10CFR50.73

Virginia Electric and Power Company
Surry Power Station
5570 Hog Island Road
Surry, Virginia 23883

September 11, 2005

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555-0001

Serial No.: 05-564
SPS: JSA
Docket No.: 50-280
50-281
License No.: DPR-32
DPR-37

Dear Sirs:

Pursuant to Technical Specifications Table 3.7-6, Virginia Electric and Power Company hereby submits the following Voluntary Special Report applicable to Surry Power Station Units 1 and 2.

Report No. 50-280, 50-281/2005-002-00

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be forwarded to the Management Safety Review Committee for its review.

Very truly yours,

Donald E. Jernigan,
Site Vice President Surry Power Station

Enclosure

Commitments contained in this letter:

None

IE22

cc: United States Nuclear Regulatory Commission
Region II
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30303-8931

Mr. N. P. Garrett
NRC Senior Resident Inspector
Surry Power Station

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY IMB: NO. 3150-0104 EXPIRES 06/30/2007

Estimated burden per response to comply with this mandatory 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 and FOIA/Privacy Service Branch (T-5 F52), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects@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.

LICENSEE EVENT REPORT (LER)

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

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Surry Power Station, Unit 1	05000 - 280	1 OF 4

4. TITLE

Radiation Monitors Inoperable Due to Condensation - Voluntary Special Report

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
									Surry Power Station, Unit 2	05000 - 281
07	25	2005	2005	— 002	— 00	09	11	2005	FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE

N

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)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☒ OTHER
☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER *(Include Area Code)*
Donald E. Jernigan, Site Vice President	(757) 365-2001

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	IL	MON	Kaman Sciences Corp	Y					

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)*

Units 1 and 2 were operating at 100% power on July 25, 2005, when a control room annunciator alarmed, indicating a problem with the effluent radiation monitors. The appropriate annunciator response and abnormal procedures were promptly performed and a low sample flow condition was identified for the gaseous vents system radiation monitor, 1-GW-RM-130-1. The monitor was declared inoperable at 23:30 and the preplanned alternate method of monitoring was initiated in accordance with Technical Specifications (TS) Table 3.7-6. An action statement was entered in accordance with TS Table 3.7-6, requiring restoration of the monitor within seven days or the submittal of a Special Report within 30 days. Investigation of the problem revealed formation of condensation, which restricted sample flow through the system. Additional heat trace was installed on the monitor sample lines to further reduce moisture accumulation. This Voluntary Special Report is being submitted pursuant to TS Table 3.7-6.

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

1.0 DESCRIPTION OF THE EVENT

Units 1 and 2 were operating at 100% on July 25, 2005, when control room annunciator 1-RMA-C4 [EIIS-IB] alarmed, indicating a problem with the effluent radiation monitors [EIIS-IL,MON]. The appropriate annunciator response and abnormal procedures were promptly performed and a low sample flow condition was identified for the gaseous vents system radiation monitor, 1-GW-RM-130-1 (normal range). As a result of this condition, 1-GW-RM-130-1 and 1-GW-RM-130-2 (high range) were declared inoperable at 23:30 and the preplanned alternate method of monitoring was initiated in accordance with Technical Specifications (TS) Table 3.7-6. An action statement was entered in accordance with TS Table 3.7-6, requiring restoration of the monitors within seven days or the submittal of a Special Report within 30 days.

Recent extreme weather conditions resulting in high dewpoint temperatures challenged the existing heat trace on the 1-GW-RM-130-1 skid during the weeks previous to this event. TS action statements were entered on several occasions but were not exceeded. Instrument and Controls (I&C) and Engineering personnel replaced components and optimized heat trace temperature control in an effort to reduce moisture accumulation and improve reliability of the system. In addition, aging and obsolescence issues have resulted in difficulty obtaining spare parts for these monitors. On July 27, 2005, additional heat trace was installed on the 1-GW-RM-130-1 skid. The system was returned to service on July 28, 2005 and the TS action statement was exited.

This Voluntary Special Report is being submitted pursuant to TS Table 3.7-6 since 1-GW-RM-130-1 experienced repetitive problems that challenged its operability over a period of several weeks.

2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

1-GW-RM-130-1 and 1-GW-RM-130-2 are designed to monitor effluents that may be released from the process vent stack following an accident. When the subject monitors were declared inoperable, the preplanned alternate method of monitoring was initiated, utilizing process vent stack high range effluent monitor, 1-GW-RM-122. In addition, Health Physics personnel were notified that the monitors were out of service. Therefore, this event resulted in no safety consequences or significant implications and the health and safety of the public were not affected at any time.

3.0 CAUSE

The sample suction line for 1-GW-RM-130-1 and 1-GW-RM-130-2 is heat traced to preclude moisture in the gas sample from condensing. An accumulation of moisture in the system is not desirable since it could affect the accuracy of iodine and particulate sampling, and potentially impede sample flow.

This event was caused by moisture condensation within the system that restricted the sample flow to the monitors.

4.0 IMMEDIATE CORRECTIVE ACTION(S)

The appropriate annunciator response and abnormal procedures were promptly performed.

1-GW-RM-130-1 and 1-GW-RM-130-2 were declared inoperable and the preplanned alternate method of monitoring was initiated.

5.0 ADDITIONAL CORRECTIVE ACTIONS

Due to the low sample flow indication, I&C changed filters and, upon investigation, found the flow control valve would not respond as required. The valve was replaced with a spare. After disassembling the replaced flow control valve, moisture was found in the valve body.

6.0 ACTIONS TO PREVENT RECURRENCE

To help minimize the potential for condensation within the system, heat trace was installed on the radiation monitors' skid and sample discharge line. The subject monitors' filters were checked for moisture during the next week with no recurrence.

7.0 SIMILAR EVENTS

Special Report No. 50-280, 50-281/1999-005-00
Radiation Monitors Inoperable Due to Heat Trace Failure

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8.0 MANUFACTURER/MODEL NUMBER

Kaman Science
Model: KMG-HRN, KMG-HRH

9.0 ADDITIONAL INFORMATION

A Design Change Package (DCP) to replace the Kaman Radiation Monitoring skids is being developed. Upon finalization and implementation of the DCP, the skids will be replaced with MGP Instrument monitors that will address the identified Kaman aging/obsolescence concerns and heat trace will be modified as required to ensure compatibility with the MGP equipment.