

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Catawba Nuclear Station, Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 4 1 3 1 OF 0 4										PAGE (3) 1 OF 0 4					
TITLE (4) Both Trains of Safety Injection Inoperable																									
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)											
0	2	0	7	8	5	8	5	0	1	1	0	0	0	3	0	8	8	5	0 5 0 0 0						
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following): (11)																									
OPERATING MODE (9)		2		20.402(b)				20.406(c)				50.73(a)(2)(iv)				73.71(b)									
POWER LEVEL (10)		0 0 0		20.406(a)(1)(i)				50.38(c)(1)				X 50.73(a)(2)(v)				73.71(c)									
				20.406(a)(1)(ii)				50.70(c)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
				20.406(a)(1)(iii)				50.72(a)(2)(i)				50.73(a)(2)(viii)(A)													
				20.406(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)													
				20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)													
LICENSEE CONTACT FOR THIS LER (12)																									
NAME Roger W. Ouellette, Assistant Engineer - Licensing												TELEPHONE NUMBER 710 4 317 131-17 15 131 0													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS															
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)

On February 7, 1985, from 0920 hours to 1030 hours, and from 1255 hours to 1325 hours, Safety Injection (SI) Trains A and B were inoperable. This was due to the concurrent inoperability of SI Pump 1B and Solid State Protection System (SSPS) Train A. This incident was discovered at approximately 1300 hours during review of the Technical Specification Action Items Logbook (TSAIL). After discovery of this incident, the Shift Supervisor began the necessary corrective action to return SI Pump 1B to service and at 1325 hours, SI Pump 1B was declared operable.

This incident is classified as a Personnel Error. The Senior Reactor Operator (SRO) in Command should not have allowed both trains of SI to be rendered inoperable.

Catawba Unit 1 was in Mode 2 (Startup) at the time of this incident. This incident is reportable pursuant to 10 CFR 50.73, Section (a)(2)(v), and 10 CFR 50.72, Section (b)(2)(iii).

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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

The Emergency Core Cooling System (ECCS) provides emergency cooling to the Reactor Core in the event of a Loss of Coolant Accident. The ECCS is a functional grouping of the following components:

- Centrifugal Charging Pumps (CCP's)
- Safety Injection (NI) Pumps
- Upper Head Injection (UHI)
- Cold Leg Accumulators (CLA's)
- Residual Heat Removal (ND) Pumps
- ND Heat Exchangers
- Refueling Water Storage Tank (FWST)

There are two Redundant Trains of ECCS (A and B) with each train consisting of one CCP, one NI Pump, one ND Pump, and one ND Heat Exchanger. UHI, the FWST, and the CLA's are shared between each train.

During a postulated accident condition, the ECCS is actuated by the Solid State Protection System (SSPS) which is a portion of the Engineered Safety Features Actuation System (ESFAS). Each Redundant Train of SSPS (A and B) is capable of supplying Reactor and Component Trip Signals and initiating Engineered Safeguards.

Procedure PT/1/A/4200/05B, Safety Injection Pump 1B Performance Test, is performed quarterly and after pump maintenance to verify the operational readiness of NI Pump 1B. When PT/1/A/4200/05B is performed, NI Pump 1B is operated in recirculation through the FWST. Valves 1NI150B (NI Pump 1B Cold Leg Injection Line Isolation) and 1NI152B (NI Pump 1B to Hot Legs A and D) are closed which prevents NI Pump 1B from discharging to the NC System. Since the normal flowpath is blocked during this test, NI Pump 1B is declared inoperable and the Action Statement of Technical Specification 3.5.2 is entered.

Procedure IP/0/A/3200/02, Solid State Protection (SSPS) Periodic Testing, is performed monthly, on a staggered basis, to verify the operability of SSPS Trains A and B. Procedure IP/0/A/3200/08, Reactor Trip Breaker Device Monthly Functional Test, is performed monthly, on a staggered basis, to verify the operability of Reactor Trip Breakers A and B. For this test, the SSPS is used to provide undervoltage trips. During the performance of IP/0/A/3200/02 and IP/0/A/3200/08, the applicable train of SSPS is placed in test which blocks the signal input and output portions of that train. This prevents inadvertent actuation of any of the plant equipment which would be automatically actuated by that train of SSPS. Therefore, the train of SSPS placed in test is declared inoperable and the Action Statement of Technical Specification 3.3.2 is entered.

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TEXT (If more space is required, use additional NRC Form 365A's) (17)

The Technical Specifications Action Items Logbook (TSAIL) provides a method of documenting the information required by the Control Room to assess the impact of operating in a Technical Specification Action Statement. It also provides a method of documenting Technical Specification Equipment that is inoperable.

On February 7, 1985, at 0745 hours, NI Pump 1B was logged in the TSAIL as inoperable for testing per PT/1/A/4200/05B. At this time, NI Pump 1A was operable. The Action Statement of Technical Specification 3.5.2 required that NI Pump 1B be operable within 72 hours. At 0920 hours, SSPS Train A was logged in the TSAIL as inoperable for testing per IP/0/A/3200/02. At this time, SSPS Train B was operable. The Action Statement of Technical Specification 3.3.2 required SSPS Train A operable within 2 hours. At 1030 hours, after completion of IP/0/A/3200/02, SSPS Train A was logged in the TSAIL as operable.

At 1255 hours, SSPS Train A was logged in the TSAIL as inoperable for testing per IP/0/A/3200/08. SSPS Train B was operable. Again, SSPS Train A was required to be operable within 2 hours.

At approximately 1300 hours, a Staff Engineer was reviewing the TSAIL and noticed that NI Pump 1B was inoperable along with SSPS Train A and questioned the entries. The Shift Supervisor stated that SSPS Train B could automatically actuate ECCS Train A when SSPS Train A was inoperable. The Staff Engineer knew however, that since SSPS Train A was inoperable, automatic actuation of ECCS Train A would not occur, thus NI Pump 1A was inoperable. Because NI Pumps 1A and 1B were simultaneously inoperable, the Shift Supervisor began the necessary corrective action to return NI Pump 1B to service.

Immediately following the discovery of this incident, another Staff Engineer attempted to determine the impact of rendering SSPS Train A inoperable along with NI Pump 1B. It was confirmed that Automatic Actuation of ECCS Train A would not occur due to the inoperability of SSPS Train A. Therefore, NI Pump 1A was also inoperable. The Staff Engineer notified the Shift Supervisor of the situation and at 1325 hours, NI Pump 1B was declared operable. SSPS Train A was declared operable at 1348 hours.

At 1649 hours, the Control Room performed RP/0/B/5000/13, NRC Notification Requirements, which required notification of the NRC Operations Center of a Significant Event.

The Shift Supervisor was aware of the fact that NI Pump 1B was inoperable and that SSPS Train A would be rendered inoperable during the performance of IP/0/A/3200/02. However, the Shift Supervisor thought that SSPS Train B could automatically actuate ECCS Train A. Because of this, testing was allowed to begin and SSPS Train A was logged in the TSAIL as inoperable. When IP/0/A/3200/08 was to be performed, the Unit Supervisor and Shift Technical Advisor noticed that SSPS Train A had previously been declared

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TEXT (If more space is required, use additional NRC Form 306A's) (17)

inoperable by the Shift Supervisor while NI Pump 1B was inoperable, and therefore, did not reevaluate the situation. Again, testing was allowed to begin and SSPS Train A was logged in the TSAIL as inoperable.

Because the inoperability of SSPS Train A rendered NI Pump 1A inoperable, the Senior Reactor Operator (SRO) in Command should not have allowed IP/O/A/3200/02 and IP/O/A/3200/08 to be performed until NI Pump 1B was declared operable. Therefore, this incident is classified as a Personnel Error.

CORRECTIVE ACTION

- 1) The Shift Supervisor initiated the necessary corrective action to return NI Pump 1B to an operable condition.
- 2) NI Pump 1B was declared operable.
- 3) SSPS Train A was declared operable.
- 4) An Operator Update was issued addressing the impact of rendering the SSPS inoperable.

SAFETY ANALYSIS

If a LOCA or Main Steam Line Break Accident had occurred during this incident, SSPS Train B was available to automatically actuate ECCS Train B. Even though NI Pump 1B was inoperable due to testing, valve 1NI150B could have been opened to provide a flow path from NI Pump 1B to the NC System. All other ECCS Train B components were operable. CCP 1B was available to provide core cooling to the NC System from the FWST along with UHI and the CLA's. ND Pump 1B was available to provide recirculation from the Containment Sump. ND Heat Exchanger 1B along with the Component Cooling System was available to remove decay heat.

The Ice Condenser and Containment Spray Systems were available to limit Containment pressure. Also, all ECCS Train A Components could have been manually started from the Control Room.

The health and safety of the public were not affected by this incident.

DUKE POWER COMPANY

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HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

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March 8, 1985

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

Subject: Catawba Nuclear Station
Docket No. 50-413

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 413/85-11 concerning both trains of safety injection being inoperable. This event is considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H.B. Tucker / RW

Hal B. Tucker

RWO:slb

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator
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