

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Catawba Nuclear Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 1 1 3	PAGE (3) 1 OF 0 4
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TITLE (4)
Unit 1 Vent Sampling Pump Power Loss

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	0	18	8	4	8	4	0	16	0	0	1	1	1	6	8	4	0	5	0	0	0

OPERATING MODE (9) 5	POWER LEVEL (10) 0 0 0	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
		20.402(b)		20.405(e)		50.73(a)(2)(iv)		73.71(b)			
		20.405(a)(1)(i)		50.38(c)(1)		50.73(a)(2)(v)		73.71(c)			
		20.405(a)(1)(ii)		50.38(c)(2)		50.73(a)(2)(vii)		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)(ix)					

LICENSEE CONTACT FOR THIS LER (12)

NAME Roger W. Ouellette, Assistant Engineer - Licensing	TELEPHONE NUMBER AREA CODE: 7 1 0 4 3 1 7 3 1 - 1 7 5 1 3 1 0
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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)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On October 18, 1984, at 0946 hours while Unit 1 was in Mode 5 (Cold Shutdown), power was found to be interrupted to the Unit 1 Vent Sampling Pump. The pump is required to run continuously per Technical Specification Surveillance Requirement 4.11.2.1.2. Since the Unit 1 Vent Particulate, Gas, and Iodine Monitors (EMF-35, 36, 37) were inoperable at the time, the pump was also required to run continuously per the Action Statement of Tech Spec 3.3.3.11. Therefore, this incident caused the violation of two Tech Spec sections.

The Unit 1 Vent Sampling Pump was de-energized because the circuit breaker that supplies power to the pump's electrical outlet had tripped. The circuit breaker tripped due to overcurrent caused by plugging another component into an electrical outlet which was powered from that circuit breaker. To recover from the incident, the circuit breaker was reclosed.

This event is classified as a Design Deficiency, due to the apparent inadequate analysis of process variables. Since the pump is required by Tech Specs to run continuously, it should have ensured that the pump's electrical outlet was powered from a more reliable source.

This incident is reportable pursuant to 10 CFR 50.73 Section (a) (2) (i).

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

The Unit 1 Vent Sampling Pump is made by Gast Manufacturing Company. It has a 115 VAC, 5.4 AMP motor. It is powered from a 120 VAC outlet. The pump is used to continuously sample the Unit Vent in accordance with the sampling and analysis program specified in Table 4.11-2 of Tech Spec Surveillance Requirement 4.11.2.1.2. Since the Unit 1 Vent Particulate, Gas, and Iodine Monitors (1EMF-35, 36, 37) were inoperable due to Nuclear Station Modification NSM-10087, the pump was also needed per the Action Statement of Tech Spec 3.3.3.11. Action 50 of this Tech Spec states "With the number of channels operable less than required by minimum channels operable requirement, effluent releases via the affected pathway may continue for up to 30 days provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2".

On October 18, 1984, at 0946 hours, the pump was found de-energized. Immediately after discovering that the pump was not operating, a drop cord was run from the pump to another electrical outlet. However, this outlet had no power available to it. At 1005 hours, the pump's power cord was returned to its original electrical outlet. The pump then began to operate.

At the time of the incident, it was not known how the power to the pump was interrupted. It was discovered that workers had vacuumed the area the morning of October 18, 1984. The circuit breaker (LA22-30) supplying power to the electrical outlet that their vacuum cleaner and the Unit 1 Vent Sampling Pump were plugged into are powered from the same circuit breaker. Since the pump motor operates at a current of 5.4 amps, and the vacuum cleaner motor operates at 15 amps, simultaneous operation of the two resulted in the 20 amp circuit breaker tripping due to overcurrent. A third outlet powered from breaker 1LA22-30 is the outlet that the drop cord was connected to immediately after the pump was found not operating. With the circuit breaker tripped, no power was available to that outlet at the time. The other outlets that are powered from circuit breaker 1LA22-30 were examined and covered. A sign was placed over each of the outlets prohibiting their use.

The Unit 2 Vent Sampling Pump and the Conventional Waste Water Treatment (WC) Compositor Pump were identified as having the potential for becoming de-energized inadvertently. Therefore, the other electrical outlets fed from the same circuit breaker as the Unit 2 Vent Sample Pump's electrical outlet were covered, and a sign was placed over each of the outlets prohibiting their use.

This incident is classified as Design Deficiency, due to the inadequate analysis of process variables. To prevent this incident from reoccurring, the Unit 1 Vent Sampling Pump, the Unit 2 Vent Sampling Pump, and the WC Compositor Pump will each have independent outlets installed that are connected to a battery backed power source. Until this is implemented, warning tags will be placed on circuit breakers feeding the pumps' electrical outlets. These warning tags on the circuit breakers and the warning signs and coverings over the outlets should prevent the pumps from becoming de-energized inadvertently in the mean time.

Other electrical outlets supplied by circuit breaker 1LA22-30 were covered to prevent use. A sign was posted over them stating that the outlets should not be utilized.

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Other plugs in pumps which needed a more reliable power source were identified.

Other electrical outlets supplied by the same circuit breaker as the Unit 2 Vent Sampling Pump were covered to prevent use. A sign was posted over them stating that the outlets should not be utilized.

A Station Problem Report (SPR) will be originated to have power for the Unit 1 Vent Sampling Pump, the Unit 2 Vent Sampling Pump, and the WC Compositor Pump electrical outlets placed on individual breakers. They should be powered from 120VAC Auxiliary Control Power System since a battery backup will be available.

Temporary warning tags stating "Contact HP before de-energizing" will be placed on the following breakers in order that the Unit Vent Pumps and the WC Compositor Pump will not lose power inadvertently.

- 1LA22-#30 (Unit 1 Vent Sampling Pump)
- 1LA22-#35 (Unit 2 Vent Sampling Pump)
- 1MXK-F02C (Feeder to Panel Board 1LA22)
- 1MXK-F03A (Normal Incoming Feeder Breaker from 1LXE)
- 1MXK-F05A (Alternate Incoming Feeder Breaker from 1LXF)
- 1LXE-5A (1MXK Normal Supply)
- 1LXF-5B (1MXK Alternate Supply)
- WCP1-23/25 (WL Compositor Pump)
- SMXY-F03E (Feeder to Panel Board WCP1)
- SMXY-F03A (Alternate Incoming Feeder Breaker from 2SLXD)
- 2SLXD-4D (SMXY Alternate Supply)
- 1SLXA-4D (SMXY Normal Supply)
- SMXY-F05A (Normal Incoming Feeder Breaker from 1SLXA)

These tags should be removed when the SPR is resolved.

VERIFICATION

The immediate corrective action verified that the pump was operating again to perform its function. The subsequent action prevented other components from being plugged into electrical outlets that are powered from the same circuit breaker as the Unit 1 Vent Sampling Pump. Also, the subsequent action identified and temporarily corrected similar problems with other Health Physics pumps being used for Tech Spec Surveillance requirements.

SAFETY ANALYSIS

Although the Unit 1 Vent Sampling Pump was de-energized for a short period of time, analysis of the Unit Vent per Procedure HP/O/B/1001/12 (Technical Specification, Gaseous Waste Sampling and Analysis) prior to and after the incident revealed that samples were within specifications of Tech Spec Surveillance Requirement 4.11.2.1.2. Since Unit 1 had not yet achieved initial criticality, no significant amounts of radiation could have been released through the Unit Vent.

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

Therefore, the health and safety of the public were unaffected by this incident.

DUKE POWER COMPANY

P.O. BOX 33189
CHARLOTTE, N.C. 28242

HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4501

November 16, 1984

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

Subject: Catawba Nuclear Station, Unit 1
Docket No. 50-413

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 413/84-16 concerning loss of power to the Unit 1 vent sampling pump. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H. B. Tucker

Hal B. Tucker

RWO:slb

Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

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

NRC Resident Inspector
Catawba Nuclear Station

American Nuclear Insurers
c/o Dottie Sherman, ANI Library
The Exchange, Suite 245
270 Farmington Avenue
Farmington, CT 06032

Palmetto Alliance
2135 1/2 Devine Street
Columbia, South Carolina 29205

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cc: Robert Guild, Esq.
P. O. Box 12097
Charleston, South Carolina 29412

Mr. Jesse L. Riley
Carolina Environmental Study Group
854 Henley Place
Charlotte, North Carolina 28207

Mr. James L. Kelley, Chairman
Atomic Safety and Licensing Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Paul W. Purdom
235 Columbia Drive
Decatur, Georgia 30030

Dr. Richard F. Foster
P. O. Box 4263
Sunriver, Oregon 97702