

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

EVENT DESCRIPTION

00 (A0-75-24) DURING SURVIVALABLE TESTING, AN DISCRETE HIGH PRESSURE SWITCHES  
01 WERE FOUND TO BE OPEN. RATE INDICATION VALUES AND THE ASSOCIATED POST VALUES WERE CHECKED  
02 AND FOUND CORRECT BY SAIBER. THEREAFTER, ONE OF THE VALVES WERE FOR RELEASE OPERATION  
03 OF ONLY ONE OF THE ENGINEERS SAFETY SYSTEMS. ANALYSIS INDICATED THAT THE DESIGN  
04 FUNCTION OF THE SAFETY SYSTEMS WAS STILL AVAILABLE FOR ALL OPERATIONS. THIS INDICATED THAT THE

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

CAUSE DESCRIPTION

00 PROCEDURES WERE DEVELOPED. THE PROC. VALUES ARE NOT USED IN SURVIVABLE TESTING  
01 AND THE POST VALUES AT THE FUNCTIONS WERE NOT ON A VALVE LINE UP SHEET. THIS  
02 RELATED THE DESIGN FUNCTION OF THE DISCRETE HIGH PRESSURE INSTRUMENTATION.

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

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00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

ADDITIONAL FACTORS

00 (EVENT DESCRIPTION CONTINUED) VALVES. THESE VALVES ARE BEING SEALED OPEN.  
01 PRODUCE CONTROL AND A CHECK-OFF LIST ARE ALSO BEING ADDED FOR VALVE OPERATION.

NAME: JC

DATE:

FORM NO. 10 (REV. 1-1977)		DATE	TIME	INITIALS	REMARKS
TO (NAME AND UNIT)					John C. ... 11/20/77
					105 ...
					... ..
TO (NAME AND UNIT)					
					Mail Stop 49922 L
TO (NAME AND UNIT)					
FROM (NAME AND UNIT)					
TO ...					The ... with G. ... of ... on 4/2
SUSPECT ...					... .. a violation in this AO
... ..					
PHONE NO.	DATE				
	7/17				

USE OTHER SIDE FOR ADDITIONAL REMARKS

GPO 1976 O 482-26

NIAGARA MOHAWK POWER CORPORATION

NIAGARA  MOHAWK

12324

DATE: March 5, 1975

SUBJECT: Abnormal Occurrence Report No. 50-333 /75- 24  
(10 Day Letter)

The enclosed Abnormal Occurrence is being submitted in accordance with Technical Specification Section 6.

TO: James P. O'Reilly  
Directorate of Regulatory Operations  
Region 1  
631 Park Avenue  
King of Prussia, Pa. 19406

FROM: Niagara Mohawk Power Corporation  
Nine Mile Point - James A. FitzPatrick Site

P.O. Box #32  
Lycoming, New York 13093

Docket No. 50-333

REFERENCE: License DPR- 59

Report No.: 50-333 /75- 24

Report Date 3/5/75

Occurrence Date 2/25/75

Facility: NY JAF 01

Identification of Occurrence:

All drywell high pressure switches found isolated.

12324

Conditions Prior to Occurrence

<input checked="" type="checkbox"/>	Steady State Power	<input type="checkbox"/>	Routine Shutdown
<input type="checkbox"/>	Hot Standby	<input type="checkbox"/>	Load Changes
<input type="checkbox"/>	Cold Shutdown	<input type="checkbox"/>	Other
<input type="checkbox"/>	Refueling Shutdown		
<input type="checkbox"/>	Routine Startup		

Description of the Occurrence:

During routine surveillance testing, an instrument technician discovered that the rack isolation valves for drywell high pressure (instrument 5-12, 10-100, 10-101 and 10-119) in both safety systems were closed. Further investigation revealed that the associated root valves, RIR-53A, B & C and RIR-60D at drywell penetrations 55a, 40Ed, 53C and 40Ec were also closed. Due to the fact that the closed valves at the rack are not used in surveillance testing and that the root valves at the penetrations are not on a valve line-up sheet, this isolation is assumed to have occurred in August 1974 when these valves were scheduled to be re-opened following completion of the ILRT. A valve check at the instrument racks made in December 1974, indicated these valves open, however, the fact that the root valves were closed still negated the design function of the drywell high pressure instrument.

Apparent Cause of the Occurrence:

<input type="checkbox"/>	Design	<input checked="" type="checkbox"/>	Procedure
<input type="checkbox"/>	Manufacture	<input type="checkbox"/>	Unusual Service Condition
<input type="checkbox"/>	Installation/Const.	<input type="checkbox"/>	Component Failure
<input type="checkbox"/>	Operator	<input type="checkbox"/>	Other (Specify)

Analysis of Occurrence:

Drywell high pressure indication is used as one of the logic inputs for permissive operation of many of the engineered safeguard systems. However, the high drywell pressure instrumentation is a diverse signal for malfunctions to the water level instrumentation. The water level instrumentation, which was full operable, initiates protection for the full spectrum of loss of coolant accidents. (LOCA) During a LOCA it is assumed that the reactor is operating at design power when a complete circumferential rupture instantly occurs in one of the two recirculation suction lines. The analysis assumes a high drywell pressure scram occurs (instrument 5-12) in less than one second. However, the analysis further states that reactor low level (scram) is reached in about 0.5 seconds. The transient analysis further explains that either the low water sensor or high drywell pressure will initiate the ECCS (Core Spray and LPCI). Therefore, high drywell pressure instruments would not be needed in the LOCA transient. The drywell sprays are manually operated from the control room provided that high drywell pressure signal is on to the logic. This signal would not be present and the operator would have to bypass or jumper this switch operation. The operator would have an analog signal of drywell pressure

available for this decision. This analog signal is independent of the isolated digital signals. The drywell sprays would not normally be needed until some 8 hours into the transient, sufficient time to determine the isolation of the drywell signal. Fundamentally, the determination of reactor water level dictates the use of various core injection or flooding systems (HPCI, LPCR and Core Spray). The need, in small line breaks to depressurize the reactor vessel is accomplished through the Automatic Depressurization System (ADS). This system is designed to allow the operator to make the decision as to the requirement for its use. That is, although automatic in operation, a built-in time delay prior to actuation allows the operator to abort its use. Thus if required ADS in reality is an operator function and could be initiated even with the isolation of the high drywell signal.

In the Main Steam line break accident inside the drywell, upstream of the flow restrictors and high flow indicators, the reactor would initially shutdown due to void formation and scram as the Main Steam Line isolation valves close due to vessel depressurization below 850 psig. Of course the various core flooding safeguards would operate on the prime variable, water level and thus prevent fuel damage.

The EDC System requirement for starting would be accomplished by the reactor vessel level or the loss of electrical voltage on the emergency buses and therefore, the start on high drywell pressure would not be necessary.

The above analysis demonstrates that even though the high drywell pressure signal was isolated, the designed function of the safeguard systems for all accidents would not be affected. Based upon these facts, no hazard was presented to the general public as a result of this procedural failure.

**Corrective Action:**

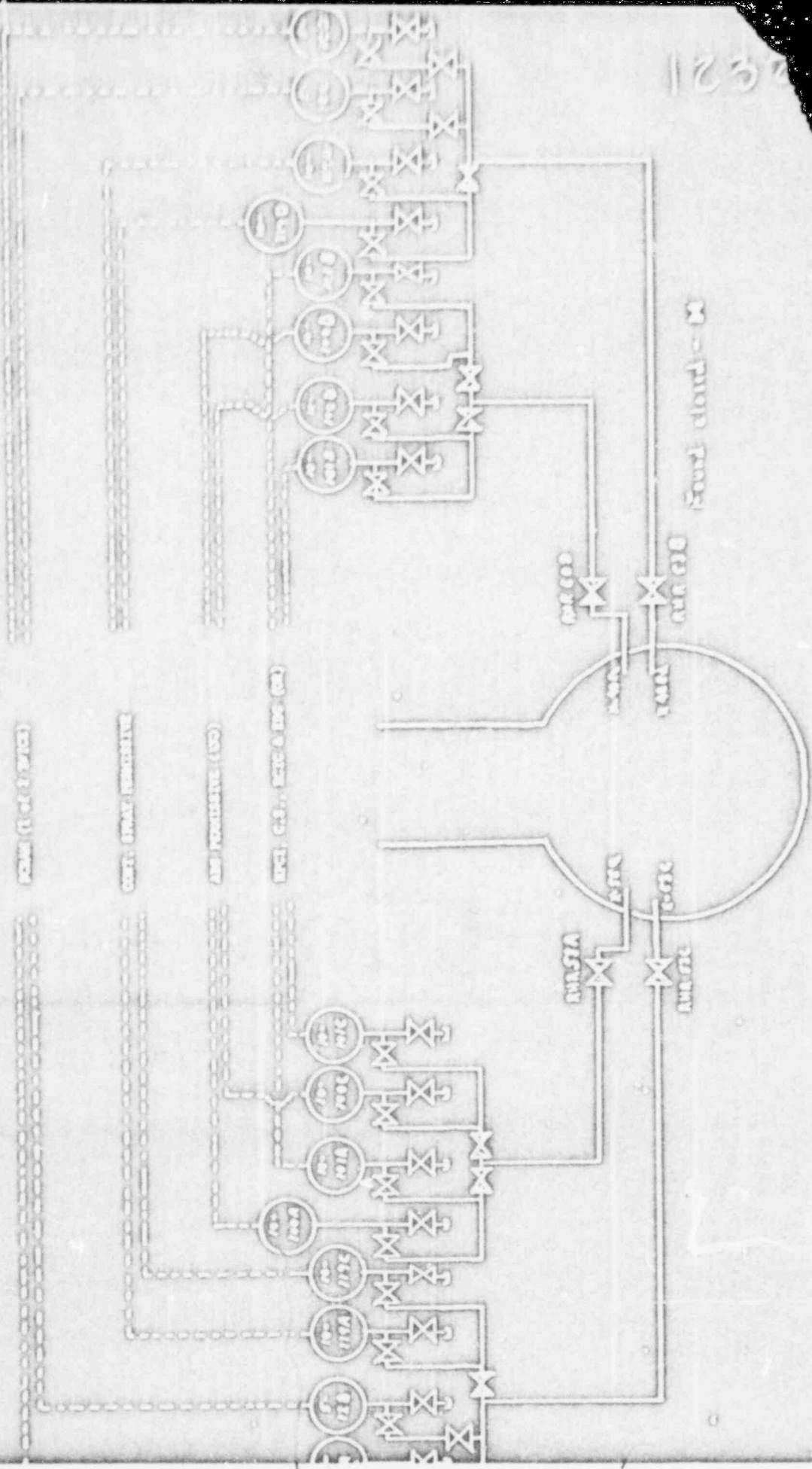
The isolated valves were immediately opened and are being sealed to prevent an occurrence of this nature again. In addition, the root valves and other isolated valves are being added to valve check-off list for both operations and instrument and control surveillance. These will be checked both prior to plant startups and during instrument surveillance testing. All other RPS rack and root valves as well as other instrument valves were inspected. Four other valves supplying only variable monitoring, no safety significance, were found and opened. As a result of this failure, Nine Mile Point #1 will also be checked for closed valves and valve line-up check sheets.

**Failure Data:**

None

# DRYWELL HIGH PRESSURE

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