attacks on September 11, 2001, the NRC has issued several Orders and threat advisories to enhance security capabilities and improve guard force readiness. We have conducted inspections to review the licensee's implementation of these requirements and have monitored the licensee's actions in response to changing threat conditions. The NRC will perform additional inspections to evaluate the licensee's compliance with any new requirements that may be ordered. Therefore, this item (IP95003) is being closed as it is not required.

Reference Material - None.

RAM Item No. - SUP-60 **Closed: Y**

Description of Issue - Group the safety performance deficiencies identified during the inspection by apparent root and contributing causes.

Description of Resolution - The inspection performance deficiencies were grouped by the 0350 Panel based on a review of the AIT inspection report and subsequent information presented to the panel. As a result, the deficiencies were utilized in developing the Restart Checklist, which identified specific areas that needed to be corrected to the NRC's satisfaction to allow the licensee to startup the facility. The latest version of the checklist is provided as an attachment to the letter from J. E. Dyer to the licensee dated January 28, 2003. This letter is in ADAMS at accession no. ml030290155.

Reference Material - ADAMS Accession No. ml030290155.

March 22, 2004

RAM Item No. - SUP-61 **Closed: Y**

Description of Issue - Compare the team's findings with previous performance indicator and inspection program data to determine whether sufficient warning was provided to identify a significant reduction in safety. Evaluate whether the NRC assessment process appropriately characterized licensee performance based on previous information. The findings from this inspection requirement will not be contained in the inspection report associated with this inspection, but should be documented in a separate report, co-addressed to the appropriate Regional Administrator and the Director of NRR.

Description of Resolution - A comparison of findings with previous performance indicators was part of the task of the Davis-Besse Lessons Learned Task Force (LLTF), which conducted a detailed analysis as to what had happened at Davis-Besse, and the contribution the NRC's inspection and licensing processes had played in the events. The LLTF issued its report to the Commission on September 30, 2002, and the document can be found in ADAMS at accession no. ml030280448. In addition, following the issuance of the NRC's Augmented Inspection Team (AIT) report, a letter was sent on May 29, 2002, from Jim Dyer to Sam Collins identifying two recommendations with the NRC baseline inspection program.

Reference Material - ADAMS Accession Numbers ml030280448 (LLTF Report) and ml021500401 (memo to S. Collins).

March 22, 2004

RAM Item No. - SUP-62 **Closed: Y**

Description of Issue - IP 71007, "Reactor Vessel Head Replacement Inspection," step 02.05, provides guidance for post-installation verification and testing inspections. This step recommends that selected inspections be conducted in the following areas: containment testing; licensee's post-installation inspections and verifications program and its implementation; RCS leakage testing; post installation equipment testing.

Description of Resolution - The following inspection activities were sufficient in scope to close this item.

Reactor Vessel Removal and Replacement - The physical removal of the old reactor vessel head from containment and the movement of the new reactor vessel head into containment were observed as routine resident plant status activities and was not specifically documented in an inspection report.

Inspection reports 05000346/2002010 and 05000346/2003017 documented radiological inspections associated with head replacement activities. Specific inspection activities included:

- walkdowns of selected portions of the radiologically restricted area, including areas within the Auxiliary and Containment Buildings where significant radiological work involving the reactor head and containment breach was occurring;
- observed work occurring both inside and outside of the Containment Building including preparation for the reactor head moves and Containment Building breach;
- walkdowns of areas outside of the Containment Building where equipment for making the Containment breach was operating to verify that controls for containing radioactive materials generated in the breach process were adequate;
- reviewed the reactor head encapsulation process to verify that contamination control and radiological shielding were adequate to minimize dose to workers and to meet 10 CFR and 49 CFR requirements for the eventual transportation of the reactor head to a burial site; and
- observed aspects of the preparation of a shipment of the reactor head including the shipping documentation.

Design and Planning/Reactor Vessel Head Inspection - Inspection Report 05000346/2002007 documented review of the non-destructive examinations performed on the replacement head welds that occurred at the Midland Michigan site and the American Society of Mechanical Engineers (ASME) Code data packages for the replacement head. Our inspection concluded that adequate records were assembled to ensure that the replacement head was designed and fabricated in conformance with ASME Code requirements and that the original ASME Code Section III N-stamp remained valid.

Containment Vessel Restoration - Inspection Report 05000346/2002007 documented that:

- the engineering evaluation associated with construction of the temporary containment access opening considered appropriate loads and demonstrated that stress in the containment shell materials would not exceed design limits;

- the temporary containment vessel opening was restored such that the original ASME Code construction requirements were maintained;
- the work activities to construct and restore the temporary containment opening and closure occurred in a controlled manner and in accordance with procedure requirements; and
- that the licensee managers demonstrated an active oversight role for the control of the contractors on the containment building temporary construction opening.

Inspection Report 05000346/2003005 documented that:

- based on the results of the containment integrated leak rate check, containment integrity had been restored where the containment had been opened for replacement of the reactor head.

Based on the results of these two inspection activities, the licensee's efforts to construct a temporary containment access, restoration of the temporary access following reactor head movement into containment, and subsequent leak testing were adequate.

Post Installation Testing - Inspection Report 05000346/2003023 documented inspection during reactor coolant system leak testing activities. The inspection included walkdowns of the reactor coolant system while at normal operating pressure as well as detailed evaluation of your inspections of the reactor vessel bottom head and closure head penetrations, and control rod drive mechanism flange connections following the 7 day pressure holding period. The results of these pressure test activities provide reasonable assurance that there are no pressure boundary leaks in the reactor coolant system.

Inspection Report 05000346/2004002 documented inspection of the performance of surveillance test DB-SC-03270, "Control Rod Assembly Insertion Time Test." This activity was observed to evaluate proper control rod movement and reactor vessel head alignment. This test was successfully completed on February 10, 2004.

Reference Material - NRC Inspection Report Nos. 50-346/02-07 (ADAMS Accession No. ml023370100); 50-346/02-10 (ADAMS Accession No. ml023030585); 50-346/03-05 (ADAMS Accession No. ml032230339); 50-346/03-17 (ADAMS Accession No. ml032721592); 50-346/03-23 (ADAMS Accession No. ml033421074); 50-346/04-02.

RAM Item No. - SUP-63 **Closed: Y**

Description of Issue - Complete 95002 Inspection in the Radiation Protection strategic arena.

Description of Resolution - Inspection Report 50-346/03-08, "Davis-Besse Nuclear Power Station NRC Supplemental Inspection and Radiation Protection Program Effectiveness Review," was issued on May 30, 2003, and completes the action on this item.

Reference Material - Inspection Report 50-346/03-08 (ADAMS Accession No. ml031500693).