



FirstEnergy Nuclear Operating Company

Beaver Valley Power Station
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February 5, 2015
L-15-051

10 CFR 50.73

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT:
Beaver Valley Power Station, Unit No. 2
Docket No. 50-412, License No. NPF-73
LER 2014-006-00

Enclosed is Licensee Event Report (LER) 2014-006-00, "Unplanned Automatic Actuation of both Standby Service Water Pumps." This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv)(A).

There are no regulatory commitments contained in this submittal. Any actions discussed in this document that represent intended or planned actions are described for the NRC's information, and are not regulatory commitments.

If there are any questions or if additional information is required, please contact Mr. William C. Cothen, Manager, Regulatory Compliance at 724-682-4284.

Sincerely,

Eric A. Larson

Enclosure – BVPS Unit 2 LER 2014-006-00

cc: Mr. D. H. Dorman, NRC Region I Administrator
Mr. J. A. Krafty, NRC Senior Resident Inspector
Ms. T. A. Lamb, NRR Project Manager
INPO Records Center (via INPO Consolidated Event System)
Mr. L. E. Ryan (BRP/DEP)

TE22
NRR

(02-2014)

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME Beaver Valley Power Station Unit Number 2	2. DOCKET NUMBER 05000412	3. PAGE 1 OF 3
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4. TITLE
Unplanned Automatic Actuation of both Standby Service Water Pumps

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
12	09	2014	2014	006	00	02	05	2015	None	
									FACILITY NAME	DOCKET NUMBER
									None	

9. OPERATING MODE Mode 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)									
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
10. POWER LEVEL 100	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A						

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT William Cothen, Manager, Regulatory Compliance	TELEPHONE NUMBER (Include Area Code) 724-682-4284
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED YES (If yes, complete 15. EXPECTED SUBMISSION DATE) NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On December 9, 2014, at 1929 hours Beaver Valley Power Station (BVPS) Unit 2 experienced an unplanned automatic start of both Standby Service Water Pumps (2SWE-P21A and 21B). An equipment clearance was being restored when 2SWE-P21A pump started automatically. Within seconds of the automatic start, 2SWE-P21B pump started due to a brief low header pressure condition that occurred while the discharge valve for the 2SWE-P21A pump was cycling open prior to the 2SWE-P21A pump reaching its rated speed and discharge pressure. Operations confirmed plant stability and verified that the standby pumps were not required to be running. Both pumps were secured and placed in automatic after approximately five minutes of run time.

The cause of this event was a circuit interaction which occurred when a 120 VAC breaker was closed.

This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv)(A) as a condition that resulted in the actuation of an emergency service water system that does not normally run and that serves as an ultimate heat sink which is a system listed in 10 CFR 50.73(a)(2)(iv)(B)(9).

Corrective actions include providing additional clearance instructions to ensure that appropriate actions are taken for clearances involving NAS cards.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

Estimated burden per response to comply with this mandatory information collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Beaver Valley Power Station Unit Number 2	05000412	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 3
		2014	- 006	- 00	

NARRATIVE

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

CONDITIONS PRIOR TO OCCURRENCE

Unit 2: Mode 1, 100% power

There were no systems, structures, or components (SSCs) that were inoperable at the start of the event that contributed to the event.

DESCRIPTION OF EVENT

On December 9, 2014 at 1929 hours, Beaver Valley Power Station (BVPS) Unit 2 experienced an unplanned automatic start of both Standby Service Water (SWE) [KG] Pumps [P] (2SWE-P21A and 21B). An equipment clearance was being restored when 2SWE-P21A pump started automatically. Within seconds 2SWE-P21B pump started due to a brief low header pressure condition that occurred while the discharge valve for the 2SWE-P21A pump was cycling open prior to the 2SWE-P21A pump reaching its rated speed and discharge pressure. The automatic start occurred during a clearance activity that was restoring power to a recently replaced ventilation system relay [RLY] by closing a 120 VAC breaker [BKR]. This same breaker supplies power to the automatic start relay of the 2SWE-P21A pump. Operations confirmed plant stability and verified that the standby pumps were not required to be running. Both pumps were secured and placed in automatic after approximately five minutes of run time.

CAUSE OF EVENT

The cause of this event was a circuit interaction which occurred when a 120 VAC breaker was closed. The coil for a ventilation system relay, which was just replaced, shares the same 120 VAC power supply and is in parallel with the relay that starts 2SWE-P21A on low header pressure. These two auxiliary relays are also controlled by NAS cards (AC controllers) located in the same process rack. The function of these auxiliary relays is to provide an interface between the 7300 system instrument channel and the 120 VAC control circuit. The interaction involved energizing (spiking) the NAS card for 2SWE-P21A when power was restored to the ventilation relay. This resulted in the unplanned automatic start of 2SWE-P21A and subsequent start of 2SWE-P21B on low header pressure.

ANALYSIS OF EVENT

The safety significance associated with the unplanned automatic start of pump 2SWE-P21A on December 9, 2014 is considered to be very low. This determination is based on the fact that the normally operating service water pumps and their respective headers remained available to provide the necessary risk significant functions. Furthermore, the subsequent unplanned automatic start of pump 2SWE-P21B is also considered of very low risk significance as this risk significant SSC functioned as designed in response to low header pressure. The unit remained in MODE 1 at the time of these unplanned automatic starts, and both of the Service Water headers remained available throughout the event to support their safety functions.

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NARRATIVE

This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv)(A) as a condition that resulted in the actuation of an emergency service water system that does not normally run and that serves as an ultimate heat sink which is a system listed in 10 CFR 50.73(a)(2)(iv)(B)(9).

CORRECTIVE ACTIONS

1. The clearance instructions for the redundant train relays have been revised to place 2SWE-P21B in Pull-to-Lock during relay replacement.
2. Additional clearance / procedural instructions will be provided to ensure that appropriate actions are taken for clearances and procedures involving NAS cards.
3. A Standing Night Order to emphasize the need for additional awareness when de-energizing / energizing components with NAS cards in the circuit will be issued.

Completion of the above and other corrective actions are being tracked through the BVPS Corrective Action Program.

PREVIOUS SIMILAR EVENTS

A review of BVPS Licensee Event Reports (LERs) for the previous 10 years has found no prior BVPS Unit 1 and three prior Unit 2 LERs involving a valid actuation of a Standby Service Water pump.

BVPS Unit 2 LER 2012-001-00, "Automatic Actuation of Standby Service Water Pump During Emergency Diesel Generator Test"

BVPS Unit 2 LER 2011-003-00, "Automatic Actuation of Standby Service Water Pump Following Unexpected Service Water Pump Trip"

BVPS Unit 2 LER 2005-002-00, "Automatic Actuation of Standby Service Water Pump Following Unexpected Service Water Pump Trip"

CR-2014-18135