

LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)
Indian Point 3

DOCKET NUMBER (2)
05000286

PAGE (3)
1 OF 4

TITLE (4) Manual Reactor Trip Initiated Due to Overpower Delta T Channel Signal and Turbine Runback

| 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 NAME | DOCKET NUMBER |
| 05 | 14 | 97 | 97 | -- 005 -- | 00 | 06 | 06 | 97 | FACILITY NAME: | DOCKET NUMBER 05000 |
| | | | | | | | | | FACILITY NAME: | DOCKET NUMBER 05000 |

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|--------------------|-----|---|--|------------------|-------------------------------------|----------------------|--|--|--|--|
| OPERATING MODE (9) | N | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11) | | | | | | | | |
| | | 20.402(b) | | 20.405(c) | <input checked="" type="checkbox"/> | 50.73(a)(2)(iv) | | 73.71(b) | | |
| POWER LEVEL (10) | 74% | 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)(vii) | | OTHER | | |
| | | 20.405(a)(1)(iii) | | 50.73(a)(2)(i) | | 50.73(a)(2)(viii)(A) | | (Specify in Abstract below and in Text, NRC Form 366a) | | |
| | | 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
Marc Pearson, Operations Manager

TELEPHONE NUMBER (Include Area Code)
(914) 736-8201

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 |
|-------|--------|-----------|--------------|---------------------|-------|--------|-----------|--------------|---------------------|
| X | JC | ALM | F180 | Y | | | | | |
| | | | | | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)

| | | | | | | |
|---|---|----|-------------------------------|-------|-----|------|
| YES (If yes, complete EXPECTED SUBMISSION DATE). | X | NO | EXPECTED SUBMISSION DATE (15) | MONTH | DAY | YEAR |
| | | | | | | |

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

On May 14, 1997, with the plant at approximately 74%, reactor operators initiated a manual reactor trip in response to a turbine runback. The runback was due to an Overpower Delta-T Channel Signal in one of the four loops. Control Room indications did not indicate that the setpoint was exceeded, but the bistable alarm light was illuminated. The plant was stabilized at hot shutdown and subsequent decisions were made to proceed to cold shutdown for early commencement of a scheduled refueling outage. All safety related and major plant equipment involved in the trip operated as expected. Operators and plant personnel responded in an appropriate manner using conservative decision making, good communication and direction, and proper procedure adherence. Corrective actions included the performance of a post trip evaluation in accordance Administrative Procedures. I&C Engineering is performing an Equipment Failure Evaluation (EFE) to determine the actual cause of the overpower delta-T runback signal. This event did not affect the health and safety of the public.

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TEXT CONTINUATION

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| Indian Point 3 | | 05000286 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER |
| | | | 97 | -- 005 -- | 00 |
| | | | | | 2 OF 4 |

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

DESCRIPTION OF EVENT

Note: The Energy Industry Identification System codes are identified within the brackets

On May 14, 1997, the plant was operating at 91% power (935 MW). Reactor Coolant System Temperature was 564 degrees fahrenheit, Reactor Coolant Pressure, 2235 psig, and pressurizer level was 44%. The unit was operating at a reduced power level due to end of core life coastdown for the approaching refueling outage. At 1721 hours on May 14, 1997, the control room received an "Overpower Delta T Channel Trip (OPDT) or Rod Stop" alarm associated with the Reactor Protection System [JC]. With the exception of the OPDT channel trip or rod stop alarm, control room indications (OPDT and delta-T indicators) did not indicate that the setpoint was exceeded. At 1721 hours, approximately 54 seconds after receiving the initial alarm, a licensed operator manually tripped the reactor, as directed by the control room supervisor, at approximately 74% percent power (650 MW) due to a turbine runback from 91%. The runback was due to OPDT on one of four loops thereby completing the one out of four (1/4) logic needed for this design feature. The OPDT two out of four (2/4) logic for a reactor trip was not met. All instrumentation showed normal which indicated that the runback was probably due to a circuitry problem, but the exact cause has not yet been determined. All safety related and major plant equipment involved in the trip operated as expected. There were no safety injection signals. Plant operators entered Emergency Operating Procedure (EOP) E-0, stabilized the plant and transitioned to normal plant procedures. A decision was made by plant management to proceed to the cold shutdown condition and commence the refueling outage scheduled for May 17, 1997. A post trip transient evaluation was performed which concluded that plant personnel responded in an appropriate manner using conservative decision making, good communication and direction, and proper procedure adherence.

All required technical specification surveillances will be performed prior to startup from the refueling outage R09. This will validate the operability (calibration and functionality) of the system and its components.

CAUSE OF THE EVENT

The probable cause of the event is believed to be a circuitry problem with a Foxboro bistable, OPDT/Rod Stop withdrawal duplex alarm.

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CORRECTIVE ACTIONS

The following corrective actions have been or will be performed to address the causes of this event:

- A post trip/transient evaluation was performed in accordance with Administrative Procedures. The initial report has been completed and is currently in the review process. Operators responded in an appropriate manner using conservative decision making, good communications and proper procedure adherence. All safety related and major plant equipment involved in the trip/transient operated as expected.
- Specific troubleshooting of Channel I and II's OPDT circuitry. This action will be complete by July 25, 1997.
- Troubleshooting of Channel I and II's bistables will be performed to identify any degraded or failed component. This will be performed by an outside vendor. The information gathered will serve as the basis for the Equipment Failure Evaluation (EFE) that will be prepared by I&C Engineering. This will serve as I&C's response to DER 97-0995. This action will be complete by December 15, 1997. If the evaluation determines the cause to be other than the bistable, then a revision to this LER will be submitted.

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ANALYSIS OF EVENT

This event is reportable under 10 CFR 50.73 (a) (2) (iv). The licensee shall report any event or condition that resulted in a manual or automatic actuation of an Engineered Safety Feature (ESF), including the Reactor Protection System (RPS). During normal plant operation, an OPDT channel trip or rod stop alarm annunciated. The situation was assessed by the control room supervisor who then directed the reactor to be manually tripped resulting in actuation of the Reactor Protection System and therefore reportable under the above criteria.

A review of Licensee Event Reports (LERs) for the past two years for similar events in which there was a manual reactor trip identified Licensee Event Reports 96-009, 95-018, and 95-012. LER-96-009 was for a manual reactor trip initiated due to greater than allowable differential temperature for the main generator stator. LER-95-018 was for a manual reactor trip due to high stator differential temperature alarm during a unit shutdown to repair the 32 hydrogen cooler. LER-95-012 was for a manual reactor trip in response to decreasing steam generator levels and low feedwater flow due to degraded feedwater controller.

SAFETY SIGNIFICANCE

This event did not affect the health and safety of the public. The turbine runback and subsequent manual reactor trip resulted in the plant being maintained within its design basis.