



DEC 09 2002

LRN - 02 - 0412

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

LER 272/02-005-00
SALEM GENERATING STATION - UNIT 1
FACILITY OPERATING LICENSE NO. DPR-70
DOCKET NO. 50-272

This Licensee Event Report, "Unexpected Auto-Start of Turbine Driven Auxiliary Feedwater Pump at Start of Refueling Outage", is being submitted pursuant to the requirements of the Code of Federal Regulations 10CFR50.73(a)(2)(i)(A).

The attached LER contains no commitments.

Sincerely,

A handwritten signature in black ink, appearing to read "D. F. Garchow".

D. F. Garchow
Vice President - Operations

Attachment

/HGB

C Distribution
LER File 3.7

Handwritten initials "JED2" in black ink.

Estimated burden per response to comply with this mandatory information collection request. 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U S Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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 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.

LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME Salem Unit 1	2. DOCKET NUMBER 05000272	3. PAGE 1 OF 3
---	-------------------------------------	--------------------------

4. TITLE
Unexpected Auto-Start of Turbine Driven Auxiliary Feedwater Pump at Start of Refueling Outage

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	10	02	02	- 005 -	00	12	09	02		05000
										05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check all that apply)	20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
10. POWER LEVEL 20%		20.2201(d)	20.2203(a)(4)	50.73(a)(2)(iii)	50.73(a)(2)(x)
		20.2203(a)(1)	50.36(c)(1)(i)(A)	50.73(a)(2)(iv)(A)	73.71(a)(4)
		20.2203(a)(2)(i)	50.36(c)(1)(ii)(A)	50.73(a)(2)(v)(A)	73.71(a)(5)
		20.2203(a)(2)(ii)	50.36(c)(2)	50.73(a)(2)(v)(B)	OTHER
		20.2203(a)(2)(iii)	50.46(a)(3)(ii)	50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.73(a)(2)(i)(A)	50.73(a)(2)(v)(D)	
		20.2203(a)(2)(v)	50.73(a)(2)(i)(B)	50.73(a)(2)(vii)	
	20.2203(a)(2)(vi)	50.73(a)(2)(i)(C)	50.73(a)(2)(viii)(A)		
	20.2203(a)(3)(i)	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(B)		

12. LICENSEE CONTACT FOR THIS LER

NAME Howard G. Berrick	TELEPHONE NUMBER (Include Area Code) (856) 339 - 1862
----------------------------------	---

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

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

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

On October 10, 2002 at 2016 hours, during the scheduled performance of a manual trip of Salem Unit 1 to begin the 1R15 refueling outage, an unexpected auto start of the No. 13 Auxiliary Feed pump occurred. This auto start was a result of Steam Generator levels reaching the Low-Low Level Setpoint. The Steam Generator Low-Low Level Setpoint was revised earlier this year from 9% to 14% narrow range as a result of a Westinghouse identified industry concern. This was the first planned Unit trip since the Low-Low Level setpoints had been revised.

There were no actual safety consequences associated with this event. The No. 13 Auxiliary feedwater pump was stopped, and plant cooldown continued in accordance with Technical Specification limits.

This event is reportable under 10 CFR 50.73 (a)(2)(iv)(A) as an actuation of the auxiliary feedwater system.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
SALEM UNIT 2	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		02	- 005	- 00	

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

PLANT AND SYSTEM IDENTIFICATION

Westinghouse - Pressurized Water Reactor
Feedwater/Steam Generator Level Control System (JB)*

* Energy Industry Identification System (EIIS) codes and component function identifier codes appear in the text as {SS/CCC}.

IDENTIFICATION OF OCCURRENCE

Event Date: October 10, 2002
Discovery Date: October 10, 2002

CONDITIONS PRIOR TO OCCURRENCE

Mode 1 – 20%

DESCRIPTION OF OCCURRENCE

On October 10, 2002 at 2016 hours, following the scheduled manual trip of Salem Unit 1 to begin 1R15 refueling outage, an unexpected auto-start of the No. 13 Turbine Driven Auxiliary Feed pump (TDAFP) occurred. The No. 11 and 12 Motor Driven Auxiliary Feedwater pumps (MDAFP) had been started manually prior to the trip, per procedure. On the reactor trip (at 20% Reactor power), the steam generator levels lowered as expected. The auto-start of the TDAFP occurred as a result of the low-low Steam Generator (SG) level setpoints {JB} being exceeded post trip on at least two of the SGs. The TDAFP started on valid steam generator low-low levels at the steam generators. The low-low level alarm setpoints had been revised upward from 9% Narrow Range (NR) to 14% NR. This had occurred earlier in the year as a result of generic Westinghouse industry notification. The Salem Unit 1 scheduled refueling outage had been the first planned unit trip since the SG Low-Low level setpoints had been revised.

A review of this event determined that a Safety System Functional Failure (SSFF) as defined in NEI 99-02 did not occur. No structures, systems or components were inoperable at the time of this event that contributed to this event.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)
SALEM UNIT 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		02	- 005	- 00	

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

CAUSE OF OCCURRENCE

The apparent cause of the unexpected auto start of the TDAFP was ineffective implementation of the Design Change Package (DCP) for the SG low-low level setpoint change in response to a Westinghouse identified industry concern. During the DCP development, it was not recognized that the normal shrink following a reactor trip from 20% reactor power could lower levels enough to result in an auto start of the AFW pump.

PRIOR SIMILAR OCCURRENCES

Prior Salem Units 1 and 2, and Hope Creek LERs, from 1999 through 2002, were reviewed. No similar occurrences have been identified.

SAFETY CONSEQUENCES AND IMPLICATIONS

There were no actual safety consequences associated with this event. The reactor had been manually tripped at 20% power. All systems operated as required. No PORVs or Safety Relief valves lifted. Post trip, main feedwater to the SGs was isolated due to the feedwater interlock, which is expected with a reactor trip. The 11 and 12 MDAFP were operable and maintaining adequate feedwater flow to SGs, and the TDAFP was shutdown by procedure.

Based on the above, this event did not affect the health and safety of the public.

CORRECTIVE ACTIONS

1. The TDAFP was stopped and the SG levels controlled with the MDAFPs.
2. A re-evaluation will be performed of procedures (Implementing, Emergency Operating and Abnormal) to determine if additional changes are required for both Salem units. [A potential procedural change may be to include the expectation for TDAFP auto-start.]
3. An evaluation of the SG Low-Low Level Setpoint calculation will be performed to determine if there are conservatisms in the current setpoint of 14% NR.
4. An evaluation of the simulator will be performed to ensure it accurately matches the plant response for SG low-low level setpoints and safety system actuations.
5. This event will be reviewed by the Engineering Human Performance Review Board to incorporate lessons learned into the design change process.

COMMITMENTS

The corrective actions cited in this LER are voluntary enhancements and do not constitute commitments.