

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

TITLE (4) Firewatch Established On Incorrect Zone Due To Inaccurate Information On Fire Protection Graphic Display

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)		
06	23	88	88	021	00	07	25	88	N/A	0 5 0 0 0		
										0 5 0 0 0		

OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in text, NRC Form 366A)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
<u>Julio G. Torre, Associate Engineer - Licensing</u>	<u>710 14 317 13 1-18 1 0 2 1 9</u>

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)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On June 23, 1988, at 1450 hours, an hourly firewatch was initiated due to Fire Detection Zone 31 in the Auxiliary Building being in continuous alarm. After reviewing the graphics for Zone 31, as required by the operating procedure, the Fire Protection Console Operator (FPCO) erroneously initiated an hourly firewatch for the Unit 1 Interior Doghouse. This error was caused by the misleading depiction of the graphic for this fire zone. The graphic displays Zone 31 as a combined area of the Main Steam Doghouse and Room 333, Pipe Chase. However, this zone actually consists of the Mechanical Penetration Room directly beneath the Interior Doghouse and the adjacent Room 333. At approximately 2100 hours, on June 25, 1988, another FPCO, performing the weekly audit of the Fire Protection Console Annunciator Status, suspected that the zone was erroneously established. After consulting with the Unit Supervisor, the Shift Supervisor, and Security personnel, it was determined that the firewatch established was incorrect. At 2130 hours, the hourly firewatch was reestablished for the correct areas. The FPCO sent a memorandum to the responsible Operations Supervisor describing this incident and placed a copy of the memo at the Fire Protection Console to alert other Operators. Unit 1 was operating in Mode 1, Power Operation, at 100% power at the time of this event.

This incident has been attributed to a design deficiency. The graphic, which led the Operators to the wrong location, was in error.

Duke Power personnel will pursue the feasibility of issuing "Controlled Graphic Fire Zone Displays" to expedite the location of fire zones. The health and safety of the public were unaffected by this event.

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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)

BACKGROUND:

The Fire Detection System [EIIIS:KP] (EFA) monitors unattended areas of the plant for smoke or fire and alerts plant personnel of the existence and location of a fire. Technical Specification 3.3.3.8, Fire Detection Instrumentation, states that an hourly firewatch must be performed when fire detection instrumentation becomes inoperable in certain zones.

The EFA System is equipped with a Central Fire Detection Panel that alerts Operators, via an alarm, for specific zones within the plant. The Fire Detection Panel is also equipped with a graphic display system. This system allows an Operator to enter a specific code for a zone and a graphic is quickly displayed which indicates zone boundaries and locations.

These graphics (35mm slides) were originated by Design Engineering from Computer Aided Drafting. Initially, the graphics were to be placed in a Controlled Document Program. The graphic displays used by the Operators are not "Controlled Documents".

DESCRIPTION OF INCIDENT:

On June 23, 1988, at approximately 1400 hours, with Unit 1 at 100% power, the Balance of Plant (BOP) Operator acknowledged an alarm on the Fire Panel for Zone 31. After trying to clear the alarm, the BOP Operator reviewed the graphic display to determine what area Zone 31 encompassed. The display indicated "Main Steam Doghouse and Room 333". The BOP Operator contacted Security to inform them that an hourly firewatch was being initiated for the Interior Doghouse.

Fire Protection Console Operator (FPCO) A arrived at the Fire Panel. The BOP Operator and FPCO A reviewed the graphics together and concluded that Zone 31 consisted of the Interior Doghouse. FPCO A went to the Interior Doghouse and verified a fire did not exist. FPCO A initiated an hourly firewatch and Security performed the first watch at 1450 hours.

From June 23 through June 25, 1988, an hourly firewatch was maintained for Unit 1 Interior Doghouse.

At approximately 2000 hours, on June 25, 1988, FPCO B was performing the weekly audit of the annunciator status for the Fire Panel. After reviewing Zone 31 coordinates, Auxiliary Building Elevation 560, EE/53, identified on the EFA Alarm Panel, FPCO B suspected that the initial determination for the area was incorrect because the Interior Doghouse is not on 560 elevation.

To determine if an error had been made, FPCO B contacted the Unit Supervisor and the Shift Supervisor. Security was contacted later due to their expertise with the Fire Detection System. At approximately 2100 hours, Operations and Security concluded that Zone 31 consisted of the Mechanical Penetration Room and Room 333, Pipe Chase.

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

At 2130 hours, FPCO B reestablished an hourly firewatch for Zone 31, Mechanical Penetration Room and Room 333, Pipe Chase. Sometime around 2200 hours, FPCO B sent a memo to the Operations Supervisor responsible for this system explaining the incident. The FPCO also left a copy of the memo at the Fire Panel to alert other operators of this incident.

On July 1, 1988, at 1410 hours, the Zone 31 alarm cleared after work was performed under Work Request 28106 OPS.

CONCLUSION:

This incident has been attributed to a design deficiency. The graphic, which lead the Operators to the wrong location, was in error. Zone 31 was depicted as being the Main Steam Doghouse. Zone 31 actually consists of the Mechanical Penetration Room directly beneath the Doghouse.

This investigation also revealed that these graphics are not in a "Controlled Document Program". Design Engineering-Civil/Environmental has agreed to coordinate with Design Engineering-Electrical and Operations to pursue the feasibility of issuing "Controlled Graphic Fire Zone Displays" for the location of fire zones. These graphics are an expedient method of locating fire zone areas.

Review of the Operating Experience Program database indicates three previous occurrences due to a Design Deficiency which resulted in a Technical Specification violation. However, these incidents (LER 413/87-05, LER 414/87-08, and LER 413/87-12) involve errors in Design "Controlled" documents. None of these involved Fire Detection graphics. Therefore, the corrective actions taken for these incidents would not have precluded this incident.

CORRECTIVE ACTION:

SUBSEQUENT

- (1) Operations reestablished an hourly fire watch for the correct location of Zone 31.
- (2) FPCO B wrote a memorandum to the Operations Supervisor responsible for the Fire Detection System.
- (3) FPCO B placed copy of the memorandum at the Fire Protection Console to alert other Operators.

PLANNED

- (1) Design and Operations will evaluate issuing "Controlled Graphic Displays" to locate fire zones.

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

SAFETY ANALYSIS:

During this incident, no fires occurred. However, if a fire had existed, there is an Unfiltered Exhaust Ventilation duct in the immediate area. Upon sensing a high temperature, the Auxiliary Building Filtered Exhaust is designed to start upon a signal received from the Unfiltered Exhaust Unit. Eventually, smoke would have been detected by sensors in the Filtered Exhaust which would have alerted the Control Room Operators.

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

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) 373-4531

July 25, 1988

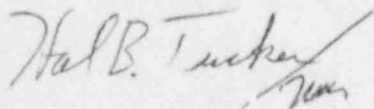
Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Catawba Nuclear Station, Unit 1
Docket No. 50-413
LER 413/88-21

Gentlemen:

Pursuant to 10 CFR 50.73 Section (a) (1) and (d), attached is Licensee Event Report 413/88-21 concerning a firewatch established on incorrect zone due to inaccurate information on fire protection graphic display. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



Hal B. Tucker

JGT/65/sbn

Attachment

xc: Dr. J. Nelson Grace
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Mr. P. K. Van Doorn
NRC Resident Inspector
Catawba Nuclear Station

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