UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

November 5, 2009

Mr. Paul Harden
Site Vice President
FirstEnergy Nuclear Operating Company
Beaver Valley Power Station
P. O. Box 4, Route 168
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION - NRC INTEGRATED INSPECTION REPORT 05000334/2009004 AND 05000412/2009004

Dear Mr. Harden:

On September 30, 2009, the U. S. 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 results, which were discussed on October 30, 2009, 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, no findings of significance were identified.

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).

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 05000334/2009004; 05000412/2009004
w/Attachment: Supplemental Information

cc: w/encl: Distribution via ListServ

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

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REGION I

Docket Nos.	50-334, 50-412
License Nos.	DPR-66, NPF-73
Report Nos.	05000334/2009004 and 05000412/2009004
Licensee:	FirstEnergy Nuclear Operating Company (FENOC)
Facility:	Beaver Valley Power Station, Units 1 and 2
Location:	Post Office Box 4 Shippingport, PA 15077
Dates:	July 1, 2009 through September 30, 2009
Inspectors:	D. Werkheiser, Senior Resident Inspector D. Spindler, Resident Inspector S. Barr, Senior Emergency Preparedness Specialist P. McKenna, Reactor Inspector T. Moslak, Health Physicist
Approved by:	R. Bellamy, Ph.D., Chief Reactor Projects Branch 6 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000334/2009004, IR 05000412/2009004; 07/01/2009 – 09/30/2009; Beaver Valley Power Station, Units 1 & 2; Routine Integrated Report

The report covered a 3-month period of inspection by resident inspectors, regional reactor inspectors, and a regional health physics inspector. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

No findings of significance were identified.

REPORT DETAILS

Summary of Plant Status:

Unit 1 began the inspection period at 100 percent power. On August 7, the unit was down-powered to 82 percent for planned condenser waterbox repair and cleaning and returned to full power on August 8. The unit remained at 100 percent power for the remainder of the inspection period.

Unit 2 began the inspection period at 100 percent power. On July 7, the unit was down-powered to 96.5 percent for planned main turbine valve testing and returned to full power the same day. The unit was down-powered to 97.5 percent on August 10 for unplanned leading-edge flow meter instrumentation repairs and returned to full power on August 14. The unit remained at 100 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity [R]

1R01 Adverse Weather Protection (71111.01)

Seasonal Susceptibility

a. Inspection Scope (1 sample)

In preparation for high winds associated with summer storm conditions and hurricane season, the inspectors reviewed the Beaver Valley Power Station (BVPS) design features and FENOC's implementation of procedures to protect risk significant mitigating systems from adverse weather. The inspectors reviewed the corrective action program database, operating experience, the Updated Final Safety Analysis Report (UFSAR), and technical specifications to determine the types of adverse weather conditions to which the site is susceptible, and to verify that the licensee was appropriately identifying and resolving weather-related equipment problems. The inspectors also reviewed and walked down the emergency diesel generators and vital 4160 VAC systems to verify seasonal readiness.

b Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

Partial System Walkdowns (71111.04Q)

a. Inspection Scope (3 samples)

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, on July 28, Motor Driven AFW Pump, 1FW-P-3B Motor Driven AFW Pump, 1FW-P-2 Turbine Driven performance of 1OST-24.2 on Motor Driven AFW Pump 1FW-P-3A;
- Unit 2, on Aug 26, 'B' Train of Recirculation Spray System during pipe and valve 2 SWS-1217 [RSS Radiation Mons Sample Cooler SWS Isolation] replacement; and
- Unit 2, on September 19, Train 'B' component cooling system lineup during the restoration of 'C' component cooling water pump after planned maintenance.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

Quarterly Sample Review (71111.05Q)

a. Inspection Scope (3 samples)

The inspectors reviewed the conditions of the fire areas listed below, to verify compliance with criteria delineated in Administrative Procedure (ADM) 1/2-ADM-1900, "Fire Protection," Rev. 19. 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, Intake Structure, Pump Cubicle CW-S-1C (Fire Area IS-3);
- Unit 1, Communication Equipment and Relay Panel Room (Fire Area CR-3); and
- Unit 2, Service Building (East) (Fire Area SB-2).

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope (1 sample)

On July 24, the inspectors reviewed a sample of flood protection measures for equipment in the Unit 1/2 intake structure. This review was conducted to evaluate FENOC's protection of the enclosed safety-related systems from internal flooding condition. The inspectors performed a walkdown of the area, reviewed the UFSAR, related internal flooding evaluations, and other related documents. The inspectors examined the as-found equipment and conditions to ensure that they remained consistent with those indicated in the design basis documentation, flooding mitigation documents, and risk analysis assumptions. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

Annual Sample Review (7111.07A)

a. Inspection Scope (1 sample)

During the week of July 30 through August 6, the inspectors reviewed periodic maintenance associated with Unit 2, 2CCP-E21A Primary Component Cooling Heat Exchanger. The review included an assessment of the maintenance and verified consistency with Electric Power Research Institute document NP-7552, "Heat Exchanger Performance Monitoring Guidelines," December 1991, and NRC Generic Letter 89-13 "Service Water System Problems Affecting Safety-Related Equipment." The inspectors reviewed inspection results, related condition reports and program health reports.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope (1 sample)

The inspectors observed one sample of Unit 1 licensed operator simulator training on September 10 (Cycle 5, Day 3). 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 staff training personnel to verify that deficiencies in operator performance were identified, and that conditions adverse to quality were entered into the licensee's corrective action program for resolution. The inspectors reviewed simulator physical fidelity to assure the simulator appropriately modeled the plant control room. The inspectors verified that the training evaluators adequately addressed that the applicable training objectives had been achieved.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

a. Inspection Scope (3 samples)

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, SSC performance criteria and goals, and appropriateness of corrective actions. The inspectors verified that the issues were addressed as required by 10 CFR 50.65 and the licensee's program for MR implementation. For the selected SSCs, the inspectors evaluated whether performance was properly dispositioned for MR category (a)(1) and (a)(2) performance monitoring. MR System Basis Documents were also reviewed, as appropriate.

- CR 09-61226, "Maint. Rule Functional Failure Review Implementation Issue";
- CR 09-62429, "Flow Transmitter for Blender Boric Acid"; and
- CR 09-61881, "Failed Maintenance Rule Goal for Unavailability Time for 2IAS-C21".

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Control (71111.13)

a. Inspection Scope (6 samples)

The inspectors reviewed the scheduling and control of six activities, and evaluated their 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.

- During the week of July 6, Unit 1 review of Yellow Risk during repairs on 1RC-47, Refueling Water Storage Tank Return Line;
- On July 27, Unit 2 review during planned maintenance and service water valve replacement on the 'A' Train Emergency Diesel Generator (EDG);
- On July 28, Unit 2 impact for 2CHS-FT113, Flow Transmitter for Boric Acid feed to the blender, failed as documented in CR 09-62429;
- On August 5, Unit 2 coordination and risk associated with the replacement of the boric acid flow transmitter 2CHS-F113, work order 200379204;
- On August 26, Unit 2 risk associated with 2-1 EDG and 'A' train recirculation spray system maintenance activities; and
- On September 18, Unit 1 review due to expanded maintenance scope of 'A' fuel pool purification pump [1FC-P-4A], documented in CR 09-64612.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope (5 samples)

The inspectors evaluated the technical adequacy of selected immediate operability determinations (IOD), prompt operability determinations (POD), or functionality assessments (FA), to verify that determinations of operability were justified, as appropriate. In addition, the inspectors verified that technical specification (TS) limiting conditions for operation (LCO) requirements and UFSAR design basis requirements

were properly addressed. In addition, the inspectors reviewed compensatory measures implemented to ensure the measures worked and were adequately controlled. Documents reviewed are listed in the Attachment.

- On July 1, Unit 2 assessment of operability regarding lube oil engine outlet temperature high as documented in CR 09-61333;
- On July 30, Unit 2 'A' service water coupler test as documented in CR 09-62515;
- On August 4, Unit 2 emergency diesel generator (EDG) operability and assessment regarding inlet/outlet temperatures information provided by vendor, as documented in CR 09-62702;
- On August 5, Unit 1 IOD regarding the failure to start and run motor-driven fuel oil pump [1EE-P-98] during a monthly surveillance test of the 'B' Train EDG, as documented in CR 09-62782; and
- On August 18, Units 1 and 2, Licensee's review, assessment, and POD of Nuclear Safety Advisory Letter 09-05 from Westinghouse regarding thermal limits documented in CR 09-62810.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

Temporary Plant Modifications

a. Inspection Scope (1 sample)

The inspectors reviewed the following temporary modifications (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 TMODs were implemented in accordance with 1/2-ADM-2028, "Temporary Modifications," Rev. 6. Documents reviewed are listed in the Attachment.

- Unit 1 TMOD 09-0549, associated with installing temporary ventilation mixing fans in containment due to the failure of the 'C' containment air recirculation fan to start on June 25. For this activity, the inspectors also reviewed the environmental and seismic qualifications of the parts and intended installation plan. Inspectors observed portions of construction of the mounting system and electrical wiring to verify that changes described in the package were actually implemented. Of three temporary fans planned, two were installed (July 17 and July 21).

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope (6 samples)

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, and that operability of the system was restored. In addition, the inspectors evaluated the applicable acceptance criteria to verify consistency with the design and licensing bases, as well as TS requirements. The inspectors witnessed the test or reviewed test data to verify results adequately demonstrated restoration of affected safety functions. 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:

- Unit 1 'C' containment recirculation fan replacement during 1R19 (WO 200074187);
- On July 15, Unit 1 Control Room Emergency Ventilation System (CREVS) activation timer 62-ACB relay replacement due to its failure to actuate upon receiving a Unit 2 high radiation monitor test signal during maintenance as documented in CR 09-61743;
- On July 15, Unit 1 power range nuclear instrument (N44) operational mode selector switch (S303) replacement (WO 200377904) due to a degraded test signal documented in CR 09-61812;
- On July 29, Unit 2 2OST-36.1, Rev. 58, "Emergency Diesel Generator [2EGS*EG2-1] Monthly Test" after replacing service water heat exchanger temperature control valve [2EGS-TCV216-1] internals per WO 200377159;
- On July 30, Unit 2 wiring and relay upgrades to emergency diesel generator circuits [ECP 08-0660] related to alternate shutdown panel control transfer; and
- On August 6, Unit 1, 1OST-36.4.AH, after replacement of contact block [STL02] for motor-operating fuel supply pump [EE-P-98] for the 'B' train emergency diesel generator [EE-EG-2];

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities (71111.20)

Unit 2 Refueling Outage (2R14)

a. Inspection Scope (1 partial sample)

The inspectors reviewed procedures and observed selected activities associated with the Unit 2 pre-outage activities. Inspectors verified activities were performed in accordance with procedures and verified required acceptance criteria were met. The inspectors also verified that conditions adverse to quality identified during performance of selected pre-outage activities were identified as required by the licensee's corrective action program. The inspectors also evaluated the following activities:

- Pre-outage shutdown safety / defense-in-depth review;
- New fuel receipt and inspection; and
- Moderator temperature coefficient determination (2RST-2.5).

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope (4 samples: 2 in-service testing and 2 routine)

The inspectors witnessed the performance of or reviewed test data for the eight following Operation Surveillance Test (OST) and Maintenance Surveillance Packages (MSP). The reviews verified that the equipment or systems were being tested as required by TS, the UFSAR, and procedural requirements. The inspectors also verified that the licensee established proper test conditions, that no equipment pre-conditioning activities occurred, and that acceptance criteria were met.

- On July 7, 1OST-13.02, Rev 33, "Quench Spray Pump QS-P-1B Test [IST];"
- On July 29, 2OST-36.01, Rev. 58, "Emergency Diesel Generator [2EGS*EG2-1] Monthly Test;
- On July 30, 2OST-30.2, Rev. 33, "Service Water Pump [2WS*P21A] Test [IST];" and
- On August 18, 1OST-13.11A, Rev. 5, "Train A Quench Spray System Operability Test."

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness [EP]

1EP2 Alert and Notification System (ANS) Evaluation (71114.02)

a. Inspection Scope (1 sample)

An onsite review was conducted to assess the maintenance and testing of the Beaver Valley Power Station ANS. During this inspection, the inspectors interviewed EP staff responsible for implementation of ANS testing and maintenance and reviewed Condition Reports (CRs) pertaining to the ANS for causes, trends, and corrective actions. The inspectors reviewed the ANS procedures and the ANS design report to ensure FENOC's compliance with design report commitments for system maintenance and testing. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment .02. 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)

a. Inspection Scope (1 sample)

The inspectors conducted a review of Beaver Valley's ERO augmentation staffing requirements and the process for notifying and augmenting the ERO. This was performed to ensure the readiness of key licensee staff to respond to an emergency event and to ensure FENOC's ability to activate their emergency facilities in a timely

manner. The inspectors reviewed the Beaver Valley ERO roster, training records, applicable procedures, drill reports for augmentation, quarterly EP drill reports, and CRs related to the ERO staffing augmentation system. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment .03. 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)

a. Inspection Scope (1 sample)

Since the last NRC inspection of this program area, in August 2008, FENOC had implemented various revisions of the different sections of the Beaver Valley Power Station Emergency Plan. FENOC had determined that, in accordance with 10 CFR 50.54(q), any change made to the Plan, and its lower-tier implementing procedures, had not resulted in any decrease in effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspectors confirmed no EAL changes had been made since August 2008, and conducted a sampling review of other Emergency Plan changes, including the changes to lower-tier emergency plan implementing procedures, to evaluate any potential decreases in effectiveness of the Emergency Plan. However, this review was not documented in an NRC Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment .04. 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)

a. Inspection Scope (1 sample)

The inspectors reviewed a sampling of self-assessment procedures and reports to assess FENOC's ability to evaluate their EP performance and programs. The inspectors reviewed a sampling of CRs from July 2007 through August 2009 from drills, self-assessments and audits. Additionally, the inspectors reviewed Quality Assurance audits, including 10CFR50.54(t) audits, and several self-assessment reports. This inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment .05. 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)

a. Inspection Scope (1 sample)

The inspectors observed an emergency preparedness mini-drill for the 'Green' team and a Unit 2 licensed-operator simulator evaluation conducted on September 17. Senior licensed-operator performance regarding event classifications and notifications were 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 General Emergency. The licensee planned to credit this evolution toward Emergency Preparedness Drill/Exercise Performance (DEP) Indicators, therefore, the inspectors reviewed the applicable event notifications and classifications to determine whether they were appropriately credited, and properly evaluated consistent with Nuclear Energy Institute (NEI) 99-02, Rev. 5, "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, Rev. 3, "NRC EPP Performance Indicator Instructions"
- 1/2-ADM-1111.F01, Rev. 2, "Emergency Preparedness Performance IndicatorClassifications/Notifications/PARS"
- EPP/I-1a/b, Rev. 13/14, "Recognition and Classification of Emergency Conditions"
- 1/2-EPP-I-2, Rev. 35, "Unusual Event"
- 1/2-EPP-I-3, Rev. 33, "Alert"
- 1/2-EPP-I-4, Rev. 33, "Site Area Emergency" and
- 1/2-EPP-I-5, Rev. 34, "General Emergency"

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety [PS]

2PS3 Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program (71122.03)

a. Inspection Scope (10 samples)

During the period July 6 - 10, the inspectors conducted the following activities to verify that the licensee implemented the radiological environmental monitoring program (REMP) consistent with station TSs and the Off-Site Dose Calculation Manual (ODCM) to validate that radioactive effluent releases met the design objectives of Appendix I of 10 CFR 50.

Additionally, the inspectors verified that radiological surveys and controls were adequate to prevent the inadvertent release of radioactive material into the public domain. Implementation of these controls was reviewed against the criteria contained in 10 CFR

20 & 50, relevant TSs, and the licensee's procedures. This inspection activity represents completion of 10 samples relative to this inspection area.

REMP Inspections:

- The inspectors reviewed the 2007 and 2008 Annual Radiological Environmental Operating Reports and the 2008 REMP Land Use Census Report to verify that the environmental monitoring programs were implemented as required by the ODCM;
- The inspectors walked down eight (of 10) air sampling stations (Nos. 27, 29B, 30, 32, 46.1, 47, 48, 51), two (of 3) milk sampling stations (Nos. 25, 27), three (of 3) surface water sampling stations (Nos. 2.1, 5, 49), two (of 2) drinking water stations (Nos. 4, 5), and nine (of 48) thermoluminescent (TLD) monitoring stations (Nos. 27, 28, 29B, 30, 32, 46.1, 47, 48, 51) to determine if sampling was conducted as described in the ODCM and associated procedures, and to evaluate the sampling equipment material condition;
- As part of the walkdown, the inspectors observed the technician collect and prepare for analysis air particulate/iodine filter samples, milk samples, and water samples; and verified that environmental sampling was representative of the release pathways as specified in the ODCM, and that sampling techniques were in accordance with procedures;
- Based on direct observation and review of records, the inspectors verified that the primary and redundant meteorological instrumentation was operable, calibrated, and maintained in accordance with the guidance contained in the FSAR, NRC Safety Guide 23, and the licensee procedures. The inspectors verified that the meteorological data readout and recording instruments in the control room and at the tower were operable for wind direction, wind speed, and delta temperature. The inspectors confirmed that redundant instrumentation was operable;
- The inspector reviewed the calibration and maintenance records for 11 air samplers and observed the technician verifying the calibration of three water compositors;
- The inspector reviewed CRs and a Nuclear Oversight Assessment Report (BV-C-08-08-02), addressing implementation of REMP requirements, to evaluate the threshold for which issues are entered into the corrective action program, the adequacy of subsequent evaluations, and the effectiveness of the resolution. The inspector also reviewed monthly RETS/ODCM effluent occurrence reports to evaluate the adequacy and timeliness of performance indicator information;
- The inspectors reviewed the results of the licensee's quarterly laboratory cross-check program to verify the accuracy of the licensee's environmental air filter, charcoal cartridge, water, and milk sample analyses; and
- The inspectors reviewed changes made by the licensee to the ODCM, as a result of changes to the land use census or sampler station modifications since the last inspection. The inspectors also reviewed technical justifications for any change in sampling location (or frequency) and verified the licensee performed the reviews required to ensure that the changes did not affect its ability to monitor the radiological condition of the environment.

Unrestricted Release of Material from the Radiologically Controlled Area (RCA):

- The inspectors observed several locations in Units 1 and 2, including the Health Physics Main Control Points, and the Decontamination Facility, where the licensee monitors potentially contaminated material leaving the RCA, and inspected methods used for control, survey, and release from these areas, including observing the performance of personnel surveying and releasing material for unrestricted use.

With the assistance of a technician, the inspector verified that the Small Article Monitors (SAM) alarmed when a check source was counted and the operating parameters met criteria; and

- The inspector verified that the contamination monitoring instrumentation (SAM-11, RM-14) was appropriate for the radiation types potentially present and was calibrated with appropriate radiation sources. The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material; verified that there was guidance on how to respond to an alarm which indicates the presence of contamination; and reviewed instrument alarm setpoints to ensure that radiation detection sensitivities are consistent with the NRC guidance contained in IE Circular 81-07 and IE Information Notice 85-92 for surface contamination and Health Physics Position (HPPOS) 221 for volumetrically contaminated material. The inspectors also reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters, and verified that the licensee has not established a release limit by altering the instruments sensitivity through such methods as raising the energy discrimination level or locating the instrument in a high radiation background area.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope (9 samples total)

The inspectors sampled licensee submittals for PIs listed below for both Unit 1 and Unit 2. The inspectors reviewed Licensee Event Reports, condition reports, portions of various plant operating logs and reports, and PI data developed from monthly operating reports. Methods for compiling and reporting the PIs were discussed with engineering and licensing personnel. To verify the accuracy of the PI data reported during this period, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 5, were used for each data element.

.1 Cornerstone: Mitigating Systems (6 samples)

The inspectors sampled licensee data to verify accuracy of the data recorded from October 2008 through July 2009 for:

- Auxiliary feedwater systems [MS08]: Turbine-driven and motor-driven auxiliary feedwater;
- Residual heat removal systems [MS09]: Low head safety injection & recirculation spray; and
- Support cooling water systems [MS10]: River water (Unit 1) & service water (Unit 2).

.2 Cornerstone: Emergency Preparedness (3 samples)

The last NRC EP inspection at Beaver Valley was conducted in the second quarter of 2008, so the inspectors reviewed supporting documentation from EP drills, training records, and equipment tests from the second calendar quarter of 2008 through the second quarter of 2009, to verify the accuracy of the reported PI data. The inspectors reviewed data for the following Beaver Valley EP PIs:

- Drill and Exercise Performance (DEP) [EP01];
- Emergency Response Organization (ERO) Drill Participation [EP02]; and
- Alert and Notification System (ANS) Reliability [EP03].

Additionally, the inspectors performed NRC Temporary Instruction (TI) 2515/175, "Emergency Response Organization, Drill/Exercise Performance Indicator, Program Review," ensured the completeness of the licensee's completed Attachment 1 from the TI, and forwarded that data to NRC Headquarters.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution (71152 – 1 sample total)

.1 Daily Review of Problem Identification and Resolution

a Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into FENOC's corrective action program. This review was accomplished by reviewing summary lists of 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 (71152)

a. Inspection Scope (1 sample)

The inspectors reviewed site trending results for the time period April through September 2009, to determine if trending was appropriately performed and evaluated by FENOC. This review covered the site trending program under FENOC's Integrated Performance Assessment process, and included a sample of self-assessments from the several organizations at Beaver Valley. This review verifies 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 (3) not indicative of a more significant safety concern. Additionally, the inspectors verified the performance of site trending against NOP-LP-2001, Rev. 23, "Condition Report Process", and NOBP-LP-2018, Rev. 5, "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, improvements in operations crew performance have been observed and were evident during response to plant malfunctions (i.e. challenges during the shutdown for the Unit 1 spring refueling outage (1R19). An emerging adverse trend was identified in the implementation of the clearance program, specifically regarding the proper use (execution) of the clearance program and planning (preparation) of the clearance points (CRs 08-38276, 09-56328, 09-65317, 09-63342, 09-63807, and 09-66167).

.3 Annual Sample: Emergency Diesel Generator (EDG) Maintenance Practices

a. Inspection Scope (1 sample)

This inspection was conducted to assess the adequacy of FENOC's evaluation and resolution of equipment failures associated with the emergency diesel generators (EDG). Specifically, the inspectors reviewed the actions taken by FENOC following two Maintenance Preventable Functional Failures (MPFF) on the Unit 2 EDGs in July and October, 2008. The inspectors also reviewed the evaluation and resolution of two failures of the #10 fuel injection pump on EDG 2-1 within a 13 month period, with the latest failure in December, 2007, and three failures of the EDG 2-1 lube oil heater breaker within a month period in August 2008. Finally, the inspectors reviewed FENOC's actions to address multiple deficiencies associated with the EDG 1-2 governor over a two month period ending in June 2009.

The inspectors reviewed FENOC's condition reports and apparent cause analyses associated with the EDG issues. The inspectors also interviewed plant personnel, and reviewed EDG system health reports, maintenance rule failure review forms and maintenance rule (a)(1) evaluation forms. This review was done to evaluate the effectiveness of FENOC's actions and determine if FENOC had promptly corrected adverse conditions when identified. In addition, the inspectors walked down the EDGs in Unit 1 and Unit 2 to assess the material condition of the EDGs. Finally, the inspectors reviewed the long term actions planned by FENOC to address remaining deficiencies to determine if they were adequate. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified.

The inspectors concluded FENOC appropriately evaluated the causes of the EDG issues discussed above. The condition report packages included cause analyses, extent-of-condition reviews, completed corrective actions and planned corrective actions. In the case of the rocker arm lube oil tank float control valve MPFF on EDG 2-1 and the four inch lube oil flange leak MPFF on EDG 2-2, the corrective actions were extensive; however, the inspectors noted that corrective actions associated with craft workmanship did not include changes to worker training programs. FENOC acknowledged this observation. Finally, the inspectors reviewed the condition report database and noted that there have been no repeat failures of the components above since corrective

actions were implemented.

4OA3 Followup of Events and Notices of Enforcement Discretion (71153)

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

(Closed) LER 05000334 / 2009-002-00: Feedwater Isolation Initiates Auxiliary Feedwater System During a Refueling Shutdown.

On April 20, 2009, Unit 1 experienced an unplanned 'B' high steam generator water level resulting in an engineered safety feature P14 actuation (normal feedwater isolation and emergency feedwater initiation) due to a bypass feedwater regulating valve (FCV-1FW-489) failing open. The plant and crew responded as expected with no additional significant complications. The licensee conducted a root cause investigation and determined the most probable cause of the failure to be foreign material in the bypass valve positioner air regulator during vendor assembly. The licensee replaced or inspected all affected valve positioners. The inspector determined that no findings of significance were identified and no violations of NRC requirements occurred. This LER is closed.

(Closed) LER 05000334/2009-004-00: Two Ultrasonic Indications Found in Reactor Coolant System Drain Pipe.

On April 26, 2009, during planned ultrasonic examination of reactor coolant piping in accordance with Materials Reliability Project document MRP-146 (see report 05000334/2009003 and 05000412/2009003, section 1R09 and 4OA3.1), two relevant indications were found in a reactor coolant 2-inch pipe segment, which is a stainless steel drain/sample line off the 'A' hot leg. The indication was not through-wall and there was no evidence of leakage. Reactor coolant system integrity was maintained. Corrective actions included replacing the pipe segment, which was observed by inspectors. The inspectors reviewed the LER, verified the appropriateness of corrective actions and extent of condition regarding other pipe segments. No findings of significance were identified and no violation of NRC requirements occurred. This LER is closed.

4OA5 Other

.1 Quarterly Resident Inspector Observations of Security Personnel And Activities

a. Inspection Scope

During the inspection period, the inspectors conducted the following observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

- Multiple tours of operations within the Central and Secondary Security Alarm Stations;
- Tours of selected security towers/security officer response posts;
- Direct observation of personnel entry screening operations within the plant's Main Access Facility; and

- Security force shift turnover activities.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

.1 Radiation Monitoring Instrumentation and Protective Equipment

On July 10, 2009, the inspectors presented the inspection results to Mr. R. Lieb, Director of Site Operations, and other members of his staff. The inspector confirmed that proprietary information was not provided or examined during the inspection.

.2 Emergency Preparedness

On September 3, 2009, the inspectors conducted an exit meeting and presented the preliminary inspection results to Mr. R. Brosi, Director – Performance Improvement, and other members of the FENOC staff. The inspector confirmed that proprietary information was not provided or examined during the inspection.

.3 Quarterly Inspection Report Exit

On October 30, the inspectors presented the normal baseline inspection results to Mr. P. Harden, Beaver Valley Power Station Site Vice President, and other members of his staff. 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	Radiation Protection Manager
M. Banko	Environmental & Chemistry Supervisor
A. Burger	Reactor Engineer Supervisor
R. Bologna	Plant Engineering Manager
D. Branch	BVPS I&C Supervisor
R. Brosi, Director	Performance Improvement
J. Campbell-Powell	Advanced Nuclear Specialist
S. Checketts	Operations Manager
G. Cramer	Emergency Planning Manager
R. Dinello	Environmental Field Specialist
M. Helms	Advanced Nuclear Specialist
D. Hewitt	Unit 1 Shift Manager
S. Hovanec	System Engineering Supervisor
L. Huyler	Advanced Nuclear Specialist
D. Jones	IST Engineer
K. Kimmerlee	Supervisor, Radiation Protection Field Operations
R. Lieb	Director, Site Operations
J. Mauck	Regulatory Compliance
D. McBride	Fleet Oversight Manager
J. Miller	Site Fire Marshall
E. Peace	EDG Maintenance Supervisor
A. Reardon	EDG System Engineer
D. Salera	Chemistry Supervisor
D. Schwer	Manager, Work Management
P. Sena	Site Vice President
B. Sepelak	Supervisor, Regulatory Compliance
R. Williams	Nuclear Engineer
R. Winters	Chemist
R. Zupo	Electrical Maintenance Supervisor

Other Personnel

L. Ryan	Inspector, Pennsylvania Department of Radiation Protection

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

05000334/2009-002-00	LER	Feedwater Isolation Initiates Auxiliary Feedwater System During a Refueling Shutdown (Section 4OA3.1)

05000334/2009-004-00	LER	Two Ultrasonic Indications found in Reactor Coolant System Drain Pipe (Section 4OA3.1)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
1/2OM-53C.4A.75.1, Rev. 11, "Acts of Nature-Tornado or High Wind Condition"

Condition Reports
05-01611 06-01008 09-60033 09-60106

Section 1R04: Equipment Alignment

Procedures
1OST-24.2, "Motor driven AFW Pump Test (1FW-P-3A)", Rev. 40

Drawings
8700-RM-424-2, Rev. 11
10080-RM-413-1, Rev. 12

Condition Reports (IR)
06-00523 07-12731 07-26409 08-44960

Section 1R05: Fire Protection

Pre-Fire Plans
1PFP-SRVB-713, Relay Room Fire Area CR-3
1PFP-INTS-705, Pump Cubicles Fire Area IS-1, 2, 3, 4

Other
CR 09-62523
CR 09-62533
CR 09-62512
Analysis No. 10080-B-085, Rev. 12

Section 1R06: Flood Protection

Procedures
1/2 OM-53C.4a.75.2, Rev. 24, "Acts of Nature – Flood"
1BVT1.33.07, Rev. 3, "Flood Seals Visual Inspection"
2BVT1.33.7, Rev. 2, "Flood Seals Visual Inspection"
1/2 PIP-MI6, Rev. 16, "Penetration Seals"

Condition Reports
05-03806 06-04373 08-33072 08-35404

Drawings
8700-RM-63E, Rev. 5, "Penetration Seals-Cooling Tower Pump House and Intake Structure"

1R07: Heat Sink Performance

Procedures
2OM-30.4.M, Rev. 35, "BV-2 Asiatic Clam and Zebra Mussel Chemical Treatment Program"
1/2-CHM-ADD-7.27, Rev. 17, "Reactor Plant River Water System/Service Water System-Biocide Addition"

Condition Reports
05-00847 05-02019 07-23817 07-19621 08-37135 08-3550
09-61081

Other
CCP System Maintenance Rule Data of July 2, 2009
2CCP-E21A Heat Exchanger Inspection Reports of 3/20/08 and 6/24/09

Section 1R11: Licensed Operator Requalification Program

Procedures
BVBP-OPS-0024, Rev. 2, "Transient Response Guidelines"
BVBP-OPS-0029, Rev. 0, "Operator Time-Critical Manual Actions"
TRG-1, Training Guide (Instrument Failure and Rod Fault)
TRG-2, Training Guide (MSIV Closure and Faulted S/G)

Section 1R13: Maintenance Risk Assessment and Emergent Work Control

Procedures
2OM-7.4Q, Rev. 11, "Emergency Boration"
NOP-OP-1007, Rev. 5, "Risk Determination"
NOP-ER-3004, Rev. 1, "FENOC Maintenance Rule Program"

Work Orders
200379204 200380006 200377159 200369748

Condition Reports
09-62429 09-62688

Other
Drawing 10080-RM-407-2
Unit 2 Weekly Maintenance Risk Summary for the week of August 3, Revs. 0 and 1
Unit 2 Weekly Maintenance Risk Summary for the week of August 24, Rev. 1
Unit 1 PRA Profile from the week of July 6, 2009
Unit 1 Maintenance Plan from the week of July 6, 2009
NOTF 600552164
NOTF 600556974
PAF 09-01520

Station Risk Profile from the week of July 27, 2009
Maintenance Rule Failure Review Form for 2CHS-FT113 dated August 27, 2009

Section 1R15: Operability Evaluations

Procedures
2OST-36.1, Rev. 58 Data Sheet 1
1OST-36.2, Rev. 52, "Diesel Generator No. 2 Monthly Test"
1OM-36.4.AH, Rev. 11, "Diesel Generator No. 2 Start-up and Shutdown"

Technical Specifications
3.2.1 3.8.1

Condition Reports
09-62702

Other
NSAL 09-5, dated August 5, 2009
PAF 09-01520
NOTF 600552164; Calibrate 2EGO-TCV200-1 Lube Oil Temperature Control Valve
NOTF 600558190
QFO BV220093794
Fairbank Morse email dated 7/2/09 from Ted Stevenson to Adam Reardon
WO 200380006

Section 1R18: Plant Modifications

Condition Reports
09-61052 09-62204 09-62285 09-62215 09-61739 09-61611
09-61463

Regulatory Applicability Determination and 10 CFR 50.59 Screens
09-61052

Procedures
½-PMP-E-75-200, Issue 4 Rev 10, "Van axial Fan Maintenance"

Drawings
616707-23, May 2001, "Reliance Electric & Eng Co. DWG for 445 TENV 6318-6318 FF 14978 2 Stage Joy

Other
BV1 Operations Shift Operating Logs, June 27; June 28; July 22, 2009
BV1 Operations Containment Temperature Operating Limits
ECP 09-0184, Unit 1 Air Duct Management Changes
Problem Solving Plan, 09-61052
Plant Health Committee Presentation for TM 09-0549-001, September 29, 2009
TS 3.6.5 Containment Temperature
Unit 1 Plant Computer containment temperature profiles, July 24, 2009
WO 200208558

UFSAR 5.4 Internal Containment Systems

Section 1R19: Post-Maintenance Testing

Procedures
1OM-36.4.AH, Rev. 11, "Diesel Generator No.2 Start-up and Shutdown"
1OM-44A.4.L, Rev. 9, "Isolating and Restoring the Control Room Ventilation System"
1OM-44A.1.D, Rev. 6
1/2 OST-43.17d, Rev. 38, "Control Room Rad Monitor Functional Test"
1/2 RCP-30A-PC, Rev. 13, "Calibration of Timing Relays"
1/2-PIP-E12, Rev. 5, "Internal Wiring"
1MSP-2.06-I, Rev. 23, "Power Range Neutron Flux Channel N44 Refueling Calibration"

Technical Specifications
BVPS TS 3.3.1
BV1 LRM LR 3.3.5

Work Orders
200380006 200377637 200377904 200342368

Condition Reports
09-62830 09-62782 09-61743 09-62492 09-62411

Other
Unit 1 Shift Operating Logs dated August 5-6, 2009
Drawing 8700-RE-21ML, Rev. 19
Drawing 10080-RE-14A
NOTF 600554733
BV1 Operations Logs dated July 14-15, 2009
ECP 08-0660-01, Rev. 1, "BV2 EDG ASP Transfer CKT-Replay Change"
Clearance 2BVP-CYC-14-1
2W12-36-EGS-002

Section 1R22: Surveillance Testing

Procedures
PAF-09-01527, Rev. 33, "Quench Spray Pump Test"

Condition Reports
09-61433 09-61333 09-62702 09-62515 09-60191 08-49878

Other
ASME OM CVDE-2004 Subsection ISTB
Unit 1 'B' Quench Spray Pump Curves
09-02882, Rev. 0, "Quench Spray Pump Test 50.59 Screening"
T.S. 3.3.1 / T.S. 3.3.2 / T.S. 3.7.8

Section 1EP2: Alert and Notification System Evaluation

Procedures
1/2-ADM-1107, Alert Notification System (Sirens) Maintenance and Testing (Rev. 9)
1/2-ADM-1107.F02, BVPS – Alert Notification System Maintenance/Repair Forms (completed February 19, 2008 – August 10, 2009)
1/2-ADM-1107.F03, Maintenance Schedule (completed for calendar year 2008)
1/2-ADM-1107.F04, Alert Notification System Test Results Documentation Forms (completed August 28, 2008 – June 19, 2009)

Other
Beaver Valley Power Station 2009 Emergency Planning Zone Siren System Test Schedule
Beaver Valley Power Station ANS-related Condition Reports (dated January 2008 – July 2009)
Emergency Warning Notification System Design Report, Beaver Valley Power Station (dated March 1, 1984)
Supplement to the Beaver Valley Power Station Emergency Warning Notification System Design Report (dated May 13, 2002)

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Procedures
1/2 -EPP-IP-1.4, Technical Support Center Activation, Operation and Deactivation, Rev. 32
1/2 -EPP-IP-1.5, Operations Support Center (OSC) Activation, Operation and Deactivation, Rev. 21
1/2 - EPP-IP-1.6, Emergency Operations Facility (EOF), Activation, Operation and Deactivation, Rev. 19
1/2 – EPP-IP-1.7, Emergency Response Organization (ERO) Teams, Rev. 19
1/2-ADM-1101, Emergency Response Organization Administration, Rev. 9
1/2 -OST-57.2, Weekly Emergency Beeper Notification System, Rev. 17
1/2 –OST-57.1, Emergency Beeper Notification System, Rev. 14
1/2- EPP-I-3, Alert, Rev. 33
1/2-EPP-IP-1.1, Notifications, Rev. 43
1/2 –ADM-1102, BVPS Emergency Notification Testing, Review and Trending, Rev. 2
1/2 –EPP-IP-7.3, Emergency Preparedness Testing, Rev. 11
1/2-ADM-1110, Emergency Response Organization (ERO) Instructions, Rev. 6

Other
Emergency Preparedness Plan, Volume 1, Rev. 27

Section 1EP4 : Emergency Action Level (EAL) and Emergency Plan Changes

Procedures
Beaver Valley Power Station 1/2- ADM 1100, Emergency Plan/Procedure Preparation and Revision, (Rev. 3

Emergency Plan Change Evaluations

2008-083-00	2008-084-00	2008-085-00	2008-086-00	2008-087-00	2008-089-00
2008-090-00	2008-091-00	2008-092-00	2008-093-00	2008-094-00	2008-095-00
2008-096-00	2008-099-00	2008-100-00	2008-101-00	2008-102-00	2008-102-00
2008-103-00	2008-104-00	2008-105-00	2008-106-00	2008-107-00	2009-001-00

2009-002-00 2009-005-00 2009-006-00 2009-007-00 2009-008-00 2009-010-00
2009-012-00 2009-013-00 2009-015-00 2009-016-00 2009-017-00 2009-019-00
2009-020-00 2009-022-00 2009-023-00 2009-024-00

Other

NOBP-LP-4003A, FENOC 10CFR 50.59 Guidelines
NOP-LP-5400, Equipment Important to Emergency Response, Rev. 0
BVRM-EP-5003, Equipment Important to Emergency Response, Rev. 1

Section 1EP5: Correction of Emergency Preparedness Weaknesses

Other

Fleet Oversight Audit Report MS-C-07-12-24
Fleet Oversight Audit Report MS-C-08-12-24
Quality Field Observation FLT1200728, Interface with State and Local Governments (dated November 30, 2007)
Quality Field Observation FLT1200867, Interface with State and Local Governments (dated November 25, 2008)
Fleet Oversight Quarterly Performance Report BV-PA-08-01
Fleet Oversight Quarterly Performance Report BV-PA-08-02
Fleet Oversight Quarterly Performance Report BV-PA-08-03
Fleet Oversight Quarterly Performance Report BV-PA-08-04
Fleet Oversight Quarterly Performance Report BV-PA-09-01
Fleet Oversight Quarterly Performance Report BV-PA-09-02
SA-BV-09-011, Review of BVPS Emergency Action Levels versus NRC SER EALs
SA-BV-09-013, Review of BVPS Emergency Preparedness Plan (EPlan) versus NRC SER EPlan
SA-BV-09-032, Beaver Valley Emergency Preparedness Improvement Program Assessment
SA-BV-09-033, NRC Performance Indicators for BVPS Emergency Response
Quarterly EP Drill Reports, June 2008 – July 2009

Condition Reports

CR-09-60763, Unusual Event Declared for ERF Substation CO2 Discharge with Smoke Detector Alarms (event date June 18, 2009)
All EP-related Condition Reports (dated July 20, 2007 – August 28, 2009)

Section 2PS3: Radiological Environmental Monitoring Program and Radioactive Material Control Program

Procedures:

1/2-ODC-01.01, Rev. 5, "ODCM: Index, Matrix, and History of ODCM Changes"
1/2-ODC-02.01, Rev. 6, "Overall Environmental Monitoring Program"
1/2-ODC-02.03, Rev. 1, "ODCM: Radiological Environmental Monitoring Programs"
1/2-ODC-03.02, Rev. 2, "ODCM: Bases for ODCM Controls"
1/2-ODC-03.03, Rev. 5, "ODCM: Controls for RETS and REMP Program"
1/2-ENV-02.01, Rev. 6, "Description of Overall Radiological Environmental Monitoring Program"
1/2-ENV-03.01, Rev. 6, "Environmental Sampling"
1/2-ENV-03.02, Rev. 2, "Maintenance & Calibration of Automatic Water Sampling Equipment"
1/2-ENV-03.03, Rev.1, "Maintenance and Calibration of AVS-28A Environmental Sampler"
1/2-HPP-4.04.024, Rev.1, "NE Technology Small Article Monitor"

1MSP-45.17-1, Rev. 24, "Meteorological Monitoring System Calibration"
NOP-WM-7021, Rev. 3, "Radiological Postings and Markings"
1/2-HPP-3.03.005, Rev. 7, "Removing Material from the RCA"
1/2-HPP-4.04.024, Rev. 2, "NE Technology Small Article Monitor (SAM-11)"
1/2-ADM-1601, Rev.19, "Radiation Protection Standards"

Sampling Sites:
Milk: Nos. 25, 27
Air Particulate/Iodine: Nos. 27, 29B, 30, 32, 46.1, 47, 48, 51
Drinking Water: Nos. 4, 5
Surface Water: Nos. 2.1, 5, 49
Thermolumeniscent Dosimeters: Nos. 27, 28, 29B, 30, 32, 46.1, 47, 48, 51

Nuclear Oversight (NO) Reports:
Fleet Oversight Audit Report (MS-C-008-08-02)

Condition Reports:

07-22426	07-22429	07-24893	08-35120	08-38873	08-39721
08-45135	08-46558	09-57064	09-59207	09-59875	08-46558
09-61236	09-59850	09-59937	09-58904	09-59207	09-59045
09-59875	09-60287				

Calibration Records
Air Sampler Nos. 6114, 6115, 6116, 6117, 6118, 6119, 6120, 6121, 6122, 6126, 6127
Meteorological Primary & Redundant Instrumentation dated 3/18/2009
Small Article Monitors Nos. 135, 136,139, 140, 428, 489, 290

Miscellaneous Reports:
2007 and 2008 Annual Radioactive Effluent Release Reports
Environmental Cross Check Samples 2008
REMP General Action Item Orders

Section 4OA1: Performance Indicator (PI) Verification

Procedures
1/2-ADM-1111, NRC EPP Performance Indicator Instructions, Rev. 3

Other
DEP PI data, June 2008 – July 2009
ERO Drill Participation PI data, June 2008 - July 2009
ANS Reliability PI data, June 2008 - July 2009

Section 4OA2: Identification and Resolution of Problems

Condition Reports:

09-63018	09-62993	09-62782	09-62702	09-62492	09-62466
09-62432	09-62402	09-61124	09-60404	09-60359	09-59651
09-58657	09-58615	09-58172	09-58032	09-57659	09-55167
09-55143	09-53179	09-52857	09-52491	08-51439	08-50442

08-49681	08-48695	08-48581	08-47663	08-47283	08-46841
08-45586	08-45462	08-44922	08-43312	08-39993	

Work Orders:

200344543	200330122	200330121	200330120	200330119	200330118
20027395					

Design Basis Documents:
1DBD-36A, Rev. 11, Unit 1 Design Basis Document for EDGs
2DBD-36A, Rev. 8, Unit 2 Design Basis Document for EDGs

Notifications:
600500997

Procedures:
1/2-ADM-2053, Rev. 0, EDG Maintenance Program
NOP-LP-2001, Rev. 18, Corrective Action

Maintenance Rule Failure Review Forms:

09-62402	09-61124	09-58032	09-57659	09-55167	08-48581
08-47663	08-45586	08-45462	08-44922	08-43312	08-39993
07-31825	07-29477	07-28237			

Other:
Maintenance Rule (a)(1) Evaluation Form on Unit 2 EDGs event date 12/20/08
Maintenance Rule (a)(1) Evaluation Form on Unit 2 EDGs, Rev. 1, event dates 10/14/08 & 10/28/08
Unit 1 EDG System Health Reports quarters 2007-3 through 2009-2
Unit 2 EDG System Health Reports quarters 2007-3 through 2009-2

Section 4OA3: Event Response

Event Notification 45022, dated April 26, 2009
ASME Section XI

LIST OF ACRONYMS

ADM	Administrative Procedure
ANS	Alert and Notification System
BCO	Basis for Continued Operations
BVPS	Beaver Valley Power Station
CFR	Code of Federal Regulations
CR	Condition Report(s)
CREVS	Control Room Emergency Ventilation System
DEP	Drill/Exercise Performance
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
FENOC	First Energy Nuclear Operating Company
FA	Functionality Assessment
IMC	Inspection Manual Chapter
IOD	Immediate Operability Determination
IP	Inspection Procedure
ISI	Inservice Inspection
LCO	Limiting Conditions for Operations
LER	Licensee Event Report
MPFF	Maintenance Preventable Functional Failures
MSP	Maintenance Surveillance Packages
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OD	Operability Determinations
ODCM	Off-Site Dose Calculation Manual
OST	Operations Surveillance Test
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PMT	Post Maintenance Testing
POD	Prompt Operability Determination
RCA	Radiologically Controlled Area
REMP	Radiological Environmental Monitoring Program
RETS	Radiological Effluent Technical Specification
SAM	Small Article Monitors
TLD	Thermoluminescence Dosimeter
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report