



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BLVD., SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

April 11, 2019

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

SUBJECT: BEAVER VALLEY UNITS 1 AND 2 – PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT 05000334/2019010 AND  
05000412/2019010

Dear Mr. Bologna:

On March 21, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Beaver Valley Units 1 and 2. On March 21, 2019, the NRC inspectors discussed the results of this inspection with R. Pennfield, General Plant Manager and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

The NRC inspectors did not identify any finding or violation of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

*/RA/*

Matthew R. Young, Chief  
Projects Branch 6

Docket Nos.: 05000334 and 05000412  
License Nos.: DPR-66 and NPF-73

Enclosure:  
Inspection Report 05000334/2019010  
and 05000412/2019010

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SUBJECT: BEAVER VALLEY UNITS 1 AND 2 – PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000334/2019010 AND 05000412/2019010 DATED APRIL 11, 2019

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**U.S. NUCLEAR REGULATORY COMMISSION  
Inspection Report**

Docket Numbers: 05000334 and 05000412

License Numbers: DPR-66 and NPF-73

Report Numbers: 05000334/2019010 and 05000412/2019010

Enterprise Identifier: I-2019-010-0004

Licensee: FirstEnergy Nuclear Operating Co.

Facility: Beaver Valley, Units 1 and 2

Location: Shippingport, PA 15077-0004

Inspection Dates: March 04, 2019 to March 21, 2019

Inspectors: J. Brand, Reactor Inspector  
S. Elkhiamy, Reactor Inspector  
J. Krafty, Senior Resident Inspector  
S. Shaffer, Senior Project Engineer

Approved By: Matthew R. Young, Chief  
Projects Branch 6  
Division of Reactor Projects

## **SUMMARY**

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a problem identification and resolution inspection at Beaver Valley Units 1 and 2 in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. Findings and violations being considered in the NRC's assessment are summarized in the table below.

### **List of Findings and Violations**

No findings were identified.

### **Additional Tracking Items**

None.

## **INSPECTION SCOPES**

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

## **OTHER ACTIVITIES – BASELINE**

### 71152B - Problem Identification and Resolution

#### Biennial Team Inspection (IP Section 02.04) (1 Sample)

The inspectors performed a biennial assessment of the licensee's corrective action program, use of operating experience, self-assessments and audits, and safety conscious work environment.

- Corrective Action Program Effectiveness - The inspectors assessed the corrective action program's effectiveness in identifying, prioritizing, evaluating, and correcting problems.
- Operating Experience, Self-Assessments and Audits – The inspectors assessed the effectiveness of the station's processes for use of operating experience, audits, and self-assessments.
- Safety Conscious Work Environment – The inspectors assessed the effectiveness of the station's programs to establish and maintain a safety-conscious work environment.

## INSPECTION RESULTS

Observation
<p>The inspectors reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. Based on the samples reviewed, the inspectors determined FENOC's performance in each of these areas supported nuclear safety.</p> <p>The inspectors also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the inspectors determined that FENOC's performance in each of these areas supported nuclear safety.</p> <p>Finally, the inspectors reviewed the station's programs to establish and maintain a safety conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the inspectors' observations and the results of these interviews, the inspectors found no evidence of challenges to the organization's safety conscious work environment. A cross section of FENOC employees were interviewed, and all stated a willingness to raise nuclear safety concerns through at least one of the several means available.</p>

Observation	71152B
<p>Operating Experience Screening Process is not consistently implemented in accordance with the requirements of NOBP-LP-2100, FENOC Operating Experience Process. Specifically, in accordance with step 4.1.2 the screening process provides for three possible outcomes: Not applicable, Information only, or Evaluation, all of which require documenting justification. The inspectors noted many examples while reviewing Operating Experience where screening documentation was not provided nor justification made for not evaluating in accordance with station procedures. In one case, OE-2017-0236, FW heater control, met the criteria for an evaluation since it affects plant reliability or availability (i.e. reactivity management level 4 event and plant power excursion), however no screening or justification was documented. Contributing to the inconsistent application of requirements may be vague or interpretative guidance.</p>	

## EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

On March 21, 2019, the inspector presented the Biennial Problem Identification and Resolution Inspection to Mr. Rod Penfield and other members of the licensee staff.

**DOCUMENTS REVIEWED****Procedures**

NOP-LP-2001, Corrective Action Program, Revision 46  
 NOBP-LP-2011, FENOC Cause Analysis, Revision 25  
 1/2OM-56B.4A.E, Unit ½ Safe Shutdown Intent and Methodology, Revision 0  
 NORM-OP-1002, Conduct of Operations, Revision 7  
 NOBP-LP-2100, FENOC Operating Experience Process, Revision 18  
 ½-ADM-0600, Environmental Protection Programs, Revision 5  
 ½-ADM-0605, Control of Water and Wastewater Disposal and Draining Activities, Revision 7  
 1/2OM-35.4A.A, voltage Schedule Guidance, Revision 15  
 2OST-30.13B, Train B Service Water System Full Flow Test, Revision 45  
 2OST-36.7, Offsite to Onsite Power Distribution System Breaker Alignment Verification,  
 Revision 20

**Condition Reports**

CR-2018-08406	CR-2017-01830	CR-2016-12107	CR-2018-00709
CR-2018-07052	CR-2017-01836	CR-2017-02305	CR-2018-01542
CR-2018-04735	CR-2017-06990	CR-2017-04022	CR-2018-01549
CR-2017-04023	CR-2017-02410	CR-2017-04146	CR-2018-02456
CR-2017-05260	CR-2017-02493	CR-2017-04211	CR-2018-03372
CR-2018-03574	CR-2018-08392	CR-2017-05270	CR-2018-04780
CR-2017-08308	CR-2016-13722	CR-2017-05721	CR-2018-05063
CR-2018-06128	CR-2017-05957	CR-2017-06376	CR-2018-07447
CR-2018-10075	CR-2017-01836	CR-2017-07506	CR-2018-07760
CR-2016-13722	CR-2016-14253	CR-2017-08205	CR-2018-07933
CR-2017-08406	CR-2017-02997	CR-2017-10327	CR-2018-08299
CR-2016-13722	CR-2017-08406	CR-2017-10852	CR-2018-08730
CR-2016-14253	CR-2018-04285	CR-2017-10857	CR-2018-10384
CR-2017-00036	CR-2017-09825	CR-2017-11030	CR-2018-10653
CR-2017-02997	CR-2009-62810	CR-2017-11191	CR-2018-11228
CR-2018-07262	CR-2013-15679	CR-2017-11220	CR-2019-00075
CR-2018-08392	CR-2015-05473	CR-2017-12308	CR-2019-00264
CR-2018-08311	CR-2015-11473	CR-2018-00258	CR-2019-00851
CR-2018-06843	CR-2016-00190	CR-2018-00283	CR-2019-01418
CR-2018-11224	CR-2016-03633	CR-2018-00470	
CR-2017-12282	CR-2016-10087	CR-2018-00665	

**Miscellaneous Documents**

Standing Order 18-006  
 OE-2018-0136, IN1803 Operating Experience Regarding Failure to meet TS Requirements  
 Changing Conditions  
 OE-2017-0349, Feedwater Heater Level Control Valve Failure to Control Level  
 IN1804, Failure of Operators to trip the Plant when experiencing unstable conditions.  
 SA-BN-2017-0614, 2R19 Shutdown Defense in Depth Post Outage Critique  
 SA-BN-2017-0595, 2017 Semi- Annual EPlan Health Physics Drill #1- 6/13/17  
 OFO-2018-0012, 2018 Emergency Preparedness Audit  
 IER L1-17-5, Line of Sight to the Reactor Core  
 SA-BN-2017-0766, Beaver Valley 2016 Annual Snap Shot Assessment on Clearance Process,  
 Procedure and Practices.



ATA 2019-2685  
ATA-2018-1216  
B-062B, Safeguards Area Ventilation – Loads and Air Rates, Revision 3  
B-244. Evaluation of Capacity of 2HVR-ACU-207A, B (Safeguard Area), Revision 1  
DCP-1604, Test Package for IWP #1604-1, Revision 0  
DMC-3606, Isokinetic Flow Assessment and Penetration of Airborne Particles for RM-1VS-109,  
RM-1VS-110, and RM-1GW-109, Revision 0  
DMC-3811, Beaver Valley Unit 2 Safeguards building Heatup Analysis Using MAAP-DBA,  
Revision 0  
ECP-17-0389, Isokinetic Flow Assessment and Penetration of Airborne Particles for  
RM-1VS-109, RM-1VS-110, and RM-1GW-109, Revision 0  
EER 600965045  
EER 601191559  
EER 601191560  
EER 601206768  
Inservice Testing Program Health Report 2014 through 2018  
MS-C-18-01-13, Design Control, Engineering Programs and ASME  
N-785, Minimum Service Water Pressure Setpoint to Protect SWS Pumps – Emergency Diesel  
Test Acceptance Curves, Revision 2  
N-800, Minimum Service Water Flow Requirements for the Unit 2 Emergency Diesel Generator  
Coolers, Revision 0  
N-864, Service Water System Performance Calculation, Revision 0  
OE-2017-0561, IN 1706 Battery and Short Circuits on DC Systems  
Pennsylvania Department of Environmental Protection Letter Dated April 12, 2017  
SA-BN-2017-0626, Tier 1 Calculations Self Assessment  
SA-BN-2018-1139, NOP-ER-3001 Problem Solving and Decision Making  
SA-BN-2018-1298, Pre-PI&R 2019 NRC Inspection Assessment  
SA-BN-2019-1326, Snapshot SA-CSA Owner JFG  
Standing Order 13-014  
Unit 2 Control Room Logs July 17, 2017  
Unit 2 Service Water System Health Report 2014 through 2018