PSEG Nuclear LLC
P O Box 236, Hancocks Bridge, New Jersey 08038-0236

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

SPECIAL REPORT 272/2002-003-00
SALEM GENERATING STATION UNIT NO. 1
FACILITY OPERATING LICENSE DPR-70
DOCKET NO. 50-272

Gentlemen:

This report entitled "Special Report - Waste Gas Oxygen Analyzer Inoperable Greater than 30 Days due to Low Sensor Output" is being submitted pursuant to the requirements of Technical Specification 3.3.3.9. The attached Special Report contains no commitments.

Sincerely,

D. F. Garchow

D. F. Garchow
Vice President - Operations

Attachment

/WJM

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NRC FORM 366 (7-2001)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

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

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

4. TITLE

Special Report - Waste Gas Oxygen Analyzer Inoperable Greater than 30 Days due to Low Sensor Output

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
									Salem Unit 1	05000272
08	08	02	2002	– 003	– 00	09	06	02	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE	1
10. POWER LEVEL	100

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)
	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)	X	OTHER Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iii)		50 46(a)(3)(ii)		50.73(a)(2)(v)(C)		
	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	TELEPHONE NUMBER (Include Area Code)
William McTigue, Licensing Engineer	856-339-1033

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
X	WE	AE	W185	Y					

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

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

On July 9, 2002, Salem Unit 1 waste gas analyzer (WGA) {WE/AE} failed its channel check due to oxygen concentration readings less than the acceptance criteria. The WGA has been removed from service and has been inoperable for greater than 30 days. The oxygen analyzers have repeatedly given lower than acceptable readings, typically within several weeks of being replaced or recalibrated. The low readings are attributed to failure of the oxygen sensors. The apparent cause is being investigated with the sensor manufacturer (Whitaker). Planned corrective actions include sensor repair or replacement upon completion of the apparent cause investigation.

There were no safety consequences associated with this event because alternate means of oxygen sampling and analysis remain available during waste gas holdup system operation. This Special Report is being submitted pursuant to Salem Unit 1 Technical Specification 3.3.3.9, for WGA inoperable greater than 30 consecutive days.

FACILITY NAME (1)	DOCKET (2) NUMBER (2)	LER NUMBER (6)					PAGE (3)		
		YEAR	SEQUENTIAL NUMBER			REVISION NUMBER			
Salem Generating Station Unit No. 1	05000272	2002	0	0	3	00	2	OF	3

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

PLANT AND SYSTEM IDENTIFICATION

Westinghouse – Pressurized Water Reactor
Waste Gas Holdup System – EIIS Identifier {WE/--} *

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

CONDITIONS PRIOR TO OCCURRENCE

Mode 1 – 100% power. No structures, systems, or components were inoperable at the time of the occurrence that contributed to the event.

DESCRIPTION OF OCCURRENCE

On July 9, 2002, Salem Unit 1 waste gas analyzer (WGA) {WE/AE} failed its channel check due to oxygen concentration readings less than the acceptance criteria. The WGA has been removed from service and has been inoperable for greater than 30 days. The WGA repeatedly indicated lower than expected values and has been declared inoperable several times in recent months. The oxygen sensors have previously been recalibrated or replaced to restore the WGA to operable status. The oxygen concentration readings would then return to unacceptably low values, typically after only several weeks of being returned to service. The WGA uses Whitaker oxygen sensors, Model No. 109C007-3, Rev. N.

Technical Specification action statement 3.3.3.9.b requires that action be taken to restore an inoperable oxygen analyzer channel within 30 days, and to submit a Special Report if unsuccessful. Waste gas system operation is permitted by Technical Specifications with an inoperable oxygen analyzer if alternate sampling and oxygen analysis is performed.

Because the oxygen analyzer has repeatedly given lower than acceptable readings, it remains removed from service pending further evaluation of apparent causes and implementation of corrective actions.

CAUSE OF OCCURRENCE

The waste gas oxygen analyzer is inoperable due to low output (or high negative output) from the oxygen sensor. The apparent cause of the low sensor output remains under investigation with support from the manufacturer.

CAUSE OF OCCURRENCE (continued)

The WGA has been inoperable for greater than 30 days to allow sufficient time for a thorough evaluation of apparent causes and implementation of corrective actions to prevent repeat sensor failures.

PRIOR SIMILAR OCCURRENCES

Based on a review of Salem LERs and Special Reports for the past two years, no events involving WGA inoperability for greater than 30 days were identified.

SAFETY CONSEQUENCES AND IMPLICATIONS

There are no safety consequences associated with the WGA being inoperable for greater than 30 days. The function of the waste gas oxygen analyzer is to monitor for potentially hazardous concentrations of oxygen in waste gas. Alternate capability to sample and analyze waste gas oxygen concentration remains available to meet the requirements of Technical Specification 3.3.3.9.

A review of this condition determined that a Safety System Functional Failure (SSFF) has not occurred as defined in Nuclear Energy Institute (NEI) 99-02.

CORRECTIVE ACTIONS

The WGA will be returned to operable status after completion of the ongoing oxygen sensor evaluation and sensor repair or replacement.

COMMITMENTS

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