

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) BIG ROCK POINT PLANT DOCKET NUMBER (2) 155  
050000 1 OF 03

TITLE (4)

REACTOR DEPRESSURIZATION SYSTEM CONSTANT SUPPORT HANGER FOUND IMPROPERLY TENSIONED

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)
05	31	85	85	005	00	07	01	85	N/A	050000
									N/A	050000

OPERATING MODE (9)	POWER LEVEL (10)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)			
N	082	20.402(b)	20.405(c)	80.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	80.36(c)(1)	80.73(a)(2)(v)	73.71(a)
		20.405(a)(1)(ii)	80.36(c)(2)	X 80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
		20.405(a)(1)(iii)	80.73(a)(2)(i)	80.73(a)(2)(vii)(A)	
		20.405(a)(1)(iv)	80.73(a)(2)(ii)	80.73(a)(2)(vii)(B)	
		20.405(a)(1)(v)	80.73(a)(2)(iii)	80.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME Robert J Alexander, Technical Engineer, Big Rock Point TELEPHONE NUMBER  
AREA CODE 616 547-6537

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
D	-	H	6255	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) X NO  
EXPECTED SUBMISSION DATE (15)

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

On May 31, 1985, it was determined that a constant support hanger in the Reactor Depressurization System (RDS) had been improperly tensioned. Reactor power was reduced to 20% to permit personnel access to the hanger location. The hanger was properly tensioned in approximately ten minutes and the reactor was returned to 82% power level.

8507160739 850701  
PDR ADOCK 05000155  
S PDR

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104  
EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
BIG ROCK POINT PLANT	05000155	85	005	00	02	OF	3

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

During the 1978 Refueling Outage, the anchor bolts holding SH-102 to the ceiling were discovered to be loose. Cause of the failure was attributed to insufficient travel length allowed by hanger SH-102. During cold hydrostatic testing, the additional weight caused SH-102 to bottom out and continued fill caused the hanger bolts to be pulled away from the mounting.

The Design Engineer (Catalytic Inc) of the support system was contacted and supported our conclusions, that although the hanger was sized for sufficient travel from hot to cold operating conditions it did not have sufficient travel for the cold hydrostatic test. The Design Engineer made the following recommendations:

1. Disconnect hanger SH-102 prior to hydrostatic testing and reconnect following completion. Catalytic's analysis indicated that the hydro-test could be performed with SH-102 disconnected, without exceeding the allowable ASME Section III limits.
2. Replace SH-102 with the identical load rating but wider range for the displacement to allow downward deflection without becoming solid. This would eliminate the need to disconnect the hanger during the hydrostatic tests.

As a result, the hydrostatic test procedure was modified to require removing SH-102 prior to performing the test. This method has not caused any difficulties until the occurrence discussed within.

Apparently during the process of disconnecting and reconnecting the hanger since 1978, an error was made in that the hanger was not pre-tensioned to the cold position following reinstallation. It can not be determined the exact date when the error occurred. The condition was discovered on May 31, 1985, while a plant engineer was analyzing measurements to procure a replacement hanger with longer travel. During an earlier inspection during plant cool down the hanger was reported to be "loose" and not bottomed out, which was later determined to be inappropriate for a constant support hanger. The hanger (SH-102) should have been pre-tensioned under these plant conditions.

#### Remedial Corrective Action

Following determination of the unacceptable condition, plant power was decreased to permit entry (ALARA reasons) to the Steam Drum area. The hanger was properly tensioned and the plant returned to the previous power level.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
BIG ROCK POINT PLANT	0 5 0 0 0 1 5 5	8 5	— 0 0 5	— 0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 388A's) (17)

Action To Prevent Recurrence

Hanger SH-102 will be replaced with a model with additional travel this will eliminate the need to disconnect the hanger for hydrostatic tests and the potential for improper pre-tensioning. This action is currently scheduled during the 1985 Refueling Outage.

Safety Consequences

An analysis was performed to address the stresses that may have occurred during operation with RDS Hanger SH-102 not carrying its design load. A comparison of the stresses/loads during the cold hydrostatic test condition (previously analyzed as acceptable) to the conditions of power operation was performed. Results showed that although the allowable stress limits are reduced in the hot condition, the loading was decreased by a greater amount due to the density decrease of coolant in the hot condition. This concluded that the allowable stresses were not exceeded during the time period the hanger was not properly tensioned and that continued plant operation is appropriate.

The Reactor Depressurization System was designed to meet seismic criteria. Without the hanger SH-102 in place, the validity of the seismic design during this period was in question. Although it is felt that without this hanger the seismic design would have still been acceptable, the cost and time associated with seismic re-analysis is not justified since the deficiency has been corrected. Additionally, during the time period from 1978, the Big Rock Point Site did not experience a seismic disturbance. Had this occurred, an analysis to ensure stresses in the system were not exceeded would be appropriate.



Consumers  
Power  
Company

General Offices: 1945 West Parnall Road, Jackson, MI 49201 • (517) 788-0550

July 1, 1985

US Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

DOCKET 50-155 - LICENSE DPR-6 - BIG ROCK POINT PLANT -  
LICENSEE EVENT REPORT 85-005 - REACTOR DEPRESSURIZATION SYSTEM CONSTANT  
SUPPORT HANGER FOUND IMPROPERLY TENSIONED

Licensee Event Report (LER) 85-005 (Reactor Depressurization System Constant  
Support Hanger Found Improperly Tensioned) is attached. This event is reportable  
to the NRC per 10 CFR 50.73 (a)(2)(vii).

Brian D Johnson  
Staff Licensing Engineer

CC Administrator, Region III, USNRC  
NRC Resident Inspector - Big Rock Point

Attachment

LE22  
4/1