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ACCESSION NBR:9110100039 DOC.DATE: 91/10/02 NOTARIZED: NO DOCKET #
FACIL:50-263 Monticello Nuclear Generating Plant, Northern States 05000263
AUTH.NAME AUTHOR AFFILIATION
HIPPE,M. Northern States Power Co.
PARKER,T.M. Northern States Power Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER-91-017-01:on 910815,discovered that hatch located in turbine bldg improperly sealed & penetration in turbine bldg inoperable.Caused by failure to recognize hatch as fire barrier.Administrative controls revised.W/911002 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 6
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:NRR/LONG,W.

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EXTERNAL: EG&G BRYCE,J.H	3 3	L ST LOBBY WARD	1 1
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Northern States Power Company

414 Nicollet Mall
Minneapolis, Minnesota 55401-1927
Telephone (612) 330-5500

October 2, 1991

Report Required by
10 CFR Part 50, Section 50.73

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Inoperable Fire Barrier Penetration Seal Due to
Failure to Identify Penetration as a Fire Barrier

The amended Licensee Event Report for this occurrence is attached.

This event was reported via the Emergency Notification System in accordance with 10 CFR Part 50, Section 50.72 on August 15, 1991.

for Monica Vik
Thomas M Parker
Manager
Nuclear Support Services

c: Regional Administrator - III NRC
Sr Resident Inspector, NRC
NRR Project Manager, NRC
MPCA

Attn: Dr J W Ferman

Attachment

9110100039 911002
FDR ADOCK 05000482
S FDR

IE22
111

ESTIMATED BUREAU PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BUREAU ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530). U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Monticello Nuclear Generating Plant										DOCKET NUMBER (2) 0 5 0 0 0 2 6 3										PAGE (3) 1 OF 0 5					
TITLE (4) Inoperable Fire Barrier Penetration Seal Due to Failure to Identify Penetration as a Fire Barrier																									
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)										
0	8	1	5	9	1	9	1	1	0	1	7	0	1	1	0	0	2	9	1	0 5 0 0 0					
OPERATING MODE (9)				THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																					
POWER LEVEL (10)				20.402(b)				20.406(e)				50.73(a)(2)(iv)				73.71(b)									
1				20.406(a)(1)(ii)				50.73(a)(1)				50.73(a)(2)(v)				73.71(d)									
0				20.406(a)(1)(iii)				50.73(a)(2)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
				20.406(a)(1)(iv)				X 50.73(a)(2)(i)				50.73(a)(2)(vii)(A)													
				20.406(a)(1)(v)				50.73(a)(2)(ii)				50.73(a)(2)(vii)(B)													
				20.406(a)(1)(vi)				50.73(a)(2)(iii)				50.73(a)(2)(viii)													
LICENSEE CONTACT FOR THIS LER (12)																									
NAME												TELEPHONE NUMBER													
Mike Hippe, Fire Protection System Engineer												AREA CODE 6 1 2 2 9 5 - 1 3 7 1													
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	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC						
SUPPLEMENTAL REPORT EXPECTED (14)														EXPECTED SUBMISSION DATE (15)				MONTH	DAY	YEAR					
YES (If yes, complete EXPECTED SUBMISSION DATE)														X NO											

ABSTRACT (Limit to 1400 words, i.e. 100 characters (letters, digits, spaces, hyphens, and underscores) (16)

While conducting an inspection of fire penetrations, a hatch located in the turbine building was determined to be improperly sealed. The penetration in the turbine building was determined to be inoperable and a fire watch was immediately established. The penetration was sealed and returned to operable status.

The cause of the inoperable barrier was a failure to recognize the hatch as a fire barrier and, consequently, failure to implement the associated requirements for resealing the hatch during a plant modification. Administrative controls will be revised to require identifying all breached penetrations to qualified plant staff prior to opening. This requirement will be included in the annual supervisor training. All Fire Barrier hatches are being labeled, "Contact Fire Protection System Engineer Prior to Opening".

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		91	017	01	02	OF	05

Monticello Nuclear Generating Plant

TEXT (if more space is required, use additional NRC Form 356A's) (17)

DESCRIPTION:

On August 15, 1991, 1500 hours, during power operation while conducting an inspection of fire barrier penetrations, the Fire Protection System Engineer identified an equipment hatch between Fire Area XII, Zone 14A and Fire Area IX, Zone 12A in the Turbine Building which was not properly sealed (EIIIS Component: SEAL). Light could be observed through three (3) 1.5 inch by 0.5 inch gaps in the hatch sealing area.

The Fire Protection System Engineer immediately notified the Shift Supervisor. The penetration was declared Inoperable at 1500 hours and a roving one hour fire watch was established as required by Technical Specification 3.13.G.2. The penetration was sealed with Kaowool and declared operable at 1525 hours on August 16, 1991. The Fire Protection System Engineer initiated an inspection of the remaining Fire Barrier hatches. No additional problems were identified.

Technical Specification 3.13.G.1 states, "All penetration fire barriers in fire area boundaries shall be operable whenever safe shutdown equipment in that fire area is required to be operable". This event is reportable because it is a condition prohibited by Technical Specifications.

CAUSE:

The cause of this event was failure to identify the hatch as a fire barrier during modification activities.

The hatch was removed to facilitate completion of a modification to the security barriers for the 4KV switchgear rooms. A fire protection review was required and performed for this modification. However, the hatch was not identified in the modification document and therefore the resealing requirements were not identified during the fire protection review. In addition, the requirement for resealing the hatch was not identified by the construction crew or job supervisor during the work. The hatch remained unsealed at the completion of the outage, which ended November 9, 1989. This was due to a lack of understanding that hatches may need to be resealed in addition to being restored to ensure an adequate fire barrier. Current administrative controls do not assure all breached penetrations are identified and reviewed by qualified individuals.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BUREAU PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555. AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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Monticello Nuclear Generating Plant	0 5 0 0 0 2 6 3	9 1	— 0 1 7	— 0 1	0 3	OF 0 5	

TEXT (If more space is required, use additional NRC Form 356A's) (17)

ANALYSIS:

Turbine Building Hatch No. 8 has overall dimensions of 14 feet by 6 feet 6 inches. The hatch is divided into four panels, each approximately 3 feet 6 inches by 6 feet 6 inches. Each panel is constructed of poured concrete approximately 6.5 inches deep. The hatch panels sit on a small lip around the perimeter of the opening, with a small lip also provided between the interconnecting pane.

A 1/2 inch gap is provided around the perimeter of the hatch assembly, with an additional 1/2 inch gap between the panels making up the hatch. The cumulative length of the gap is approximately 60 feet. The 1/2 inch gap is designed to be sealed to a 4 inch depth with Thermafiber CT felt and a layer of Flamemastic. Approximately 9 inches of the 60 foot perimeter was found to be unsealed, with light detectable from the opposite side of the barrier.

The hatch assembly is located within the 4kV switchgear and 480V load center enclosure portion of the area/zone on the 911 foot elevation. On the 931 foot elevation, the hatch assembly is located outside the 4kV switchgear and 480V load center enclosure portion of the area/zone. A barrier that is solid up to the height of about 7 feet topped with steel grating separates the hatch assembly from the 931 foot elevation switchgear and load centers.

Per the Updated Fire Hazards Analysis, the combustible loading in Fire Area/Fire Zone XII/14A, Turbine Building Load Center No. 2 located on the 931 foot elevation, consists primarily of cable insulation with an equivalent fire severity of under 15 minutes. Postulated fires in the area/zone would tend to spread upwards and outward away from the hatch assembly. Fires in this location would not impact on the hatch assembly or equipment located below.

The combustible loading in Fire Area/Fire Zone IX/12A, Turbine Building Load Center No. 1 location on the 911 foot elevation, consists primarily of cable insulation with an equivalent fire severity of under 25 minutes. Minimal exposed cable insulation is located in the vicinity of the hatch assembly, and there is none within 3 feet (vertically) of the hatch.

Should a fire occur in the area/zone, it would be detected in its incipient stages by the ceiling level smoke detection system and result in prompt fire brigade response. Prior to arrival of the fire brigade, the main product of combustion that the hatch could be exposed to would be smoke and hot gases. Direct flame impingement would not occur due to the minimum 3 foot vertical separation between cable trays and the hatch.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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Monticello Nuclear Generating Plant	0 5 0 0 0 2 6 3	9 1	0 1 7	0 1	0 4	OF	0 5

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

The potential spread of smoke and hot gases through the hatch assembly is limited by the size of the unsealed openings. The three unsealed gaps with dimensions of 3 inches by 1/2 inch provide a minimal path for smoke and hot gas spread. Should smoke and hot gas spread through the openings, there would be no direct impact on safe shutdown equipment in the area. The part height barrier located between the hatch assembly and the safe shutdown equipment would prevent direct smoke and gas impingement on safe shutdown equipment. Reasonable assurance is provided that manual fire fighting activities would act to control and/or extinguish postulated fires prior to smoke spread through the steel grate portion of the barrier and down to the level of the equipment.

Based on the result of the preceding evaluation, the unsealed portions of the Turbine Building Hatch No. 8 had no adverse impact on the ability to achieve and maintain safe shutdown capability. There were no consequences to the health and safety of the public.

CORRECTIVE ACTIONS:

1. Completed Actions:

- Turbine Building Hatch No. 8 was sealed with Kaowool.
- The hatch was labeled to identify it as a fire barrier.
- An inspection was performed by the Fire Protection system engineer to insure hatches in Fire Barriers were sealed.

2. Future Actions:

- Administrative controls will be revised to require job and responsible supervisors to report all hatches breached to the Fire Protection system engineer for review.
- Job and Responsible Supervisors will be trained in the revised administrative control during annual training.
- All Fire Barrier hatches will be labeled, "Contact Fire Protection System Engineer Prior to Opening."

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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Monticello Nuclear Generating Plant	0 5 0 0 0 2 6 3	9 1	0 1 7	0 1	0 5	OF	0 5

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

ADDITIONAL INFORMATION:

Failed Component Identification:

None

Previous Similar Events:

Similar events were reported in Licensee Event Reports 88-004-00, 89-001-00, 89-013-01, and 90-009-00. Corrective actions for these events addressed the procedures and engineering staff activities associated with fire protection barriers. Prior corrective actions did not address the individuals actually performing the work at the job site.