

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Wolf Creek Generating Station	0 5 0 0 0 4 8 2	8 7	— 0 1 0	— 0 0	0 2	OF	0 9

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

Introduction

On several occasions during February and March, 1987, situations involving breached fire barriers were discovered. In each instance, the appropriate corrective measures were promptly initiated. Technical Specification (T/S) 3.7.11 requires that all fire barrier penetrations separating safety related fire-areas or separating portions of redundant systems important to safe shutdown with a fire area and all sealing devices in fire-rated assembly penetrations be operable, or that a fire watch of the affected area be established. These situations are considered to be conditions prohibited by the plant's Technical Specifications and are being reported pursuant to 10CFR 50.73(a)(2)(i)(B).

Description of Events and Immediate Corrective Actions

1. Breached penetrations originally dispositioned on Non Conformance Report NCR LSN52281C

NCR LSN52281C was written in December, 1984. This NCR was written on 22 penetration seals because of a lack of traceability due to a lack of documentation. Corrective actions were signed off as complete in January, 1985. All penetrations discussed in this section are listed on this NCR.

On February 16, 1987, at approximately 1030 CST, fire barrier penetration 321W0130 was found to be breached. This five inch diameter penetration serves as part of the required fire barrier between two fire zones on the 1984 foot elevation of the Control Building [NA]. The penetration service is a one inch fire protection pipe. Following this discovery, an hourly fire watch was established, and a work request was written to seal the penetration.

Review of the history of penetration 321W0130, revealed that it had also been inspected in January, 1987. This inspection was conducted as a result of the discovery that penetration 133W2104 was not sealed. (Further discussion of this discovery is provided in Licensee Event Report 87-001.) The January, 1987, inspection did not identify the fact that this penetration was not properly sealed. As a result of this occurrence a walkdown was conducted by the Fire Protection Specialist on March 11 and 12, 1987. During this walkdown of all penetrations addressed in NCR LSN52281C, penetrations 321W0109, 321W0080, and 141W2491 were found breached. It is assumed that the penetrations have been unsealed since issuance of the facility operating license on March 11, 1985.

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Investigations have also revealed that penetrations 321W0130, 321W0109, and 321W0080 had been inspected in Fall, 1986, during performance of surveillance procedure STS MT-026, "Fire Barrier Penetrations and Sealing Devices". STS MT-026 was performed to satisfy Technical Specification Surveillance Requirement 4.7.11.1 'c', which requires, in part, a visual inspection of at least ten percent of each type (mechanical and electrical) of sealed penetration at least once per eighteen months. This Surveillance Requirement further requires a visual inspection of an additional ten percent of each type of sealed penetration if apparent changes of appearance or abnormal degradation is found during the initial inspection. During the initial ten percent inspection which included penetrations 321W0130, 321W0109, and 321W0080, an electrical penetration seal was found to be damaged. Because of this damaged seal, an additional ten percent of each type of sealed penetration was inspected with no discrepancies identified. Although penetration 321W0130 was identified as not being sealed during the initial inspection, this discovery was not identified as a test deficiency during the review process of the completed surveillance procedure. Consequently, no repair of penetration 321W0130 was initiated. Penetrations 321W0109 and 321W0080 were not identified as having been breached because of personnel error by maintenance personnel.

Figure 1 depicts the chronological order of these events.

2. Fire barrier breaches caused by holes that are not designed penetration closures.

A deficiency identified on February 16, 1987, involved a one-inch diameter hole in the floor slab between the 2000 foot and 2026 foot elevation of the Auxiliary Building [NF]. On December 18, 1986, a work request had been initiated to repair several attempted core drills. At that time, it was not recognized that these deficiencies affected the operability of required fire barriers, and the work request was classified as not requiring a Fire Protection Review. On February 16, when preparing to implement this work request, construction personnel questioned the Fire Protection Specialist concerning this classification. Upon review, it was determined that one of the core drills in the floor slab of the 2026 foot elevation of the Auxiliary Building constituted a breach of a required fire barrier. A fire watch of the affected area was promptly instituted.

On February 19, 1987, a deficiency involving a hole approximately 2 inches in diameter in the wall between the 2026 elevation of the Auxiliary Building and the south end of the Turbine Building [NM] was identified. Upon discovery, a fire watch of the area was instituted, and a work request was initiated to repair the hole.

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

On March 9 1987, it was discovered that an approximate two inch diameter penetration believed to be an abandoned conduit, existed in the east wall of Room 3416, Access Control and Electrical Equipment Air Conditioning Units Room Number 2, on the 2016 foot elevation of the Control Building. This condition represents a breach of a required fire barrier between adjacent fire zones. A fire watch of the area was promptly established and a work request was initiated to grout the penetration.

The exact time when these three holes through concrete were made could not be identified. It is assumed that the conditions have existed since before receipt of the facility operating license.

3. Personnel errors involving failure to comply with fire protection procedures.

On February 19, 1987, at approximately 1545 CST, a deviation from fire protection procedure requirements was discovered. During the review/close-out cycle of a work request package, it was determined that copies of necessary Fire Protection Impairment Control Permits were not included in the package. Fire Protection Impairment Control Permits are utilized to track fire protection impairments and to establish the necessary precautions (e.g., fire watch) when an impairment is planned or discovered. A review of both the Fire Impairment Logs and Fire Protection Impairment Control Permits revealed that the proper permits had not been obtained to complete the activities associated with this work request. During performance of this work, a total of seven T/S required penetrations were breached and then resealed by construction personnel during the month of April, 1986. Following discovery of this T/S violation on February 19, the affected areas were inspected and it was verified that the penetrations had been properly re-sealed.

On March 4, 1987, a Nuclear Regulatory Commission Resident Reactor Inspector identified that Fire Door 34031 was blocked open by a hose but did not have a Fire Impairment Control Permit. The Control Room was notified of the situation, and instructed that the door be closed. Investigation revealed that construction personnel had opened the door and placed a hose through it while performing Work Request 723-87 without first obtaining a fire permit. A previous similar occurrence is discussed in Licensee Event Report 86-050-00.

On March 11, 1987, during an inspection by the Fire Protection Specialist, penetration 321W0091 was identified as breached. Following this discovery, a fire watch was established and a work request was initiated to seal the penetration. Investigation revealed that a video camera cable had been run through this penetration in Fall, 1986, by Health Physics personnel without first obtaining a Fire Impairment Control Permit.

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These events occurred as a result of cognitive personnel error by personnel who failed to obtain the proper Fire Impairment Permits when rendering a fire barrier inoperable. These errors are contrary to administrative procedures governing Fire Protection Impairment Control. Upon discovery of each breached fire barrier, immediate corrective actions were taken in accordance with T/S Requirements.

Construction craft personnel have been retrained on the requirements of the administrative procedure governing Fire Protection Impairment Control. In addition, the administrative procedure is being added to required reading for Health Physics personnel as a reminder of the Impairment Control Requirements.

Analysis of Events

Each discrepancy described in this report represents a potential path for heat and products of combustion transmission to adjacent fire zones. However, each safe shutdown area is served by the Fire Detection System, which could have generated an alarm in the Main Control Room had a fire occurred in any one of these areas. Figure 2 contains a summary of the fire detection/suppression system capabilities for each affected area. A previous similar occurrence of an inoperable penetration seal is discussed in Licensee Event Report (LER) 87-001. At the time LER 87-001 was originally prepared, the situation was thought to be an isolated case. A revision to LER 87-001 will be submitted.

Corrective Actions

Internal Operations Program Deficiency (IOPD) 87-01 is being utilized to provide a systematic review and upgrade of key aspects of the fire protection program. Corrective actions planned as part of the IOPD are the following:

1. Review and revision of the surveillance procedure for inspection of fire barriers to enhance specific inspection criteria.
2. Train inspection personnel on the revised inspection criteria.
3. Conduct an inspection of all design fire barrier penetrations and ensure any discrepancies are expeditiously corrected.
4. Labeling of all Technical Specification fire barrier penetrations so that they may be clearly identifiable during future inspections.

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Wolf Creek Generating Station

0500048287-0110-010016019

TEXT (If more space is required, use additional NRC Form 305A w/ (17))

LER 87-010-00
FIGURE 1 Page 1 of 2

PROBLEMS WITH
PENETRATIONS ORIGINALLY
IDENTIFIED AND
DISPOSITIONED ON
NCR 1SN 52281C

LER 87-001-00
Piping penetration seal
133W2104 was found to be
breached by the auxiliary
building watch operator on
1/7/87.

NCR 1SN 52281C
22 Seals found to be
installed without traceable
QC field documentation on
12/17/84

NCR 1SN 52281C :
NCR Signed off as action
completed on 1/4/85.,
USE-AS-IS disposition.

Penetration 133W2104 is on
NCR 1SN 52281C. A walkdown
of the other accessible
penetrations identified on the
NCR was performed to verify
the closures. Complete on
1/13/87.

Continued on
next page

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Wolf Creek Generating Station

0500048287-0110-01007019

TEXT (if more space is required, use additional NRC Form 360A (1/17))

Two of the penetrations, 321W0109 and 321W0080, found with no seals on 3/11/87 walkdown were inspected as part of STS-MT-026.

During review of penetration 321W0130 breach it was determined that the penetration had been inspected during STS-MT-026 and identified as having No-Seal. However, through personnel error no corrective action was identified as needed for this penetration during review of the completed STS.

Surveillance STS-MT-026 Fire Barrier Penetrations and Sealing Devices:
Twenty percent inspection completed on 10/6/86.
One discrepancy noted involving damaged fire seal.

LER 87-010-00 Penetration seal 321W0130 was found to be breached on 2/16/87.

Penetration 321W0130 is on NCR 1SN 52281C. It was reported having seal installed on walkdown on 1/13/87.

During a walkdown on 3/11/87, by the Fire Protection Specialist, the following additional penetration seals addressed on the NCR were found breached: 321W0109, 321W0080, 141W2491.

LER 87-010-00
FIGURE 1 Page 2 of 2
PROBLEMS WITH PENETRATIONS
ORIGINALLY IDENTIFIED
AND DISPOSITIONED ON
NCR 1SN 52281C

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APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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FIGURE 2
SUMMARY OF FIRE DETECTION/SUPPRESSION CAPABILITIES

Penetration	Fire Zone Boundary	Fire Detection	Fire Suppression
321W0130	C-1/C-3	KC-XSH-300-ID-002 (C-3)	Wet Pipe Sprinklers (C-3) and (C-1)
133W2104	A-25/A-8	KC-XSH-117-ID (A-25) KC-XSH-103-ID (A-8)	Partial Coverage Pre-action Sprinklers (A-8)
321W0109	C-5/C-6	KC-XSH-300-ID (below ceil) KC-XSH-301-ID (above ceil)	Wet Pipe Sprinklers (below ceil) Wet Pipe Sprinklers (above ceil)
321W0080	C-5/C-6	KC-XSH-300-ID (below ceil) KC-XSH-301-ID (above ceil)	Wet Pipe Sprinklers (below ceil) Wet Pipe Sprinklers (above ceil)
141W2491	A-16/A-26	KC-XSH-104-ID (A-16) KC-XSH-118-ID (A-26)	Pre-Action Sprinklers (A-16)
1" hole 2026 Aux	A-16/A-8	KC-XSH-104-ID (A-16) KC-XSH-103-ID (A-8)	Pre-Action Sprinklers (A-16) Pre-Action Sprinklers (A-8)
2" hole Aux/Turb	A-16/T-2	KC-XSH-104-ID (A-16) KC-XSH-404-CD (T-2)	Pre-Action Sprinklers (A-16) Pre-Action Sprinklers (T-2)
2" hole 2016 Cont	C-14/C-35	KC-XSH-303-ID (C-14)	None
351W0785	C-21/CC-1	KC-XSH-306-ID (C-21) KC-XSH-302-ID (CC-1)	Pre-Action Sprinklers (C-21)
361S0534	C-21/C-27	KC-XSH-308-ID (C-27) KC-XSH-306-ID (C-21)	Pre-Action Sprinklers (C-21)
351W0786	C-21/CC-1	KC-XSH-306-ID (C-21) KC-XSH-302-ID (CC-1)	Pre-Action Sprinklers (C-21)

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APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

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Penetration	Fire Zone Boundary	Fire Detection	Fire Suppression
361S1068	C-21/C-27	KC-XSH-308-ID (C-27) KC-XSH-306-ID (C-21)	Pre-Action Sprinklers (C-21)
371S0594	C-22/C-27	KC-XSH-307-ID (C-22) KC-XSH-308-ID (C-27)	Pre-Action Sprinklers (C-22)
371S0659	C-22/C-27	KC-XSH-307-ID (C-22) KC-XSH-308-ID (C-27)	Pre-Action Sprinklers (C-22)
371S0683	C-22/C-27	KC-XSH-307-ID (C-22) KC-XSH-308-ID (C-27)	Pre-Action Sprinklers (C-22)
Door 34031	C-15/C-35	KC-XSH-304-ID (C-15) KC-XSH-305-ID (C-15)	Halon (C-15)
321W0091	C-5/C-6	KC-XSH-300-ID (below ceil) KC-XSH-301-ID (above ceil)	Wet Pipe Sprinklers (below ceil) Wet Pipe Sprinklers (above ceil)

Aux = Auxiliary Building
Turb = Turbine Building
Cont = Control Building
ceil = ceiling

WOLF CREEK
NUCLEAR OPERATING
CORPORATION

March 18, 1987

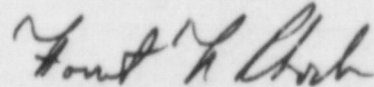
U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Letter: NO 87-0062
Re: Docket No. 50-482
Subj: Licensee Event Report 87-010-00

Gentlemen:

The attached Licensee Event Report is submitted pursuant to 10 CFR 50.73
(a) (2) (i) concerning a Technical Specification violation.

Yours very truly,



Forrest T. Rhodes
Vice-President
Nuclear Operations

FTR:wbb

Attachment

cc: PO'Connor (2)
JCummins
RMartin

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IE22