



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

June 23, 2025

Barry Blair
Site Vice President
Vistra Operations Company, LLC
Beaver Valley Power Station
P.O. Box 4 - Route 168
Shippingport, PA 15077-0004

**SUBJECT: BEAVER VALLEY POWER STATION, UNITS 1 AND 2 – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000334/2025010 AND 05000412/2025010**

Dear Barry Blair:

On May 15, 2025, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Beaver Valley Power Station and discussed the results of this inspection with you 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 problem identification and resolution program to confirm that the station was complying with NRC regulations and licensee standards. Based on the samples reviewed, the team determined that your program complies with NRC regulations and applicable industry standards such that the Reactor Oversight Process can continue to be implemented.

The team also evaluated the station's effectiveness in identifying, prioritizing, evaluating, and correcting problems, reviewed licensee audits and self-assessments, and its use of industry and NRC operating experience information. The results of these evaluations are in the enclosure.

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.

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

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,

Jason E. Schussler, Team Leader
Technical Support and Administrative Team
Division of Operating Reactor Safety

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

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: BEAVER VALLEY POWER STATION, UNITS 1 AND 2 – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000334/2025010 AND 05000412/2025010 DATED JUNE 23, 2025

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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: 05000334/2025010 and 05000412/2025010

Enterprise Identifier: I-2025-010-0003

Licensee: Vistra Operations Company, LLC

Facility: Beaver Valley Power Station, Units 1 and 2

Location: Shippingport, PA

Inspection Dates: April 28, 2025 to May 15, 2025

Inspectors: M. Hardgrove, Senior Project Engineer
C. Khan, Senior Project Engineer
A. Nugent, Resident Inspector
S. Obadina, Reactor Operations Engineer

Approved By: Jason E. Schussler, Team Leader
Technical Support and Administrative Team
Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a biennial problem identification and resolution inspection at Beaver Valley Power Station, 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.

List of Findings and Violations

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

Additional Tracking Items

None.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedure (IP) 71152, "Problem Identification and Resolution (PI&R)," 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 03.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the effectiveness of the licensee's problem identification and resolution program, use of operating experience, self-assessments and audits, and safety-conscious work environment.
 - Problem Identification and Resolution Effectiveness: The inspectors assessed the effectiveness of the licensee's problem identification and resolution program in identifying, prioritizing, evaluating, and correcting problems. The inspectors also conducted a five-year review of Units 1 and 2 service water/river water systems. The corrective actions for the following non-cited violations (NCVs) and findings were evaluated as part of the assessment: NCV 05000334,05000412/2023402-02, NCV 05000334,05000412/2023402-04, NCV05000334,05000412/2023011-01, NCV 05000334,05000412/2023004-01, NCV 05000334,05000412/2023004-02, NCV 005000334,05000412/2023004-03, NCV 05000334,05000412/2024001-01, and NCV 05000334,05000412/2024003-01.
 - Operating Experience: The inspectors assessed the effectiveness of the licensee's processes for use of operating experience.
 - Self-Assessments and Audits: The inspectors assessed the effectiveness of the licensee's identification and correction of problems identified through 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

Assessment	71152B
Problem Identification and Resolution Program Effectiveness:	

The inspectors determined that the licensee's problem identification and resolution program for Beaver Valley was generally effective and adequately supported nuclear safety and security.

Identification: The team reviewed a sample of issues that have been processed through the licensee's problem identification and resolution program since the last biennial team inspection, including NCVs of regulatory requirements and other documented findings. The team determined that, based on the samples selected, the station identified issues and entered them into the corrective action program at a low threshold and timely manner. However, in this instance, the inspectors identified a minor performance deficiency when the licensee failed to comply with a self-imposed standard regarding procedure use and adherence. The minor performance deficiency is documented below.

Prioritization and Evaluation: Based on the samples reviewed, the team determined the licensee was generally effective at prioritizing and evaluating issues commensurate with the safety significance of the identified problem. Inspectors observed that at station corrective action program meetings, issues were generally screened and prioritized at the appropriate level and that corrective actions were assigned to address the issues. However, in this instance, the inspectors identified an observation regarding inadequate evaluation documentation. The observation is documented below.

Corrective Action: The team reviewed a sample of corrective actions and concluded that the licensee was generally effective in developing corrective actions that were appropriately focused to correct the identified problems.

Assessment	71152B
Operating Experience:	
The inspectors reviewed a sample of operating experience captured in the corrective action program and sampled operating experience from NRC, industry, vendors, and third-party groups. Overall, for the samples selected, the licensee was generally performing the appropriate assessments for station applicability.	

Assessment	71152B
Self-Assessments and Audits:	
The inspectors determined that the licensee was adequately performing self-assessments and audits in accordance with licensee procedures and implementing corrective actions as needed.	

Assessment	71152B
Safety-Conscious Work Environment:	
The team interviewed a total of 29 individuals in one-on-one interviews. The purpose of these interviews was (1) to evaluate the willingness of the licensee staff to raise nuclear safety issues, (2) to evaluate the perceived effectiveness of the corrective action program at resolving identified problems, and (3) to evaluate the licensee's safety-conscious work environment. The personnel interviewed were randomly selected by the inspectors from Engineering, Maintenance, Operations, Radiation Protection, Chemistry, Emergency Preparedness, and Security. To supplement these discussions, the team interviewed the	

Employee Concern Program (ECP) Coordinator to assess their perception of the site employees' willingness to raise nuclear safety concerns, and also reviewed the ECP case log and select case files.

All individuals interviewed indicated that they would raise safety concerns. Individuals felt that their management was receptive to receiving safety concerns and generally addressed them promptly, commensurate with the significance of the concern. Interviewees indicated that they were adequately trained and proficient on initiating condition reports. Most interviewees were aware of the licensee's ECP, and all stated they would use the program if necessary and expressed confidence that their confidentiality would be maintained if they brought issues to the ECP. When asked whether there have been any instances where individuals experienced retaliation or other negative reaction for raising safety concerns, all individuals interviewed stated that they had neither experienced nor heard of an instance of retaliation at the site. The team determined that the processes in place to mitigate potential safety culture issues were adequately implemented.

Minor Performance Deficiency

71152B

Minor Performance Deficiency

Minor Performance Deficiency: The inspectors identified a minor performance deficiency associated with procedure use and adherence during the station's performance of a containment leak rate test required by the technical specifications surveillance program. Specifically, on May 1, 2021, the station was using the standby instrument air compressor to perform a containment leak rate test during a refueling outage. The standby instrument air compressor did not have adequate diesel fuel for the required duration to perform the containment leak rate test. Subsequently, the standby instrument air compressor tripped and caused a pressure perturbation. This event is captured in CR-2021-03545.

The inspectors reviewed procedure 1BVT1.47.2, "Containment Type A Leak Test," Revision 8, for performing the containment leak rate test. This procedure states to manually start the standby instrument air compressor in accordance with 1OM-34.4.U, "Diesel Driven Air Compressor Operation." Procedure 1OM-34.4.U has a precaution for timely arrangements for delivery of diesel fuel for extended runs of the standby instrument air compressor. Procedure 1OM-34.4.U is a step-by-step, continuous use procedure defined in NOP-LP-2601, "Procedure/Work Instruction Use and Adherence," Revision 6. Specifically, step 4.2.7.1 states that step-by-step procedures are continuous use procedures required for complex or infrequent work activities for which the consequences of an improper action could have possibly irreversible adverse impact on safety, production, or reliability. In addition, step 4.2.7.2 states, in part, that prior to starting the task, the performer shall review the precautions, limitations, and prerequisites.

The inspectors determined that the licensee did not review the precautions, limitations, and prerequisites in 1OM-34.4.U in accordance with the requirements of NOP-LP-2601, therefore failing to make timely arrangements for delivery of diesel fuel for an extended run of the standby instrument air compressor.

The station implemented a corrective action to remove the Unit 2 option to use the standby instrument air compressor for the containment leak rate test and is in the process of removing the option on Unit 1.

Screening: The inspectors determined the performance deficiency was minor. The inspectors

evaluated the performance deficiency in accordance with the guidance in IMC 0612, Appendix B, "Issue Screening," and determined the issue was of minor significance because it did not adversely impact the mitigating systems cornerstone. Although the standby instrument air compressor tripped and caused a pressure perturbation, the plant conditions at the time were such that the transient did not challenge plant stability.

Observation: Documentation Quality

71152B

The inspectors identified instances where the station failed to promptly document issues resolutions within the corrective action program. Examples include:

- CR-2023-04187 for the motor-driven auxiliary feedwater pumps autostart function during MODES 1 and 2 for a trip of the main feedwater pump
- CR-2021-03545 for the trip of the standby instrument air compressor because of the loss of diesel fuel during a scheduled containment leak rate test during an outage
- CR-2021-08451 for broken linkage on a 21A steam generator atmospheric dump valve (PCV101A) local hand pump during manual stroke test

The evaluation of the motor-driven auxiliary feedwater pumps fails to document considerations of all MODES of technical specification required applicability, MODES 1, 2, and certain conditions of MODE 3 associated with removing the autostart function. Additionally, CR-2021-03545 for the standby instrument air compressor calls for 9000 cfm compressor capacity, where the procedure calls for combined compressor capacity of 9000 cfm to perform the containment leak rate test. Lastly, the PCV101A valve had a linkage break due to degradation during a test following manual operation of the valve during an outage. The inspectors note multiple valves were not adequately documented to show the condition of the valves, what work was done, the bases for decision-making, and if any extent of condition was completed. The inspectors independently evaluated the deficiencies noted above for significance in accordance with the guidance in IMC 0612, Appendix B, "Issue Screening," and Appendix E, "Examples of Minor Issues." The inspectors determined that none of the conditions were deficiencies of greater than minor significance and therefore area not subject to enforcement action in accordance with NRC's Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

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

- On May 15, 2025, the inspectors presented the biennial problem identification and resolution inspection results to Barry Blair and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Corrective Action Documents		ATL-2022-0092-ATA-39, ATL-2022-0092-ATA-40, ATL-2023-0084-ASTA-33, ATL-2023-0084-ASTA-35, ATL-2023-0084-ATA-38	
			CR-2019-07935, CR-2021-02880, CR-2021-03545, CR-2021-03673, CR-2021-04700, CR-2021-07851, CR-2021-08451, CR-2021-08469, CR-2022-04751, CR-2022-05622, CR-2022-07344, CR-2022-08430, CR-2022-08692, CR-2022-08957, CR-2023-00131, CR-2023-00825, CR-2023-01140, CR-2023-01196, CR-2023-02216, CR-2023-02775, CR-2023-02859, CR-2023-02904, CR-2023-02910, CR-2023-03224, CR-2023-03388, CR-2023-03414, CR-2023-03454, CR-2023-03610, CR-2023-03906, CR-2023-04102, CR-2023-04105, CR-2023-04187, CR-2023-04504, CR-2023-04732, CR-2023-04798, CR-2023-05103, CR-2023-05349, CR-2023-05428, CR-2023-05435, CR-2023-05517, CR-2023-05649, CR-2023-05660, CR-2023-05720, CR-2023-05755, CR-2023-06057, CR-2023-06158, CR-2023-06404, CR-2023-06932, CR-2023-06994, CR-2023-07026, CR-2023-07093, CR-2023-07293, CR-2023-07344, CR-2023-07418, CR-2023-07462, CR-2023-08366, CR-2023-08586, CR-2023-08642, CR-2023-08705, CR-2023-08710, CR-2023-08937, CR-2023-09028, CR-2023-09126, CR-2023-09126, CR-2023-09244, CR-2023-09405, CR-2024-00044, CR-2024-00201, CR-2024-00514, CR-2024-00806, CR-2024-01204, CR-2024-01396, CR-2024-02092, CR-2024-02501, CR-2024-02807, CR-2024-02885, CR-2024-03128, CR-2024-03128, CR-2024-03129, CR-2024-03520, CR-2024-03753, CR-2024-04141, CR-2024-04203, CR-2024-04203, CR-2024-04203, CR-2024-04270, CR-2024-04327,	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			CR-2024-04692, CR-2024-04750, CR-2024-04798, CR-2024-05069, CR-2024-05230, CR-2024-05405, CR-2024-05449, CR-2024-05850, CR-2024-06468, CR-2024-06468, CR-2024-06601, CR-2024-06702, CR-2024-07442, CR-2024-07578, CR-2024-07702, CR-2024-07723, CR-2024-07829, CR-2024-07984, CR-2024-07995, CR-2024-08004, CR-2024-08008, CR-2024-08066, CR-2024-08776, CR-2024-08779, CR-2024-08787, CR-2024-08816, CR-2024-08827, CR-2024-08890, CR-2024-08913, CR-2024-09002, CR-2024-09016, CR-2024-09016, CR-2024-09042, CR-2024-09114, CR-2024-09133, CR-2024-09213, CR-2024-09430, CR-2024-09439, CR-2024-09439, CR-2024-09455, CR-2024-09456, CR-2024-09457, CR-2024-09458, CR-2024-09481, CR-2024-09481, CR-2024-09611, CR-2024-09829, CR-2025-00044, CR-2025-00044, CR-2025-00059, CR-2025-00059, CR-2025-00331, CR-2025-00530, CR-2025-00607, CR-2025-00639, CR-2025-01471, CR-2025-01487	
	Corrective Action Documents Resulting from Inspection	CR-2025-03430 CR-2025-03489		
	Drawings	RM-0411-001	Piping and Instrumentation Diagram, Safety Injection System, Unit 1	33
		RM-0411-002,	Piping & Instrumentation Diagram, Safety Injection System, Unit 1	19
	Engineering Evaluations	601411339		
		601450172		
	Procedures	1/2-ADM-1906	Control of Transient Combustible and Flammable Materials	20
		1/2-ADM-2021	Control of Penetrations (Including HELB Doors)	17
		1/2-PMP-E-36-015	ITE Medium Voltage Circuit Breaker Inspection and Test Model 5HK-250/350	34
		1/2MI-60-Polar	Polar Crane Operating Guide	2

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		Crane-1M		
		1/2OST-33.12B	Fire Pump Flow Test	4
		1/2OST-57.3	Initial Notification System Test	23
		1BVT 1.47.2	Containment Type A Leak Test	8
		1DBD-34	Design Basis Document for Compressed Air Systems	8
		1OM-11.4G	Pressurizer Safety Injection Accumulator [1SI-TK-1A (1B)(1C)]	16
		1OM-34.4.U	Diesel Driven Air Compressor [1IA-C-4] Operation	11
		1OM-53C.4.1.34.1	Loss Of Station Instrument Air	32
		1OST-1.10K	Cold Shutdown Valve Exercise Test (Part K) Main Feedwater Valves	8
		1OST-11.14A	LHSI Full Flow Test	37
		1OST-33.4	Fire Protection System Hydrant Test	17
		2-CMP-M-75-A35-5A	Operation of Rolling Steel Door A35-5 and Missile Shield Door A35-5A	0
		2-CMP-M-75-F66-3	Operation of Fuel Building Rolling Door F66-2 and Fuel Building Missile Door F66-3	0
		2BVT 1.47.2	Containment Type A Leak Test	4
		2OM-24.4.D	Placing a Steam Generator Feed Pump In Service	31
		2OST-33.4	Fire Protection System Hydrant Test	18
		2OST-36.1	Emergency Diesel Generator [2EGS*EG2-1] Monthly Test	89
		EPP-I-1a	Recognition and Classification of Emergency Conditions	21
		NOP-LP-2001	Corrective Action Program	50
		NOP-LP-2601	Procedure/Work Instruction Use and Adherence	6
	Self-Assessments	1-QFO-2024-0005		
		ATA-2022-0755-ATA-16		
		MS-C-11-24		
		MS-C-23-08-20		
		MS-C-23-10-18		
		MS-C-23-11-24		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		MS-C-24-08-03		
		MS-C-24-09-19		
		QFO-2024-0004		
	Work Orders		200505485, 200667826, 200835845, 200866193, 200867624, 200867626, 200870946, 200873609, 200878258, 200878842, 200893694, 200900108, 200912374, 200913391, 200919207, 200919212, 200923947, 200956108, 200962460, 200966295	