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Nuclear Business Unit

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LER 272/99-008-00
SALEM GENERATING STATION – UNIT 1
FACILITY OPERATING LICENSE NO. DPR-70
DOCKET NO. 50-272

Gentlemen:

This Licensee Event Report entitled "Engineered Safety Feature Actuation, 1R11A Containment Air Particulate Monitor Alarm and Containment Ventilation System Isolation" is being submitted pursuant to the requirements of the Code of Federal Regulations ****10CFR50.73(a)(2)(iv)****

Sincerely,

Mark B. Bezilla
Vice President – Operations

/rbk
Attachment

C Distribution
LER File 3.7

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PDR ADOCK

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If 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.

LICENSEE EVENT REPORT (LER)

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

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TITLE (4)

Engineered Safety Feature Actuation, 1R11A Containment Air Particulate Monitor Alarm and Containment Ventilation System Isolation

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
09	25	99	99	-- 008 --	00	10	25	99		05000
									FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	6	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	0	20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)
		20.2203(a)(1)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)	X 50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Brooke Knieriem, Licensing Engineer	(856) 339-1782

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

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

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

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

This LER reports the automatic actuation of an Engineered Safety Feature (ESF) due to a valid signal, as required by 10CFR50.73(a)(2)(iv). On September 25, 1999 the Salem Unit 1 Containment Air Particulate (1R11A) alarmed in response to a valid high radiation condition, causing a Containment Ventilation system isolation.

The high radiation condition was caused by the release of particulate activity during the performance of local leak rate testing, due to poor radiological work practices. In preparation for the performance of local leak rate test on Chemical and Volume Control System, station personnel blew down a section of piping using compressed air directly to the containment atmosphere. Since the discharge was not filtered, particulate activity in the containment increased to above the 1R11A alarm/trip setpoint and actuated a Containment Ventilation System isolation.

The corrective Actions for this event included containment atmosphere monitoring to verify that an abnormal radiological condition did not exist. All personnel who perform local leak rate tests were advised of the details of this event. Additionally, local leak rate test procedures will be modified to add precautions for performing pressurized draining of potentially contaminated systems to avoid releasing radioactive contaminants into the containment atmosphere.

PLANT AND SYSTEM IDENTIFICATION

Westinghouse - Pressurized Water Reactor

Engineered Safety Feature Actuation System {JE/-}*
Radiation Monitoring Instrumentation {IL/-}
Containment Ventilation System {BF/-}
Chemical and Volume Control System {CB/-}

* Energy Industry Identification System (EIIS) codes and component function identifier codes appear as {SS/CC}

CONDITIONS PRIOR TO OCCURRENCE

At the time of the occurrence, Salem Unit 1 was shutdown, in Mode 6 with the Reactor Coolant system depressurized. Containment closure was established to support refueling operations. Containment purge was in progress as permitted by Salem Technical Specifications.

DESCRIPTION OF OCCURRENCE

At approximately 2100, on September 25, 1999 station personnel connected a drain hose to a section of piping in the Salem Unit 1 Chemical and Volume Control System {CB/-} between valves 13CV293 and 13CV294 in preparation for a leak test of check valve 13CV99. This hose was directed to the Containment Annulus drain at the 78' level. Since the section of piping being drained does not contain a high point vent, a hose was connected to another drain connection to supply compressed air to blow down that section of piping. The piping was blown down until no evidence of water was observed coming from the drain hose. The drain was then isolated and the air hose and the drain hose were disconnected.

At 2330 the Salem Unit 1 1R11A Containment Radiation Air Particulate Monitor {IL/-} alarmed as the result of a valid radiological condition, producing an Engineered Safety Features (ESF) {JE/-} actuation signal to isolate the Containment Ventilation System {BF/-}.

Activities in progress in containment at the time of the 1R11A alarm and Containment Ventilation isolation were reviewed. The blowdown of the Chemical and Volume Control piping was determined to be the only activity in progress in Containment at the time of the event that could have produced an airborne radioactive particulate activity level of sufficient magnitude to produce the 1R11A alarm and the subsequent isolation.

APPARENT CAUSE OF OCCURRENCE

The apparent cause of the isolation of the Containment Ventilation system was the release of radioactive particulate from the Reactor Coolant system during blowdown of Chemical and Volume Control System piping in preparation for local leak rate testing due to inadequate radiological work practices. During venting of the piping section, air was not filtered but was vented directly to the Containment atmosphere. A review of activities in progress at the time of the event indicated that blowdown of the Chemical and Volume Control piping was the only activity in progress in Containment at the time of the event that could have produced an airborne radioactive particulate activity level of sufficient magnitude to produce the 1R11A alarm and the subsequent isolation.

PRIOR SIMILAR OCCURRENCES

A review of LERs for Salem Units 1 and 2 and Hope Creek for the past two years identified two reportable occurrences that involved the isolation of the Containment Ventilation System due to a valid radiation monitor signal. Salem Unit 2 Licensee Event Report 311/99-004-00 reported a Containment Ventilation System isolation that occurred as a result of an alarm/trip signal from the 2R12A Containment Noble Gas monitor during the removal of the reactor vessel head during refueling. Although a higher noble gas activity level is expected to occur under this condition, the event was reportable because it was not procedurally documented as an expected result of reactor head removal. Salem Unit 1 Licensee Event Report 272/99-007-00 reported a Containment Ventilation System isolation that occurred as a result of a conservative alarm/trip setpoint that did not account for noble gas spiking that will occur during normal outage activities.

SAFETY CONSEQUENCES

There were no safety consequences as a result of the event described in this LER. The function of the 1R11A is to measure air particulate radioactivity in the containment and to ensure that the release through the plant vent during purging is maintained below specified limits. The isolation of the Containment Ventilation system occurred as designed to isolate the Containment atmosphere to terminate the release to the outside environment.

In addition, because of the short duration of the event, the localized nature of the radioactivity, and the levels of radioactivity involved, the radiological consequences of this event to station personnel were minimal.

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

SAFETY CONSEQUENCES(Cont.)

A review of this event determined that a Safety System Functional Failure SSFF) as defined in NEI 99-02 did not occur. The 1R11A functioned as designed to isolate the Containment Ventilation system and no equipment failures were involved.

CORRECTIVE ACTIONS

1. The Containment atmosphere was monitored to verify that no abnormal radiological conditions existed.

2. The lessons learned from this event were discussed with personnel who perform local leak rate tests immediately following the event and prior to the performance of further leak rate testing. (70001409, Act.0050)

3. Salem Procedures S1.RA-IS.ZZ-0001(Q) and S2.RA-IS.ZZ-0001(Q), Salem 1 and 2, Type B and C Leak Rate Test, will be modified to add precautions for performing pressurized draining of potentially contaminated systems to avoid releasing radioactive contaminants into the containment atmosphere. (70001409, Act.0030 and Act. 0040)