Indian Point 3 Nuclear Power P P.O. Box 215 Buchanan, New York 10511 914 739.8200



November 14, 1991 IP3-NRC-91-065

Docket No. 50-286 License No. DPR-64 Document Control Desk Mail Station PI-137 U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Dear Sir:

The attached Licensee Event Report LER 91-011-00 is hereby submitted in accordance with the requirements of 10CFR50.73. This event is of the type defined in the requirements per 10CFR50.73(a)(2)(i) and 10CFR50.73(a)(2)(vii).

Very truly yours,

Uni

Jóseph Russell Resident Manager Indian Point Three Nuclear Power Plant

ed/rj Attachment

cc: Mr. Thomas T. Martin Regional Administrator Region 1 U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, Pennsylvania 19406

> INPO Records Center Suite 1500 1100 Circle 75 Parkway Atlanta, Georgia 30339



NRC Form 386 (9-83) LICENSEE EVENT REPORT (LER)											
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NRC Form 366 (9.83)

NRC Form 366A (9-83)	 	LICENSEE	ENT REPOR	IT (LER) TEXT	CONTINU		U.S. NUCLEAR REC APPROVED O EXPIRES: 8/31	BULATORY COMMISSION IMB NO. 3150-0104 /88
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DESCRIPTION OF THE EVENT

On October 15, 1991 at 2350 hours, with the reactor at 100 percent power, an indicating lamp (General Electric Model #3S6/5/130V)(G080)(JE)(IL) monitoring the containment phase A actuating relay of safeguards train B, electrically faulted. The control room annunciator "safeguards initiation racks or 480V switchgear sequence DC power failure" went to the alarm condition. No safeguards equipment actuated.

As a result of the short circuit, a fuse on the negative control power feed to safeguards initiation train B blew, rendering the automatic initiation feature of safeguards train B inoperable. The operations crew made preparations to shut down the plant according to alarm response procedure ARP-4, "Safeguards SB-1". The shutdown requirements were to be in hot shutdown within four hours and cold shutdown within the following twenty-four hours.

An exact replacement for the ten ampere blown fuse could not be located on-site. A temporary modification was written to permit use of a five ampere fuse of the same class as the ten ampere fuse that had blown. The temporary modification verified that the five ampere fuse was adequate for the loads of a safeguards actuation and would not degrade any plant system function. An instrumentation and controls technician replaced the blown fuse at 0015 hours on October 16, 1991 after verifying that no electrical fault existed on the lamp socket. The operations crew terminated the shutdown preparations. Reactor power had not been changed.

CAUSE OF THE EVENT

The cause of the event was the short circuit that developed at the phase A containment isolation circuit monitoring lamp. The root cause has not been positively identified. In-house and industry experience indicate that the quality of S6 type light bulbs may have deteriorated.

	ORT (LER) TEXT CONTINU	U.S. NUCLEAR RE APPROVED EXPIRES: 8/3	GULATORY COMMISSION OMB NO. 3150-0104 1/88
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CORRECTIVE ACTIONS

An appropriate ten ampere fuse was located and dedicated, and the five ampere fuse was replaced with the correct ten ampere fuse at 1435 hours on October 18, 1991. A five ampere jumper fuse was used, via a temporary modification, to maintain safeguards initiation train B operable during the fuse exchange.

Technicians replaced the damaged lamp socket on October 19, 1991 when the plant was in hot shutdown for main generator repairs.

The plant staff will investigate to determine if a better quality indicating lamp can be procured for use in the safeguards initiation racks.

ANALYSIS OF THE EVENT

This event is reportable under 10CFR50.73(a)(2)(i)(B), the plant was operated in a condition prohibited by the facility's Technical Specifications. Technical Specification 3.3.A.3 lists safety injection and residual heat removal systems' components required to be operable when Tavg exceeds 350 degrees F. Specification 3.3.A.4 allows modification of that specification and lists components, any <u>one</u> of which may be inoperable. During the twenty-five minutes, that safeguards initiation train B was inoperable, safety injection pump 33 and residual heat removal pump 32 did not have automatic start capability. Position initiation signals to multiple safety injection and residual heat removal system valves on motor control center 36B were also lost. These pumps and valves did not satisfy the definition of "operable" contained in Technical Specification 1.5.

Technical Specification 3.3.B.1 lists containment cooling and iodine removal systems' components required to be operable above cold shutdown. Specification 3.3.B.2 allows modification of that specification and lists components, any <u>one</u> of which may be inoperable. During the twenty-five minutes that safeguards initiation train B was inoperable, containment fan cooler unit 35 and containment spray pump 32 did not have automatic start capability. These components also did not satisfy the "operable" definition.

NRC FORM 368A

	RT (LER) TEXT CONTINU	U.S. NUCLEAR RE	GULATORY COMMISSION DMB NO, 3150-0104 1/88
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EXT (If more space is required, use additional NRC Form 366A's) (17)

This event is also reportable under 10CFR50.73(a)(2)(vii) because the loss of safeguards initiation train B caused one independent train to become inoperable in multiple systems designed to mitigate the consequences of an accident for a period of twentyfive minutes. The safeguards automatic initiation signal for the following components was unavailable during that time:

- 1. safety injection pump #33
- 2. residual heat removal pump #32
- 3. containment spray pump #32
- 4. containment fan cooler unit #35
- 5. service water pump #36
- 6. component cooling water pump #33
- 7. auxiliary feedwater pump #33
- 8. motor control center #36B

During the twenty-five minute period that safeguards initiation train B was inoperable, train A was operable. A single train of safeguards will start the minimum safeguards equipment needed for accident mitigation. Loss of a single train of safeguards initiating logic is a postulated single failure considered in the <u>Final Safety Analysis Report</u> and is within the design bases of the plant. Manual, remote operation of the above components was unaffected by the event. Had an accident occurred during the brief period that safeguards initiation train B was inoperable, <u>Emergency Operating Procedures</u> would have directed operators to manually operate these components to mitigate the severity of the accident.

No similar LERs have been reported to date.

SECURING FROM THE EVENT

An instrumentation and controls technician replaced the blown fuse at 0015 hours on October 16, 1991. Technicians installed the correct size fuse at 1435 hours on October 18, 1991 without deenergizing safeguards initiation train B. Instrumentation and controls technicians replaced the damaged lamp socket on October 19, 1991 while the plant was at hot shutdown due to a high dewpoint condition in the main electrical generator cooling gas. Satisfactory completion of the safeguards initiation train surveillance procedure demonstrated proper functioning of the system.