10CFR50.73

SCE&G
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May 7, 1990

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

SUBJECT: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
LER 90-004

Gentlemen:

Attached is Licensee Event Report No. 90-004 for the Virgil C. Summer Nuclear Station. This report is submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

Should there be any questions, please call us at your convenience.

Very truly yours,

OSBradham

O. S. Bradham

ARR/OSB:lcd
Attachment

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO 3150-0104
EXPIRES 8/31/85

LICENSEE EVENT REPORT (LER)

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TITLE (4)
Personnel Error Leads to Inoperable Reactor Building Level Transmitter

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 NAMES	DOCKET NUMBER(S)
1 1	1 4	8 8	9 0	0 0 4	0 0	0 5	0 7	9 0		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	6	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
W. R. Higgins, Supervisor, Regulatory Compliance	AREA CODE 8 0 3 3 4 5 - 4 0 4 2

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
A				N							

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 fifteen single-space typewritten lines) (16)

Technical Specification Table 3.3-10 Item 14 lists the Reactor Building Level Transmitters (LT-1975, LT-1976) as required accident monitoring instruments. While implementing a modification to these level transmitters during the fifth refueling outage, it was discovered that two leads for LT-1976 were determinated rendering the transmitter inoperable. The leads had been determinated during the previous refueling outage for maintenance purposes.

The cause of this event was personnel error. The Lifted Lead and Jumper Sheet for the transmitter was inappropriately transferred between work documents. Contributing to this event was the use of an inadequate post-maintenance operability test.

The procedure for controlling lifted leads and jumpers is under revision and training on this process has been conducted with appropriate maintenance personnel. Also, other Technical Specification instruments which fail to the position of their normal indication (e.g., zero span) will be evaluated for adequate testing.

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

PLANT IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

EQUIPMENT IDENTIFICATION:

Post Accident Monitoring System (IP) - EIIS

IDENTIFICATION OF EVENT:

Personnel error leads to inoperable Reactor Building Level Transmitter.

EVENT DATE:

The transmitter leads were lifted for level transmitter LT-1976 on November 14, 1988. A reportable condition was identified on April 9, 1990.

REPORT DATE:

May 7, 1990

This report was initiated by Off-Normal Occurrence Report 90-038.

CONDITION PRIOR TO EVENT:

Mode 6, 0% power, fifth refueling outage

DESCRIPTION OF EVENT:

Technical Specification 3/4.3.3.6 requires certain accident monitoring instruments be operable to ensure that sufficient information is available post-accident to monitor and assess selected plant parameters. Table 3.3-10 Item 14 lists the Reactor Building Level Transmitters (LT-1975, LT-1976) as required accident monitoring instruments. While implementing a modification to these level transmitters during the fifth refueling outage, it was discovered that two leads in cabinet XPN-6002 had been previously disconnected which rendered LT-1976 inoperable.

Investigation into this event determined that the leads for LT-1976 were determinated during the fourth refueling outage (November 14, 1988) as part of an Equipment Qualification (EQ) inspection. The inspection was performed using a Preventive Maintenance Task Sheet (PMTS). As required by plant procedure (SAP-300), a Lifted Lead and Jumper (LL&J) sheet was included with the PMTS to document the lifted leads.

On November 17, 1988, during completion of the PMTS, the Electrical Supervisor (who was aware that the Instrumentation and Control group had an open Maintenance Work Request [MWR 88I0501] to repair damaged wires on LT-1976) contacted the I&C Supervisor to find out if retermination of the leads could be performed by I&C. The intent was that I&C would reland the leads for the EQ inspection and repair the damaged transmitter wires under MWR 88I0501. Both supervisors agreed that this

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

action would be acceptable. Subsequently, the retermination portion of the original LL&J sheet was NA'd by the Electrical Supervisor with reference to the retermination via the MWR. The PMTS was signed off on November 17, 1988. However, MWR 8810501 which was supposed to reterminate the leads (per the agreement between the supervisors) had been field completed on November 8, 1988. The failure to reterminate the leads resulted in the level transmitter being inoperable until it was discovered during the Refuel 5 modification.

CAUSE OF EVENT:

The cause of this event was personnel error. Apparently neither supervisor realized that the MWR had already been completed and, therefore, could not be used to reterminate the leads. In addition, there was miscommunication between the supervisors regarding the means for using the LL&J sheet to document the transfer of work. The Electrical Supervisor intended for the I&C Supervisor to generate a new LL&J sheet whereas the I&C Supervisor apparently assumed that the original LL&J sheet would be provided to him for incorporation into the MWR package. Plant procedures allow transfer of work between documents (with specific controls), however, the method for transfer of LL&J sheets is not adequately specified.

The surveillance testing requirements for the transmitter requires a monthly channel check and an 18 month loop calibration. The loop calibration (STP-300.006) was performed prior to the determination of the LT-1976 leads. The monthly channel check (STP-135.001), which was also specified as the post-maintenance test, checks that LT-1975 and LT-1976 are within instrument tolerance for redundant channels and are indicating as expected for existing plant conditions. By design the de-energized LT-1976 fails to the indicator mechanical stop (413 feet indicated) and, therefore, the transmitter appeared to be reading normally (i.e., zero span) during the channel checks. A contributing factor to this event was that the monthly channel check was inadequate for a post-maintenance/modification check of the level transmitter.

ANALYSIS OF EVENT:

The Limiting Condition for Operation (LCO) for Technical Specification 3.3.3.6 (when less than the required number of channels is operable) is to repair the inoperable channel within seven days or be in hot shutdown within the next 12 hours. This event is reportable under 10CFR50.73(a)(2)(i)(B) since LT-1976 was inoperable for approximately 17 months. The plant was already shutdown at the time the event was discovered. A review of the PMTS and loop calibration for LT-1975 (the redundant Reactor Building Level Transmitter) indicates that it was operable during the period from Refuel 4 to Refuel 5.

LT-1976 does not perform any control functions. It is used solely for Reactor Building level indication. This condition did not pose a safety concern because the redundant level transmitter was operable during the period. Also, two Reactor Building Sump level indicators (range 408-412 feet) were available to provide initial indication of rapidly rising water in the Reactor Building.

CORRECTIVE ACTION:

Since the plant was in Mode 6, no immediate corrective action was required. The following corrective measures have been identified for this event.

1. The procedure for controlling lifted leads and jumpers (SAP-300) is being revised to outline programmatic controls/methods for transferring LL&J sheets from one work document to another. This revision is scheduled to be complete by July 31, 1990.

2. The proper means to transfer responsibility of LL&J sheets has been discussed with the Electrical and I&C Supervisors. Formal guidance (memorandum dated April 18, 1990) was provided on how to transfer LL&J responsibility and training sessions were conducted with the applicable I&C, Mechanical and Electrical Maintenance personnel.

3. A list of Technical Specification instruments which fail to the position of their normal indication (e.g., zero span) has been generated. SCE&G will verify that adequate testing has been performed on these instruments prior to entering Mode 1 from the present refueling outage and will ensure they remain operable throughout the upcoming cycle.

4. The adequacy of the post-maintenance testing program will be thoroughly reviewed by SCE&G. The responsibility for administering post-maintenance testing will be transferred to the recently formed Test Group. This will improve the technical adequacy and consistency of post-maintenance testing.

PRIOR OCCURRENCES:

None.