



DUKE POWER

January 7, 1991

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U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

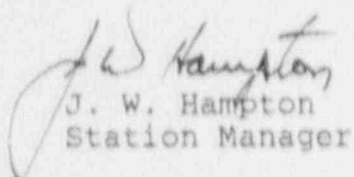
Subject: Catawba Nuclear Station
Docket No. 50-413
LER 413/90-31

Gentlemen:

Attached is Licensee Event Report 413/90-31, concerning FAILURE TO PERFORM TECHNICAL SPECIFICATION SURVEILLANCES WITHIN THE REQUIRED INTERVAL.

This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,


J. W. Hampton
Station Manager

ken:LER-NRC.JWH

cc: Mr. S. D. Ebner
Regional Administrator, Region II
U. S. Nuclear Regulator Commission
101 Marietta Street, NW, Suite 2900
Atlanta, GA 30323

M & M Nuclear Insurers
1221 Avenues of the Americas
New York, NY 10020

R. E. Martin
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D. C. 20555

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

Mr. W. T. Orders
NRC Resident Inspector
Catawba Nuclear Station



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 5										PAGE (3) 1 OF 0 5																													
TITLE (4) Failure to Perform Technical Specification Surveillances Within the Required Interval																																																	
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 N/A										DOCKET NUMBER (5) 0 5 0 0 0												
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OPERATING MODE (9) 1										THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11)																																							
POWER LEVEL (10) 1 0 0										20.402(b)										20.405(c)										50.73(a)(2)(iv)										73.71(b)									
										20.405(a)(1)(ii)										50.36(e)(1)										50.73(a)(2)(v)										73.71(c)									
										20.405(a)(1)(iii)										50.36(e)(2)										50.73(a)(2)(vi)										OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
										20.405(a)(1)(iii)										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)(iv)										50.73(a)(2)(iii)										50.73(a)(2)(i)																			
LICENSEE CONTACT FOR THIS LER (12)																																																	
NAME C. L. Hartzell, Compliance Manager																				TELEPHONE NUMBER 8 0 1 3 8 1 3 1 1 - 1 3 6 6 1 5																													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																	
CAUSE			SYSTEM			COMPONENT			MANUFACTURER			REPORTABLE TO NRC			CAUSE			SYSTEM			COMPONENT			MANUFACTURER			REPORTABLE TO NRC																						
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 fifteen single-space typewritten lines) (16)

On December 7, 1990, at 1128 hours, Radiation Monitor EMF58 failed high range automatic source check. On December 8, at approximately 1645 hours, with Unit 1 in Mode 1, 100% Power Operation, and Unit 2 in Mode 1, 98% Power Operation, a Chemistry Supervisor was discussing the operability of EMF58 with the Chemistry System Expert. The interval between required daily channel check surveillances was questioned during this discussion. The Chemistry Supervisor consulted the Technical Specification (T/S) and determined that daily meant once per 24 hours. The Chemistry Supervisor then determined that the last channel check frequency for several effluent monitoring instruments had been 36 hours and 25 minutes. Technical Specifications were violated due to exceeding the 24 hour surveillance interval for CNOAMP5000. This incident is attributed to a Management Deficiency. Corrective actions include changing the frequency of daily T/S related surveillances to once per shift. Procedures which involve daily surveillances will be revised. Training will be provided to Chemistry personnel on T/S requirements.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

BACKGROUND

The Process Radiation Monitoring [E1IS:IL] (EMF) System provides early warning to Station personnel of equipment, component, or system malfunctions or potential radiological hazards that may occur during normal plant operation, and certain accident conditions so that corrective action can be taken to prevent exceeding the Limits of the Station's Technical Specifications.

EMF57 - Monitor Tank Building (MTB) Radiation Monitor. Radiation Monitor EMF57 measures discharge radiation levels (Liquid Effluents) and indicates and alarms in the plant control room and on the MTB control panel. On a high radiation signal, 1WLX28, the Monitor Tank Building Discharge to the Conventional Low Pressure Service Water [E1IS:KG] (RL) System isolation valve [E1IS:V], automatically closes. A channel check is performed on EMF57 prior to releases from the Monitor Tank Building.

EMF58 - MTB Gas Monitor - Radiation Monitor EMF58 measures the monitor tank building ventilation discharge levels. Radiation Monitor EMF58 provides only an alarm function to the plant control room and the MTB control panels. EMF58 includes both low and high range channels; only the low range channel is needed to monitor the MTB.

The purpose of the MTB is to enclose additional processing capability to the existing Liquid Radwaste System [E1IS:WD] (WL) and the Steam Generator [E1IS:HX] drain tanks. It also provides condensate powdex resin processing capability and additional monitor tank capacity. The MTB includes a processing area supported by a truck bay, sample room, laboratory control room, and change areas.

The MTB HVAC [E1IS:VH] (AM) System provides climate control sufficient for general equipment protection, habitability for work, and freeze protection exhaust is provided for the laboratory hoods, sample hood, and process area. Provisions are made to vent the monitor tanks through charcoal filters [E1IS:FLT] and HEPA filters prior to release. EMF58 monitors the MTB ventilation exhaust to the environment.

Technical Specification 4.3.3.10 requires each radioactive liquid effluent monitoring instrumentation channel to be demonstrated operable by performance of the channel check, source check, channel calibration, and analog channel operational test operations at the frequencies shown in Table 4.3-8. Table 4.3-8 lists the channel check frequencies for the MTB liquid discharge monitor EMF57 as daily and the effluent flow measurement device as daily on days releases are made.

Technical Specification 4.3.3.11 requires each radioactive gaseous effluent monitoring instrumentation channel to be demonstrated operable by performance of the channel check, source check, channel calibration, and analog channel operational test operations at the frequencies shown in Table 4.3-9. Table 4.3-9 list the channel check frequencies for the MTB noble gas activity monitor EMF58 as daily and the discharge flow instrumentation as daily.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED DNE NO. 3150-0104

EXPIRES: 6/31/88

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TEXT (If more space is required, use additional NRC Form 365A (2) (17))

CNOWLP8260 is used when performing the EMP57 effluent flow measurement device daily channel check. CNOAMP5000 is used when performing the EMP58 effluent flow measurement device daily channel check.

Chemistry personnel are responsible for performing the channel and source checks. IAE personnel are responsible for the channel calibration and the analog channel operational test.

Technical Specifications define daily as once per 24 hours, while for Chemistry sampling frequencies (non T/S) daily has been interpreted to mean once per calendar day.

EVENT DESCRIPTION

On December 7, 1990, at 0320 hours, with Unit 1 in Mode 1, at 100% Power Operation, and Unit 2 in Mode 1, at 98% Power Operation, a Chemistry technician performed a channel check on EMP57, EMP58, CNOAMP5000, and CNOWLP8260 located in the Monitor Tank Building. At 1128 hours, EMP58 failed high range automatic source check, placing the monitor control panels in an "operate failure" alarm state for that range. An annunciator was actuated in the Control Room, the MTB and on the 543' elevation of the Auxiliary Building [EIS:NF]. The MTB was not manned by Chemistry personnel at this time, since a release was not in progress. EMP58 continued to monitor and record the ventilation discharge activity concentration and the trip setpoint alarm function was available for the low range.

On December 8, 1990, at 1545 hours, as another Chemistry technician performed the daily channel checks on the MTB T/S related instruments, he discovered the failure of EMP58. The duty Chemistry Supervisor was notified and began investigating the EMP58 alarm. The EMP passed two manual source checks and the Chemistry Supervisor contacted the Chemistry System Expert for assistance. The discussion on the EMP led to a question on the interval for the surveillance requirements for the channel checks. The Chemistry Supervisor consulted Technical Specifications and determined that daily is described as once per 24 hours and not once per calendar day as had been previously thought. The Chemistry Supervisor then determined that the elapsed time between the last two channel check surveillances had been 36 hours and 25 minutes, exceeding the 24 hour period plus extension (6 hours). The Chemistry Supervisor then notified the Chemistry Manager at which time they jointly took immediate action and changed the surveillance frequency of Chemistry Technical Specification related equipment to once per shift.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

CONCLUSION

This incident is attributed to a management deficiency due to inadequate training, because Chemistry failed to recognize the Technical Specification definition of daily. Chemistry personnel interpreted daily to mean once per calendar day and had not considered or were unaware of the Tech Spec definition of daily to mean once per 24 hours. This led to the failure to clearly identify the definition in Chemistry's written guidance and training programs. Technical Specification 4.3.3.11 was violated when the channel checks for CNOAMP5000 were not performed by 0920 hours on December 8. The surveillance interval was also exceeded for EMF58 and WL8260; however, a 24 hour automatic source check was being performed on EMF58 and WL8260 and EMF57 require a daily check only when a release is in progress. Chemistry changed the surveillance frequency for Technical Specification related equipment/instrumentation from daily to once per shift. The Chemistry program of performing channel check surveillances on a shift basis should prevent problems in the future. Chemistry will revise the following procedures to better define daily and Tech Spec requirements:

OP/O/B/6500/58 Operating Procedure for the Monitor Tank Building
Ventilation System

OP/O/B/6500/59 Monitor Tank Building Radiation Monitor

PT/O/B/4600/14 Chemistry Periodic Surveillance Items

Chemistry Guideline 3.4.16 Chemistry Guideline for Chemistry
Controlled EMPs

Training and Qualification Guide RC-803-C Operation of the Monitor
Tank Building Radiation Monitors

Production Services/Training will develop a supplemental Technical Specification training plan for Chemistry continuing training. This lesson plan gives more in depth training for Technical Specification requirements.

Technical Specification violations resulting from management deficiencies are a recurring problem at Catawba. LER 413/90-021 documented an incident in which the fire watch interval specified in the Tech Spec was misinterpreted, resulting in the misapplication of grace periods.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Catawba Nuclear Station, Unit 1	0500041390	—	031	—	00	05	OF 05

TEXT (If more space is required, use additional NRC Form 386A's) (17)

CORRECTIVE ACTION

SUBSEQUENT

- 1) Chemistry changed the surveillance frequency for Technical Specification related equipment/instrumentation from daily to once per shift.

PLANNED

- 1) Chemistry will revise the following procedures to better define daily and Tech Spec requirements:
OP/O/B/6500/58 Operating Procedure for the Monitor Tank Building Ventilation System
OP/O/B/6500/59 Monitor Tank Building Radiation Monitor
PT/O/B/4600/14 Chemistry Periodic Surveillance Items
Chemistry Guideline 3.4.16 Chemistry Guideline for Chemistry Controlled EMFs
Training and Qualification Guide RC-803-C Operation of the Monitor Tank Building Radiation Monitors
- 2) Production Services/Training will develop a supplemental Technical Specification training plan for Chemistry continuing training. This lesson plan gives more in depth training for Technical Specification requirements.

SAFETY ANALYSIS

When EMF58 failed the automatic source check, the monitor was put in "operate failure" for the high range. The EMF did continue to monitor and record the ventilation discharge, and its alarm function was operational for the low range needed to monitor MTB activity. Review of this documentation has shown that Trip 1 or Trip 2 setpoints were not reached during this period. Radiation Protection set up a sampling program to monitor the ventilation discharge. The results of this sampling program have also demonstrated no abnormal releases of radioactivity. Exceeding the surveillance interval on CNOAMP5000 was of no consequence, since no releases were made. With these methods in place, it can be stated that the health and safety of the public were unaffected by this incident.