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(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CONT

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

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CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

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NAME OF EMPLOYEE J. L. Wilson

Phone: (804) 357-3184

ATTACHMENT 1  
SURRY POWER STATION, UNIT NO. 1  
DOCKET NO: 50-280  
REPORT NO: 83-057/03L-0  
EVENT DATE: 12-15-83

TITLE OF THE EVENT: DOSE EQUIVALENT IODINE LIMIT EXCEEDED

1. Description of the Event

On December 15, 1983, at 1600, following a unit trip from 100%, the specific activity sample of the reactor coolant showed a peak dose equivalent I-131 level of 1.68 microcuries/cc. This exceeds the dose equivalent I-131 T.S.3.1.D.2 limit of  $\leq 1.0$  microcuries/cc and is reportable per T.S.6.6.2.b.(2) and the special reporting requirements of T.S.3.1.D.4.

2. Probable Consequences and Status of Redundant Equipment

The limitations on the specific activity of the primary coolant ensure that the resulting 2 hour doses at the site boundary will not exceed an appropriately small fraction of 10 CFR 100 limits following a postulated steam generator tube rupture. Since the dose equivalent I-131 peak was below the Technical Specification upper limit of 10 microcuries/cc, the reactor coolant gross activity was below the value analyzed in the FSAR for a tube rupture and 1% failed fuel. Therefore, the health and safety of the public were not affected.

3. Cause

The Iodine Spike was caused by known, yet not specifically located, fuel element defects in the reactor core. Post trip conditions enhanced the release of fission products, specifically I-131 which caused an increase in the coolant specific activity level.

4. Immediate Corrective Action

The immediate corrective action was to implement the actions required by T.S. Table 4.1.2.B. Specifically, the level dose equivalent I-131 was monitored every 4 hours until the level returned to less than 1.0 microcuries/cc.

5. Subsequent Corrective Action

No further corrective actions will be taken at this time.

6. Action Taken to Prevent Recurrence

The specific activity of the reactor coolant system will continue to be monitored as required by T.S. Table 4.1.2.B.

7. Generic Implications

None.

SUPPLEMENTAL INFORMATION

The supplemental information required by T.S.3.1.D.4 "Special Report" is included as follows:

1. Reactor Power History 48 hours prior to the event:

December 13, 1983 - 24 hours at 100%  
December 14, 1983 - 24 hours at 100%  
December 15, 1983 - 1335-Reactor Trip from 100%

2. Fuel Burnup by Core Region-As of December 15, 1983:

Fuel Batch:        S2/6B: 28810  
                     6C: 29880  
                     4C: 30344  
                     7A: 27475  
                     7B: 34878  
                     8A: 24812  
                     8B: 24153  
                     9 : 6015

Cycle 7 Burnup: 5270 MWD/MTU

3. Prior to the reactor trip, the unit had established a normal letdown rate of 106 GPM.
4. No de-gassing operations were performed.
5. Duration of I-131 spike:

December 15, 1983 - 1600 hours - Post Trip Sample 1.68 microcuries/cc.  
                     1800 hours - Post Trip Sample 1.52 microcuries/cc.  
                     1955 hours - Post Trip Sample 1.55 microcuries/cc.  
                     2230 hours - Post Trip Sample 1.37 microcuries/cc.

December 16, 1983 - 0015 hours - Post Trip Sample 1.21 microcuries/cc.  
                     0400 hours - Post Trip Sample .685 microcuries/cc.

Duration Approximately 12 hours.

# Vepco

VIRGINIA ELECTRIC AND POWER COMPANY  
Surry Power Station  
P. O. Box 315  
Surry, Virginia 23883

JAN 6 1984

Serial No: 84-001

Docket No: 50-280

License No: DPR-32

Mr. James P. O'Reilly  
Regional Administrator  
Suite 2900  
101 Marietta Street, NW  
Atlanta, Georgia 30303

Dear Mr. O'Reilly

Pursuant to Surry Power Station Technical Specifications, the Virginia Electric and Power Company hereby submits the following Licensee Event Report for Surry Unit 1.

Report Number

83-057/03L-0

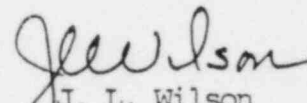
Applicable Technical Specification

T. S. 6.6.2.b(2)

1. S. 3.1.D.4

This report has been reviewed by the Station Nuclear Safety and Operating Committee and will be reviewed by Safety Evaluation and Control.

Very truly yours,

  
J. L. Wilson  
Station Manager

Enclosure

cc: Document Control Desk, USNRC  
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Washington, D. C. 20555

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