NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Catawba Nuclear Station, Unit 1	0 5 0 0 0 4 1 3	1 OF 0 7

TITLE (4)
Continuous Fire Watch Not Performed Due to Miscommunication

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 1	0 5	8 5	8 5	0 6 2	0 0	1 2	0 5	8 5	N/A	0 5 0 0 0
										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(c)		50.73(a)(2)(iv)		73.71(b)
	20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
	20.405(a)(1)(ii)		50.36(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)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Roger W. Ouellette, Associate Engineer - Licensing	7 0 4 3 7 3 - 7 5 3 0

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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)

From November 4, 1985, at 1715 hours, to November 5, 1985, at 1500 hours, a continuous fire watch was not conducted on Diesel Generator (D/G) 1B while the Low Pressure Cardox Fire Protection System for D/G 1B was disabled. This was discovered at about 1215 hours on November 5, 1985, and a continuous fire watch was established at 1500 hours. Catawba Unit 1 was in Mode 5, Cold Shutdown, at the time this incident occurred.

This incident resulted form miscommunication between Security and Maintenance Personnel. Therefore, this incident is classified as a Personnel Error.

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

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1/1

BACKGROUND

Each Diesel Generator (D/G) Room is equipped with a Cardox Fire Extinguishing System (EIIS:KG). The System may be discharged automatically, or manually by manual pushbutton stations. Each D/G Cardox System can be isolated by closing valve 1RF817, D/G Room 1A CO2 Supply Header Isolation Valve, or valve 1RF819, D/G Room 1B CO2 Supply Header Isolation Valve, or disabled by manually placing the Disable Switch for each respective D/G Cardox System to the disable position. This is to ensure that the D/G Cardox System does not inadvertently discharge whenever work is performed on the respective D/G, D/G Cardox System or in the D/G Room.

Technical Specification 3.8.1.2 requires one D/G operable during Modes 5, Cold Shutdown, and 6, Refueling. Technical Specification 3.7.10.3 requires the D/G Cardox System to be operable whenever equipment protected by the Cardox System is required to be operable. Therefore, during Modes 5 and 6, 1 D/G along with its associated Cardox System is required to be operable.

In the event that a D/G Cardox System is isolated or disabled when the system is required to be operable, Technical Specification 3.7.10.3 requires that a continuous fire watch be established within 1 hour of the impairment. A Security Officer is assigned the duty of Fire Protection Console Operator (FPCO) and is responsible for evaluating available information concerning the operability of the fire protection equipment. The FPCO serves as the coordinator for the fire watch program. In order to ensure that fire watches are maintained as required and due to the requirements of operating modes, Security Procedures governing the fire watch program require that a fire watch always be established whenever fire protection equipment is inoperable.

DESCRIPTION OF INCIDENT

On September 27, 1985, a Work Request was issued to perform an internal visual inspection on the D/G 1B Air Intake Silencers. This was required to ensure that both end caps of the Centerline "Bullet" were welded to the Cylindrical Section. When the inspection was performed, it was discovered that one end cap was not welded. A weld packet was completed by maintenance personnel so that the end cap on D/G 1B could be welded as required.

On October 31, 1985, at 0923 hours, a Tagout Removal and Restoration Record Sheet (R&R) was issued to isolate the D/G 1B Cardox System by closing valve 1RF819 to support welding work on D/G 1B. Operations notified Security that 1RF819 would be closed, impairing the D/G 1B Cardox System. At 1420 hours, D/G 1B Cardox System was declared inoperable. A Fire Impairment Form was completed by Security to document that the D/G 1B Cardox System

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

would be impaired. At 1500 hours, FPCO A made an entry in the Fire Watch Log to document the impairment of the D/G 1B Cardox System and the group responsible for the required fire watch; Mechanical Maintenance. A Fire Watch Verification Form was initiated by FPCO A to be used by Maintenance to document the fire watch (Security Procedures required that a fire watch be established within 1 hour of the impairment by the responsible group on D/G 1B. Technical Specifications did not require a fire watch to be performed at this time). FPCO A stated that he contacted the responsible Mechanical Maintenance Supervisor and instructed him that a continuous fire watch would have to be performed when the D/G 1B Cardox System was impaired. The Maintenance Supervisor does not remember FPCO A telling him that a continuous fire watch had to be performed when the Cardox System was impaired. The Maintenance Supervisor was under the impression that a continuous fire watch was to be performed by Maintenance during the welding only due to hot work requirements. Also, at 1500 hours, Operations closed 1RF819 per the R&R. A copy of the R&R was given to FPCO A to document that 1RF819 was closed, impairing the D/G 1B Cardox System. The Fire Watch Verification Form was placed on the desk at the Fire Protection Console (FPC) by FPCO A so that Maintenance could pick it up. However, Maintenance did not pick up the form or begin the fire watch at this time.

During this same time, Maintenance had requested that Security open the outer door to D/G Room 1B so that welding leads could be pulled from a welding machine outside of D/G Room 1B into the Room. The door would have to be blocked open until the welding job was completed. The door was listed in the Fire Watch Log by FPCO A and a Security Officer was posted at the door.

At 1830 hours, FPCO B relieved FPCO A at the FPC. FPCO A told FPCO B that a continuous fire watch was being performed on D/G 1B by the Security Officer standing watch at the door. FPCO B found the Fire Watch Verification Form which had been prepared by FPCO A for Mechanical Maintenance on the desk at the FPC. FPCO B contacted the Mechanical Maintenance Supervisor responsible for the welding work to find out if the welding had begun. The Maintenance Supervisor informed FPCO B that the work had not started. FPCO B prepared a new Fire Watch Verification Form and discarded the original Fire Watch Verification Form prepared by FPCO A. Maintenance Personnel picked up the Fire Watch Verification Form and at 2000 hours, the welding work started on D/G 1B and a continuous fire watch was established by Maintenance to satisfy hot work requirements. The fire watch for the D/G door which was blocked open was terminated by FPCO B since he felt this was duplication of efforts.

On November 1, 1985, at 0500 hours, after Mechanical Maintenance completed the welding work, the fire watch was terminated. The Fire Watch Verification form was returned to the FPC by Maintenance. Prior to this time, FPCO C had relieved FPCO B. FPCO C closed out the fire watch entry in the Fire Watch Log. The Fire Impairment Report was subsequently signed off by FPCO A indicating that the impairment to the D/G 1B Cardox System had been restored. (Note: At this time, the D/G 1B Cardox System was still inoperable; 1RF819 was closed per the R&R.)

At about 0525 hours on November 1, 1985, a Nuclear Equipment Operator (NEO) on rounds discovered the D/G 1B Cardox System disabled (the system control switch was in the disable position). It cannot be determined who positioned the switch. The NEO immediately notified the Shift Supervisor. The Shift Supervisor instructed the NEO to complete Enclosure 4.5 of procedure OP/1/A/6450/19, Cardox Fire Protection System, to document that the system was disabled. The NEO completed Enclosure 4.5 and went by the FPC and showed the completed enclosure to FPCO C. (A procedure change was made to OP/1/A/6450/19 on October 30, 1985, adding steps to Enclosure 4.5 requiring that when the Cardox System is disabled or returned to standby per Enclosure 4.5, that a copy of the enclosure be given to the FPCO to use for fire impairment reporting. Security, however, was not aware of this procedure change and FPCO C did not recognize the enclosure.) The NEO told the FPCO that it was a supplement to the R&R. Since FPCO C was told that it was a supplement to the R&R, he felt that no further action was required. The NEO then left to make a copy of the enclosure to give to FPCO C. The NEO returned and put the copy in the Fire Impairment Form Notebook. However, FPCO C does not remember the NEO returning with the copy of the enclosure.

At 1330 hours, Operations tried to restore the D/G 1B Cardox System to standby per Enclosure 4.5. However, the trouble light for the D/G 1B Cardox System would not reset so the system remained inoperable. A Work Request was subsequently issued by Operations to investigate and repair the trouble light on the system. This problem had been documented on the previous Work Request on October 23, 1985. On November 2, 1985, at 1300 hours, 1RF819 was opened and the R&R was closed out. At 1525 hours, D/G 1B Cardox System was declared operable. (D/G 1B Cardox System was actually still inoperable due to the problem with the resetting of the trouble light.) At 1720 hours, D/G 1B was declared operable following completion of the welding work.

On November 4, 1985, at 1715 hours, D/G 1A was declared inoperable. At this time, Technical Specification 3.7.10.3 required that a continuous fire watch be performed on D/G 1B since D/G 1B was the only available source for backup A.C. power and the D/G 1B Cardox System was inoperable. On November 5, 1985, at 1215 hours, FPCO D found the copy of Enclosure 4.5 in the Fire Impairment Form Notebook. FPCO D dispatched a Security Officer to D/G 1B to check the area for fire. A Fire Impairment Form was completed to document the disabled D/G 1B Cardox System. At 1500 hours, a continuous fire watch was established on D/G 1B.

CONCLUSION

This incident is classified as a Personnel Error, due to the miscommunication which transpired between Security and Mechanical Maintenance concerning the need to begin a continuous fire watch when valve 1RF819 was closed. Also, FPCO C should have determined the significance of Enclosure 4.5, even though he was not aware of the procedure change, and then taken the appropriate actions to ensure a fire watch was maintained on D/G 1B until the impairment to the D/G 1B Cardox System was restored.

It should be noted that if the D/G 1B Cardox System had not been disabled, a Technical Specification violation would not have occurred even though the fire watch was not established as required during the time that 1RF819 was closed. It is not known at this time who disabled the D/G 1B Cardox System. Normally the system is disabled using Enclosure 4.5 of OP/1/A/6450/19. After the D/G 1B Cardox System was found disabled, no documentation could be found on file to document the Cardox System being disabled. The operation of the D/G Cardox Fire Protection System was described at the November, 1985, monthly safety meeting which all station personnel were required to attend. This should reinforce the operational requirements of the system to all station personnel.

Station Directive 2.12.6 addresses responsibilities for fire impairment reporting. This directive gives adequate guidance for initiating and conducting compensatory action, and notification of restoration of fire impairments. Station Directive 3.3.9 addresses proper fire prevention practices when hot work operations are performed. This directive provides adequate guidance for all Catawba employees in the correct hot work procedures.

The second Work Request was voided on November 6, 1985. The repair work was performed under the initial Work Request which had been initiated earlier to investigate and repair the problem with the D/G 1B Cardox System trouble light. The repair work was completed on November 7, 1985, and the D/G 1B Cardox System was returned to standby on November 9, 1985.

On September 19, 1985, a similar incident occurred where backup fire protection equipment was removed while the permanent fire protection equipment was still inoperable (see LER 413/85-55). As a result of that incident, a change will be made to Station Directive 2.12.6 to ensure that personnel are aware that compensatory fire protection equipment and/or fire watches must be maintained until the system has been restored, red tags removed, and permission obtained from the Operations Shift Supervisor to remove the compensatory equipment and/or fire watch.

This is the third incident where fire watches were improperly performed. See also LER's 413/84-26 and 413/85-58.

CORRECTIVE ACTION

Immediate

A continuous fire watch was established on D/G 1B.

Subsequent

The D/G 1B Cardox Fire Protection System was restored to standby.

Planned

1) Notification will be given to all Mechanical Maintenance personnel that fire watches under the responsibility of Mechanical Maintenance are to be maintained as required.

2) Notification will be given so that all FPCO's are aware that all Fire Impairment Reports are not to be cleared until the actual fire impairment is restored.

3) Notification will be given to all FPCO's of the change made to Enclosure 4.5 of OP/1/A/6450/19 and the significance of the enclosure.

4) A method will be developed to ensure a fire watch is established or will be established at the time fire protection equipment required operable by Technical Specifications is rendered inoperable.

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

SAFETY ANALYSIS

Technical Specification 3.8.1.2 requires that one D/G be operable during Modes 5 and 6. D/G 1A was declared inoperable at 1715 hours on November 4, 1985. D/G 1B was operable at this time which ensured compliance with Technical Specification 3.8.1.2 since backup AC electrical power was available. With D/G 1B Cardox System disabled, no automatic fire extinguishing method was available for D/G 1B. However, operable fire detectors in the D/G Room would have alerted the FPCO if a fire had occurred, and the fire brigade could have been dispatched. Hose racks, supplied by the Nuclear Service Water System, are available in each D/G Room.

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

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HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

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December 5, 1985

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 413/85-62 concerning a continuous fire watch not being performed due to miscommunication.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/mm

Hal B. Tucker

RWO:slb

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator
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NRC Resident Inspector
Catawba Nuclear Station