February 6, 2003

Mr. Lew W. Myers
Chief Operating Officer
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION
NRC SPECIAL INSPECTION -MANAGEMENT AND HUMAN PERFORMANCE
ROOT CAUSE ASSESSMENT - REPORT NO. 50-346/02-15(DRP)

Dear Mr. Myers:

On December 18, 2002, the NRC completed a Special Inspection at your Davis-Besse Nuclear Power Station. This inspection reviewed your actions to resolve Items 1.b and 4.a of the NRC's Restart Checklist, Revision 0, associated with the adequacy of organizational effectiveness and human performance. Specifically, this inspection focused on review of activities associated with your root cause determination on management and human performance, and associated corrective actions to address the performance deficiencies that resulted in the reactor pressure vessel head degradation. Our review of this assessment included an evaluation of your staff's root cause assessment methods and the appropriateness of identified corrective actions. The enclosed report presents the results of our review.

The NRC's 0350 Oversight Panel determined that a special inspection of the management and human performance area was warranted. The overall inspection plan was designed to assure that an appropriate root cause analysis had been completed (Phase 1), that appropriate corrective actions had been identified and implemented (Phase 2), and that the effectiveness of those corrective actions was assessed (Phase 3). The attached inspection report partially addresses the first two phases of the overall plan. While no findings were identified during this inspection, several issues were identified associated with your overall root cause analysis activities. These issues need to be addressed before our phased inspection activity can continue.

The inspection plan was designed to be conducted in three phases. The first phase was to look at the root cause analyses and identified corrective actions. Based on our review of the root cause assessments for management and human performance issue identified below, we have concluded that the completed reviews were appropriately conducted and provided meaningful insights. We also concluded that your staff's planned corrective actions, if properly implemented, are sufficient to address the issues identified in the August 13, 2002 "Failure to Identify Significant Degradation to the Reactor Pressure Vessel Head"; and September 10, 2002 "Failure in Quality Assurance Oversight to Prevent Significant Degradation of the Reactor Vessel Head" root cause assessment reports. However, the team identified that additional assessments in the areas of engineering, operations, and nuclear and corporate oversight activities were necessary. The team also identified that a collective significance

review of the individual area assessments had not been performed. The team can not conclude whether the corrective actions identified to date are sufficient until the additional assessments are completed and the collective significance review is accomplished.

Following completion of the additional activities identified above, and to most effectively and efficiently use resources, we plan to combine the remaining Phase 1 activities and the Phase 2 corrective action implementation review into one inspection. The Phase 3 corrective action effectiveness assessment will be a separate inspection. Restart Checklist, Revision 0, Items No. 1.b. and 4.a. regarding the adequacy of the root cause evaluation and the corrective action associated with organizational and human performance will be evaluated following completion of the second phase of the inspection plan. Restart Checklist Item 4.b., regarding the effectiveness of the corrective actions will be evaluated following completion of Phase 3 of the inspection plan.

In accordance with 10 CFR 2.790 of the USNRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

John A. Grobe, Chairman
Davis-Besse Oversight Panel

Docket No. 50-346
License No. NPF-3

Enclosure: Inspection Report 50-346/02-15

cc w/encl: B. Saunders, President - FENOC
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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-346
License No:	NPF-3
Report No:	50-346/02-15
Licensee:	FirstEnergy Nuclear Operating Company
Facility:	Davis-Besse Nuclear Power Station
Location:	5501 North State Route 2 Oak Harbor, OH 43449-9760
Dates:	September 9 through October 4, 2002 and December 18, 2002
Inspectors:	G. Wright, Team Leader J. Lara, Senior Resident Inspector, Kewaunee R. Pelton, Human Factors Specialist, NRR J. Jacobson, Senior Inspector, NRR W. Corcoran, Consultant
Approved by:	Christine A. Lipa, Chief Branch 4 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000346-02-15, FirstEnergy Nuclear Operating Company, on 09/09-10/04 and 12/18/2002, Davis-Besse Nuclear Power Station. Special Inspection.

This report covers a special inspection to review the licensee's root cause evaluation for the management and human performance aspects of the reactor coolant system pressure boundary leakage and degraded reactor vessel head. The inspection was conducted by Region III and NRR inspectors and a contractor experienced in root cause analyses.

At the start of the inspection, the licensee's root cause analysis was comprised of four individual assessments:

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

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

3. "Root Cause Analysis Report - Operations Role in Maintaining Site Safety Focus," dated August 22, 2002; and

4. "Review of Company Nuclear Safety Review Board," draft, no date.

During the inspection, the Operations Role assessment was retracted and the Company Nuclear Safety Review Board assessment was in draft. In response to questions by the team, the licensee indicated that it was their intent to conduct reviews of engineering and corporate support, and to perform a collective significance review. The inspection team did not review these assessments.

Based on the team's review of the August 13 and September 10, 2002 reviews, a number of observations were developed which were discussed with the licensee:

- The August 13 and September 10, 2002 reports identified a number of significant issues and causes associated with the Davis-Besse organization's failure to identify and address pressure boundary leakage and reactor head degradation.

- The corrective actions identified in the August 13 "Root Cause Analysis Report - Failure to Identify Significant Degradation to the Reactor Pressure Vessel Head" and September 10, 2002 "Root Cause Analysis Report - Failure in Quality Assurance Oversight to Prevent Significant Degradation of the Reactor Vessel Head" reports appropriately addressed the causes, contributing causes, and related observations, identified in the reports. The implementation schedule for corrective action completion was appropriate with a majority of the action scheduled for completion prior to the end of calendar year 2002.

- The more significant corrective actions included initiatives to: 1) improve the safety focus of the organization; 2) improve implementation of the corrective action program; and 3) improve compliance with the Boric Acid Corrosion Control (BACC) Program.

- Root causes and corrective actions were traceable back to the findings and recommended actions identified in the analyses which formed the basis for the August 13 and September 10 reports.

- During the inspection, the team noted that the scope of the root cause assessments was not sufficiently broad to identify potential contributors in the engineering and corporate support areas. The licensee initiated separate focused assessment in these areas.

- The team also noted that the assessments were not developed in an integrated manner to identify potentially systemic issues. The licensee stated they would perform a collective assessment of all areas once the six assessments were complete.

- The assessments and associated corrective actions did not specifically address the failure to effectively implement codes, standards, and federal regulations (including Appendix B to 10 CFR Part 50). The licensee stated that this issue would be addressed in their corrective actions.

- The tracking system for condition reports was not sufficiently rigorous to ensure all corrective actions had been accounted for or to prevent inadvertent deletion of an item. The licensee stated they would develop a tracking mechanism to tie corrective actions to root causes, contributing causes, and observations from the various assessments.

The assessments and corrective actions reviewed during this inspection were adequate. However, the team could not conclude whether the corrective actions were sufficient until the remainder of the assessments are complete and the collective review is accomplished.

REPORT DETAILS

1.0 Assessment of Root Cause Methodology Implementation

a. Inspection Scope

This inspection evaluated the licensee's root cause(s) assessments of its failure to identify reactor coolant system pressure boundary leakage and significant degradation of the reactor pressure vessel head. Further, the inspection evaluated the licensee's actions to correct and prevent recurrence of the conditions which allowed the leakage and degradation to go undetected.

This inspection did not assess the licensee's root cause of the technical issues associated with the cracking of the reactor vessel head nozzles or the vessel head corrosion mechanisms. Further, this inspection did not assess the circumstances surrounding the licensee's request to delay inspection of the control rod drive nozzles from December 31, 2001 to February 16, 2002.

For efficiency, the inspection used parallel reviews. One review concentrated on the licensee's implementation of the root cause analysis techniques. The parallel review assessed the conclusions and recommendations of the analyses, and the root causes, contributing causes, observations and corrective actions documented in the root cause reports.

Early in the inspection, the licensee's root cause analysis was comprised of the following assessments:

- "Root Cause Analysis Report - Failure to Identify Significant Degradation to the Reactor Pressure Vessel Head," dated August 13, 2002;
- "Root Cause Analysis Report - Failure in Quality Assurance Oversight to Prevent Significant Degradation of the Reactor Vessel Head," dated September 10, 2002;
- "Root Cause Analysis Report - Operations Role in Maintaining Site Safety Focus," dated August 22, 2002; and
- "Review of Company Nuclear Safety Review Board," which was in draft at the time of the inspection.

The inspection team was only able to review the first two assessments during this inspection; the "Root Cause Analysis Report - Operations Role in Maintaining Site Safety Focus" was retracted by the licensee during the inspection and the "Review of Company Nuclear Safety Review Board" was in draft, therefore neither assessment was reviewed by the inspection team. NRC reviews of these assessments will be conducted during a future inspection (05000346/2002018)

b. Inspection Methodology

In performing its review, the inspection team reviewed information supporting the licensee's assessments including:

- Records of interviews with past and present licensee employees;
- An events and casual factors (E&CF) chart;
- Selected condition reports; and
- Individual MORT[1] units.

The inspection team also interviewed licensee individuals involved in development of the various root cause analyses and other selected licensee employees relevant to the inspection.

The inspection team used guidance contained in Inspection Procedure 95002, "Inspection For One Degraded Cornerstone or Any Three White Inputs in a Strategic Performance Area," in evaluating the acceptability of the licensee's analyses. As stated in IP 95002, the breadth and depth of a root cause analysis should generally be commensurate with the importance/safety significance of the issues being reviewed. Because of the apparent high significance, the team expected the corresponding root cause analysis to be comprehensive. Among the specific attributes the team looked for in the licensee's analyses were:

- A systematic method was used to identify root and contributing causes;
- The root cause evaluation was conducted to a level of detail commensurate with the significance of the problem;
- The evaluation included a consideration of prior occurrences and knowledge of prior operating experience;
- The evaluation included consideration of potential common causes;
- Appropriate corrective actions were specified;
- Corrective actions had been prioritized with consideration of risk significance and regulatory compliance; and
- A schedule for corrective action implementation had been established.

[1]MORT; Management Oversight and Risk Tree is a root cause methodology copyrighted by Conger & Elsea, Inc.

c. Findings and Conclusions

Description of Licensee's Root Cause Methodology

The licensee, using a team of eight individuals, supplemented by additional contractor and other external resources, used a combination of hazard-barrier target analysis, MORT, and E&CF charting to produce the basis for the August 13, 2002 "Root Cause Analysis Report - Failure to Identify Significant Degradation to the Reactor Pressure Vessel Head." In performing its review, the licensee's team processed a large amount of relevant information, some dated prior to 1990. Using the E&CF methodology, the information was added to an E&CF chart to form a time-line of relevant information. The E&CF chart included the results of numerous interviews conducted by the licensee's team, data taken from previous analyses, relevant conditions reports, and other relevant documents. The licensee used hazard-barrier target methodology to identify failed barriers within the licensee's BACC Program during the 1998 and 2000 refueling outages.

The MORT methodology formed the framework for a majority of the licensee's efforts. MORT provided a structured way of assessing potential root causes through the use of a tree and branch approach. The MORT approach used a series of questions to assess and group relevant data. In implementing MORT, the licensee used the following generic potential root cause paths (MORT branches): technical information systems; hazard analysis process; corrective action program; operations involvement; independent oversight programs; task performance errors; and corporate management goals. Once the relevant data was grouped, the data was analyzed by the licensee's root cause team and statements summarizing the results of each data group were drafted. Based upon these summary statements, the licensee generated a report providing its conclusions regarding the root causes.

In its August 13, 2002 report, the licensee identified three categories of issues: (1) root causes; (2) contributing causes; and (3) related observations. While it was not clear from the licensee's report what criteria were used to determine which of the three categories a specific item would be assigned to, discussions with the licensee revealed that the distinction rested on the amount of material available to support the conclusions. To be identified as a root cause, sufficient information had to be available to substantiate, or prove that the conclusion was true. Contributing causes were issues where less information and therefore less certainty existed. Related observations were made where the licensee's team believed an issue was relevant but had little or no information to support the belief. The resulting root and contributing causes in the August 13, 2002 "Root Cause Analysis Report - Failure to Identify Significant Degradation to the Reactor Pressure Vessel Head" were essentially restatements of the MORT unit summary statements.

The licensee's August 13, 2002 root cause report listed four root causes, two contributing causes, and ten related observations regarding the organization's failure to identify reactor coolant system pressure boundary leakage and significant degradation of the reactor pressure vessel head. The following summarizes the licensee's conclusions.

Root causes:

- Less than adequate safety focus;
- Less than adequate implementation of the corrective action program;
- Less than adequate analyses of safety implications; and
- Less than adequate compliance with the BACC Procedure and In-service Test Program

Contributing causes:

- Evaluations and decisions were made without hazard analyses; and
- A Corrective Action Program which did not reflect state-of-the-art industry practices.

Observations:

- Original design material was susceptible to cracking;
- Lack of training for head inspection activities;
- Lack of coordination of boric acid control activities;
- Weak BACC procedure;
- Untimely corrective action;
- Lack of Quality Assurance involvement;
- FENOC's monetary incentive program not consistent with promoting safety first;
- Employee and nuclear safety were not clearly addressed in written policies;
- Minimal operations involvement; and
- Minimal management involvement in observing containment conditions.

Assessment of Licensee's Methodology and Root Cause Conclusions

The August 13 and September 10, 2002 reports, referenced above, identified a number of significant issues and causes associated with the Davis-Besse organization's failure to identify the head degradation. Notwithstanding these reports, the inspection team identified a number of issues which indicated that while the existing reviews were appropriately conducted and provided meaningful insights, additional assessments were necessary to ensure that all potentially significant contributors were identified and addressed. Also, the inspection team identified that the separate analyses had not been assessed in an integrated manner to identify potential systemic issues. Following discussions with the inspection team, the licensee stated they planned to perform a collective significance review when all assessments were finalized.

The licensee's root cause analysis included:

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

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

- "Root Cause Analysis Report - Operations Role in Maintaining Site Safety Focus," dated August 22, 2002; (retracted during the inspection) and

- "Review of Company Nuclear Safety Review Board" (in progress during the inspection.)

Each area was assessed using different techniques, from a full MORT assessment to a review by a single individual.

The inspection team identified that none of the analyses specifically covered the engineering area. Because engineering errors appeared to contribute to the condition and several of the licensee's employee interviews pointed to potential engineering weaknesses, the inspection team concluded that the lack of an assessment in the engineering area was a weakness in the licensee's overall root cause assessment. Areas which had not been fully assessed included staffing, engineering processes, engineering interfaces, design basis information adequacy, and qualifications. Following discussions with the inspection team, the licensee indicated it planned to perform an assessment of engineering and a restart readiness review of engineering.

The licensee's assessments did not pursue corporate influences on Davis-Besse staff's performance between 1996 and 2002. The licensee identified that a shift in management philosophy in the mid-1990s, attributable to new site management personnel, was the cause of the increased emphasis on production without a corresponding increased emphasis on safety. Further, the licensee identified that during the same time frame, the executive bonus structure started to shift from one weighted towards nuclear safety, to one that placed more emphasis on production. However, the licensee stopped their analysis at that point and did not pursue corporate policies, practices, or actions, e.g., plant/corporate financial relationship, corporate oversight, and corporate level nuclear experience, as potential contributors. The inspection team was concerned that while the causes and corrective actions identified to date may be sufficient to prevent recurrence in the short term, their long term effectiveness may not be assured unless corporate influences are assessed and appropriately corrected. The team noted that actions had been taken to strengthen corporate site involvement including the creation of a new corporate level vice president position and realignment of Quality Assurance reporting level. Following discussions with the inspection team, the licensee stated they planned to perform additional reviews in this area.

A final concern identified by the inspection team was that none of the assessments or associated corrective actions specifically addressed the failure of the Davis-Besse organization to effectively implement codes, standards, and federal regulations (including Appendix B to 10 CFR Part 50). The MORT methodology adequately identified that codes, standards, and regulations were available, known, and had been translated into specific procedural guidance. Further, the MORT Task Performance Errors area was capable of identifying the failure to properly implement the guidance; however, the licensee chose not to exercise that section of MORT. As a result, the licensee's causes and recommended corrective actions did not address specific actions related to this area. Following discussions with the inspection team, the licensee added information relative to the importance of and compliance with regulations to one of its corrective actions.

2.0 Appropriateness of Corrective Actions in Relation to Licensee Root Cause Evaluations

a. Inspection Scope

The licensee documented various evaluations and analyses of the management and organizational issues associated with the failure to detect and correct primary pressure boundary leakage and reactor vessel head degradation. The evaluations reviewed during this inspection included the August 13, 2002 "Root Cause Analysis Report - Failure to Identify Significant Degradation to the Reactor Pressure Vessel Head," and the September 10, 2002 "Root Cause Analysis Report - Failure in Quality Assurance Oversight to Prevent Significant Degradation of the Reactor Vessel Head."

The inspection team focused on evaluating the adequacy of the following elements:

- Corrective actions in relation to root cause evaluations;
- Corrective actions in relation to the licensee's Management and Human Performance Excellence Plan; and
- Recommendations and corrective actions in relation to the licensee's Management and Human Performance Building Block.

b. Findings and Conclusions

The Management and Human Performance Improvement Plan was developed to address the causes identified from the various reviews and evaluations. The plan documented the cause categories and the corrective actions to address the causes. Additionally, performance measures were identified to assess the trends in performance.

During the inspection period, the licensee had begun evaluating the individual corrective actions discussed in the September 10, 2002 Quality Assurance root cause report for departmental acceptance and clarification of corrective actions, where necessary. This report documented Preventive, Remedial, and Enhancement Actions to address the underlying reasons why the Nuclear Quality Assurance oversight organization was not successful in identifying or effecting resolution of issues relating to the corrosion of the vessel head. The team determined that the corrective actions, as described in the respective conditions reports, correlated well with the identified organizational root causes.

The inspection team was able to link the licensee's corrective actions to the identified root causes, contributing causes, and related observations. However, the licensee's system for tracking condition reports, which documented corrective actions, to the source documents which identified the adverse conditions and corrective actions, was not sufficiently rigorous to ensure all actions had been accounted for and to prevent inadvertent deletion of an item. At the conclusion of this inspection, the licensee was developing a system to effectively track the individual corrective action documents.

Representative corrective actions for the root causes include initiatives to improve the safety focus of the organization; improve implementation of the Corrective Action Program; improve use and integration of industry information and operating experience; and increase BACC program compliance. Representative corrective actions for the contributing causes and related observations include improvements to the corrective action procedure, coordination of BACC activities, improved training of inspectors and technicians, increased management observations of field activities, and reassessment of performance bonuses. The inspection team determined that the corrective actions appeared to appropriately address the causes and observations.

In addition to the corrective actions specifically associated with management and human performance, the licensee was implementing system and program reviews to assess the extent of condition caused by the organizational deficiencies. The system and program reviews are being evaluated through separate special inspections.

The inspection team also assessed the licensee's schedule for the corrective actions related to the root causes, contributing causes, and related observations in the September 10, 2002 root cause evaluation and condition report listed below. The corrective actions appeared to be appropriately prioritized. The licensee documented 12 actions to evaluate the effectiveness of their corrective actions: seven were scheduled for 2002, two were scheduled for 2003, two are scheduled for 2004, the last review had not been scheduled. While corrective action effectiveness assessments had been scheduled, the team noted that the licensee had not identified specific management or human performance goals as prerequisites for mode changes.

The process for implementation of corrective actions was also reviewed during this inspection. The team noted that the licensee had either completed or was tracking the completion of corrective actions using the Management and Human Performance Improvement Plan. The team noted each accepted corrective action had a responsible organization assigned and an identified due date. Condition Report numbers: 02-00685, 02-00846, 02-00891, 02-00932, 02-01053, 02-01128, 02-01378, 02-01489, 02-01516, 02-01583, 02-01850, 02-02120, 02-02235, 02-02434, 02-02578, 02-02581, 02-02584, 02-02585, 02-02593, 02-02662, 02-02879, 02-03602, and 02-03712 and their associated corrective actions were included in this review. The primary condition report associated with the September 10, 2002 root cause evaluation was Condition Report 02-00891.

3.0 Exit Meeting

The Team presented the inspection results to Mr. Myers and other members of licensee management on December 18, 2002. The licensee acknowledged the results presented. No proprietary information was identified.

KEY POINTS OF CONTACT

B. Babiak, Nuclear Quality Assurance, Perry Site
G. Becker, Regulatory Interface
M. DeStefano, Nuclear Quality Assurance Supervisor
D. Eshelman, Nuclear Engineering Services Director
G. Leidich, Executive Vice President
S. Livingston, Quality Assurance Supervisor
S. Loehlein, Quality Assurance Manager
L. Myers, FENOC Chief Operating Officer and Site Vice President
L. Pearce, FENOC Oversight Vice President
J. Powers, Engineering Director
C. Price, Business Services Manager
M. Roder, Operations Manager
J. Sturdavant, Licensing Engineer

LIST OF ACRONYMS

ADAMS	Agencywide Documents Access and Management System
BACC	Boric Acid Corrosion Control
CR	Condition Report
DRP	Division of Reactor Projects
E&CF	Events and Causal Factors
FENOC	FirstEnergy Nuclear Operating Company
MORT	Management Oversight and Risk Tree
NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
PARS	Publically Available Records

DOCUMENTS REVIEWED DURING THE INSPECTION:

Root Cause analysis Report, "Failure to identify Significant Degradation of the Reactor Pressure Vessel Head," August 13, 2002

Root Cause Analysis Report "Significant Degradation of the Reactor Pressure Vessel Head," April 15, 2002

Root Cause Analysis Report "Operations Role in Maintaining Site Safety Focus," August 22, 2002

Root Cause Analysis Report "Failure in Quality Assurance Oversight to Prevent Significant Degradation of Reactor Pressure Vessel Head," September 10, 2002

Nuclear Quality Assessment "Examination of Five Closed Non-conformances Related to the Reactor Pressure Vessel Head," dated June 13, 2002

Davis-Besse Management and Human Performance Excellence Plan, Revision 2, September 6, 2002

Davis-Besse Operations Leadership Plan

Davis-Besse Tech-19, "Problem Solving Policy," October 29, 2001

FENOC Quality Assurance Program Manual, Revision 3

CR 02-00685 Boron Build Up On Reactor Vessel Head

CR 02-00784 Collective Review The Nuclear Fuel Related CRs For Common Causes

CR 02-00846 More Boron on Head than Expected

CR 02-00891 Control Rod Drive Nozzle Crack Indication

CR 02-00932 CRDM Nozzle Crack Indications

CR 02-01053 Unexpected Tool Movement

CR 02-01128 Reactor Head Material Finding

CR 02-01378 Boric Acid Buildup and Corrosion in Containment

CR 02-01489 The Incore Instrument Nozzles in B&W Plant

CR 02-01516 Boric Acid Corrosion Control Program Implementation Issues

CR 02-01583 General Thinning of Reactor Vessel Closure Head Outside Nozzle 3 Area

CR 02-01850 Compromised Standards

CR 02-02120 Degradation of Service Water Piping in Containment at Elev. 603.

CR 02-02235 Operating Experience Required Based on Extent of Condition Results

CR 02-02434 Inadequate Engineering Rigor Applied to Activities

CR 02-02578 NQA Effectiveness

CR 02-02581 Operations Role in Maintaining Site Safety Focus

CR 02-02584 Implementation of Corrective Action Program by Site Personnel

CR 02-02585 Management and Supervisory Oversight and Ownership of Plant Activities.

CR 02-02593 FME Concern Relative to Iron Oxide Deposits in Containment

CR 02-02662 Change Management Tool Needed for Implementation of Training Changes

CR 02-02879 Tracking for Corrective Actions Referenced in Cr 1998-20 Not Found

CR 02-03602 NRC 1989 BACC Program Audit Weaknesses/enhancements Not Addressed by Plt Staff

CR 02-03712 Failure to Maintain Policy/charter/guideline Documents Accurate and up to Date

MORT Summary Sheet FENOC monetary incentive program, 8/5/2002

MORT Summary Sheet, “Management System Overview”, undated working draft.

MORT Summary Sheet, “Organizational Performance”, 8/6/2002.

MORT Summary Sheet, “Corrective Action Policy and Program”, 8/6/2002.

MORT Summary Sheet, “Problem Cause Determination in the Corrective Action Process”, 8/6/2002.

MORT Summary Sheet, “Technical Information Systems”, 8/5/2002.

MORT Summary Sheet, “Hazard Analysis”, 8/5/2002.

MORT Summary Sheet, “Trending and Programmatic Reviews Within the Corrective Action Process, 8/6/2002.

Detailed MORT Unit, “Technical Information Less Than Adequate”, 7/24/2002.

Detailed MORT Unit, “Risk Assessment/Hazard Analysis/Safety Evaluation, 7/31/2002.

Detailed MORT Unit, “Management Systems Overview”, undated working draft.

Interview Notes - FENOC # 0034-F, 6/17/2002.

Interview Notes - FENOC # 0028-F, 6/18/2002.

Interview Notes - FENOC # 0057-F, undated.

Interview Notes - FENOC 0379-F, 3/28/2002.

Interview Notes - FENOC 0485-F, 7/22/2002.

Interview Notes - FENOC 0037-F, 5/14/2002.

Interview Notes - FENOC 0048-F, 5/16/2002.

Graphs depicting Davis-Besse Actual Costs, Manning, and Budget, extracted from GAP Audit Phase 2, DB Cost Containment Study Implementation Plan, undated.