

May 9, 2007

Mr. James Lash
Site Vice President, Beaver Valley Power Station
FirstEnergy Nuclear Operating Company
Post Office Box 4
Shippingport, Pennsylvania 15077

SUBJECT: BEAVER VALLEY POWER STATION - NRC INTEGRATED INSPECTION
REPORT 05000334/2007002 AND 05000412/2007002

Dear Mr. Lash:

On March 31, 2007, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Beaver Valley Power Station Units 1 and 2. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 13, 2007, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, this report documents one (1) NRC-identified finding and one (1) self-revealing finding of very low safety significance (Green). These findings were determined to involve a violation of NRC requirements. However, because of the very low safety significance and because the issues have been entered in the corrective action program, the NRC is treating the findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any of the findings in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Beaver Valley.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosures, and your response (if any) 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 Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

J. Lash

2

We appreciate your cooperation. Please contact me at 610-337-5200 if you have any questions regarding this letter.

Sincerely,

/RA/

Ronald R. Bellamy, Ph.D., Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos.: 50-334, 50-412
License Nos: DPR-66, NPF-73

Enclosures: Inspection Report 05000334/2007002; 05000412/2007002
w/Attachment: Supplemental Information

cc w/encl:

J. Hagan, President and Chief Nuclear Officer
J. Lash, Senior Vice President of Operations
D. Pace, Senior Vice President, Fleet Engineering
J. Rinckel, Vice President, Fleet Oversight
R. Anderson, Vice President, Nuclear Support, FirstEnergy Nuclear Operating Company
D. Jenkins, Attorney, FirstEnergy Corporation
Director, Fleet Regulatory Affairs, FirstEnergy Nuclear Operating Company
Manager, Fleet Licensing, FirstEnergy Nuclear Operating Company
P. Sena, Director, Site Operations
T. Cosgrove, Director, Maintenance
M. Manoleras, Director, Engineering
L. Freeland, Director, Site Performance Improvement
C. Keller, Manager, Regulatory Compliance
M. Clancy, Mayor, Shippingport, PA
D. Allard, PADEP
C. O'Claire, State Liaison to the NRC, State of Ohio
Z. Clayton, EPA-DERR, State of Ohio
Director, Utilities Department, Public Utilities Commission, State of Ohio
D. Hill, Chief, Radiological Health Program, State of West Virginia
J. Lewis, Commissioner, Division of Labor, State of West Virginia
W. Hill, Beaver County Emergency Management Agency
J. Johnsrud, National Energy Committee, Sierra Club

J. Lash

2

We appreciate your cooperation. Please contact me at 610-337-5200 if you have any questions regarding this letter.

Sincerely,
/RA/
Ronald R. Bellamy, Ph.D., Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos.: 50-334, 50-412
License Nos: DPR-66, NPF-73

Enclosures: Inspection Report 05000334/2007002; 05000412/2007002
w/Attachment: Supplemental Information

cc w/encl:

- J. Hagan, President and Chief Nuclear Officer
- J. Lash, Senior Vice President of Operations
- D. Pace, Senior Vice President, Fleet Engineering
- J. Rinckel, Vice President, Fleet Oversight
- R. Anderson, Vice President, Nuclear Support, FirstEnergy Nuclear Operating Company
- D. Jenkins, Attorney, FirstEnergy Corporation
- Director, Fleet Regulatory Affairs, FirstEnergy Nuclear Operating Company
- Manager, Fleet Licensing, FirstEnergy Nuclear Operating Company
- P. Sena, Director, Site Operations
- T. Cosgrove, Director, Maintenance
- M. Manoleras, Director, Engineering
- L. Freeland, Director, Site Performance Improvement
- C. Keller, Manager, Regulatory Compliance
- M. Clancy, Mayor, Shippingport, PA
- D. Allard, PADEP
- C. O'Claire, State Liaison to the NRC, State of Ohio
- Z. Clayton, EPA-DERR, State of Ohio
- Director, Utilities Department, Public Utilities Commission, State of Ohio
- D. Hill, Chief, Radiological Health Program, State of West Virginia
- J. Lewis, Commissioner, Division of Labor, State of West Virginia
- W. Hill, Beaver County Emergency Management Agency
- J. Johnsrud, National Energy Committee, Sierra Club

Distribution w/encl:

- S. Collins, RA
- M. Dapas, DRA
- D. Lew, DRP
- R. Bellamy, DRP
- G. Barber, DRP
- J. Lamb, RI OEDO
- J. Lubinski, NRR
- N. Morgan, NRR
- R. Guzman, NRR
- P. Cataldo - Senior Resident Inspector
- P. Garrett - Resident OA
- M. Satorius, DRS-RIII (**Only Inspection Reports**)
- ROPreports@nrc.gov (**All Inspection Reports**)

Region I Docket Room (with concurrences)

ML071290194

DOCUMENT NAME: C:\FileNet\ML071290194.wpd

SUNSI Review Complete: AAR (Reviewer's Initials)

After declaring this document "An Official Agency Record" it **will** be released to the Public.

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attchmts/enclosure "N" = No copy

OFFICE	RI/DRP	RI/DRP	RI/DRP
NAME	Pcataldo/AAR for	ARosebrook	RBellamy
DATE	04/25/07	05/04/07	05/07/07

OFFICIAL RECORD COPY

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos. 50-334, 50-412

License Nos. DPR-66, NPF-73

Report Nos. 05000334/2007002 and 05000412/2007002

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Beaver Valley Power Station, Units 1 and 2

Location: Post Office Box 4
Shippingport, PA 15077

Dates: January 01, 2007 through March 31, 2007

Inspectors: P. Cataldo, Senior Resident Inspector
D. Werkheiser, Resident Inspector
N. Perry, Senior Emergency Response Coordinator
T. Mozlak, Health Physicist

Approved by: R. Bellamy, Ph.D., Chief
Reactor Projects Branch 6
Division of Reactor Projects

TABLE of CONTENTS

SUMMARY OF FINDINGS	iv
REACTOR SAFETY	1
1R01 Adverse Weather Protection	1
1R04 Equipment Alignment	2
1R05 Fire Protection	3
1R06 Flood Protection Measures	3
1R11 Licensed Operator Requalification Program	5
1R12 Maintenance Rule Implementation	6
1R13 Maintenance Risk Assessment and Emergent Work Control	6
1R15 Operability Evaluations	7
1R17 Permanent Plant Modifications	10
1R19 Post-Maintenance Testing	10
1R22 Surveillance Testing	11
1R23 Temporary Plant Modifications	12
1EP2 Alert and Notification System (ANS) Evaluation	13
1EP3 Emergency Response Organization (ERO) Staffing and Augmentation System	13
1EP4 Emergency Action Level (EAL) and Emergency Plan Changes	14
1EP5 Correction of Emergency Preparedness Weaknesses	14
1EP6 Drill Evaluation	14
RADIATION SAFETY	15
2OS1 Access Control to Radiologically Significant Areas	15
2OS2 ALARA Planning and Controls	17
OTHER ACTIVITIES [OA]	19
4OA1 Performance Indicator (PI) Verification	19
4OA2 Problem Identification and Resolution	20
4OA3 Followup of Events and Notices of Enforcement Discretion	22
4OA5 Other	24
4OA6 Management Meetings	25
ATTACHMENT: SUPPLEMENTAL INFORMATION	A-1
KEY POINTS OF CONTACT	A-1
LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED	A-1
LIST OF DOCUMENTS REVIEWED	A-2
LIST OF ACRONYMS	A-10

SUMMARY OF FINDINGS

IR 05000334/2007002, IR 05000412/2007002; 01/01/2007 - 03/31/2007; Beaver Valley Power Station, Units 1 & 2; Flood Protection Measures; Operability Determinations.

The report covered a 3-month period of inspection by resident inspectors, regional reactor inspectors, and a regional health physics inspector. Two Green non-cited violations (NCV) were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3 dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, for inadequate and untimely corrective actions regarding deficiencies in a safety-related river water valve pit at Unit 1. Specifically, the NRC identified that FENOC had performed inadequate inspections of the valve pit in February 2006, as evidenced by a recent inspection that revealed an unsealed penetration between two halves of the pit that contain the 'A' and 'B' headers of the river water system. FENOC subsequently utilized the corrective action program, inspected the valve pit, identified additional deficiencies, and aggressively evaluated and dispositioned specific deficiencies based on significance.

The inspectors determined that this finding is more than minor because it impacted the external factors attribute regarding the availability and reliability of the river water system, and the capability to respond to initiating events and prevent undesirable consequences. The inspectors determined that this finding is of very low safety significance, because there was no loss of system or overall function due to the remaining mitigating equipment capability. This finding has a cross-cutting aspect in the area of problem identification and resolution, in that FENOC did not properly identify quality issues completely, accurately, and in a timely manner commensurate with their safety significance, when deficiencies in the valve pit were not identified in a February 2006 inspection [P.1(a)]. (Section 1R06)

- Green. A self-revealing, Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, was identified in that the licensee failed to properly implement and control chemical additions to the Unit 2 Steam Generators, which resulted in a valve being out of its normal alignment for approximately 71 days. Subsequently, borated water interacted with the Auxiliary Feedwater System in such a way that ultimately caused the blockage of the 'B' motor-driven auxiliary feedwater pump packing leakoff reservoir drain, water to back up and enter the forced lubrication

system of the pump, and result in extended periods of inoperability. FENOC subsequently utilized the corrective action program and performed a root cause evaluation, evaluated appropriate human performance and organizational contributors, and initiated physical repairs and procedure revisions to prevent recurrence.

The inspectors determined that this finding is more than minor because it affected the equipment performance attribute of the associated Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined that this finding is of very low safety significance, because there was no overall loss of system function due to system redundancy, and that after analysis, the pump would have been able to perform its required safety function for the applicable mission time during design basis events. This finding has a cross-cutting aspect in the area of human performance, because FENOC failed to ensure appropriate coordination of work activities during steam generator chemical additions, which resulted in a loss of configuration control that degraded a safety-related Auxiliary Feedwater pump for an extended period of time [H.3.(b)]. (Section 1R15)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status:

Unit 1 began the inspection period at 100 percent power. On February 23, the unit was down-powered to 80 percent for planned condenser waterbox cleaning and returned to full power on February 25. Other waterbox cleaning activities occurred during the periods March 2 through 6 and March 23 through 29. Following waterbox cleaning on March 7, the unit implemented a 5 percent power uprate and reached the full uprated power level on March 9 (Section 4OA5). The unit remained at the new 100 percent power level for the remainder of the inspection period.

Unit 2 began the inspection period at 100 percent power. On February 17, the unit down-powered to 98 percent to perform turbine valve testing and returned to full power the same day. On March 9 through 11 and March 16 through 18, the unit was down-powered to 85 percent for planned condenser waterbox cleaning. On March 13, control issues were observed regarding turbine governor valve number 4 (GV-4) and the unit was down-powered to 98 percent to transition from partial-arc to full-arc turbine governor scheme (Section 4OA3) and remained at 98 percent for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection (711111.01 - 1 system sample)

System Inspection

a. Inspection Scope

The inspectors reviewed the readiness of the Unit 1 auxiliary river water system at the alternate intake structure for extreme weather conditions; specifically, cold weather, high winds, and other relevant severe weather events. The inspection verified that the indicated equipment, its instrumentation, and supporting structures were configured in accordance with FENOC's procedures and that adequate controls were in place to ensure functionality of the system. The inspectors reviewed licensee procedures and walked down the system. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

Enclosure

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdowns (71111.04Q - 3 samples)

a. Inspection Scope

The inspectors performed three partial equipment alignment inspections during conditions of increased safety significance, including when redundant equipment was unavailable during maintenance or adverse conditions. The partial alignment inspections were also completed after equipment was recently returned to service after significant maintenance. The inspectors performed partial walkdowns of the following systems, including associated electrical distribution components and control room panels, to verify the equipment was aligned to perform its intended safety functions:

- Unit 1 'B' Solid State Protection System (SSPS) during 'A' SSPS testing on March 8, 2007;
- Unit 2, Carbon Dioxide (CO₂) Fire Suppression System 2 during CO₂ impairments, on March 15, 2007; and
- Unit 2 vital battery and DC electrical distribution during change-out of 2-2 Battery Breaker, on March 22, 2007.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown (71111.04S - 1 sample)

a. Inspection Scope

The inspectors completed a detailed review of the alignment and condition of the Unit 1 'A' Component Cooling Water (CCP) System. The inspectors conducted a walkdown of the system to verify that the critical portions, such as valve positions, switches, and breakers, were correctly aligned in accordance with procedures, and to identify any discrepancies that may have had an effect on operability.

The inspectors also reviewed outstanding maintenance work orders to verify that the deficiencies did not significantly affect the CCP system function. In addition, the inspectors discussed system health with the system engineer and reviewed the condition report database to verify that equipment alignment problems were being identified and appropriately resolved. Documents reviewed during the inspection are listed in the Attachment:

- Unit 1 Component Cooling Water System, on March 16, 2007

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Sample Review (71111.05Q - 9 samples)

a. Inspection Scope

The inspectors reviewed the conditions of the fire areas listed below, to verify compliance with criteria in Administrative Procedure 1/2-ADM-1900, "Fire Protection," Rev. 13. This review included FENOC's control of transient combustibles and ignition sources; material condition of fire protection equipment including fire detection systems, water-based fire suppression systems, gaseous fire suppression systems, manual firefighting equipment and capability, passive fire protection features, and the adequacy of compensatory measures for any fire protection impairments. Documents reviewed are listed in the Attachment:

- Unit 1 Main Steam Valve Area, (Fire Area MS-1);
- Unit 1 Auxiliary Building Component Cooling Pump Area (Fire Area PA-1E);
- Unit 1 Pipe Tunnel (Fire Area PT-1);
- Unit 2 Safeguards Area - North, (Fire Area SG-1N);
- Unit 2 Safeguards Area - South, (Fire Area SG-1S);
- Unit 2 Auxiliary Building General Area Elevations (Fire Area PA-3);
- Unit 2 Cable Vault and Rod Control East (Fire Area CV-2);
- Unit 2 Emergency Switchgear Ventilation Room (Fire Area CV-4); and
- Unit 2 Battery Room 2-2 (Fire Area SB-8).

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

External Flooding Inspection (1 sample)

a. Inspection Scope

The inspectors evaluated FENOC's preparation and protection from the effects of external flooding conditions for Unit 1 and Unit 2. This evaluation included a review of the Updated Final Safety Analysis Report (UFSAR) and applicable flood-related procedures to determine the readiness of protection for applicable safety-related structures, systems, and components. The inspectors performed walkdowns of the Unit 1 and Unit 2 external structures to verify the adequacy of protection from the most probable flood, as well as actions to address seasonal Ohio River water levels that could potentially impact safety-related equipment. Specifically, the inspectors reviewed licensee actions on multiple occasions following entry into the abnormal operating procedure (AOP) 1/2OM-53C.4A.75.2, "Acts of Nature - Flood," Rev. 22, which included

backwash of river water strainers that supply cooling to the Unit 1 safety-related charging pumps. Additionally, the inspectors reviewed recent FENOC inspection results, including flood barrier inspections, and verified that previously identified deficiencies had been entered into the corrective action program for resolution. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

Introduction. A Green, NRC-identified Non-Cited Violation was identified for failure to perform adequate and timely inspections of a Unit 1 safety-related, river water system valve pit, thus failing to identify and correct a condition adverse to quality.

Description. In February 2006, Beaver Valley conducted inspections of the Unit 1 river water system valve pit after the NRC identified that this structure was not scoped into the licensee's maintenance rule monitoring program. This resulted in NCV 05000334/2006002-01, detailed in NRC inspection report 2006-002. This inspection had concluded there were no deficiencies and no penetrations between the two halves of the valve pit, and essentially mitigated the potential regulatory significance of the condition. During a February 2007 inspection of the Unit 1 river water system valve pit, the licensee identified an unsealed penetration between the two halves of the pit that contain the 'A' and 'B' headers of the river water system. The NRC informed licensee staff and management that this condition was contrary to the February 2006 licensee inspection. Thus, the licensee missed an opportunity to identify and correct a long standing material deficiency which impacts the ability of the system to perform its required safety function as described in the UFSAR.

The licensee subsequently completed inspections of the valve pit, completed engineering evaluations to address structural issues associated with the wall that separates the two halves of the valve pit, and concluded that groundwater or river water system leakage would not impact the ability of the both the auxiliary and river water systems from performing their intended safety function. The licensee captured issues associated with this valve pit in the corrective action program for resolution, under condition reports (CR) 07-15302 and 07-15303.

Analysis. The failure to perform adequate and timely corrective actions was determined to be a performance deficiency. The finding was more than minor, because it was associated with the external factors attribute of the mitigating systems cornerstone, and affected the availability and reliability of the river water system, and the capability to respond to initiating events and prevent undesirable consequences. The potential existed for the river water system to be unable to perform its required safety function for approximately one year. The significance of this finding was evaluated using Appendix A, of the NRC's Significance Determination Process (Manual Chapter 0609). The inspectors determined that this finding was of very low safety significance (Green), because while there was degradation of a valve pit designed to mitigate the effects of flooding, there was no loss of system or overall function, due to the remaining mitigation capability of the system.

This finding has a cross-cutting aspect in the area of problem identification and resolution, in that FENOC did not properly identify quality issues completely, accurately, and in a timely manner commensurate with their safety significance, when deficiencies in the valve pit were not identified in a February 2006 inspection [P.1(a)].

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, requires in part, that conditions adverse to quality are identified and corrected, commensurate with their safety significance. Contrary to these requirements, the licensee failed to perform timely and effective corrective actions to identify unsealed penetrations and other deficiencies, and correct them in a timely manner. Because this deficiency was considered of very low safety significance, and was entered into the corrective action program for resolution as CR 07-15503 and 15504, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy:

NCV 05000334/2007002-01, Failure to effect timely and adequate corrective actions related to deficiencies in a safety-related river water valve pit.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q - 1 sample)

a. Inspection Scope

The inspectors observed Unit 1 licensed operator simulator training, which highlighted plant transients, on February 8, 2007. The inspectors evaluated licensed operator performance regarding command and control, implementation of normal, annunciator response, abnormal, and emergency operating procedures, communications, technical specification review and compliance, and emergency plan implementation. The inspectors evaluated the licensee training personnel to verify that (1) deficiencies in operator performance were identified, (2) conditions adverse to quality were entered into the corrective action program for resolution, and (3) applicable training objectives had been achieved. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)Routine Maintenance Effectiveness Inspection (71111.12Q - 2 samples)a. Inspection Scope

The inspectors evaluated Maintenance Rule (MR) implementation for the issues listed below. The inspectors evaluated specific attributes, such as MR scoping, characterization of failed structures, systems, and components (SSCs), MR risk characterization of SSCs, and SSC performance criteria and goals. The inspectors verified that the issues were addressed consistent with 10 CFR 50.65 and the licensee's program for MR implementation. For the selected issues, the inspectors evaluated whether performance was properly dispositioned for MR category (a)(1) and (a)(2) performance monitoring. MR System Basis Documents (Unit 2 System 30, Rev. 5) was also reviewed, as appropriate.

- Spare Service Water pump availability monitoring during implementation of 2OM-30.4.E, Rev. 11, "Spare Service Water Pump Shutdown," conducted on March 4, 2007.
- Condition Report 07-15668, "SG Blowdown Rad Monitor Removed from Service for Excessive Amount of Time"

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Control (71111.13 - 6 samples)a. Inspection Scope

The inspectors reviewed the scheduling and control of six activities, and evaluated the effect on overall plant risk. This review was conducted to ensure compliance with applicable criteria contained in 10 CFR 50.65(a)(4). Documents reviewed during the inspection are listed in the Attachment. The inspectors reviewed the planned or emergent work for the following activities:

- On January 9 and 10, Unit 2 entered a planned "yellow" risk during performance of portions of 2OST-01.11B, Rev. 14, "Safeguards Protection System Train 'A' SIS Go-Test;"
- On January 11, Unit 1 entered a planned "yellow" risk during performance of 1MSP-1.04I, Rev. 34, "Solid State Protection System Train 'A' Bi-Monthly Test;"
- The inspectors reviewed condition report CR-07-13191 on January 26, which addressed a risk deviation between the station's Risk Management procedure (1/2-ADM-2033, Rev. 4) and the recently adopted FENOC Risk Determination

Enclosure

procedure (NOP-OP-1007, Rev. 4) with regards to risk management during Solid State Protection System Testing;

- On February 5, the inspectors assessed overall plant risk due to Unit 1 instrumentation and control re-scaling for extended power uprate (ECP 06-0371) and work week schedule impact;
- On March 12, Unit 2 entered a planned "yellow" risk during combined activities regarding safety-bus motor control center component replacements and low head safety injection flow indicator calibration; and
- On March 22, Unit 2 entered a planned "yellow" risk status due to the replacement of the 2-2 Battery Breaker. In addition, the licensee identified this evolution as an "Orange Risk Activity," which required additional controls in accordance with NOP-OP-1007, Rev. 4, "Risk Determination."

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 6 samples)

a. Inspection Scope

The inspectors evaluated the technical adequacy of selected operability determinations (OD), Basis for Continued Operations (BCO), or operability assessments, to verify that determinations of operability were justified, as appropriate. In addition, the inspectors verified that TS limiting conditions for operation (LCO) requirements and UFSAR design basis requirements were properly addressed. Documents reviewed are listed in the Attachment. This inspection activity represents six samples of the following issues:

- The inspectors evaluated licensee actions following the identification of high silt levels in the intake structure in January 2007. These silt levels were identified during intake bay cleaning activities and were documented in CR-07-12053, CR-07-13035, and CR-07-13112;
- The inspectors evaluated the licensee's assessment of operability for the 'B' motor-driven auxiliary feedwater (AFW) pump, as detailed in CR-07-12672, and CR-07-12720. This assessment was performed due to the identification of water in the lube oil reservoir and both the inboard and outboard bearing housings, on January 15, 2007;
- The inspectors evaluated the licensee's response following the identification of a breaker component found on the floor and associated with a 480V Masterpact Breaker utilized at Unit 1. This component, a primary disconnect stab (one of nine) later identified to be from a non-safety-related bus feeder breaker that was installed in the plant, was detailed in CR-07-12790;

Enclosure

- On January 18, the inspectors evaluated the licensee evaluation of issues identified during review of a 10CFR21 notification, documented in CR 07-13031, regarding Fairbanks Morse digital reference units (DRU). The DRU is a component of the installed Unit 2 emergency diesel engine 2301A control system;
- The inspectors evaluated the licensee's response to and assessment of operability of Unit 2 AFW carbon steel components due to boric acid found in the 'B' motor-driven AFW pump seal leakoffs, as detailed in CR 07-13253. This assessment was performed due to the identification of an open chemical injection valve [2FWE-378] on January 23, 2007; and
- The inspectors evaluated the licensee's response to and assessment of steam leaking by residual heat release valve, 2SVS-HCV104, at Unit 2 as detailed in CR 07-16066 on March 13. This leak-by may impact off-site and control room doses during a design basis steam generator tube rupture (SGTR) event, due to an inability to isolate a faulted steam generator. The licensee quantified the leakage and determined that the leakage from the degraded condition of the valve was bounded by the analysis, such that it would still perform its intended function and not adversely impact dose limits.

b. Findings

Introduction. A Green, self-revealing Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, was identified for failure to properly implement and control chemical additions to the Unit 2 Steam Generators, and resulted in a valve being out of its normal system alignment for approximately 71 days. As a result, it led to the unexpected inoperability of a safety-related auxiliary feedwater (AFW) pump for an extended period of time.

Description. On January 13, 2007, a Unit 2 operator identified an abnormally full oil bubbler located on the Unit 2 'B' AFW pump, which subsequently led to the identification of water in the bearings and oil reservoir of the pump. The pump was subsequently flushed, and a successful operability run was later performed on January 15. (See Section 1R19)

A root cause investigation revealed that during the Unit 2 outage, on or about November 11, 2006, a valve that interfaces between the main feedwater (MFW) chemical addition system and the AFW system was opened, as required, during steam generator fill evolutions. This valve was identified to be open during the licensee's root cause investigation. No procedure could be found that documented the valve manipulations; however, other indicators existed that supported the conclusion that the valve had been left out of its normal system alignment.

The valve being misaligned resulted in the exposure of the AFW system, and the 'B' AFW pump in particular, to borated water during normal, secondary plant chemical additions over the course of a few months. Subsequently, packing gland leakoff with

higher concentrations of boric acid, as well as normal corrosion products, blocked a leakoff reservoir drain. This, in turn, allowed water to be introduced into the bearing housings, and eventually, the main oil reservoir. This would challenge the ability of the 'B' AFW pump to perform its safety function for its required design basis mission time.

As stated earlier, while no procedure could be found that documented the valve manipulations for the mispositioned valve, the inspectors noted that this valve needed to be opened to accomplish appropriate chemistry control during steam generator fill operations. The following observations and conclusions were made:

- Valve FWE-378 was found OPEN by the root cause team approximately 71 days after it would have been opened to support secondary plant chemistry during steam generator fill operations while in the outage;
- Boric acid deposits were identified on the inboard and outboard seal leakoff areas of the 'B' AFW pump seal leakoffs on December 20, 2006 (CR-06-11653);
- The identified issues regarding water in the oil of the 'B' AFW pump on January 13, 2007;
- The most likely procedure that would have been used to manipulate FWE-378 during the outage would have been 2CHM-ADD-7.18, "Steam Generator Boric Acid Addition."

Analysis. The failure to properly implement and control chemical additions to the steam generators, resulting in a valve being out of normal system alignment for approximately 71 days, and ultimately leading to a degradation of a safety-related AFW pump, is considered a performance deficiency. The inspectors determined that the failure to properly implement and control chemical additions to the steam generator was more than minor, because if affected the equipment performance attribute of the associated Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The significance of this finding was evaluated using Appendix A, of the NRC's Significance Determination Process (Manual Chapter 0609). The inspectors determined that this finding was of very low safety significance (Green), because there was no loss of function and the pump was inoperable for less than the TS LCO of 72 hours.

This finding has a cross-cutting aspect in the area of human performance, because FENOC failed to ensure appropriate coordination of work activities during steam generator chemical additions, and resulted in a loss of configuration control that degraded a safety-related AFW pump for an extended period of time [H.3.(b)].

Enforcement. 10 CFR 50, Appendix B, Criterion V, requires in part, that activities affecting quality shall be accomplished in accordance with appropriate procedures, and contain appropriate criteria to ensure satisfactory accomplishment. Contrary to these requirements, FENOC failed to ensure chemical addition activities were appropriately

performed in accordance with approved procedures, which resulted in a valve being out of its normal alignment for approximately 71 days, and resulting in the unexpected inoperability of a safety-related auxiliary feedwater (AFW) pump for an extended period of time. Because this deficiency was considered of very low safety significance, and was entered into the corrective action program for resolution as CR 07-12720, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: **NCV 05000412/2007002-02, Failure to implement and control chemical addition activities results in a degraded auxiliary feedwater pump.**

1R17 Permanent Plant Modifications (71111.17A - 2 samples)

a. Inspection Scope

The inspectors evaluated the design basis impact of the modifications listed below. The inspectors reviewed the adequacy of the associated 10 CFR 50.59 screening, verified that attributes and parameters within the design documentation were consistent with required licensing and design bases, as well as credited codes and standards, and walked down the systems to verify that changes described in the package were appropriately implemented. The inspectors also verified the post-modification testing was satisfactorily accomplished to ensure the system and components operated consistent with their intended safety function. Documents reviewed during the inspection are listed in the Attachment.

- Unit 1 ECP 06-0212, related to the nuclear steam supply system (NSSS) instrumentation rescaling for the 2900 MWth Extended Power Uprate.
- Unit 1 ECP 06-0371, related to the Instrumentation and Control rescaling for the 2900 MWth Extended Power Uprate.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 6 samples)

a. Inspection Scope

The inspectors reviewed the following activities to determine whether the post-maintenance tests (PMT) adequately demonstrated that the safety-related function of the equipment was satisfied given the scope of the work specified, and that operability of the system was restored. In addition, the inspectors evaluated the applicable acceptance criteria to verify consistency with the associated design and licensing bases, as well as TS requirements. The inspectors also verified that conditions adverse to quality were entered into the corrective action program for resolution. Documents reviewed during the inspection are listed in the Attachment. The following six maintenance activities and associated PMTs were evaluated:

- 2OST-24.3, Rev. 34, "Motor Driven Auxiliary Feed Pump [2FWE*P23B] Test", conducted on January 15, following repair activities to remove water identified in the oil system;
- WO 200194487 and 2OM-39.4B, Rev. 15, "Battery Equalizing Charges" on January 29 to recover from a low specific gravity on the safety-related 2-2 battery;
- WO 200250686 and 1MSP-6.39I, Rev. 10, "T-RC-422 Delta T Tavg Protection Instrument Channel II Calibration" on February 4, for issues identified concerning the overpower, delta temperature protection circuit, TI-RC-422B, set point documented in CR-07-13961, and issues identified during instrument rescaling activities to support Unit 1 power uprate;
- 1-CAL-6-T408C, Rev. 19, Issue 4, "T-1RC-408C, Rod Speed Control Calibration" on February 4 and 5 after rod speeds were adjusted to support Unit 1 extended power uprate;
- WO 2001889279 retests completed on February 24 following an extended maintenance outage of the Unit 2 'A' station air compressor; and
- 1OST-7.6, Rev. 37, "Centrifugal Charging Pump Test [1CH-P-1C]," conducted on March 19 - 20, following maintenance activities on the Unit 1 high head safety injection pump. The maintenance activities and other documents are listed in Attachment 1.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (4 Routine surveillances, 1 IST sample, 1 isolation valve sample)

The inspectors observed pre-job test briefings, observed selected test evolutions, and reviewed the following completed Operation Surveillance Test (OST) and Maintenance Surveillance (MSP) packages. The reviews verified that the equipment or systems were being tested as required by TS, the UFSAR, and procedural requirements. Documents reviewed are listed in the Attachment. The following six activities were reviewed:

- 2OST-1.11B, Rev. 33, "Safeguards Protection System Train A SIS Go Test" performed on January 10 through January 18;
- 1MSP-1.04-I, Rev. 33, "Solid State Protection System Train A Bi-Monthly Test" performed on January 11;

- 2MSP-45.07-I, Rev. 1, "2ER-RRA Seismic Accelerographs (ETNA) Monthly Channel Check" on January 17.;
- 2-MSP-E-39-001, Rev. 17, "Vital Bus Batteries, Test and Inspection" for the 2-2 battery at Unit 2 on January 25;
- 2OST-47.3G, Rev. 6, "Containment Penetration and ASME Section XI Valve Test - Work Week 2" for in-service testing of Unit 2 auxiliary feedwater throttle valve, 2FWE-HCV100F; and
- 2OST-47.2, Rev. 31, "Containment Penetration Verification" for Unit 2 containment isolation valve, 2HVS-SOV114B, on February 12.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23 - 1 sample)

a. Inspection Scope

The inspectors reviewed the following temporary modification (TMOD) based on risk significance. The TMOD and associated 10 CFR 50.59 screening were reviewed against the system design basis documentation, including the UFSAR and the TS. The inspectors verified the TMOD was implemented in accordance with Administrative (ADM) Procedure, 1/2-ADM-2028, "Temporary Modifications," Rev. 6. Documents reviewed are listed in the Attachment.

- TMOD 1-07-05, associated with temporary heating established in the auxiliary intake structure area near WR-P-9A pump discharge piping to 1RW-24 due to associated heat trace malfunctioning. Inspectors walked down the system to verify that the TMOD described was appropriately implemented, the safety function of the pump and valve would be maintained, and that auxiliary river water operability would not be challenged.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness [EP]1EP2 Alert and Notification System (ANS) Evaluation (71114.02 - 1 Sample)a. Inspection Scope

An onsite review was conducted to assess the maintenance and testing of FENOC's ANS. During this inspection, the inspector interviewed EP staff responsible for implementation of the ANS testing and maintenance. CRs pertaining to the ANS were reviewed for causes, trends, and corrective actions. The inspector further discussed with the licensee the ANS siren system and its performance over the last two years, and focused more in-depth on one siren which was out-of-service for an extended period. The inspector reviewed the licensee's procedures and the ANS design report to ensure compliance with those commitments for system maintenance and testing. Additionally, the inspector observed a silent test conducted on February 5. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 2. Planning standard, 10 CFR 50.47(b)(5) and the related requirements of 10 CFR 50, Appendix E were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Staffing and Augmentation System (71114.03 - 1 Sample)a. Inspection Scope

A review of Beaver Valley's ERO augmentation staffing requirements and the process for notifying the ERO was conducted. This was performed to ensure the readiness of key staff for responding to an event and to ensure timely facility activation. The inspector reviewed procedures and CRs associated with the ERO notification system and drills, and reviewed records from call-in drills. The inspector interviewed personnel responsible for testing the ERO augmentation process, and reviewed the Integrated Training System records for a sampling of ERO to ensure training and qualifications were up to date. The inspector reviewed procedures for ERO administration and training, and verified a sampling of ERO participated in exercises in 2005 and 2006. The inspector also reviewed EP drill reports for 2005 and 2006, and verified that the EP department staff was receiving required training as specified in the Emergency Plan. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 3. Planning standard, 10 CFR 50.47(b)(2) and related requirements of 10 CFR 50 Appendix E were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04 - 1 Sample)

a. Inspection Scope

Prior to this inspection, the NRC had received and acknowledged changes made to the Beaver Valley Emergency Plan and implementing procedures. The licensee developed these changes in accordance with 10 CFR 50.54(q), and determined that the changes did not result in a decrease in effectiveness to the Plan. The licensee also determined that the Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. During this inspection, the inspector conducted a review of FENOC's 10 CFR 50.54(q) screenings for all the changes made to the EALs and a sampling of the changes made to the Plan during the past two years that could potentially result in a decrease in effectiveness. In particular, the inspector reviewed changes to the EPP-IPs, and the 50.54(q) screening and CRs for changes made regarding the need to estimate the anticipated duration of a radiation release. This review of the EAL and Plan changes did not constitute NRC approval of the changes and, as such, the changes remain subject to future NRC inspection. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4. The requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05 - 1 Sample)

a. Inspection Scope

The inspector reviewed a sampling of self-assessments and Nuclear Oversight Assessment Reports to assess the licensee's ability to evaluate their performance and programs. The inspector reviewed all CRs from 2005 and 2006 initiated by FENOC from drills, self-assessments and audits. This inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 5. Planning standard, 10 CFR 50.47(b)(14) and the related requirements of 10 CFR 50 Appendix E were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06 - 1 sample)a. Inspection Scope

The inspectors observed a Unit 2 licensed-operator evaluation conducted on March 23, 2007. Senior licensed-operator performance regarding event classifications was specifically evaluated. The inspector evaluated the simulator-based scenario that involved multiple, safety-related component failures and plant conditions that would have warranted emergency plan activation, emergency facility activation, and escalation to the event classification of Alert. The licensee planned to credit this evolution toward Emergency Preparedness Drill/Exercise Performance (DEP) Indicators, therefore, the inspectors reviewed the applicable event classifications to determine whether they were appropriately credited, and properly evaluated consistent with Nuclear Energy Institute (NEI) 99-02, Rev. 4, "Regulatory Assessment Performance Indicator Guideline." The inspectors reviewed licensee evaluator worksheets regarding the performance indicator acceptability, and reviewed other crew and operator evaluations to ensure adverse conditions were appropriately entered into the Corrective Action Program. Other documents utilized in this inspection include the following:

- 1/2-ADM-1111, "NRC EPP Performance Indicator Instructions," Rev. 2;
- 1/2-ADM-1111.F01, Rev. 0, "Emergency Preparedness Performance Indicators Classifications/Notifications/PARS;"
- EPP/I-1b, "Recognition and Classification of Emergency Conditions," Rev. 10;
- 1/2-EPP-I-3, "Alert," Rev. 22; and
- 1/2-EPP-IP-1.1.F01, Rev. 1, Initial Notification Form."

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY**Cornerstone: Occupational Radiation Safety**2OS1 Access Control to Radiologically Significant Areas (71121.01 - 11 samples)a. Inspection Scope

During the period January 29 through February 1, 2007, the inspector conducted the following activities to verify that the licensee was properly implementing physical, administrative, and engineering controls for access to locked high radiation areas, and other radiologically controlled areas during power operations. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, relevant TS and procedures. This inspection activity represents the completion of 11 samples relative to this inspection area.

Plant Walkdown and Radiation Work Permits (RWP) Reviews

- The inspector toured accessible radiologically controlled areas in Units 1 and 2, and with the assistance of a radiation protection technician, performed independent radiation surveys of selected areas to confirm the accuracy of survey data, and the adequacy of postings.
- The inspector identified the Unit 1 Decontamination Room as an area for inspection where radiologically significant work was being performed. Specifically, sink drain piping was being replaced. The inspector reviewed the applicable RWP (107-1003) and the electronic dosimeter dose/dose rate setpoints, for the associated tasks, to determine if the radiological controls were acceptable and if the set points were consistent with plant policy.
- There were no significant dose gradients requiring relocation of dosimetry for the radiologically significant job reviewed during this inspection.
- There were no current radiation work permits for airborne radioactivity areas with the potential for individual worker internal exposures of > 50 mrem.
- During 2006, there were no internal dose assessments for any actual internal exposures greater than 50 mrem cumulative effective dose equivalent (CEDE). The inspector reviewed the CEDE dose assessments for the five highest internal exposures for 2006; no dose exceeded 10 mrem.

The inspector also reviewed Personnel Contamination Event (PCE) reports and reviewed the methodology for assessing the Shallow Dose Equivalent for the subject individuals.

Problem Identification and Resolution

- A review of a licensee self-assessment, Integrated Performance Assessment (BV-SA-07-067), was conducted to determine if identified problems were entered into the corrective action program for resolution.
- Fifteen CRs, associated with radiation protection access control, initiated between October 1, 2006 and January 29, 2007, were reviewed and discussed with the licensee staff to determine if the follow-up activities were being conducted in an effective and timely manner, commensurate with their safety significance.

High Radiation Area and Very High Radiation Area Controls

- Changes made to high dose rate high radiation area and very high radiation area procedures, since the last inspection of this area, were reviewed and management of these changes was discussed with the Radiation Protection Manager.

Enclosure

- Keys to locked high radiation areas (LHRA) were inventoried, and accessible LHRAs were verified to be properly secured and posted during plant tours.

Radiation Worker and Radiation Protection Technician Performance

- Several radiologically-related condition reports (see Section 4OA2) were reviewed to evaluate if the incidents were caused by repetitive radiation worker errors and to determine if an observable pattern traceable to a similar cause was evident.
- Radiation Protection Technicians were questioned regarding their knowledge of plant radiological conditions and associated controls.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls (71121.02 - 9 samples)

a. Inspection Scope

During the period January 29 through February 1, 2007, the inspector conducted the following activities to verify that the licensee was properly implementing operational, engineering, and administrative controls to maintain personnel exposure as low as is reasonably achievable (ALARA) for activities performed in 2006. Also reviewed were the dose controls for current activities and the forecasted dose for the fall 2007 Unit 1 outage. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, applicable industry standards, and procedures.

Radiological Work Planning

- The inspector reviewed pertinent information regarding cumulative exposure history, current exposure trends, and ongoing activities to assess past (2006) outage site ALARA performance, current (2007) exposure trends, and the challenges for the fall 2007 Unit 1 outage.
- The inspector reviewed the exposure status for tasks performed during the Unit 2 fall 2006 outage and compared actual exposure with forecasted estimates contained in ALARA reviews. Outage jobs reviewed included the sump modification (ALARA Plan 06-2-27), the pressurizer surge line weld overlay (ALARA Plan 06-2-51), pressurizer 780' weld overlay (ALARA Plan 06-2-43), reactor head inspection/repair (ALARA Plan 06-2-48), and outage scaffolding construction (ALARA Plan 06-2-22).
- The inspector evaluated the departmental interfaces between radiation protection, operations, maintenance crafts, and engineering to identify missing ALARA program elements and interface problems. The evaluation was

accomplished by reviewing outage Work-in-Progress and Post-Job ALARA reviews, Station ALARA Committee meeting minutes, and interviewing the station Radiation Protection Manager.

Verification of Dose Estimates

- The inspector reviewed the assumptions and basis for the annual (2007) site collective exposure projections for site operations and for the fall Unit 1 refueling outage.
- The inspector reviewed the licensee's procedures associated with monitoring and re-evaluating dose estimates when the forecasted cumulative exposure for tasks was approached and the implementation of these procedures during the past Unit 2 fall outage. The inspector reviewed the dose records for the fifteen (15) workers who received the highest doses for 2006 to confirm that no individual exceeded the regulatory annual limit.

Job Site Inspections

- The inspector reviewed the ALARA controls contained in RWP 107-1003, Mechanical Routine Maintenance, and the associated Micro ALARA Planning Sheet for replacing decon sink drain line piping. No other jobs of radiological significance were being performed during the inspection.

Source Term Reduction and Control

- The inspector reviewed the status and historical trends for the Unit 1 and Unit 2 source terms. Through review of survey maps and interviews with the Senior Nuclear Specialist-ALARA, the inspector evaluated recent source term measurements and control strategies. Specific strategies being employed included zinc addition (Unit 1), enhanced chemistry controls, system flushes, and temporary shielding.

Declared Pregnant Workers

- The inspector reviewed the procedural controls for managing declared pregnant workers (DPW) and reviewed the exposure records for two DPWs who were employed during 2006.

Problem Identification and Resolution

- The inspector reviewed elements of the licensee's corrective action program related to implementing the ALARA program to determine if problems were being entered into the program for timely resolution. Eleven CRs related to dose/dose rate alarms, programmatic dose challenges, and the effectiveness in predicting and controlling worker dose were reviewed. Details of this review are contained in Section 4OA2 of this report.

Enclosure

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope (71151- 7 samples total)

.1 Cornerstone: Emergency Preparedness (3 samples)

The inspector reviewed data for the EP PIs which are: (1) Drill and Exercise Performance (DEP); (2) ERO Drill Participation; and (3) ANS Reliability. The inspector reviewed supporting documentation from drills and tests for 2005 and 2006, to verify the accuracy of the reported data. The review of these PIs was conducted in accordance with NRC Inspection Procedure 71151. The acceptance criteria used for the review were 10 CFR 50.9 and NEI 99-02, Revision 4, "Regulatory Assessment Performance Indicator Guidelines."

.2 Cornerstone: Initiating Events (4 samples)

The inspectors sampled licensee submittals for two PIs listed below for Unit 1 and Unit 2. The inspectors reviewed portions of the operational logs and PI data developed from monthly operating reports, and discussed methods for compiling and reporting the PIs with cognizant engineering and licensing personnel. To verify the accuracy of the PI data reported during this period, PI definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, were used for each data element.

Unplanned Scrams per 7000 Critical Hours

The inspectors reviewed the PIs for unplanned scrams per 7000 critical hours, to verify that scrams had been properly reported as specified in NEI 99-02, Rev. 4. The inspectors verified the accuracy of the reported data through reviews of Licensee Event Reports, monthly operating reports, plant operating logs, and additional records. The inspectors reviewed 12 months of data (January 2006 to December 2006) for unplanned scrams.

Scrams with Loss of Normal Heat Removal

The inspectors reviewed the PIs for scrams with loss of normal heat sink to verify that scrams had been properly reported as specified in NEI 99-02, Rev. 4. The inspectors verified the accuracy of the reported data through reviews of Licensee Event Reports, monthly operating reports, plant operating logs, and additional records. The inspectors reviewed 12 quarters of data (January 2005 to December 2006) for scrams with loss of normal heat sink.

b. Findings

No findings of significance were identified.

40A2 Problem Identification and Resolution (71152 - 2 samples total)

.1 Daily Review of Problem Identification and Resolution

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and to help identify repetitive equipment failures or specific human performance issues for followup, the inspectors performed a daily screening of items entered into FENOC's corrective action program. This review was accomplished by reviewing each CR, attending screening meetings, and accessing FENOC's computerized CR database.

b. Findings

No findings of significance were identified.

.2 Semi-Annual Trend Review (1 sample)

a. Inspection Scope

The inspectors reviewed site trending results for June through December 2006, to determine if trending was appropriately performed and evaluated by FENOC. This review covered the site trending program under FENOC's Integrated Performance Assessment (IPA) process, and included a sample of self-assessments from the several organizations at Beaver Valley, such as BV-SA-07-092, the BVPS "Site Roll-Up Integrated Performance Assessment." This review verified that existing trends were (1) appropriately captured and scoped by applicable departments, (2) consistent with the inspectors' assessment from the daily CR and inspection module reviews (Section 40A2.1 and .5), and (3) not indicative of a more significant safety concern. Additionally, the inspectors verified the performance of site trending against NOP-LP-2001, Rev. 15, "Condition Report Process," and NOBP-LP-2018, Rev. 02, "Integrated Performance Assessment /Trending." The inspectors also reviewed quarterly Quality Assurance

reports and issues captured in the Activity Tracking database to identify issues and trends to evaluate during the inspection.

b. Findings

No findings of significance were identified. However, the inspector identified a recurrent, adverse trend that involved instrument and control air system tubing deficiencies. Specifically, FENOC's IPA from 2005, as identified in CR 05-05999, identified a number of issues associated with tubing that included, for example, air lines not properly installed and cross-threaded fasteners. Response strategy was to incorporate corrective actions into department Excellence Plans, as well as the corrective action program. The inspector identified several similar deficiencies, including incomplete ferrules (CR-06-9129), swagelok failure (CR-06-9101) and improperly made swagelok fitting (CR-06-9025). While the IPA process identified some of these issues under an area for improvement, FENOC lacked recognition that a continuing adverse trend existed and required additional scrutiny and assessment. Several plant processes were available to reasonably identify and correct plant processes such as IPAs, the corrective action program, management review of CRs (daily, following management meeting), internal experience, and oversight reports. In addition, the section performance rating was considered effective, with all attributes of the core indicators being identified as effective, which is inconsistent with a continuing adverse trend.

.3 Annual Sample Review (71152 - 1 sample)

Safety Culture

a. Inspection Scope

The inspectors selected the annual Safety Culture Assessment and management assessment process for review. This review utilized guidance contained in NOBP-LP-2502, "Safety Culture Monitoring," Rev. 2, and focused on the adequacy and appropriateness of corrective actions. The review utilized the annual Safety Culture Assessment report for 2006, dated February 2007, as well as a Nuclear Quality Assessment that addressed Safety Culture from a survey perspective. The inspectors also attended various discussions regarding the assessment process, and engaged site personnel regarding specific attributes or issues identified during the process.

b. Findings and Observations

No findings of significance were identified. The inspector noted negative trends present in several areas under safety culture were identified and being tracked for resolution in the corrective action program.

.4 Access Controls and ALARA Planning and Controls

a. Inspection Scope

The inspector reviewed 15 CRs related to access controls, 11 CRs related to ALARA, an Integrated Performance Assessment, and the minutes from 24 station ALARA committee meetings to evaluate the threshold for identifying, evaluating, and resolving problems in implementing radiological controls. This review was conducted against the criteria contained in 10 CFR 20, TSs, and the licensee's procedures.

b. Findings

No findings of significance were identified.

.5 Inspection Module Problem Identification and Resolution (PI&R) Review

a. Inspection Scope

The inspectors reviewed various CRs associated with the inspection activities performed in accordance with the applicable inspection modules covered in this report.

b. Findings

No findings of significance were identified.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153 - 5 samples total)

.1 Review of Licensee Event Reports (LERs) (2 samples)

(Closed) LER 05000412/2006-003-00. Scaffolding Adversely Impacts Main Steam Isolation Valves Closure Capability.

The inspectors reviewed the details of the scaffolding interference in the LER, which was identified by the licensee on October 1, 2006. The inspectors reviewed the corrective actions taken and planned by the licensee, reviewed the preliminary root cause evaluation, and verified that appropriate reportability criterion were implemented during the initial notification and followup LER. This issue was entered into FENOC's corrective action program as CR 06-7046. The inspector determined that no new findings of significance were identified and no additional violations of NRC requirements occurred, and this issue was previously dispositioned in NRC Inspection report 2006-05. This LER is closed.

(Closed) LER 05000412/2006-003-01. Scaffolding Adversely Impacts Main Steam Isolation Valves Closure Capability.

The inspectors reviewed the supplement LER, which finalized the root cause and associated corrective actions to address the underlying issues that contributed to the scaffolding event. The inspector determined that no findings of significance were identified and no violations of NRC requirements occurred. This LER is closed.

.2 Review Personnel Performance during Non-Routine Operations (3 samples)

a. Inspection Scope

The inspectors reviewed 3 events that demonstrated personnel performance in coping with non-routine evolutions and transients. The inspectors observed operations in the control room and reviewed applicable operating and alarm response procedures, technical specifications, plant process computer indications, and control room shift logs to evaluate the adequacy of FENOC's response to these events. The inspectors also verified the events were entered into the corrective action program to resolve identified adverse conditions. Documents reviewed during the inspection are listed in the Attachment.

- Unit 1: Inspectors evaluated crew response after an unexpected field forcing alarm was received on the main generator on March 12. Momentary spikes in main generator voltage and reactive load were also noted, with no alarms received. The operators referenced the appropriate abnormal operating procedure, verified stable plant parameters, and contacted the grid local control center (LCC). The system operator at the LCC reported multiple breaker operations at the coal-fired station (Bruce Mansfield) located near Beaver Valley. It was determined that Bruce Mansfield had lost a 345kV power line coincident with the observed field forcing alarm. The inspectors reviewed shift narrative logs, printouts and other documents, and interviewed plant employees. The event was entered into the corrective action program as CR 07-16068 and 16069.
- Unit 2: On March 13, the inspectors evaluated control room response to a momentary overpower transient caused by an apparent loose connector associated with the main turbine governor valve number four (GV-4). After full power ascension from condenser water box cleaning, minor oscillations of GV-4 were observed and documented in the corrective action program (CR 07-16056). The inspectors noted that the crew was appropriately briefed on contingency actions if oscillations degraded to the point of adversely affecting plant operations. During the investigation, an apparent loose coaxial connector was tightened and caused a slight change in GV-4 position. This resulted in a momentary overpower transient with reactor power peaking at 100.19 percent. Operators in the control room observed the increasing power and appropriately reduced power below 100 percent. The inspectors interviewed plant personnel, reviewed shift narrative logs, printouts, and other documents. The inspectors verified that safety limits were not exceeded. The event was entered into the corrective action program as CR 07-16095.
- Unit 2: On March 17, with the Control Rod Group Selector switch in AUTO, control bank 'D' rods stepped in 1-1/2 steps in response to a reactor coolant system temperature deviation of 1.5 degrees. The unit had recently completed a condenser water box cleaning at 85 percent power and returned to full power. Average coolant temperature was increasing, as expected, due to the effects of reactor core Xenon, and the crew was expected to borate, in accordance with the reactivity plan, prior to exceeding 0.5 degree deviation. This boration

precludes an automatic rod insertion that occurs at a temperature deviation of 1.5°F. However, the crew identified the rod insertion hours after it occurred and erroneously determined that the rod step was caused by a momentary spike of the median average temperature instrument. Followup investigations determined that the issue was not associated with instrumentation, but rather, a failure of the control room staff to appropriately identify the change in plant conditions. The crew was subsequently administratively removed from licensed activities and remediated. The inspectors observed remediation activities in the Unit 2 simulator. The crew completed remediation and were returned to licensed activities. The inspectors reviewed shift narrative logs, technical specifications, and interviewed personnel. The inspectors assessed the adequacy of FENOC's short and long-term corrective actions as detailed in CR-07-16421.

b. Findings

No findings of significance were identified.

4OA5 Other

.1 Unit 1 Extended Power Uprate (IP 71004)

a. Inspection Scope

The inspectors observed selected plant testing and other power ascension activities during the implementation of the final two phases (~2.5% + ~2.5%) (2770 MWt to 2900 MWt) of a planned 3-phase extended power uprate totaling approximately 8% power. Inspectors observed and/or reviewed selected plant changes and testing prior to the power ascension that began on March 7, 2007. Additionally, the inspectors observed post-100% power activities and reviewed selected plant data to determine if significant plant anomalies occurred, and to ensure plant behavior was consistent with the data by simulator and analysis data.

The inspectors reviewed operator actions, applicable procedure changes, and reviewed selected plant design changes and other inspection activities conducted under the normal baseline inspection program, to ensure an adequate sample of risk-significant attributes required by NRC inspection procedure 71004 were evaluated. Specific inspections completed in the current report or credited in other NRC inspection reports can be found in the Attachment.

b. Findings

No findings of significance were identified.

.2 Institute for Nuclear Power Operations (INPO) Assessment

The inspectors reviewed the preliminary report, dated January 19, 2007, which summarized the INPO plant assessment results from the November 2006 evaluation. INPO results were consistent with NRC assessments and observations.

4OA6 Management Meetings

.1 Access Control / ALARA Planning and Control

The inspector presented the inspection results to Mr. P. Sena, Director, Site Operations, and other members of the FENOC staff, at the conclusion of the inspection on February 1, 2007. The licensee acknowledged the conclusions and observations presented. No proprietary information is presented in this report.

.2 Emergency Preparedness inspection conducted on February 5 - 9, 2007

On February 9, 2007, the inspector conducted an exit meeting and presented the preliminary inspection results to Mr. L. Freeland, Director, Performance Improvement and other members of the FENOC staff. The licensee acknowledged the conclusions and observations presented. The inspector confirmed that proprietary information was not provided or examined during the inspection.

.3 Quarterly Inspection Report Exit

On April 13, 2007, the inspectors presented the inspection results to Mr. J. Lash, Site Vice President, Beaver Valley Power Station, and other members of the FENOC staff. The licensee acknowledged the conclusions and observations presented. The inspectors confirmed that proprietary information was not retained at the conclusion of the inspection period.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION**KEY POINTS OF CONTACT**Licensee personnel

S. Baker	Site Radiation Protection Manager
J. Clark	Radiation Protection Health Services Technician
J. Fontaine	Supervisor, ALARA
L. Freeland	Director Performance Improvement
J. Freund	Supervisor, Rad Operations Support
D. Hardaway	Senior Radiation Protection Technician
H. Koehnke	Advanced Nuclear Specialist
J. Lebda	Supervisor, Radiation Protection Services
R. Pucci	Senior Nuclear Specialist, ALARA Coordinator
J. Redmond	System Engineer, Battery Systems
P. Sena	Director Site Operations
B. Sepelak	Supervisor, Regulatory Compliance
S. Vicinie	Emergency Preparedness Manager
R. Ferrie	Breaker Specialist

Other Personnel

L. Ryan	Inspector, Pennsylvania Department of Radiation Protection
---------	--

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSEDOpen and Closed

05000334/2007002-01	NCV	Failure to effect timely and adequate corrective actions related to deficiencies in a safety-related river water valve pit. (Section 1R06)
05000412/2007002-02	NCV	Failure to implement and control chemical addition activities results in a degraded auxiliary feedwater pump. (Section 1R15)

Closed

05000412/2006003-00	LER	Scaffolding Adversely Impacts Main Steam Isolation Valves Closure Capability. (Section 4OA3)
05000412/2006003-01	LER	Scaffolding Adversely Impacts Main Steam Isolation Valves Closure Capability. (Section 4OA3)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

1OM-45.4.AE, "Troubleshooting Heat Trace Alarms"
1/2OM-53C.4A.75.2, Rev. 22, "Acts of Nature - Flood"

Condition Reports

07-14255	07-14189	07-13999	07-13973	07-13957	07-13690
07-13535	07-13435	07-13073	07-12297		

Section 1R04: Equipment Alignment

Design Basis Documents

1DBD-15, Rev. 8, "Design Basis Document for Primary Component Cooling Water and Neutron Shield Tank Cooling Water System"
2DBD-33B, Rev. 7, "Design Basis Document for Fire Protection Systems"

Procedures

ZOST-39.1B, rev. 16, "Weekly Station Battery Check [BAT*2-2]"

Drawings

10080-RM-433-2A, Rev. 15, "Valve Oper No Diagram CO2 Fire Protection System"
10080-RM-433-2B, Rev. 2, "Valve Oper No Diagram CO2 Fire Protection System"
8700-RM-415-1, Rev 17, "Valve Oper No Diag, Component Cooling Water"
8700-RM-415-2, Rev 7, "Valve Oper No Diag, Component Cooling Water"
8700-RM-415-3, Rev 11, "Valve Oper No Diag, Component Cooling Water"
8700-RM-415-4, Rev 9, "Valve Oper No Diag, Component Cooling Water"
8700-RM-415-5, Rev 12, "Valve Oper No Diag, Component Cooling Water"

Condition Reports

07-16729	07-16742	07-16284	07-16149
----------	----------	----------	----------

Section 1R05: Fire Protection

Calculations

10080-B-085, Rev 12, "Unit 2 Fire Hazards Analysis"
8700-B-084, Rev. 4, "Unit 1 Fire Hazards Analysis"

Drawings

10080-RM-44F-3, Rev.2 "Area Ventilation system - Miscellaneous Orange & Purple Switchgear Room."

Other

Unit 1 & Unit 2 Updated Final Safety Analysis Report

Unit 1 Appendix R Compliance Report, Rev. 27
Unit 2 Fire Protection Safe Shutdown Report, Addendum 29
Miscellaneous Pre-Fire Plans: U1 PT-1, U1 PA-1E, U1 MS-1, U2 SG-1N/1S, U2 CV-4,
U2 PA-3, U2 SB-8

Section 1R06: Flood Protection Methods

Procedures

1/2MI-75-MANHOLE-1E, Rev.3, "Inspection of Manholes For Water Induced Damage"

Condition Reports

07-15845 06-6305 06-01604 07-15504

Section 1R11: Licensed Operator Requalification Program

Procedures

1/2-OM 48.1I, Technical Specification Compliance
BVBP-OPS-024, Transient Response Guidelines
NOP-OP-1002, Conduct of Operations

Abnormal and Emergency Operating Procedures

AOP-1.1.8, "Dropped Rod"
ARP 1OM-35.4.AAB & AAR, "Voltage Regulator Failure"
ARP 1OM-35.4.AAS & AAU, "Loss of the 1A SSST"
E-0, "Reactor Trip or Safety Injection"
ES-0.1, "Loss of Feedwater"
FR-H.1, "Loss of Secondary Heat Sink"

Other

CR-06-6141, Root Cause Analysis Report, "Letdown Isolation Due to RCS Cooldown", dated
October 06, 2006
1LRTS-2007M1D2&3 Learning Objective Design, "Plant Transients & Operator Fundamentals",
per 1/2-ADM-1301.F16 dated February 08, 2007
Beaver Valley Unit 1 Current Technical Specifications
Beaver Valley Unit 1 and 2 Improved Technical Specifications, Draft Revision 5

Section 1R12: Maintenance Rule Implementation

Procedures

1MSP-43.74-I, Rev. 0, "Radiation Process Monitor RM-1BD-101 Water Effluent Calibration"

Condition Reports

07-15668

Section 1R13: Maintenance Risk Assessment and Emergent Work Control

Procedures

1/2-ADM-2033, Rev. 4, "Risk Management Program"
1MSP-1-04I, Rev. 34, "Solid State Protection System Train 'A' Bi-Monthly Test"
2OST-01-11B, Rev. 14, "Safeguards Protection System Train 'A' SIS Go-Test"
NOP-OP-1007, Rev. 4, "Risk Determination"

Condition Reports

07-13876 07-13335 07-13191 07-12724 06-10771

Technical Specifications

Unit 2 CTS 3.6.2.3, Containment Systems - Chemical Addition System

Other

Weekly PRA Risk Profile for Unit 1 and Unit 2, January 9 & 10, 2007
Weekly PRA Risk Profile for Unit 1 and Unit 2, January 11, 2007
Weekly PRA Risk Profile for Unit 1 and Unit 2, January 26, 2007
Weekly PRA Risk Profile for Unit 1 and Unit 2, February 5, 2007
Unit 1 EPU Instrumentation & Control Calibration Schedule, Rev. 0
Engineering Change Package 06-0371
WO 200141844-006

Section 1R15: Operability Evaluations

Procedures

2OM-24.4.Q, Rev. 12, "Response to Steam Binding or Depressurization in Auxiliary Feedwater System"
2OM-39.4.B, Rev. 15, "Battery Equalizing Charges"
2OM-53A.1.E-3, Rev. 11, "Steam Generator Tube Rupture"
2-MSP-E-39-001, Rev. 17, "Vital Bus Batteries, Test and Inspection"

Condition Reports

07-16067 07-16066 07-15163 07-15155 07-13420 07-13400
07-13254 07-13253 07-13031 07-12790 06-11653 06-03904

Notifications

600370795

Work Orders

200029990 200193233

Calculations

10080-UR(B)-496, Rev. 1, "Site Boundary and Control Room Doses following a Steam Generator Tube Rupture based on Core Uprate and Alternative Source Term Methodology"

Miscellaneous

10CFR21 Notification, dated December 22, 2006, "Identification of Defect Fairbanks Morse Woodward Governor"
BVBP-SITE-0009, "Pump Packing Guide"
BVPS Unit 2 UFSAR, Section 15.6.3, Steam Generator Tube Rupture Analysis
BVPS Unit 2 UFSAR, Table 15.0-12, Potential Doses at the Exclusion Area Boundary and Low Population Zone due to Postulated Accident (TEDE)
Beaver Valley Unit 2 Shift Logs dated January 23-25, 2007
Beaver Valley Unit 2 Shift Logs dated March 12-13, 2007
EPRI Boric Acid Control Guide
Unit 2 eSOMS Operator Logs dated January 2007
Unit 2 SER License Amendment 156, "Issuance of Amendment Regarding the 8-percent Extended Power Uprate," Table 1, "Radiological Consequences in REM as TEDE for BVPS-2"

Section 1R19: Post-Maintenance Testing

Procedures

2OST-34.4, Rev 7, "Station Air Compressor [2SAS-C12A] Auto Start Test"
1/2PMP-7CH-P-1A/21A-B-C-2M, Rev. 10, "Charging/High Head Safety Injection Pump Bearing Inspection."

Work Orders

200188279
200222328 (Clean and inspect speed increaser)
200162345 (Replace oil reservoir sight glass)
200190090 (Preventive maintenance tasks)
200171331 (Inspect Pump Bearings)

Condition Reports

07-15282 07-15099 07-13961 05-06915

Other

ECP 05-0197-02
Green Tag 58729
Notification 600367684

Section 1R22: Surveillance Testing

Procedures

2OST-47.3G, Rev. 6, "Containment Penetration and ASME Section XI Valve Test - Work Week 2"

Condition Reports

07-14422 07-14188 07-13912 07-13474 07-12838 07-12398
07-12354

Notification
600337529

Work Order
200206111
200188279

Other
Limited Change Form PAF-07-00076 dated January 8, 2007

Section 1R23: Temporary Plant Modifications

Condition Reports
07-14549 07-14546 07-13973 07-13957

Procedures
1/2-ADM-2028, Rev. 5 & 6, "Temporary Modifications"

Other
Unit 1 Control Room Operations Logs 1OM-54.2.S1, dated February 4, 2007

Section 1EP2: Alert and Notification System (ANS) Evaluation

1/2-ADM-1107, Alert Notification System (Sirens) Maintenance and Testing, May 16, 2006
Condition Reports related to ANS sirens, from 2005 and 2006

Section 1EP3: Emergency Response Organization (ERO) Staffing and Augmentation System

Miscellaneous
Beaver Valley Emergency Response Plan
Beaver Valley ERO Member Roster

Procedures
1/2-ADM-1101, Emergency Response Organization Administration, Revision 3
1/2-OST-57.3, Initial Notification System Test, May 19, 2006
BVBP-EPP-0001, Emergency Response Unit Personnel Training Requirements, December 1, 2004

Section 1EP6: Drill Evaluation

Miscellaneous
1/2-ADM-1357.F07, Rev. 0, "Team Evaluation Form"
1/2-ADM-1357.F08, Rev. 0, "RO Evaluation Form"
1/2-ADM-1357.F09, Rev. 0, "SRO Evaluation Form"
1/2-ADM-1357.F11, Rev. 0, "Simulator Evaluation Scenario Cover Page."

Section 2OS1: Access Control to Radiologically Significant AreasProcedures

1/2-ADM-1601, Rev 15	Radiation Protection Standards
1/2-ADM-1611, Rev 9	Radiation Protection Administrative Guide
1/2-ADM-1621, Rev 3	ALARA Program
1/2-ADM-1630, Rev 10	Radiation Worker Practices
1/2-ADM-1631, Rev 5	Exposure Control
1/2-HPP-3.02.003, Rev 8	Decontamination Control
1/2-HPP-3.02.004, Rev 4	Area Posting
1/2-HPP-3.04.002, Rev 5	Bioassay Administration
1/2-HPP-3.05.001, Rev 4	Exposure Authorization
1/2-HPP-3.07.002, Rev 5	Radiation Survey Methods
1/2-HPP-3.07.013, Rev 3	Barrier Checks
1/2-HPP-3.08.001, Rev 8	Radiological Work Permit
1/2-HPP-3.08.003, Rev 10	Radiation Barrier Key Control
1/2-HPP-3.08.005, Rev 4	ALARA Review Program
1/2-HPP-3.08.006, Rev 1	Shielding
BVBP-RP-0003, Rev 4	Dosimetry Practices
BVBP-RP-0013, Rev 2	Radiation Protection Risk Assessment Process
BVBP-RP-0016, Rev 0	Survey Requirements During Plant Transients
BVBP-RP-0020, Rev 6	RP Job Coverage General Guidance
NOP-WM-7001, Rev 0	ALARA Program
NOP-WM-7002, Rev 0	Operational ALARA Program
NOP-WM-7003, Rev 0	Radiation Work Permit
NOP-WM-7017, Rev 0	Contamination Control Program
NOP-WM-7021, Rev 1	Radiological Postings, Labeling, and Markings

Integrated Performance Assessment

BV-SA-07-067

Condition Reports

71121.01 Related: 06-03100, 06-08645, 06-07912, 06-09264, 06-09000, 06-09078,
06-07836, 06-08649, 06-09089, 06-08627, 06-11991 06-11819,
06-11869, 06-11764, 06-11642

71121.02 Related: 07-12846, 07-13268, 07-13219, 07-12847, 07-12845, 07-12840,
07-12578, 07-12612, 07-12265, 07-12175, 07-12268

Post-Job / Work-in-Progress ALARA Reviews

Sump Modification (ECP 05-0362)
Reactor Head Repair Work
Pressurizer Weld Overlay
Pressurizer Surge Line Weld Overlay
Scaffolding Construction in Unit -2 Reactor Building

ALARA Committee Meeting Minutes

Meeting Nos. 2R12-01 through 2R12-22, 06-13 through 06-15

ALARA Reports

- 2R12 Outage ALARA Plan
- 2R12 Post-Outage ALARA Plan Report
- 1R17 Post-Outage ALARA Plan Report

Section 4OA3: Event Response

Condition Reports

07-16421 07-16095 07-16069 07-16068 07-16056

Procedures

- 1/2OM-48.1.D, Rev. 6, "Operations Shift Rules of Practice"
- 1/2OM-53C.4A.25.1, Rev. 4, "Degraded Grid"
- 2OM-7.2.A, Rev. 15, "Precautions and Limitations"
- 2OM-7.4.K, Rev. 4, "Blender Boration Operation"
- NOP-OP-1003, Rev. 0, "Grid Reliability Protocol"

Other

- BVPS Unit 1 Operation Logs dated March 13, 2007
- BVPS Unit 1 Plant Information (PI) dated March 13, 2007
- BVPS Unit 1 & Unit 2 Operation Night Orders, dated March 21, 2007
- PJM Manual 13, Rev. 26, "Emergency Operations"

Section 4OA5: Other Activities - Extended Power Uprate (EPU) Inspection Activities

Inspection Procedure	Title	Inspection Report	Description and 71004 Section
71004	Power Uprate	07-02	<p>BV1 EPU Phase 2 & 3 (5% with 2.5%/2.5% and additional intervals) power ascension control room observations and plant walkdowns (2.02.d)</p> <p>BV1 EPU interim (3/8) and post-100% (3/12) neutron flux mapping. (2.02.d/e)</p> <p>BV1 EPU Post-100%, Full EPU-related vibration and displacement inspections (2.02.e/g)</p>

A-9

71111.13	Risk Assessments	07-02	Work Week (w/o Feb. 5) impact due to rescaling critical instrumentation for the new 100% EPU-value of 2900 mWt. (2.02.g)
71111.17A	Permanent Plant Modifications	07-02	ECP 06-0212, NSSS Rescaling and Calibrations (2.02.c) ECP 06-0371, Feed Flow/Steam Flow, AMSAC rescaling and calibrations. (2.02.c)
71111.19	Post-modification testing	07-02	Rod Speed Calibrations (2/6-11). (2.02.c) Loop OPDT/OTDT, 1MSP-6.39I

Other Unit 1 EPU Activities and Documents

Procedures / Surveillances / Post Maintenance Tests

1-SPT-52-40440-3, Rev. 1, "Escalation to EPU Uprate Power (2900 Mwt)"
1CAL-6-T408C, Rev. 19, Issue 4, "T-1RC-408C, Rod Speed Control Calibration", dated February 6, 2007

Miscellaneous

Beaver Valley Unit 1 Shift Operating Logs dated February 13, 2007
Instrumentation and Control 2900MWth Uprate Work Flow and Operations Impact Matrix, Rev. 0, dated February 5, 2007
ODMI, Rev.0, "On-Line Instrumentation Rescaling for Unit 1 Power Uprate", dated February 13, 2007
TMOD 1-07-06: FF>SF Mismatch Contingency Activities

Work Orders

WO 200244065 WO 200222624

Condition Reports

07-13876: Work Week Schedule Impact Due to Power Uprate Activities
07-13961: Channel 2 OP Delta T Setpoint Drifting High
07-14006: Potential Tech Spec Entry Due to Power Uprate
07-14266: PRA System Evaluation Calculation Note CN-RRA-02-58 Information Truncation

LIST OF ACRONYMS

ADM	Administrative Procedure
ANS	Alert and Notification System
BVPS	Beaver Valley Power Station
CFR	Code of Federal Regulations
CR	Condition Report
DEP	Drill and Exercise Performance
EAL	Emergency Action Level
ECP	Engineering Change Package
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
ERO	Emergency Response Organization
FENOC	First Energy Nuclear Operating Company
HRA	High Radiation Area
IMC	Inspection Manual Chapter
IP	Inspection Procedure
ISI	Inservice Inspection
LER	Licensee Event Report
MR	Maintenance Rule
NRC	Nuclear Regulatory Commission
NRR	Nuclear Reactor Regulation
OA	Other Activities
OST	Operations Surveillance Test
PCE	Personnel Contamination Event Report
PI	Performance Indicator
PI&R	Problem Identification and Resolution
RCA	Radiologically Controlled Area
RWP	Radiation Work Permit
SDP	Significance Determination Process
TI	Temporary Instruction
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
VHRA	Very High Radiation Area
WO	Work Order