FENOC
FirstEnergy Nuclear Operating Company

Davis-Besse Nuclear Power Station
5501 North State Route 2
Oak Harbor, Ohio 43449-9760

Howard W. Bergendahl
Vice President - Nuclear

419-321-8588
Fax: 419-321-8337

Docket Number 50-346

License Number NPF-3

Serial Number 1-1284

July 12, 2002

Mr. J. E. Dyer, Administrator
United States Nuclear Regulatory Commission
Region III
801 Warrenville Road
Lisle, IL 60532-4351

Subject: Transmittal of Revision 1 of the Davis-Besse Nuclear Power Station, Unit 1 Return to Service Plan

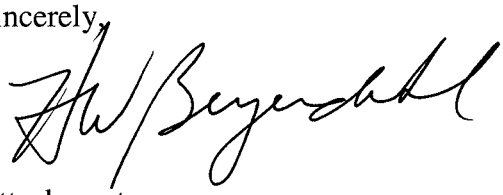
Dear Mr. Dyer:

The purpose of this letter is to transmit Revision 1 of the Davis-Besse Nuclear Power Station, Unit 1 (DBNPS) Return to Service Plan. As stated in FirstEnergy Nuclear Operating Company letter Serial Number 1-1275, dated May 21, 2002, the Return to Service plan describes the DBNPS course of action for a safe and reliable return to service. The course of action includes those actions necessary to address each of the six sets of commitments in the Confirmatory Action Letter (CAL Number 03-02-001A, dated May 15, 2002), the near-term corrective and preventive actions necessary to address the causal factors associated with the head degradation event, and the longer term actions necessary to assure that the underlying causal factors remain corrected and that improved performance at the DBNPS is sustained. Revision 1 to the Return to Service Plan, which supercedes the previous revision in its entirety, continues to accomplish the original objectives and reflect the current revision of the Building Block Plans and the development of implementing procedures to effect the plans.

Actions discussed in Revision 1 of the Return to Service Plan represent intended or planned actions by the FirstEnergy Nuclear Operating Company. They are described to the Nuclear Regulatory Commission (NRC) for the NRC's information and are not regulatory commitments.

If you have any questions or require further information, please contact Mr. Patrick J. McCloskey, Manager-Regulatory Affairs, at (419) 321-8450.

Sincerely,



Attachments

cc: USNRC Document Control Desk
D.V. Pickett, DB-1 NRC/NRR Project Manager
S.P. Sands, DB-1 NRC/NRR Backup Project Manager
C.S. Thomas, DB-1 Senior Resident Inspector
Utility Radiological Safety Board

Docket Number 50-346
License Number NPF-3
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Attachment 1

DAVIS-BESSE NUCLEAR POWER STATION, UNIT 1
RETURN TO SERVICE PLAN, REVISION 1

(22 Pages follow)

Davis-Besse Nuclear Power Station

Return to Service Plan

DAVIS-BESSE
RETURN TO SERVICE PLAN

Revision: 1

Date: July 10, 2002

Approvals:

H. W. Bergendahl

L. W. Myers

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I. Introduction and Purpose

Between March 6 and March 10, 2002, as a result of inspections conducted pursuant to NRC Bulletin 2001-01, "Circumferential Cracking of Reactor Vessel Head Penetration Nozzles," Davis-Besse Nuclear Power Station (Davis-Besse) management informed the Nuclear Regulatory Commission (NRC) of the presence of a large cavity in the reactor pressure vessel (RPV) head adjacent to a control rod drive nozzle. On March 13, 2002, the NRC issued a Confirmatory Action Letter (CAL) identifying six sets of commitments that the FirstEnergy Nuclear Operating Company (FENOC) will meet to address the conditions associated with degradation of the RPV head prior to restart of the reactor, including meeting with the NRC to obtain approval for restart. The CAL was subsequently revised on May 15, 2002.

Prior to this point, the Davis-Besse plant had good operational performance. All NRC reactor oversight cornerstones were GREEN. Previous Institute of Nuclear Power Operations (INPO) evaluations also showed no significant weaknesses, with generally improving trends.

This Return to Service Plan describes Davis-Besse's course of action for a safe and reliable return to service. This course of action includes those actions necessary to address each of the six sets of commitments in the CAL, the near-term corrective and preventive actions necessary to address the causal factors associated with the RPV head degradation event, and the longer term actions necessary to assure that the underlying causal factors remain corrected and that continued safe performance at Davis-Besse is sustained. In addition, the root cause related to management not promptly identifying the degradation of the RPV head will be corrected.

The near-term actions necessary to support restart are being included in the Davis-Besse IMC 0350 Restart Action List and will be discussed in an Integrated Restart Report, which will document Davis-Besse's response to the NRC's Augmented Inspection Team (AIT) Report, and request NRC approval of restart and closure of the commitments in the CAL. The longer term, post-restart actions will be incorporated into the Davis-Besse Business Plan.

This Plan consists of seven Building Blocks, designed to support safe and reliable restart of the plant and to ensure sustained performance improvements:

A. Reactor Head Resolution Plan

B. Containment Health Assurance Plan

C. System Health Assurance Plan

D. Program Compliance Plan

E. Management and Human Performance Excellence Plan

F. Restart and Post-Restart Test Plan

G. Restart Action Plan

Formal plans have been developed for each of the seven Building Blocks, along with implementing procedures and action plans. These plans are available for NRC review.

Status of the implementation of these plans will be discussed in future meetings, demonstrating our performance.

Davis-Besse management is being deliberate and conservative in implementing the Return to Service Plan and will not return the Station to service until it is satisfied that the Station can be returned to power and operated safely and reliably over the long-term. FENOC senior leadership is directly involved in the direction and oversight of Davis-Besse's return to service. A Restart Overview Panel, which includes independent industry experts, is providing additional oversight of restart activities.

II. Restart Organization

The following are the key elements of the restart organization:

- A new Chief Operating Officer position has been established and is assigned to provide corporate direction and oversight of the Return to Service Plan.
- A new Executive Vice President – Engineering and Services position has been established to provide corporate direction and oversight of engineering activities under the Return to Service Plan.
- A new Vice President of Oversight position has been established to assess the quality of Building Block and restart activities.
- Building Block Teams have been established to address the causal factors associated with the RPV head degradation.
- A Restart Overview Panel has been established, consisting of FENOC and non-FENOC executives to provide overall oversight of implementation of the Return to Service and Building Block Plans.
- An Engineering Assessment Board has been established, consisting of independent experts from outside of FENOC, and will review products generated under several of the Building Blocks.
- A Restart Senior Management Team (RSMT) has been established, consisting of the Vice President and the Directors at Davis-Besse. This team provides oversight to the Building Block Teams. The RSMT reviews the Building Block Plans and recommends them for approval.
- A Restart Station Review Board has been established, consisting of site managers, independent oversight, and chaired by the Director – Support Services, to provide decisions regarding restart required actions.

Figure 2 depicts the restart organization and its relationship to the building blocks.

III. Nuclear Quality Assessment Oversight

Davis-Besse (DB) Nuclear Quality Assessment (NQA), under the direction of the Vice President – FENOC Oversight, provides oversight and verification of activities conducted as part of the Return to Service Plan. This is performed by assessing key activities such as: review board meetings; in-depth technical review of engineering products; field verification of actual conditions pre and post remediation; and independent reviews paralleling those performed by the line organization. Specific activities are being selected for review based on their safety and risk significance to provide reasonable assurance that Return to Service Plan activities are performed in a quality manner.

NQA oversight is being conducted using FENOC procedure NOP-LP-2004, Internal Assessment Process. As described in this procedure, the Quality Field Observation database will be used to document the results of these assessments. Findings and recommendations shall be documented on condition reports and processed in accordance with FENOC procedure NOP-LP-2001, Condition Report Process.

Assessment Team Leaders are certified in accordance with Davis-Besse procedure NA-QA-07006, Certification of Lead Auditor Personnel. Assessment team members, including technical specialists, receive training orientation in accordance with FENOC procedure NOP-LP-2004, Internal Assessment Process.

IV. Building Blocks

Each of the Building Blocks has been assigned an Owner and an individual responsible for Senior Oversight.

Block	Owner	Oversight
Reactor Head Resolution Plan	E. David Baker	Robert W. Schrauder
Containment Health Assurance Plan	Timothy J. Chambers	J. Randel Fast
System Health Assurance Plan	Joseph W. Rogers	James J. Powers
Program Compliance Plan	Neil A. Morrison	James J. Powers
Management and Human Performance Excellence Plan	Lew W. Myers	N/A
Restart and Post-Restart Test Plan	Anthony R. Stallard	J. Randel Fast
Restart Action Plan	Clark A. Price	Lew W. Myers

These plans are summarized on Figure 1. Each of the plans for the first six Building Blocks identifies those actions that must be accomplished before restart. An internal plant operating review committee, the Restart Station Review Board (RSRB) will provide decisions on the restart action database determinations. The membership of the RSRB

consists of manager level employees, and is headed by the Director – Support Services. The RSRB provides the initial decisions to develop the restart action database, which consists of the Davis-Besse Restart Action List and the Davis-Besse IMC 0350 Restart List.

When viewed collectively, the Building Blocks address the causal factors identified in Chapter 5, 6, and 7 of the Davis-Besse Root Cause Analysis Report, submitted to the NRC on April 18, 2002. Appendix 1 provides a matrix which correlates the Building Block actions to the causal factors identified by FENOC and the corresponding causes and missed opportunities identified in the NRC's AIT Report.

The Management and Human Performance Excellence Plan includes actions to extend and deepen the analyses of causal factors in the Root Cause Analysis Report. This includes an in-depth review, under the leadership of the new FENOC Oversight Vice President, using formal root cause analysis tools to determine why indicators present before 2002 did not result in detection and resolution of RPV head degradation.

FENOC Oversight will monitor and sample each Building Block prior to restart. The Vice President, Oversight, is a member of the Restart Overview Panel. A brief summary of the major elements of the actions and approach for each Building Block follows.

A. Reactor Head Resolution Plan

Charter: Restore the degraded Davis-Besse RPV Head such that it is in compliance with appropriate Commission rules and industry requirements.

During the Davis-Besse 13th Refueling Outage (13RFO), an inspection of the Reactor Pressure Vessel (RPV) Head nozzles was performed pursuant to NRC Bulletin 2001-01, "Circumferential Cracking of Reactor Vessel Head Penetration Nozzle." Extensive corrosion of the RPV Head was identified during this inspection that required either major repairs or replacement of the RPV Head. Condition Reports were written and a Root Cause Analysis was prepared.

FirstEnergy Nuclear Operating Company (FENOC) has made the decision to replace the degraded RPV head with an unused one from the cancelled Midland Unit 2 Nuclear Power Plant. The replacement RPV Head is a Babcock and Wilcox design, and with minor modifications, can satisfy the applicable Nuclear Regulatory Commission (NRC) rules and industry requirements.

The major attributes of this Plan include:

- Procurement and Certification and of the replacement RPV Head. Non-Destructive Examinations (NDE) will be preformed to confirm that the replacement RPV Head is suitable for use.
- Minor RPV Head modifications, to ensure that the replacement RPV Head fits the Davis-Besse reactor. Inspection holes will be added to the Service Structure for more effective inspections
- Temporary fuel removal from the reactor to eliminate concerns regarding load drops.

- Cutting an access hole in Davis-Besse Containment for removal of the original RPV Head and placement of the new RPV Head on the RPV Head Stand
- Installation of new RPV Head, including Transfer of existing Service Structure and Transfer of existing CRDM to the new RPV Head
- Restoration, Testing, and Inspection of the RPV Head and Containment
- Storage and/or Disposal of original Davis-Besse RPV Head
- Updating the Design and Licensing Basis Documents

A temporary access opening will be made in the Davis-Besse containment vessel and shield building to allow for transfer of the replacement RPV Head into the containment building and removal of the original RPV Head. The shield building and containment vessel at Davis-Besse will be restored to meet design requirements. An integrated leak rate test (ILRT) will be performed to verify containment integrity.

The degraded RPV Head will be temporarily stored at Davis-Besse. Final plans for permanent storage or disposal are under development.

Bechtel has been contracted to provide engineering services for the RPV Head replacement, including overall project management, detailed engineering, licensing support, quality assurance, and project controls.

Framatome-ANP has been contracted to procure and certify the replacement RPV Head, including modifying the RPV Head as required, providing a Certificate of Conformance documenting that the replacement RPV Head is suitable for use at Davis-Besse, and providing engineering and required evaluations to ensure the Davis-Besse design and licensing requirements are met (including ASME code criteria).

The RPV Head replacement is a modification to the facility and will be performed in accordance with the provisions of 10 CFR 50.59 criteria. Completion of this modification will resolve the issue concerning boron corrosion degradation of Davis-Besse's RPV Head, including disposition of the associated corrective actions, and performance of more effective periodic head inspections allowing for early detection of RPV Head degradation due to the increased size of the inspection holes. This will enable Davis-Besse to return to safe and reliable operation.

B. Containment Health Assurance Plan

Charter: Perform inspections, evaluations of Containment Systems, Structures and Components (SSCs) prior to restart to ensure that the condition of Containment supports safe and reliable operation. This will be accomplished by completing inspections and evaluations of SSCs using qualified inspectors and evaluators. Particular focus will include boric acid degradation, Containment vessel, Containment coatings, emergency sump, Alloy 600, and inspection for indications of PWSCC and threaded bolted component leaks.

The purpose of Containment Health Assurance Plan is to perform inspections, evaluations of SSCs prior to restart to ensure that the condition of containment supports safe and reliable operation.

To support this plan an organization has been put into place to manage, provide oversight, implement, and provide interface with external communications.

The plan is focused on the extent of primary water stress corrosion cracking of Alloy 600 welds in the Reactor Coolant System, and any damage that may have resulted from boric acid leakage and dispersion of boric acid in the Containment Building. The plan scope has been expanded based on input from team members, operating experience reviews, and internal and external oversight. These areas include the Containment emergency sump, Containment vessel liner, Environmental Qualification program and effects of boric acid on equipment, refueling canal leakage, Containment coatings, and the Decay Heat valve pit. Action plans for each of these focus areas direct the actions necessary to meet the objectives of this plan. Procedures, Work Orders, and Condition Reports are used to control field activities, evaluation and resolution of issues. FENOC is soliciting industry expertise to assist in evaluating these focus areas and developing needed corrective actions.

Field inspectors have been trained to conduct thorough inspections based on specific requirements and quality attributes associated with Containment inspections. Inspectors will attend training for specific procedures and work orders prior to implementing field activities. This training standard was selected to ensure all inspectors are gathering data with similar knowledge standards and quality attributes.

C. System Health Assurance Plan

Charter: Perform reviews of system health prior to restart to ensure that the condition of th eplant is sufficient to support safet and reliable operation. Three levels of system reviews will be performed. An Operational Readiness Review of systems important to the safe and reliable operation of Davis-Besse was performed. Perform a System Health Readiness Review of Maintenance Rule risk significant systems. Perform reviews of the Reactor Coolant, Emergency Diesel Generator, Auxiliary Feedwater, Component Cooling Water, and Service Water systems to identify any latent issues, and to provide reasonable assurance that these systems can perform their safety and accident mitigation functions.

FENOC will develop lists of systems that will fall within this scope of these reviews. The list of systems for the Operational Readiness Reviews was established based on the following:

- Systems identified with Red or Yellow performance
- Maintenance Rule safety significance
- Significance in delivering power to the grid
- Amount of maintenance and modification activities scheduled for 13RFO
- Systems suspected of having latent operation and maintenance issues
- Amount or significance of recent CRs
- Systems posing undue operations and maintenance burden
- Industry operating experience

The list of System Health Readiness Reviews will be based on the risk significant systems identified in the Davis-Besse Maintenance Rule Program. The five systems selected for Latent Issues Reviews include three systems with identified weaknesses and two systems chosen based on their importance.

The purpose of these reviews will be to identify conditions (either individually or collectively) that could impact the function of the system. Such conditions will be designated as potential restart constraints, will be evaluated for inclusion in the Restart Action List, and items identified as restart constraints will be corrected prior to restart.

The System Health Readiness Reviews and the Latent Issues Reviews will be performed in accordance with approved inspection plans or procedures, which will identify the various documents required to be reviewed and evaluated.

The following types of documents are examples of documentation that will be reviewed during the system reviews, but the list is not intended to be all-inclusive:

- Condition Reports
- Industry Operating Experience
- Corrective and Preventive Maintenance Work Orders
- Modification documentation
- Commitments
- Cited and non-cited violations

Additionally, system walkdowns will be performed, and interviews with Operations and Maintenance personnel will be conducted.

The purpose of these reviews will be to ensure that FENOC has taken appropriate actions to discover conditions that may impact the safe and reliable operations of plant systems.

The results of each System Health Readiness Review and Latent Issues Reviews will be documented in a report. The Plant Engineering Manager will review the report. The Engineering Assessment Board will also review the report to provide an independent assessment of the technical adequacy of the report. The Technical Services Director will approve the System Health Readiness Review reports. The System Engineers will present the Latent Issues reports to the Senior Management Team headed by the Vice President – Nuclear, who will approve the report.

D. Program Compliance Plan

Charter: Perform a review of applicable plant programs to ensure that the programs are fulfilling required obligations, including interfaces and handoffs, and are sufficient to support the restart and safe operation of Davis-Besse Nuclear Power Station. Prior to restart, perform Phase 2 detailed systematic reviews of the Boric Acid Corrosion Control Program, Inservice Inspection Program, Plant Modification Program, Corrective Action Program, Reactor Coolant System Unidentified Leakage Program, and the Operating Experience Program. Prior to restart, perform Phase 1 baseline assessments of applicable plant programs.

Program weaknesses were a major contributor to the degradation of the Reactor Pressure Vessel Head. The program weaknesses identified are:

- **Standards**
- **Ownership**
- **Oversight**

We have identified the programs on Attachment 1 to receive a Phase 2 review described below. Each of these programs will be reviewed over the next two years. A schedule for the first seven programs which includes those contributing to Reactor Pressure Vessel Head degradation is attached. A schedule for the remaining programs will be developed and may be modified, as plant needs change in the future. The programs identified as contributing to the degradation of the Reactor Pressure Vessel Head are: the Boric Acid Corrosion Control Program, Inservice Inspection Program, Plant Modification Program, Corrective Action Program, Reactor Coolant System Unidentified Leakage Program, and the Operating Experience Program.

The plan review process will use a two-phase approach.

Phase 1- Program Readiness Baseline Assessment

Phase 1 performs a baseline assessment of applicable plant programs to determine if the programs are in a condition to support the restart and safe operation of Davis-Besse. The programs listed in Attachment 1 will receive a Phase 1 assessment prior to restart (with the exception of the Probabilistic Safety Assessment Program, Boric Acid Corrosion Control Program, In Service Inspection Program, Plant Modifications Program, Corrective Action Program, Reactor Coolant Unidentified Leakage Program, and Operating Experience Program that will receive a detailed review prior to restart). The program owner

assesses the program by completing a standardized questionnaire. The program owner then presents the results of his/her assessment to a Program Review Board, which includes independent, external personnel. The Program Review Board reviews the program utilizing a screening form. Condition Reports (CRs) will be generated to document program deficiencies. The CRs will be evaluated to determine whether the corrective action should be identified as a restart restraint.

Phase 2 – Detailed Program Reviews

Phase 2 is an integral part of the long term Comprehensive Management and Human Performance Excellence Plan. This phase is an in-depth systematic review of the programs listed in Attachment 1. This process evaluates programs in depth to ensure that the programs are fulfilling required obligations, including interfaces and handoffs, and are sufficient to support the restart and safe operation of Davis-Besse. Phase 2 reviews will be completed prior to restart for the Boric Acid Corrosion Control Program, Inservice Inspection Program, Plant Modification Program, Corrective Action Program, Reactor Coolant System Unidentified Leakage Program, and the Operating Experience Program. The Probabilistic Safety Assessment (PSA) will be evaluated as a pilot for this process.

E. Management and Human Performance Excellence Plan

Charter: Conduct a thorough assessment of the management and organizational issues surrounding the degradation of the reactor head.

Create a comprehensive leadership and organizational development plan for the site. This plan will include actions to be taken prior to and after restart.

Several ongoing or planned assessments dealing with the non-technical aspects of the head degradation will further develop managerial and organizational contributors to the reactor pressure vesel head degradation. Actions will be initiated from this plan to develop the proper focus, behaviors and teamwork throughout the entire organization. These actions will consist of restart actions and actions to be taken after restart.

FENOC has augmented senior leadership capabilities and is applying them in a focused manner to Davis-Besse restart. The new Chief Operating Officer of FENOC will maintain a strong presence at Davis-Besse to address the managerial and organizational issues. He will remain at the site, focused on these issues through restart and post-restart testing. The new Oversight Vice President will be responsible for oversight activities at all FENOC facilities. Both eternal and internal oversight will be assessed for improvements.

FENOC is conducting a thorough assessment of the management and organization development needs of the Davis-Besse site. As a result of this assessment, a comprehensive leadership and organizational development plan will be developed to address these issues and make recommendations for their resolution. The assessments will continue post-restart as other building block activities feed into this plan.

The overall goal of this plan is to initiate a substantive and demonstrative change in Davis-Besse management. This change will prevent cyclical plant performance, and provide for consistent, continuous performance excellence.

F. Restart and Post-Restart Test Program

Charter: Verify the Reactor Coolant System (RCS) is in a condition to support sustained operation. Perform required test of RCS to identify and disposition leakage during fill and vent of the RCS and at normal operating temperature and pressure. Assess and enhance the leakage control program to provide assurance of containment systems and components material condition. In addition, a team review of the planned post-maintenance and modification testing from this shutdown will be performed with the test results for selected tests presented to the Engineering Assessment Board (EAB).

The intent of this program is to verify the RCS and associated piping that is exposed to full RCS pressure is in a condition to support sustained operation. The program will consist of two separate inspections using qualified inspectors. The same pool of individuals that were utilized for the extent of condition inspections will be utilized for these inspections.

The inspections will consist of a visual inspection of the external surfaces of installed insulation as well as un-insulated piping and components for evidence of active RCS leakage. These inspections will be limited to the RCS and connected piping that contains boric acid and is also located in the Containment Building. The scope of these inspections will include all RCS items identified during the Extent of Condition reviews for Boric Acid corrosion as requiring re-inspection.

The first inspection will be performed following RCS fill. System pressure will be approximately 30-50 psig and temperature will be less than 200 °F. Any Condition Report (CR) generated during this first inspection will be a Mode 4 restraint requiring resolution prior to performing a RCS heatup to normal operating temperature and pressure.

Once any deficiencies noted have been dispositioned, the RCS will then be heated up to normal temperature and pressure of 2,155 psig and 532 °F.

A second visual inspection will then be performed to locate, assess and correct any RCS leakage. Any deficiencies noted during this inspection, including RCS leaks, will be documented on a Condition Report. Any CR generated during the second inspection will be a Mode 2 restraint, requiring resolution prior to reactor criticality. A plant cooldown and depressurization will then be performed to resolve each deficiency and to reinstall insulation.

As a part of this plan, the team will also assess the RCS Leakage Management program to identify and adopt industry best practices related to monitoring and responding to changes in the RCS leak rate. The intent of this self-assessment is to move the program from a compliance-based program to a proactive,

conservative response to both actual RCS leak rates as well as changes in RCS leak rates.

Finally, a review of post-maintenance and modification testing performed during the outage will reviewed during the System Health Review. Selected testing will be reviewed by the Engineering Assurance Board. Testing following the modifications associated with the Reactor Pressure Vessel head will also be included.

G. Restart Action Plan

Charter: Administer the identification, coordination, monitoring and closure of actions required to meet all Company-identified objectives and requirements under the Davis-Besse Return to Service Plan.

The Restart Action Plan establishes a mechanism for identification, monitoring and control of restart actions under the Davis-Besse Return to Service Plan. The Restart Action Plan also establishes a process and criteria for the evaluation, disposition, and closure of restart-identified actions and provides for the effective interaction with the Nuclear Regulatory Commission (NRC) during the Inspection Manual Chapter 0350 Reactor Oversight Process. This plan provides for the actions that the FENOC Management Team at Davis-Besse will perform to ensure that the plant is restarted in a safe and reliable manner and that the long term performance of the plant will be sustainable. After NRC approval, to restart has been received, final authority to restart the plant resides with the FENOC Chief Operating Officer.

The Davis-Besse Restart Station Review Board has been established to identify and classify items to be included in the Restart Action Database through a the review of Condition Reports and Corrective Actions received from activities identified by the six Building Block Plans. The Restart Station Review Board makes an initial determination of items for inclusion of items in the Restart Action Database and further classifies those items that meet NRC IMC 0350 criteria. A final review is made by the Restart Senior Management Team for inclusion of items in the Davis-Besse IMC 0350 Restart List with final approval made by the Chief Operating Officer. The Restart Station Review Board uses criteria that parallel the NRC IMC 0350 Restart Checklist criteria. Those items processed through the Restart Station Review Board that are determined not required for restart are managed in accordance with the Corrective Action Program and evaluated for inclusion in the Davis-Besse Operational Business Plan and/or the Toledo Edison Regulatory Management System.

Action Plans from the Containment Health Assurance, System Health Assurance, and Program Compliance Building Blocks are further evaluated for technical accuracy by the Engineering Assessment Board. The Engineering Assessment Board reports to the Director – Technical Services and has been introduced at each FENOC site to ensure a high degree of technical accuracy and assurance of nuclear safety.

The Restart Action Plan establishes the phases of Planning, Discovery, Implementation, and Validation/Closure. Closure packages are prepared documenting the resolution of issues on the Davis-Besse IMC 0350 Restart List and made available for NRC review. Closure packages are validated through a series of reviews with final review and concurrence from the Restart Senior Management Team.

The Restart Overview Panel (ROP) functions to provide an independent oversight and review of restart activities as part of the Davis-Besse Return to Service Plan. The ROP performs an overview of internal and external plant activities, advising the FENOC President, Chief Operating Officer and Davis-Besse Vice President on matters relating to the safe resumption of operation of Davis-Besse and provides recommendations as appropriate.

The Davis-Besse Restart Action Plan shall be maintained through restart and until the NRC terminates the IMC 0350 Reactor Oversight Process. This plan shall be implemented by a procedure(s) that provides details of the responsibilities and activities required to administer and control this Restart Action Plan Building Block.

V. Confirmatory Action Letter Status

A number of actions to satisfy the CAL commitments are completed or underway. The current status of the CAL items is summarized as follows:

(1) Quarantine components or other material from the RPV head and CRDM nozzle penetrations that are deemed necessary to fully address the root cause of the occurrence of degradation of the leaking penetrations. Prior to implementation, plans for further inspection and data gathering to support determination of the root cause will be provided to the NRC for review and comment.

Status: Applicable components and material were quarantined. Plans for inspection and data gathering to support determination of the root cause were provided to the NRC for review and comment. Ongoing activities to support confirmation of the root cause analysis were described by Davis-Besse staff in a public meeting with NRC Headquarters personnel on May 9, 2002. On June 17, 2002, a meeting was held with the NRC staff at the BWXT Laboratory in Lynchburg, Virginia. The Nozzle 2, Nozzle 3, and Nozzle 3 Corrosion Area samples were viewed and the plans for the laboratory analyses to be performed on these samples were discussed. The sample plan was updated following the meeting, and is currently awaiting NRC approval.

(2) Determine the root cause of the degradation around the RPV head penetrations, and promptly meet with the NRC to discuss this information after you have reasonable confidence in your determination.

Status: FENOC provided a Probable Cause Summary Report to the NRC on March 22, 2002. FENOC submitted the Root Cause Analysis Report to the NRC on April 18, 2002. Responses to NRC questions on the Probable Cause Summary Report were submitted by FENOC on April 30, 2002, and May 14, 2002. Davis-Besse staff met with NRC headquarters personnel on May 9, 2002, to review the technical elements of the root cause analysis. FENOC understands that the NRC 0350 Restart Panel will schedule a meeting to review the root cause issues in satisfaction of the CAL commitment. FENOC is currently in the process of performing a formal root cause analysis of the non-technical issues that led to the degradation.

(3) Evaluate and disposition the extent of condition throughout the reactor coolant system relative to the degradation mechanisms that occurred on the RPV head.

Status: On April 15, 2002, FENOC began implementation of its Containment Health Assurance Plan. The scope of this plan has been increased to encompass the overall health of the containment. Inspections, evaluations, and dispositions are ongoing and available for NRC inspection and audit.

(4) Obtain NRC review and approval of the repair or modification and testing plans for the RPV head, prior to implementation of those activities. Prior to restart of the reactor, obtain NRC review and approval of any modification and testing

activity related to the reactor core or reactivity control systems. If the reactor vessel head is replaced in lieu of repair or modification, the replacement must comply with appropriate Commission rules and industry requirements.

Status: FENOC is moving forward with the head replacement option. A submittal will describe the replacement plan and the basis for compliance with applicable regulatory requirements. Core modifications will not be necessary.

Framatome has procured the Midland Plant RPV head under the provisions of 10 CFR Part 21. The Midland Plant RPV head was designed and manufactured under Section III of the ASME Code. However, following the cancellation of the Midland project, the Midland Plant RPV head has not been maintained under a quality assurance program under 10 CFR Part 50 Appendix B. To resolve this nonconformance, Framatome will perform non-destructive examinations (NDE) and will provide certification of the Midland Plant RPV head that meets the requirements of the ASME Code. Some of the original radiographs for the Midland Plant RPV head are not retrievable and cannot be fully recreated. Therefore, FENOC will be submitting requests in accordance with 10 CFR 50.55a demonstrating that the existing radiographs and other documentation provide a sufficient basis for determining that the quality of the welds is acceptable.

(5) Prior to the restart of the unit, meet with the NRC to obtain restart approval. During that meeting, we expect you will discuss your root cause determination, extent of condition evaluations, and corrective actions completed and planned to prevent recurrence.

Status: Upon completion of the restart actions described in this Plan, FENOC will submit its Integrated Restart Report, which will summarize the root cause determination, extent of condition evaluations and corrective actions completed and planned to prevent recurrence. FENOC understands that the NRC 0350 Restart Panel will schedule a meeting to review the root cause issues in satisfaction of the CAL commitment.

(6) Provide a plan and schedule to the NRC, within 15 days of the date of this letter, for completing and submitting to the NRC your ongoing assessment of the safety significance for the RPV head degradation.

Status: The Safety Assessment was submitted to the NRC on April 8, 2002. Requests for additional information, dated May 6, 2002, and June 24, 2002, were received from the Nuclear Regulatory Commission and are being reviewed for submittal.

VI. Conclusions

FENOC is taking an integrated and comprehensive approach to complete the items in the CAL, address the causal factors in the Root Cause Analysis Report and AIT Report, and identify and implement restart actions and long-term actions to ensure that Davis-Besse is ready for safe and reliable operation and improved performance. FENOC is structuring its approach around seven key Building Blocks, including implementing documents. These plans have been made available for NRC review, and will provide the foundation for Davis-Besse's safe and reliable return to service. Lessons learned from the RPV head degradation technical and non-technical root cause analyses will be shared with the other FENOC plants as well as with the nuclear industry.

FIGURE 1

DAVIS-BESSE RESTART BUILDING BLOCKS

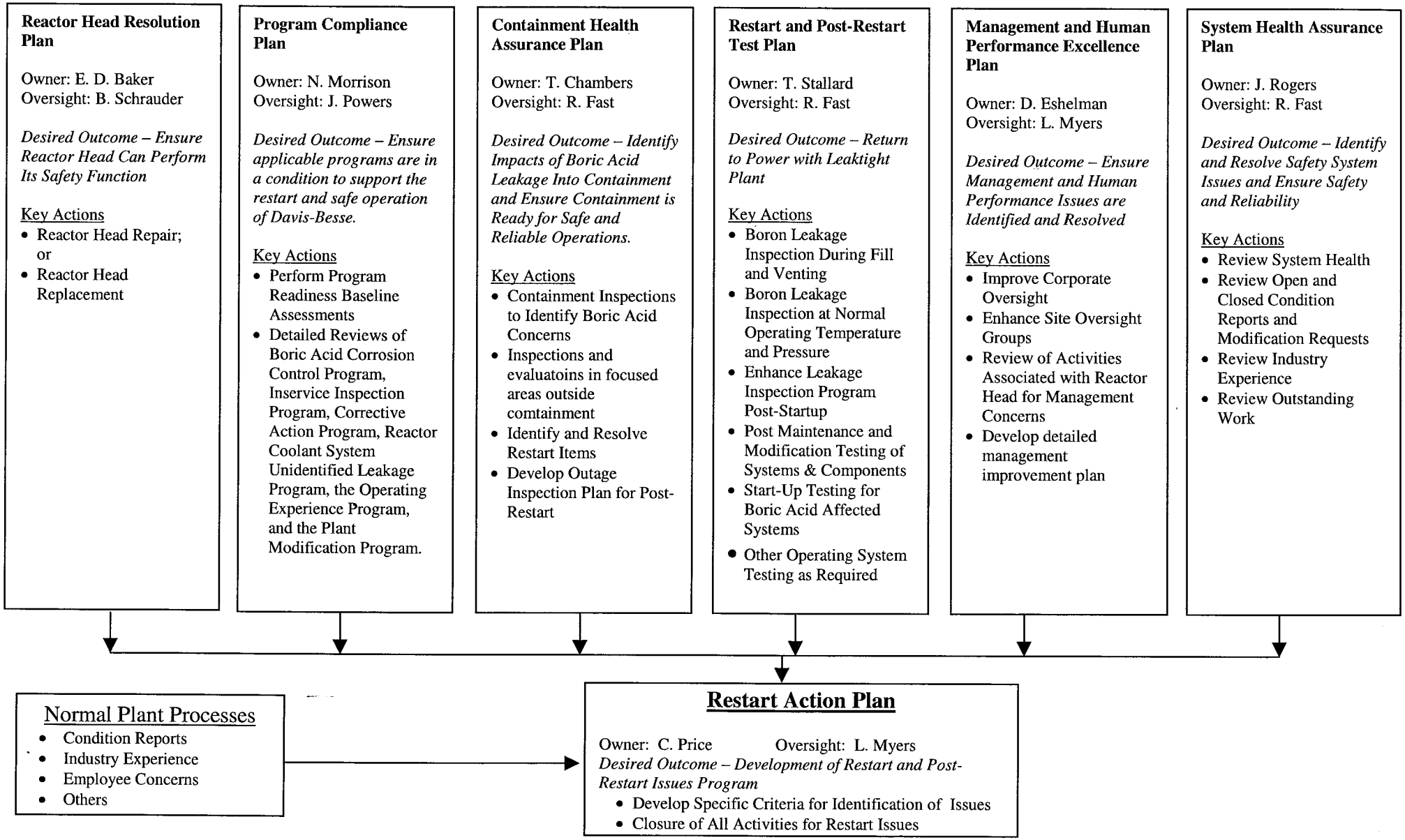
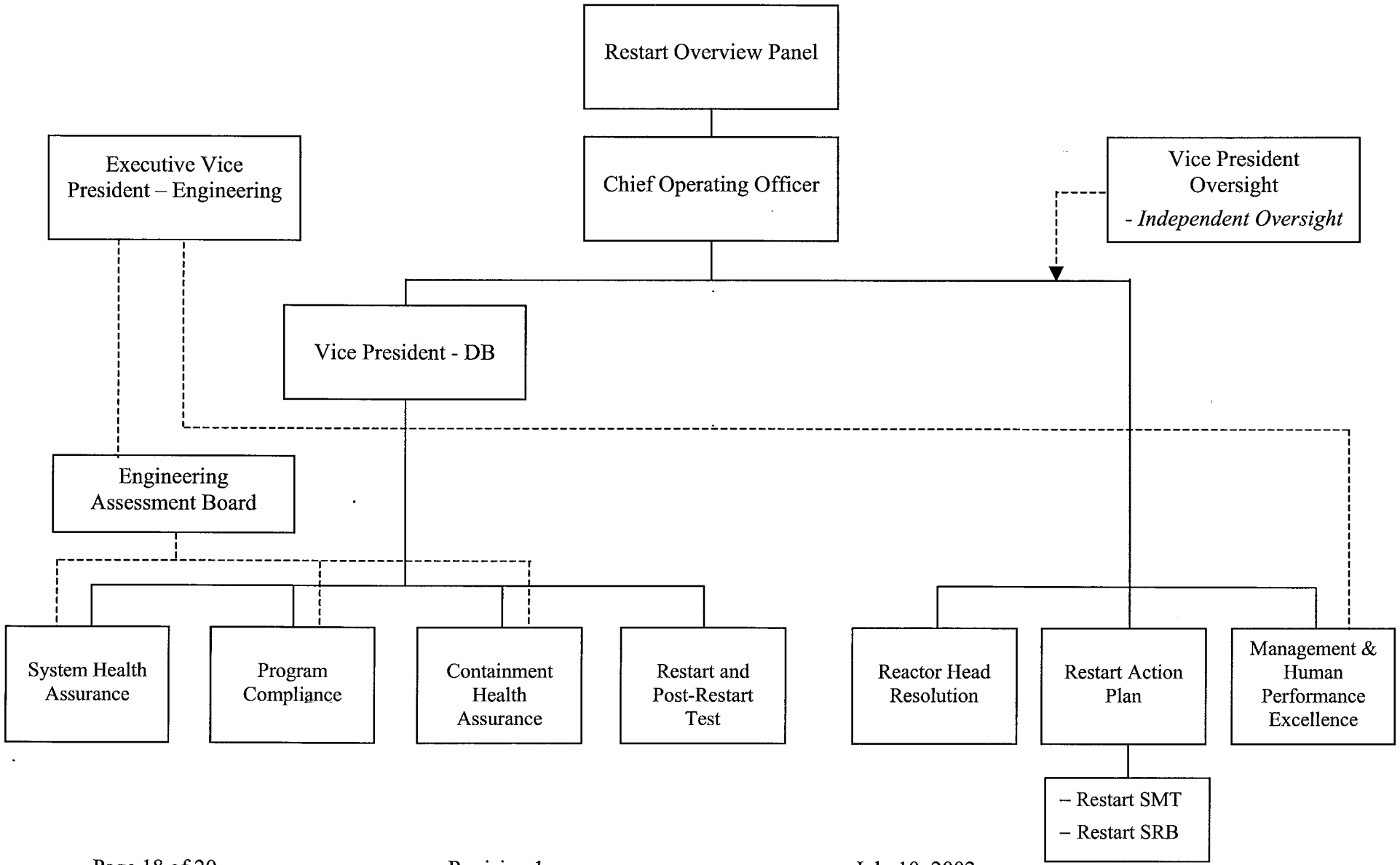


FIGURE 2

Restart Organization



CORRELATION OF CAUSAL FACTORS VERSUS RESTART BULDING BLOCKS

Causal Factor	Building Block	Action
Root Cause Analysis Report		
PWSCC of CRDM nozzles	Reactor Head Resolution	Restore the head.
	Restart and Post-Restart Test Program	Inspect for any leaks.
Boric acid corrosion of RPV head	Reactor Head Resolution	Restore the head.
	Containment Extent of Condition	Inspections in the containment for other SSCs that may be affected by boric acid.
Boric Acid and Inservice Inspection Programs and program implementation	Program Compliance Plan	Review of Boric Acid and ISI Programs.
Environmental conditions and cramped conditions at the RPV head	System Health Assurance Program	Review of modification requests to identify modifications that should be implemented prior to restart. (Note: the modification to improve access to the RPV head service structure has been completed.)
Uncorrected CRDM flange leakage	Restart and Post-Restart Test Program	Inspect for any leaks. (Note: flange leakage was corrected in RFO 12)
Management monitoring of field activities	Management and Human Performance Excellence Plan	Management monitoring and oversight improvement.
Management monitoring of changes in conditions	Management and Human Performance Excellence Plan	New oversight processes.
	Program Compliance Plan	Review of Boric Acid and ISI Programs.
	Restart and Post-Restart Test Program	Inspect for leaks and boric acid corrosion.
Use of industry and in-house experience	Management and Human Performance Excellence Plan	Industry experience management review.
	Program Compliance Plan	Performance of reviews of industry experience programs
	System Health Assurance Plan	Review of closed industry and operating experience reports on SSCs to determine adequacy of actions.

CORRELATION OF CAUSAL FACTORS VERSUS RESTART BULDING BLOCKS

Causal Factor	Building Block	Action
Execution of Condition Report Program	Program Compliance Plan	Review of Corrective Action Program.
	Management and Human Performance Excellence Plan	Review of missed opportunities associated with reactor head for management concerns.
	System Health Assurance Program	Review of closed CRs on SSCs to determine adequacy of corrective action.
AIT Report		
PWSCC of CRDM nozzles	Reactor Head Resolution	Restore the head.
	Restart and Post-Restart Test Program	Inspect for any leaks.
Boric acid corrosion of RPV head	Reactor Head Resolution	Restore the head.
	Containment Extent of Condition	Inspections in the containment for other SSCs that may be affected by boric acid.
Boric acid corrosion control program	Program Compliance Plan	Review of Boric Acid and ISI Programs.
Reactor Coolant System leakage detection	Restart and Post-Restart Test Program	Inspect for any leaks.
Boric acid in Containment Air Coolers	Restart and Post-Restart Test Program	Inspections in the containment for other SSCs that may be affected by boric acid.
Boric acid in radiation elements	Restart and Post-Restart Test Program	Inspections in the containment for other SSCs that may be affected by boric acid.
Delay of Modification of Service Structure	System Health Assurance Program	Review of modification requests to identify modifications that should be implemented prior to restart. (Note: the modification to improve access to the RPV head service structure has been completed.)
Delay of Repair of CRDM Flange Leakage	Restart and Post-Restart Test Program	Inspect for any leaks. (Note: flange leakage corrected in RFO 12.)

Docket Number 50-346
License Number NPF-3
Serial Number 1-1284
Attachment 2

COMMITMENT LIST

The following list identifies those actions committed to by the Davis-Besse Nuclear Power Station (DBNPS) in this document. Any other actions discussed in the submittal represent intended or planned actions the DBNPS. They are described only for information and are not regulatory commitments. Please notify the Manager - Regulatory Affairs (419-321-8450) at the DBNPS of any questions regarding this document or associated regulatory commitments.

COMMITMENTS	DUE DATE
None	