



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

November 9, 2021

Mr. John J. Grabnar  
Site Vice President  
Energy Harbor Nuclear Corp.  
Beaver Valley Power Station  
Route 168  
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNITS 1 AND 2 – INTEGRATED  
INSPECTION REPORT 05000334/2021003 AND 05000412/2021003

Dear Mr. Grabnar:

On September 30, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Beaver Valley Power Station, Units 1 and 2. On October 21, 2021, the NRC inspectors discussed the results of this inspection with Mr. Mark Manoleras, Director, Site Engineering, and other members of your staff. The results of this inspection are documented in the enclosed report.

No NRC-identified or self-revealing findings were identified during this inspection.

A licensee-identified violation which was determined to be of very low safety significance is documented in this report. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Resident Inspector at Beaver Valley Power Station, Units 1 and 2.

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 Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Matt R. Young, Chief  
Projects Branch 2  
Division of Operating Reactor Safety

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

Enclosure:  
As stated

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SUBJECT: BEAVER VALLEY POWER STATION, UNITS 1 AND 2 – INTEGRATED  
INSPECTION REPORT 05000334/2021003 AND 05000412/2021003 DATED  
NOVEMBER 9, 2021

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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: 05000334/2021003 and 05000412/2021003

Enterprise Identifier: I-2021-003-0028

Licensee: Energy Harbor Nuclear Corp.

Facility: Beaver Valley Power Station, Units 1 and 2

Location: Shippingport, PA 15077

Inspection Dates: July 1, 2021 to September 30, 2021

Inspectors: G. Eatmon, Senior Resident Inspector  
R. Rolph, Resident Inspector  
C. Hobbs, Reactor Inspector  
P. Ott, Operations Engineer

Approved By: Matt R. Young, Chief  
Projects Branch 2  
Division of Operating Reactor Safety

Enclosure

## SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Beaver Valley Power Station, 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. A licensee-identified non-cited violation is documented in report section: 71153.

### List of Findings and Violations

No findings or violations of more than minor significance were identified.

### Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
LER	05000334/2021-001-00	Beaver Valley Power Station, Unit 1, Regarding Containment Isolation Valve Found Restrained Open Resulting in Condition Prohibited by Technical Specifications	71153	Closed

## PLANT STATUS

Unit 1 operated at or near rated thermal power for the entire inspection period. At 0021 on August 18, 2021 the licensee declared an unusual event (UE) due to the receipt of multiple fire alarms and a halon discharge in the Unit 1 cable tunnel. At 0036 on August 18, 2021, the fire brigade verified no signs of fire, and the licensee terminated the UE at 0401 based on no indication of fire.

Unit 2 operated at or near rated thermal power for the entire inspection period. On September 14, 2021, Unit 2 entered end-of-cycle coast down operations and ended the inspection period at 92.6 percent rated thermal power.

## 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. Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident and regional inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time, the resident inspectors performed periodic site visits each week, increasing the amount of time on site as local COVID-19 conditions permitted. As part of their onsite activities, resident inspectors conducted plant status activities as described in IMC 2515, Appendix D, "Plant Status," conducted routine reviews using IP 71152, "Problem Identification and Resolution," observed risk significant activities; and completed on site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

## REACTOR SAFETY

### 71111.01 - Adverse Weather Protection

#### Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal high temperatures for the following systems:
  1. Unit 1, reactor plant river water pump cube ventilation
  2. Unit 2, service water pump cube ventilation
  3. Unit 1 and Unit 2, emergency switchgear ventilation
  4. Unit 1 and Unit 2, emergency diesel generator ventilation

Impending Severe Weather Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the adequacy of the overall preparations to protect risk significant systems from impending severe weather of thunderstorms as issued by the National Weather Service on July 16, 2021

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) Unit 2, motor driven auxiliary feed water, train 'A' on July 27, 2021
- (2) Unit 1, quench spray, train 'A' on August 3, 2021

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Unit 1, auxiliary building general area 768' fire compartment 1-PA-1A on July 20, 2021
- (2) Unit 2, auxiliary building general area 718' fire compartment 2-PA-3 on July 25, 2021
- (3) Unit 2, cable tunnel 712' fire compartment 2-CB-1 on August 19, 2021
- (4) Unit 2, control building fan room fire compartment 2-CB-5 on September 7, 2021
- (5) Unit 2, west cable vault fire compartment 2-CV-1 and east cable vault fire compartment 2-CV-2 on September 16, 2021

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

- (1) Unit 2, cable tunnel (flood area CT-1) and control building common instrumentation and relay room (flood area CB-1)

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (1 Sample)

- (1) The inspectors reviewed and evaluated the licensed operator requalification exam results for the annual operating exam for Beaver Valley Unit 1 on September 9, 2021

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01)  
(1 Sample)

- (1) The inspectors observed and evaluated licensed operators' performance in the Control Room during quench spray system, train 'B', surveillance on September 13, 2021

Licensed Operator Regualification Training/Examinations (IP Section 03.02) (1 Sample)

The inspectors observed and evaluated the following activities:

- (1) Unit 2, 'B' steam generator tube leak that degraded to a tube rupture with an emergency action level entry and a unit shutdown and cooldown on August 25, 2021

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (1 Sample)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components remain capable of performing their intended function:

- (1) Unit 1, Control Room emergency air cooling system, train 'B', inoperable and classified as condition monitoring failure of the associated 480V supply breaker, on June 15, 2021

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (6 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

- (1) Unit 1, bypass feed regulating valves, FCV-1FW-479, FCV-1FW-489, FCV-1FW-499, supply breaker found tripped on July 14, 2021
- (2) Unit 1, elevated risk due to planned maintenance on required offsite power source, standby station service transformer 'B', commencing on July 19, 2021
- (3) Unit 2, emergent work on the service water pump seal water strainer, 2SWS-STRM48, when a 10 gpm packing leak developed for service water train 'B' pumps on August 5, 2021
- (4) Unit 2, emergent work to restore the 480V supply breaker to MCC2-08 that tripped on overcurrent on August 6, 2021
- (5) Unit 2, elevated risk and emergent work due to fuel and decontamination building crane trolley bounded with 125 percent capacity ISFSI test load suspended, on August 24, 2021
- (6) Unit 1, elevated risk due to heavy load lift over normal switchgear using portable hoist and crane bridge to reinstall halon bottles and restore clean shop floor plug on August 27 and August 30, 2021



## 71111.15 - Operability Determinations and Functionality Assessments

### Operability Determination or Functionality Assessment (IP Section 03.01) (7 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) Unit 1, evaluation of turbine driven auxiliary feedwater pump, 1FW-P-2, two trips during operability test on May 9, 2021
- (2) Unit 2, emergency switchgear fan, 2HVZ-FN261B, failed to start resulting in emergency switchgear train 'B' unavailable for heat removal functions on June 24, 2021
- (3) Unit 1, scaffolding touching safety-related reactor plant river water pump 'C,' 1WR-P-1C, in multiple locations on June 30, 2021
- (4) Unit 1, steam leak upstream of steam generator 'B' blowdown isolation valve, 1BD-2, that was assessed using the safety analysis radiological consequences for main steam line break and steam generator tube rupture and the containment leakrate testing program on July 1, 2021
- (5) Unit 1, evaluation of 'A' charging pump outboard pump seal leak on July 14, 2021
- (6) Unit 1, main intake cube 'A' and 'C' ventilation recirculation damper failure identified on June 22, 2021 and August 6, 2021
- (7) Unit 2, follow-up functionality assessment for a significant leak on the standby service water system that was not repaired within the license requirement manual completion time on September 3, 2021

## 71111.19 - Post-Maintenance Testing

### Post-Maintenance Test Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

- (1) Unit 1, 1OST-16.1, supplementary leak collection and release test for exhaust through the main filter bank train 'A' after the repair of damper BV-1VS-D-4-2A on July 17, 2021
- (2) Unit 2, 2OM-30.4.A, service water system startup of the 'B' service water pump to the 'B' service water header after cleaning and inspecting the motor operated seal water strainer for the 'B' and 'C' service water pumps on July 26, 2021
- (3) Unit 1, 1OST-30.1B, auxiliary river water pump test after packing replacement on July 28, 2021
- (4) Unit 1, NOP-CC-5760, ultrasonic detection of gas voids in train 'A' quench spray piping after system surveillance requirement on August 3, 2021
- (5) Unit 1, 1OST-36.1, operating surveillance test for diesel generator number 1 after replacement of the permissive start relay for the motor driven fuel pump when no fuel oil pressure was indicated, September 3, 2021

## 71114.06 - Drill Evaluation

### Drill/Training Evolution Observation (IP Section 03.02) (1 Sample)

The inspectors evaluated licensee classification and notification activities during the following simulator training evolution:

- (1) Unit 1, 'B' steam generator tube leak that degraded to a tube rupture with an emergency action level entry and unit shutdown and cooldown on September 9, 2021

## **RADIATION SAFETY**

### 71124.02 - Occupational ALARA Planning and Controls

#### Radiological Work Planning (IP Section 03.01) (4 Samples)

The inspectors evaluated the licensee's radiological work planning.

The inspectors reviewed the following activities:

- (1) Reactor Disassembly/Reassembly
- (2) Remove/Replace Core Exit Thermocouple Nozzle Assemblies and Thermocouples
- (3) Remove/Replace Reactor Head and Upper Internals
- (4) Scaffolding/Emergent Scaffolding

#### Verification of Dose Estimates and Exposure Tracking Systems (IP Section 03.02) (4 Samples)

The inspectors evaluated dose estimates and exposure tracking.

The inspectors reviewed the following as low as reasonably achievable planning documents:

- (1) ALARA Plan 21-1-4018, 45 percent and 75 percent Work in Progress Reviews, and the Post Job Review
- (2) ALARA Plan 21-1-4019, 45 percent and 75 percent Work in Progress Reviews
- (3) ALARA Plan 21-1-4021, 45 percent and 75 percent Work in Progress Reviews, and the Post Job Review
- (4) ALARA Plan 21-1-4028, 45 percent and 75 percent Work in Progress Reviews, and the Post Job Review

#### Implementation of ALARA and Radiological Work Controls (IP Section 03.03) (3 Samples)

The inspectors reviewed as low as reasonably achievable practices and radiological work controls.

The inspectors reviewed the following activities:

- (1) 121-4061, Inspect, Test, Repair TCV-1CH-200A, Regenerative Heat Exchanger Valve

- (2) 121-4029, Initial Reactor Building Containment entry - Preps for shutdown/put residual heat removal in service, observed down posting of the "Keyway" Very High Radiation Area to a Lock High Radiation Area
- (3) 121-0143, Replace 'B' traversing In-core Detector at 100 percent power

Radiation Worker Performance (IP Section 03.04) (1 Sample)

The inspectors evaluated radiation worker and radiation protection technician performance during:

- (1) Retrieval/Removal of foreign material from the flooded Reactor Cavity during 1R27

**OTHER ACTIVITIES – BASELINE**

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

- (1) Unit 1, July 1, 2020 through June 30, 2021
- (2) Unit 2, July 1, 2020 through June 30, 2021

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

- (1) Unit 1, July 1, 2020 through June 30, 2021
- (2) Unit 2, July 1, 2020 through June 30, 2021

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

- (1) Unit 1, July 1, 2020 through June 30, 2021
- (2) Unit 2, July 1, 2020 through June 30, 2021

OR01: Occupational Exposure Control Effectiveness Sample (IP Section 02.15) (1 Sample)

- (1) Unit 1 for the period of June 30, 2020 through June 30, 2021  
Unit 2 for the period of June 30, 2020 through June 30, 2021

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual  
Radiological Effluent Occurrences (RETS/ODCM) Radiological Effluent Occurrences Sample  
(IP Section 02.16) (1 Sample)

- (1) Unit 1 for the period of June 30, 2020 through June 30, 2021  
Unit 2 for the period of June 30, 2020 through June 30, 2021

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 02.03) (2 Samples)

The inspectors reviewed the licensee’s implementation of its corrective action program related to the following issues:

- (1) CR-2021-00451, Part 21, Wedge pin failure in Anchor Darling motor operated double disk gate valves with threaded stem to upper wedge connections, boiling water reactor owners group industry topical report revision 5 on September 8, 2021
- (2) Reliability Issues with the Source Range Nuclear Instrument System at Unit 1 and Unit 2

71153 – Follow-Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

- (1) LER 0500000334/2021-001-00, Containment Isolation Valve Found Restrained Open Resulting in Condition Prohibited by Technical Specifications (ADAMS Accession No. ML21187A275). The inspection conclusions associated with this LER are documented in this report under Inspection Results for Report Section 71153. This LER is closed.

Reporting (IP Section 03.05) (1 Sample)

Inspectors evaluated the following event notifications (EN):

- (1) EN55413, Unit 1, Notification of UE Declared Due to Fire Alarms In Cable Tunnel, on August 18, 2021.

At 0021 on August 18 the licensee declared an UE due to the receipt of multiple fire alarms and a halon discharge in the Unit 1 cable tunnel. At 0036 on August 18 the fire brigade verified no signs of fire, and the licensee terminated the UE at 0401 based on no indication of fire. The inspectors evaluated this event notification and concluded the licensee correctly submitted this event notification as required per 50.72(a)(1)(i) for emergency declared.

**INSPECTION RESULTS**

Observation: Reliability Issues with Source Range Nuclear Instrument System at Unit 1 and Unit 2	71152
The inspectors performed an in-depth review of Beaver Valley Power Station (BVPS) corrective actions to address reliability issues for the Source Range Nuclear Instrumentation (SRNI) system at both Beaver Valley Unit 1 and Beaver Valley Unit 2. From 2017 to 2021, there have been a number of reliability issues associated with the SRNI system at both Beaver Valley units. Issues related to the SRNI system include noise spiking on the Source Range channel indications in the Control Room with the reactor at power and shutdown, unreliable Source Range power indication in the Control Room during reactor shutdown, and premature Source Range detector failures. Unreliability of SRNI systems has the potential to	

lead to complications on plant shutdowns and plant startups. In addition, detector failures can lead to outage schedule delays, operator burdens for unreliable power indication, impacts to maintenance outage resources, and increased radiological dose incurred to plant personnel during the detector replacement maintenance in containment. Reactor shutdown is the only condition under which detector calibration maintenance can be performed, which presents a challenge to predicting premature detector failures.

The inspectors determined that reliability issues associated with the SRNI system at BVPS Unit 1 and Unit 2 were identified at the appropriate level and entered into the corrective action system. In addition, corrective action evaluations, extent of condition reviews, and evaluation of station internal and external Operating Experience related to the SRNI system, were adequate for the reliability issues identified from November 2017 to August 2021. The inspectors noted that there is a limitation on the corrective actions that can be taken, due to the fact that maintenance can only be performed on Source Range detectors with the reactor shutdown. Energizing the Source Range detectors with the reactor at power is not recommended by the manufacturer, and will damage or destroy the detector anode in the presence of a high flux gamma and neutron field. BVPS currently performs the full range of maintenance and testing recommended by the Pressurized Water Reactor Owner's Group (PWROG) for the SRNI system. The inspectors noted that BVPS continues to work with the Source Range detector vendor and manufacturer, as well as engaging in bench marking efforts with the PWROG for long term reliability improvement for the system.

Corrective Action References: CR-2017-11133, CR-2020-01870, CR-2021-03569, CR-2017-04487, CR-2018-07140, CR-2018-07886, and CR-2020-03119.

Licensee-Identified Non-Cited Violation	71153
<p>This violation of very low safety significance was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.</p>	
<p>Violation: During BVPS Unit 1 startup activities from refueling outage 27, the licensee failed to maintain configuration control of containment isolation valve, 1-QS-4. Operators transitioned the plant from MODE 5, into MODE 4 on May 8, 2021 at 0356 and into MODE 3 on May 8, 2021 at 1028 with 1-QS-4, the quench spray train 'B' containment isolation valve inside containment, restrained open. 1-QS-4, was discovered restrained open in MODE 3 during a startup boric acid walkdown and was determined to be inoperable on May 8, 2021 at 1406. Operators removed the restraint and closed 1-QS-4 on May 8, 2021 at 1541. 1-QS-4 was restrained open and inoperable for a period of 11 hours and 45 minutes as operators transitioned the plant from MODE 5 to MODE 3. During this period the redundant outside containment isolation valve, MOV-1QS-101B, remained operable and closed.</p>	
<p>BVPS Unit 1 Technical Specification (TS) 3.6.3, "Containment Isolation Valves," limiting conditions for operation (LCO) requires all containment isolation valves to be operable in MODES 1, 2, 3, and 4. Unit 1 TS LCO 3.0.1, requires, in part, LCOs shall be met during the MODES or other specified conditions in the Applicability. Additionally, Unit 1 TS 3.0.4 requires, in part, that when an LCO is not met, entry into a MODE or other specified condition in the Applicability shall only be made after performance of a risk assessment addressing inoperable system and components, consideration of the results, determination of the acceptability of entering the MODE or other specified condition of Applicability, and establishment of risk management actions when a risk assessment has been performed determining that entry into the MODE is acceptable.</p>	

Contrary to the above, between, 0356 and 1028 on May 8, operators transitioned the plant out of MODE 5 and into MODE 3, with containment isolation valve, 1-QS-4, restrained open and inoperable, without the performance of a risk assessment addressing the inoperable valve, consideration of the results, determination of the acceptability of transitioning MODES, and the establishment of risk management actions that support that the MODE transition was acceptable.

Significance/Severity: Green. The inspectors assessed the significance of the finding using IMC 0609, Attachment 4, "Initial Characterization of Findings," effective December 20, 2019, and IMC 0609, Appendix A, "The Significance Determination Process for Findings at Power," Exhibit 3, for safety significance and determined that the finding was of very low safety significance (Green) because there was no actual open pathway in the physical integrity of reactor containment (valves, airlocks, etc.), failure of containment isolation system (logic and instrumentation), failure of containment pressure control equipment (including structures, systems, and components credited for compliance with Order EA-13-109), failure of containment heat removal components and it does not involve an actual reduction in function of hydrogen igniters in the reactor containment.

Corrective Action References: CR2021-03771

## **EXIT MEETINGS AND DEBRIEFS**

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

- On July 16, 2021, the inspectors presented the 71124.02 ALARA inspection results to Mr. John Grabnar, Site Vice President and other members of the licensee staff.
- On August 31, 2021, the inspectors presented the Reliability Issues with Source Range Nuclear Instrument System at Unit 1 and Unit 2 inspection results to Mr. Andrew Crotty, Strategic Engineering Manager and other members of the licensee staff.
- On October 21, 2021, the inspectors presented the integrated inspection results to Mr. Mark Manoleras, Director, Site Engineering, and other members of the licensee staff.

**DOCUMENTS REVIEWED**

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Corrective Action Documents	2021-04854		
		2021-05021		
		2021-05356		
		2021-05454		
		2021-05947		
	Miscellaneous Procedures		BVPS Certification of Summer Readiness letter	06/30/2021
		1/2OM-53C.4A.75.1	Acts of Nature – Severe Weather	Revision 24
		1OM-44F.4.AAA	Diesel Gen 1A Bld Exhaust Fan Thermal Overload	Revision 4
		1OM-44F.4.AAE	Intake Structure Supply Fan Thermal Overload	Revision 6
		1OM-52.4.B.1	Turbine Load Changes	Revision 2
		2OM-44F.1.B	Area Ventilation Summary Description	Revision 2
		2OM-44F.1.C	Area Ventilation Major Components	Revision 3
		2OM-44F.4	Operating Procedures, Area Ventilation Systems – Miscellaneous Systems, Issue 4	Revision 3
	2OM-44F.4.AAN	Local Standby Service Water Alternate Intake Structure Temperature High/Low	Revision 6	
71111.04	Drawings	RM-0413-001	Valve Oper No Diagram Containment Depressurization Sys	Revision 27
	Procedures	U1OST-13.1	Unit 1, Quench Spray Pump [1QS-P-1A] Test	Revision 46
		2OST-24.2	Motor Driven Auxiliary Feed Pump [2FWE-P23A] Test	Revision 43
		2OST-24.3	Motor Driven Auxiliary Feed Pump [2FWE-P23B] Test	Revision 45
		2OST-48.7	Padlock Review of Components Outside Containment	Revision 44
71111.05	Operability Evaluations	2PFP-CBLT-712	Cable Tunnel Fire Compartment 2-CB-1	Revision 6
	Procedures	1PFP-AXLB-768	Auxiliary Building General Area Fire Compartment 1-PA-1A	Revision 5
		2PFP-AXLB-718	Auxiliary Building General Area Fire Compartment 2-PA-3	Revision 3
		2PFP-CNTB-735-FAN		Revision 3
		2PFP-MSCV-735-East	East Cable Vault Fire Compartment 2-CV-2	Revision 4
		2PFP-MSCV-735-	West Cable Vault Fire Compartment 2-CV-1	Revision 6

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		West		
71111.06	Miscellaneous		Purchase specification for BVPS Unit 2, Sump pump, Mark No 2DBS-P-28/29	
		10090-N-868	Calculation for PRA Internal Flooding Scenario for BVPS Unit 2 Service Water	01/30/2012
		2PFP-CNTB-735-FAN	Fan Room Fire Compartment 2-CB-5	Revision 3
		Calculation 211-N-265	Unit 2 Flooding Analysis Outside Containment	05/28/1987
		PRA-BV2-AL_R07a	Internal Flooding PRA Notebook	Revision 7a
71111.11Q	Procedures	1OST-13.11B	Unit 1, Train B Quench Spray System Operability Test	Revision 13
		1OST-13.2	Unit 1, Quench Spray Pump (1QS-P-1B) Test	Revision 50
		2OM-53C.4.2.6.4	Unit 2, Steam Generator Tube Leakage	Revision 30
71111.12	Corrective Action Documents	2021-04107		
	Miscellaneous		Maintenance Rule System Basis Document, Area Ventilation Systems – Miscellaneous Systems, System 44F	Revision 8
			Maintenance Rule System Basis Document, 480 Volt Station Service System, System 37	Revision 5
71111.13	Corrective Action Documents	2021-05364		
		2021-05448		
		2021-05915	Excessive Service Water Strainer 2SWS-STRM48 Packing Leakage	8/5/2021
		2021-05950		
		2021-06397		
	Drawings	RS-38E, Beaver Valley Unit 2	Fuel & Decontamination BLDG Misc Framing & Details	02/20/1979
	Miscellaneous		Lift plan, Performing Lifts into Unit 1 Switchgear – Protected Train – Using Crane Bridge Only with Portable Hoist	approved 08/25/2021
			Risk Management Plan for Yellow risk	signed 07/06/2021
			Lift plan, SB-1 Clean Shop Flood Plug Lift with Crane Bridge only and Portable Hoist	approved 08/27/2021



Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		BV2REV7A	Whatif 1 Current Risk Summary Report	08/05/2021 at 1045
		EER 601328660	Engineering Evaluation of crane end stops for pull force	
	Procedures	1OST-1.27B	Slave Relay Test K636B, SG Feedwater Bypass Valves	Revision 0
		2OM-37.4.Z, Unit 2	Clearing Non-Emergency Motor Control Centers	Revision 25
		2OM-38.5.B.2	Unit 2, Table 38-2 AC Distribution Panel Load List	Revision 39
	Work Orders	NOP-OP-1007	Risk Management	Revision 35
200811128		addendum 9		
71111.15	Corrective Action Documents	2021-03784		
		2021-04854		
		2021-04900		
		2021-05027		
		2021-05358		
		2021-05947		
		2021-06148		
		2021-06647		
	Corrective Action Documents Resulting from Inspection	2021-05758		
		2021-06232		
		2021-06945		
	Miscellaneous		Engine Systems, Inc. Woodward Nuclear Distributor, Mechanical Governor Condition Report	05/26/2021
		10080-UR(B)-500	Calculation Addendum	Revision 1, Addendum 1
		2OM-44F.4.AAC	Intake Structure Vent Fan Auto Trip/-Temp Trouble	Revision 8
		8700-UR(B)-219	Calculation Computation	Revision 3
Calculation 10080-US(B)-230		BV2 ESGR Area Heatup Following a Loss of Ventilation for PRA Analysis	09/28/1998	
EER Notification 601323974				
Notification 601323889		Engineering Evaluation Request for CR 2021-05027 regarding past operability	06/30/2021	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		UR(B)-219	Calculational Site Boundary and Control Room Doses following a steam Generator Tube Rupture based on Core Uprate and Alternative Source Term	Revision 3
	Procedures	1BVT 1.11.2	Unit 1 Safety Injection Recirculation MODE Leak Test	Revision 17
		1OST-24.9	Turbine Driven AFW Pump (1FW-P-2) Operability Test	Revision 61
		2OM-44F.4.A	Miscellaneous Ventilation Systems Startup, Normal Operations, and Shutdown of a QA Category I Systems	Revision 13
		2OM-44F.4.AAC	Intake Structure Vent Fan Auto Trip/-Temp Trouble	Revision 8
		2OM-44F.4.AAD	Emergency SWGR Ventilation Auto-Start/Auto-Stop	Revision 11
		2OST-44F.1	Periodic Ventilation Equipment Rotation	Revision 16
	NOP-WM-5008,	Control of Scaffolding	effective 08/29/2017	
71111.19	Corrective Action Documents	2021-06665		
	Miscellaneous	Notification 601325261		
	Procedures	½-CMP-M-75-031	Pump Packing Instruction	Revision 9
		1OST-16.1	Supplementary Leak Collection and Release Test For Exhaust Through The Main Filter Bank – Train A	Revision 14
		1OST-30.1B	1WR-P-9B Auxiliary River Water Pump Test	Revision 57
		1OST-47.3G	Containment Isolation and ASME Test-Work Week 3	Revision 19
		NOP-CC-5760	Ultrasonic Detection and Sizing of Gas Voids in Liquid Systems	Revision 02
	Work Orders	200776194		
		200797756	BV-1SOT-30.1B Auxiliary River Water Pump WR-P-9B Test	
200798688				
71114.06	Procedures	1OMM-53C.4.1.6.4	Unit 1, Steam Generator Tube Leakage	Revision 37
71124.02	Corrective Action Documents Resulting from Inspection	2021-05383	Potential Locked High Radiation Area Control Concern	7/14/2021
	Miscellaneous		1R27 ALARA Post Outage Report	06/21/2021
71152	Calibration	BV-1MSP-02_09-I	Unit 1 Nuclear Instrumentation Source Range N31 Calibration	05/12/2020

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	Records	BV-1MSP-02_10-I	Unit 1 Nuclear Instrumentation Source Range N32 Calibration	07/20/2021
		BV-1MSP-02_15-I	Unit 1 N31 Neutron Detector Channel Calibration	04/12/2021
		BV-1MSP-02_16-I	Unit 1 N32 Neutron Detector Channel Calibration	10/16/2019
		BV-2MSP-02_09-I	Unit 2 Nuclear Instrumentation Source Range N31 Calibration	07/07/2020
		BV-2MSP-02_10-I	Unit 2 Nuclear Instrumentation Source Range N32 Calibration	02/04/2021
		BV-2MSP-02_16-I	Unit 2 Nuclear Instrumentation Source Range N32 Calibration	04/13/2020
	Corrective Action Documents	2017-04486, 2017-04487, 2017-05116, 2017-11132, 2017-11133, 2018-07140, 2018-07600, 2018-07886, 2020-00688, 2020-01870, 2020-03111, 2020-03119, 2020-03153, 2020-03172, 2020-04021, 2021-00863, 2021-03569		
		2021-00451		
	Miscellaneous	Beaver Valley Unit 1 Maintenance Rule System Basis Document	Reactor Excore Instrumentation System, System 02	Revision 4
		Beaver Valley Unit 2 Maintenance Rule System Basis Document	Reactor Excore Instrumentation System, System 02	Revision 4

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		ML18008A063, LER 2017-003	BVPS Unit 1 Reactor Trip due to Turbine Trip and Automatic Initiation of Auxillary Feedwater System	01/04/2018
	Work Orders	200693784, 200734211, 200734212, 200735083, 200735083, 200761777		