



Northern States Power Company

Monticello Nuclear Generating Plant
2807 West Hwy 75
Monticello, Minnesota 55362-9637

October 11, 1996

10 CFR Part 50
Section 50.73

US Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

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

LER 96-009

Failure to Perform the Required Actions within One Hour
Following the Discovery of Water in a Fire Hydrant Barrel

The Licensee Event Report for this occurrence is attached. This report contains no new NRC commitments.

Please contact Tom Parker at (612) 295-1014 if you require further information.

William J Hill
Plant Manager
Monticello Nuclear Generating Plant

c: Regional Administrator - III NRC
Sr Resident Inspector, NRC
NRR Project Manager, NRC
State of Minnesota, Attn: Kris Sanda

Attachment

IE221

9610210282 961011
PDR ADOCK 05000263
S PDR

NRC FORM 368 (5-92)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95						
LICENSEE EVENT REPORT (LER) <small>(See reverse for required number of digits/characters for each block)</small>								ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, 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) 05000 - 263			PAGE (3) 1 OF 6			
TITLE (4) Failure to Perform the Required Actions within One Hour Following the Discovery of Water in a Fire Hydrant Barrel											
EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
09	24	96	96	009	00	10	11	96	FACILITY NAME	DOCKET NUMBER	
										05000	
										05000	
OPERATING MODE (9)		N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
			20.402(b)			20.405(c)			50.73(a)(2)(iv)	73.71(b)	
POWER		100	20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)	73.71(c)	
LEVEL (10)		%	20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)	OTHER	
			20.405(a)(1)(iii)		<input checked="" type="checkbox"/>	50.73(a)(2)(i)			50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 368A)	
			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 Tom Parker						TELEPHONE NUMBER (Include Area Code) 612-295-1014					
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	
E	KP	HYD	X999	No							
SUPPLEMENTAL REPORT EXPECTED (14)											
YES (IF YES, COMPLETE EXPECTED SUBMISSION DATE)					<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)			MONTH	DAY	YEAR

ABSTRACT LIMIT TO 1400 SPACES, I.E., APPROXIMATELY 15 SINGLE-SPACED TYPEWRITTEN LINES) (16)
NRC FORM 368 (5-91)

While performing a yard fire hydrant barrel inspection, water was found in one Technical Specification required hydrant. Technical Specifications require actions to be taken within one hour. This was mistakenly not done since the water did not affect the ability of the hydrant to perform its function during non-freezing conditions. Upon discovery of this oversight, the required actions were promptly taken. This is a Technical Specification violation. Lessons learned from this event will be communicated to appropriate personnel.

NRC FORM 368A (5-82)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MN88 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.	
FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (5)	
MONTICELLO NUCLEAR GENERATING PLANT		05000 263		YEAR 96	SEQUENTIAL NUMBER 009
				REVISION NUMBER 00	PAGE (3) 2 of 6

Description

On September 23, 1996, at 1022 with the plant at full power, a shift supervisor approved the initiation of Surveillance Procedure 0319, Fire Protection System - Yard Hydrant Barrel Inspection. The procedure satisfies Technical Specification surveillance requirement 4.13.D.1.b, which states:

1. The yard hydrant hose houses listed in Specification 3.13.D.1 shall be demonstrated operable as follows:
 - b. Every six months (in the spring and fall) visually inspect each yard fire hydrant and verify that the hydrant barrel is dry and that the hydrant is not damaged.

If this specification is not met, "within one hour have sufficient additional lengths of 2 - 1/2 inch diameter hose located adjacent operable yard hydrant hose house(s) to provide service to the unprotected area(s)". Since these hydrants are located outdoors, the primary operability concern is to ensure that no water exists in the fire hydrant barrel which could freeze and damage the fire hydrant.

On September 24, 1996, at approximately 1000, a fire hydrant (Hose House #1)(EIS System Code: KP)(EIS Component Code: HYD), required to be operable by Technical Specifications, was identified with approximately 9 feet of water in the hydrant barrel. The fire protection system engineer was notified. Work Order 9601476 was initiated to attempt to clear the drain port by pressurizing the hydrant per vendor manual recommendations. This was unsuccessful and actions were initiated to pump out the water.

On September 25, 1996, at 1800 a shift supervisor was reviewing the completed surveillance procedure. The shift supervisor determined that the water in the fire hydrant barrel made the fire hydrant technically inoperable in accordance with Specification 4.13.D.1.b. The fire hydrant was declared inoperable and the required actions were promptly performed. Since this action was not accomplished within one hour of the initial discovery of water in the fire hydrant barrel, the plant was operating in a condition prohibited by the Technical Specifications.

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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	YEAR	LER NUMBER (6) SEQUENTIAL NUMBER	REVISION NUMBER	PAGE (3)
MONTICELLO NUCLEAR GENERATING PLANT	05000 263	96	009	00	3 of 6

Upon notification of the situation, the fire protection system engineer identified that the same fire hydrant barrel failed to drain following the spring surveillance test. In the spring, the surveillance test passes water through the hydrant leaving the hydrant barrel full of water, which should have, but did not, drain out through the drain port. The actions required by Technical Specifications were not taken at that time. Therefore, the plant was operating in a condition prohibited by the Technical Specifications from approximately May 10, 1996 until the required actions were taken on September 25th.

The hydrant was excavated and the drain port was cleaned. The hydrant was declared operable on October 6, 1996.

Cause

The fire hydrant barrel provides a hydraulic connection from the fire main to the hydrant itself and also passes the mechanical operator for the valve (see attached figure). The barrel is normally dry. To use the hydrant, the valve operator opens the valve supplying water to the barrel and the hydrant. This fills the barrel with water and it remains full of water during use. After use, the valve is closed, and the water drains through a drain port to the ground surrounding the barrel. If the water does not drain, the ability of the fire hydrant to perform its function is unaffected, provided the water is not allowed to freeze.

The hydrant barrel surveillance is performed by maintenance personnel. The surveillance procedure states that the shift supervisor should be notified if more than 2 or 3 inches of water is found in the hydrant barrel. In both the 1996 spring and fall surveillances, the maintenance personnel notified the fire protection system engineer. The shift supervisor was not notified as required by the procedure. Following completion, the procedure is reviewed by a maintenance supervisor, a shift supervisor and the fire protection system engineer.

The fire protection system engineer understood the purpose of checking for water in the barrel and knew that a wet hydrant was fully functional during non-freezing conditions. The fire protection system engineer did not recognize that the water in the fire hydrant barrel made it inoperable per Technical Specifications.

The purpose of the surveillance is to ensure that fire hydrant barrels are dry prior to cold weather, i.e., winter. Since there was no possibility of freezing weather conditions from spring to fall, the fire protection system engineer wrote a work order on May 10, 1996 following the spring surveillance to correct the problem, planning to initiate it in the fall, if the problem persisted.

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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	YEAR	LER NUMBER (6) SEQUENTIAL NUMBER	REVISION NUMBER	PAGE (3)
MONTICELLO NUCLEAR GENERATING PLANT	05000 263	96	009	00	4 of 6

There are no unusual characteristics of the work location that contributed to these errors.

Contrary to procedure, maintenance personnel failed to notify the shift supervisor of the water in the hydrant barrel. The fire protection system engineer mistakenly determined that the hydrant was operable with water in the barrel. Maintenance supervision, during procedure completion review, failed to identify this issue. Shift supervision failed to identify this issue during completion review in the spring.

The cause of the failure of the water to drain from the hydrant barrel was drain hole plugging in the valve body, located below the ground. Carbon steel corrosion byproduct debris was obstructing drainage.

Analysis of Reportability

The required actions by the Technical Specifications were not taken within the specified 1 hour time period. This caused the plant to be in a condition prohibited by the Technical Specifications. 10 CFR Part 50, Section 50.73(a)(2)(i)(B) states that the licensee shall report: "any operation or condition prohibited by the plant's Technical Specification,".

This report is being submitted in accordance with 10 CFR Part 50, Section 50.73(a)(2)(i)(B).

Safety Significance

The yard fire hydrants were all verified to be dry in the fall on 1995, prior to the winter. The hydrants were filled with water during the spring 1996 testing. Water was found in yard fire hydrant #1 following the testing. Since the hydrant was dry in the fall of 1995 and was found undamaged in the spring of 1996, we believe the hydrant barrel was dry during freezing conditions and was operable during this time.

From the time that water was found in the hydrant barrel, in the spring of 1996, until it was pumped out, there was no possibility of the water freezing. A significant period of temperatures below 32°F would have been required to cause water in the fire hydrant barrel to freeze. Ground temperatures were well above freezing. Although technically inoperable, the fire hydrant was available to perform its intended function.

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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
MONTICELLO NUCLEAR GENERATING PLANT	05000 263	96	009	00	5 of 6

Actions Associated with the Reportable ConditionImmediate Actions

The fire hydrant with water in the barrel was declared inoperable on September 24, 1996. Actions were taken within the required 1 hour as specified in the Technical Specifications, following the shift supervisor determining that the fire hydrant was inoperable.

Corrective Actions

The immediate actions corrected the condition.

Preventive Actions

The personnel involved in this event are now aware that, when water is found in yard fire hydrant barrels, prompt shift supervisor notification is required and that prompt actions are required to comply with Technical Specifications.

Refresher training is being evaluated for engineering, operations and maintenance personnel. Topics to consider are: strict compliance with the Technical Specifications, notification of the shift supervisor when required and proper procedural completion review.

Actions Associated with the Fire Hydrant

The water was pumped out of the fire hydrant barrel and the drain port was repaired under work orders 9602567 and 9602627.

The preventive maintenance program for the yard fire hydrants will be reviewed for changes to minimize drain port plugging.

Failed Component Identification

Manufacturer: Waterous Company
Model Number: W-59 Compression Hydrant

Previous Similar Events

None

NRC FORM 386A (5-92)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNSB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.	
FACILITY NAME (1)		DOCKET NUMBER (2)		YEAR	LER NUMBER (6)
MONTICELLO NUCLEAR GENERATING PLANT		05000 263		96	009
					REVISION NUMBER
					00
				PAGE (3)	
				6 of 6	

YARD FIRE HYDRANT

Simplified Drawing

