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May 28, 1992

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D.C. 20555

Gentlemen:

TENNESSEE VALLEY AUTHORITY - SEQUOYAH NUCLEAR PLANT UNIT 1 - DOCKET NO. 50-327 - FACILITY OPERATING LICENSE DPR-77 - LICENSEE EVENT REPORT (LER) 50-327/92011

The enclosed LER provides details concerning a safety injection and a reactor trip while shut down. This was initiated by a low steam-line pressure signal resulting from the inadvertent opening of the steam-dump valves. This event is being reported in accordance with 10 CFR 50.73(a)(2)(iv) as an automatic actuation of engineered safety features, including the reactor protection system.

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Sincerely,

Vilsn

L. Wilson

Enclosure cc: See page 2

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U.S. NUCLEAR REGULATORY COMMISSION

Approved OMB No. 3150-0104 Expires 4/30/92

LICENSEE EVENT REPORT (LER)

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

On April 29, 1992, at 2226 Eastern daylight time, while in Mode 3, Unit 1 experienced a safety injection (SI) and a reactor trip initiated by a low steam-line prossure signal. The signal resulted from the inadvertent opening of twelve main steam-dump valves. After plant conditions were stabilized, the SI signal was reset and the emergency core cooling system pumps stopped. The apparent cause of all 12 steam-dump valves opening inadvertently was a failure in the steam-dump control circuitry. However, troubleshooting did not identify any failed components; therefore, the root cause could not be determined. The equipment that may have caused the actuation of the steam-dump valves was replaced.

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NRC Form 366A (6-89)

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I. PLANT CONDITIONS

Unit 1 was in Mode 3 at no-load temperature and pressure, preparing for a reactor start-up.

II. DESCRIPTION OF EVENT

A. Event

On April 29, 1992, at 2226 Eastern daylight time (EDT), with Unit 1 in Mode 3, the unit experienced a safety injection (SI) signal (EIIS Code SI) while preparing for a reactor start-up. The SI signal was generated from low steam-line pressure that resulted from the inadvertent opening of the steam-dump valves (EIIS Code SE). The reactor trip breakers opened, and wiltiple control panel indications were received. Seconds after the initiation of the SI signal, the main steam isolation valves (MSIVs) (EIIS Code SB) indicated closed and the steam dumps indicated fully closed. The cause of the SI signal was determined to be high steam flow to the condenser, which caused the lowering steam-line pressure. The inadvertent opening of the steam-dump valves resulted from a failure in the steam-dump control circuitry.

B. Inoperable Structures, Components, or Systems That Contributed to the Event

None.

C. Dates and Approximate Times of Major Occurrences

1.	April 29, 1992 at 2226 EDT	Unit 1 experienced a safety injection signal. Operations performed Emergency Procedure E-O and verified appropriate plant response.
2.	April 29, 1992 at 2230 EDT	The SI signal was reset and unnecessary equipment was shut down.
3.	April 29, 1992 at 2242 EDT	The shift operations supervisor declared a notification of unusual event (NOUE) until the cause could be determined.
4.	April 30, 1992 at 0330 EDT	The NOUE was exited on the basis that the cause was known, and it could not reoccur with the MSIVs closed

D. Other Systems or Secondary Functions Affected

None.

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E. Method of Discovery

The steam-dump valves opening caused the SI and the reactor trip, which caused an annunciation in the control room.

F. Operator Actions

As a result of the event, Operations performed Emergency Procedure E-O and verified that the emergency core cooling systems were performing their intended functions. After the unit was in a stable condition, Operations declared a NOUE.

G. Safety System Responses

Safety systems performed their intended functions. Minor anomalies were noted with the emergency gas treatment system and auxiliary building gas treatment system, but these anomalies did not effect overall system performance.

III. CAUSE OF THE EVENT

A. Immediate Cause

The SI and the reactor trip were generated from low steam-line pressure. The low steam-line pressure resulted from inadvertent opening of the steam-dump valves.

B. Root Cause

The cause of the event was a result of a malfunction in the steam-dump control circuitry. The cause of malfunction of the control circuitry could not be determined.

IV. ANALYSIS OF THE EVENT

Plant response during and after the SI signal actuation was consistent with the responses described in the Final Safety Analysis Report. The event was terminated by closure of the MSIVs. The reactor coolant rystem cooldown did not drop below shutdown margin requirements. The event did not pose a nuclear safety threat to plant personnel or the public.

V. CORRECTIVE ACTIONS

Immediate Corrective Actions

Components that could have caused the steam-dump valves to open inadvertently were replaced to ensure that any potential intermittent degradation of components was removed and that any concerns of similar events do not exist.

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Corrective Actions to Prevent Recurrence

Troubleshooting was performed on the control circuitry, and no component failures were identified. TVA is monitoring the control circuitry related to this event.

VI. ADDITIONAL INFORMATION

A. Failed Components

TVA determined that the failurs was in the control circuit; the component failure could not be determined.

B. Previous Similar Events

Four licensee event reports were identified that were associated with anomalous steam-dump system operation. Only one event, LER 50-327/91027, involved failure or malfunction of the steam dump controller or circuitry. In this case, the intermittent malfunction of a controller was determined to be the cause of the actuation of the steam-dump volves although the specific failure or cause could not be determined. The corrective action replaced the controller and the controlling potentiometer. Corrective actions for the previous event did not prevent the subject occurrence because of the indeterminate cause of both malfunctions.

VII. COMMITMENTS

None.