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Big Rock Point Nuclear Plant, 10269 US-31 North, Charlevoix, MI 49720

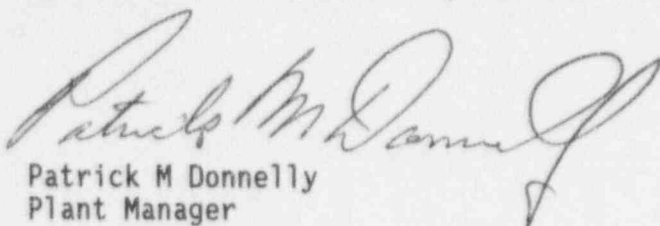
Patrick M Donnelly
Plant Manager

October 23, 1996

Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

**DOCKET 50-155 - LICENSE DPR-6 - BIG ROCK POINT PLANT - LICENSEE EVENT REPORT
96-011: TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT INADVERTENTLY
SURPASSED**

Licensee Event Report 96-011: **TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT
INADVERTENTLY SURPASSED**, is attached. This event is reportable to the Nuclear
Regulatory Commission in accordance with 10 CFR 50.73(a)(2)(i)(B) - Technical
Specification Prohibited Operation.



Patrick M Donnelly
Plant Manager

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

ATTACHMENT

IE221

300071

9610300238 961023
PDR ADOCK 05000155
S PDR

A CMS ENERGY COMPANY

LICENSEE EVENT REPORT (LER)

(See reverse for required number of
digits/characters for each block)ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY
INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE
INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY.
FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND
RECORDS MANAGEMENT BRANCH (7-6 F33), 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)

BIG ROCK POINT NUCLEAR PLANT

DOCKET NUMBER (2)

50-155

PAGE (3)

1 OF 6

TITLE (4)

Technical Specification Surveillance Requirement Inadvertently Surpassed.

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 NAME	DOCKET NUMBER
09	26	96	96	011	00	10	23	96	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		y		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)						
POWER LEVEL (10)		95%		20.2201(b)		20.2203(a)(2)(v)		X	50.73(a)(2)(i)	50.73(a)(2)(viii)
				20.2203(a)(1)		20.2203(a)(3)(i)			50.73(a)(2)(ii)	50.73(a)(2)(x)
				20.2203(a)(2)(i)		20.2203(a)(3)(ii)			50.73(a)(2)(iii)	73.71
				20.2203(a)(2)(ii)		20.2203(a)(4)			50.73(a)(2)(iv)	OTHER
				20.2203(a)(2)(iii)		50.36(c)(1)			50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
				20.2203(a)(2)(iv)		50.36(c)(2)			50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME

Michael D. Bourassa, Licensing Supervisor

TELEPHONE NUMBER (INCLUDE AREA CODE)

1-616-547-8244

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS
D	na	na	na	N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

Big Rock Point Technical Specification 11.4.1.5.a requires that the Reactor Depressurization System (RDS) be verified to be OPERABLE in accordance with the following: "at least once per month the instrumentation and system logic shall be FUNCTIONALLY TESTED as indicated in Table 11.3.1.5". (Table 11.3.1.5 requires the input and output channels be tested monthly).

Contrary to the above, the surveillance requirements for "C" RDS train were inadvertently not performed for 61 days (March 11, 1994 through May 11, 1994). This condition was discovered during an evaluation of the same surveillance test that nearly surpassed the 25% Technical Specification surveillance limit for "A" Train on September 19, 1996. Surveillance tests performed since this date have proven to be satisfactory.

The root cause was determined to be a less than adequate procedure. The information provided in the procedure controlling plant startups did not provide adequate guidance for surveillance procedures not performed during shutdown conditions.

A revision was immediately issued to the procedure, O-TGS-1; Master Checklist, providing clear instructions with regard to required RDS surveillances.

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

IDENTIFICATION OF THE EVENT

This event is reportable to the Nuclear Regulatory Commission pursuant to:

- 1) 10 CFR 50.73(a)(2)(i)(B) - Technical Specification Prohibited Operation.

REFERENCES

O-TGS-1 Master Checklist

O-RDS-7; RDS Channel Test with Plant in Shutdown

T30-59; RDS Channel Tests At Power

SOP 18; Reactor Depressurization System

Technical Specification 11.3.1.5 and 11.4.1.5.a

4.3.2 Forced Outage Administration

PREVIOUS OCCURRENCES

Big Rock Point Technical Specifications require that cell voltage is verified to be greater than or equal to 6.0 volts and specific gravity is greater than or equal to 1.2 volts on each cell of the Reactor Depressurization System (RDS) batteries; and that the cell voltage is verified to be greater than or equal to 2.1 volts and specific gravity is greater than or equal to 1.2 of each cell of the Alternate Shutdown System (ASD) battery - monthly.

Contrary to the above, on November 28, 1995, the cell voltages and specific gravities were not verified within the monthly plus 25% of the monthly surveillance requirement for battery banks 2A (RDS Uninterruptible Power Supply (UPS) - A) and battery 1612 (ASD battery). The work order was discovered while a review of the "available for scheduling" (AFS) work was being conducted. This discovery was made within a day of the exceeded surveillance requirement, and was scheduled for immediate completion. The pilot cell readings were verified to be within the technical specification limits described above.

Root cause of the missed surveillance test was determined to be human error exacerbated by an inadequate and cumbersome process. Corrective actions included enhancements to the surveillance board posted in the Maintenance Building, reading batteries on the same day of the week to promote a routine and a more direct routing of surveillance tests to scheduling.

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DESCRIPTION OF EVENT

Big Rock Point Technical Specification 11.4.1.5.a requires that the Reactor [RCT] Depressurization System (RDS) be verified to be OPERABLE "at least once per month the instrumentation and system logic shall be FUNCTIONALLY TESTED as indicated in Table 11.3.1.5". (Table 11.3.1.5 requires the input and output channels be tested monthly).

Contrary to the above, the surveillance requirements for "C" RDS train were inadvertently not performed in accordance with T30-59, RDS Channel Tests at Power; for 61 days (March 11, 1994 through May 11, 1994). Surveillance tests performed since this date have proved to be satisfactory.

History

To improve RDS reliability, the four trains are "stagger tested"¹, (in lieu of being tested all at the same time), meeting the Technical Specification monthly requirement described above. The majority of the surveillances at the station test the whole system at once, therefore this is a deviation from the normal schedule. The only other stagger test employed at the station concerns RDS Battery Testing for the same improved reliability reasons (see Previous Occurrences).

This condition was discovered during an evaluation of the same surveillance test (T30-59) whose performance nearly surpassed the 25% Technical Specification surveillance limit for "A" Train on September 19, 1996. Three years of T30-59 surveillances (1994, 1995 and 1996) were researched, and the stated period of March 11, 1994 through May 11th, 1994 was the period discovered that exceeded the Technical Specification requirement. During that time, the reactor had been removed from service for a higher than normal unidentified primary system [AD] leakrate (recirculation pump seal [AD;P] and reactor head vent [RCT;VTV] leakage). The outage began March 2, and lasted 19 days.

ROOT CAUSE

During the previous three year review of the T30-59 Surveillances, it is apparent that the resident knowledge of the Big Rock Point staff was being relied upon as a final barrier to ensure that the RDS surveillance requirements were up to date. Exceeding surveillance requirements is most probable during forced outages, or outages of limited duration (i.e., 4 to 14 days) when T30-59 comes due; and the surveillance scheduled for one of the trains of RDS is not performed due to the condition of the plant (cold shutdown). The Big Rock Point staff then had to "create a way" remember to perform the "subject surveillance" that was not performed during the outage because of plant conditions along with the next "scheduled surveillance" during power operation.

¹ A different RDS train is tested each week. By the end of four weeks, RDS trains A,B,C, and D have been tested; meeting the monthly technical specification requirement.

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The root cause was determined to be a less than adequate procedure. The information provided in the procedure controlling plant startups did not provide adequate guidance for surveillance procedures not performed during shutdown conditions.

CORRECTIVE ACTIONS

1. An immediate corrective action consisted of issuing a revision to the facility's start-up procedure, O-TGS-1; MASTER CHECKLIST. This change enhances O-TGS-1, providing clear instructions concerning RDS surveillance. The New Step 42 reads:

"If plant has been in a shutdown condition, complete the following:

a. Perform TSD-03, Cold RDS Isolation Valve Testing, if > 90 days since the last TSD-03 or T90-07, RDS Isolation Valve Test Operate. If less than 90 days, step is not applicable. NA....

b. Perform O-RDS-07, RDS Channel Test With Plant in Shutdown, on any RDS Channel that was not tested in accordance with T30-59, RDS Channel Test at Power while the plant was shutdown. This step is not applicable if the RDS channels are being tested in accordance with T30-59 and the surveillance tests are current. NA...."

2. The periodic activities board identifies surveillance tests that are not performed when the plant is shutdown by using "green dots". The following "greendotted" procedures were reviewed with the Operation's Supervisor to ensure surveillance compliance:

T7-03 CRD Coupling Integrity (Required by Technical Specifications - addressed in O-TGS-1, Part B; Steps 30 and 46).

T7-12 Pipe Tunnel Leakage Inspections (not required by Technical Specifications)

T7-30 Plant Water Inventory (not required by Technical Specifications)

T30-01 Reactor Protection System (Required by Technical Specifications - addressed in O-TGS-1, Part B; Step 44)

T30-43 Steam Drum Relief Valve Monitor Checkout (Required by Technical Specifications - addressed in O-TGS-1, Part B; Step 2).

T90-07 RDS Isolation Valve Test (Required by Technical Specifications - addressed in O-TGS-1, Part B; Step 42).

T30-59 L2 Module Test; Electric and Diesel fire Pumps RDS Cabinet Test (A,B,C,D). (Required by Technical Specifications - revised O-TGS-1, Part B; Step 42 to address).

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SAFETY SIGNIFICANCE

The reactor depressurization system serves three functions during anticipated transients. The primary function is to provide rapid depressurization of the primary system [AD] to permit operation of the low-pressure core spray system [BM] when normal high-pressure makeup sources [BG] fail to provide adequate flow to maintain core coverage. As a secondary function, the system is employed for manual primary system pressure control to preclude safety valve actuations for accidents in which primary system heat sinks (i.e., the main and emergency condenser) are unavailable. As a tertiary function, the system is operated to prevent primary system over-pressurization in accidents where the safety relief valves fail to open.

System success criteria are dependent on the operational mode of the system. For automatic or manual depressurization, success requires three of four valve trains. Each valve train is initially capable of releasing steam at a rate of 144 lb/sec, which is equivalent to one-third of the full steam flow. When manual venting through one RDS valve train to control primary system pressure, success requires the air operated valve to be open and opening of one of the four depressurization valves. Flow through the bypass valve CV-4184 is approximately 6 to 7 lb/sec. These success criteria are summarized below:

EVENT	SUCCESS CRITERIA
Very small steam line break inside containment	Automatic actuation of 3 out of 4 RDS trains
Small steam line break outside of containment	Automatic or manual actuation of 3 out of 4 RDS trains
High-pressure transients caused by failure of the main condenser and the emergency condenser	Manual venting of the PCS through CV-4184 and one depressurization valve to prevent safety valve cycling
Small LOCAs above and below core	Automatic actuation of 2 out of 4 RDS trains causing rapid depressurization of the PCS
Very high-pressure transients caused by failure to control pressure by venting the PCS and RDS or by safety valve cycling	Manual actuation of all 4 trains of RDS valves to prevent over pressurization of the PCS

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EVENT

SUCCESS CRITERIA

Station blackout without
power restorationManual actuation of 3 out of 4
valve trains from the computer
room. In this scenario, power to
RDS control panel C-40 is unavailable

The significance of this event is minimal based on the staggered (reliability) testing of the trip channels and the availability of the RDS automatic test feature, which increases system reliability. Further, surveillance tests performed on "C" train since May 11, 1994, have met the stated acceptance criteria; and even if the train had failed the surveillance testing, the facility would still have remained within the design basis as described above.

Also, on June 4, 1987, the Staff forwarded Generic Letter 87-09, Sections 3.0 and 4.0 of the Standard Technical Specifications (STS) on the Applicability of Limiting Conditions For Operation and Surveillance Requirements. With regard to surveillance testing, one of the problems addressed was unnecessary shutdowns caused by inadvertent surpassing of surveillance intervals. The following italicized discussion is taken from that letter.

"Surveillance Requirements are defined in 10 CFR 50.36 as those requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that the facility will be within the safety limits, and that the Limiting Condition of Operation (LCO) will be met."

Consistent with the NRC's regulatory framework for Surveillance Requirements, Specification 4.0.3 states that the failure to perform a surveillance within the specified time interval shall constitute a failure to meet the LCO's Operability Requirements. Therefore, if a Surveillance Requirement is not met as a result of the failure to schedule the performance of the surveillance, the LCO would not be met (the LCO associated with this case is 7 days; then a normal orderly shutdown is required within one hour)".

The Staff then provided the following position:

It is overly conservative to assume that systems or components are inoperable when a surveillance requirement has not been performed. The opposite is in fact the case; the vast majority of surveillance demonstrates that systems or components in fact are operable. When a surveillance is missed, it is primarily a question of operability that has not been verified by the performance of the required surveillance.

However, the facility does recognize that failure to perform a surveillance requirement within the specified time interval constitutes a failure to meet the Operability requirements for a Limiting Condition of Operation, and that compliance with the facility's Technical Specifications is required.