

POWER AUTHORITY OF THE STATE OF NEW YORK

10 COLUMBUS CIRCLE NEW YORK, N. Y. 10019
(212) 397-6200

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November 10, 1982
IPN-82-73

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Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. Steven A. Varga, Chief
Operating Reactor Branch No. 1
Division of Licensing

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Request for Additional Information
Concerning Action Plant Item 11.K.3.17
Report on Outages of ECC Systems

Dear Sir:

In response to your June 25, 1982 letter the Authority provides herewith, in Attachment A, the requested additional information concerning ECCS Systems outages. The Authority understands that the information provided in this letter will be used to determine the cumulative duration of ECCS outages. It must be recognized that the data provided overstates the actual required outage time considerably. Many maintenance actions cited in Table 2 were discretionary in their timing and were performed when the system was not required to be operational. Therefore the work was performed on a low priority basis.

The information concerning diesel generator outages is contained in the Authority's letter of November 19, 1981 (IPN-81-93) which was in response to your letter dated July 20, 1981 regarding Unresolved Safety Issue A-44, Station Blackout.

Should you or your staff have any questions please contact Mr. P. Kokolakis of my staff.

Very truly yours,

J. P. Bayne
J. P. Bayne
Executive Vice President
Nuclear Generation

A046

Att.

cc: attached

8211160186 821110
PDR ADOCK 05000286
P PDR

cc: Resident Inspector's Office
Indian Point Unit 3
U. S. Nuclear Regulatory Commission
P. O. Box 38
Buchanan, New York 10511

ATTACHMENT A

Response to Request for Additional Information
Concerning Action Plan Item II.K.3.17
Report on Outages of ECC Systems

POWER AUTHORITY OF THE STATE OF NEW YORK
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
NOVEMBER, 1982

ATTACHMENT A

Item II.K.3.17 ECC System Outages

The purpose of this report is to provide information to the NRC on the possible unreliability of the ECC Systems and to determine if cumulative outage limitations are needed. It should be noted that the Indian Point 3 technical specifications require only a portion of the ECC system to be operational during cold shutdown conditions and only during specified evolutions.

The report on ECC System Outages is provided under the following conditions:

1. The equipment investigated was that identified as ECC equipment in the Indian Point 3 FSAR, Section 6.2.
2. The period investigated was from initial criticality, April 6, 1976 to December 31, 1980.
3. Outage times resulting from testing were developed in the following manner:
 - a. Periodic tests performed on ECC components which prevented the component from performing it's designed function in the intended manner, were identified and listed.
 - b. Tests performed on ECC components after completion of maintenance were identified and listed.
 - c. An estimate of the time required to perform each of these tests was determined. The total estimated time that various ECC system components were tested is tabulated on Table 1.
4. ECC system maintenance outages were identified through research of the Maintenance Work Request (WR) records. Work request documents indicate when maintenance is first requested and when maintenance is completed. The reported times tabulated on Table 2 are estimates of when the equipment was out of service for maintenance. It should be noted that work done during cold shutdown is performed at a time when the ECC Systems are not required by technical specifications and therefore there is no impetus to complete the work on an accelerated schedule.

TABLE 1

ECC Systems Testing Outages, April 6, 1976 to December 31, 1980

Residual Heat Removal (RHR) System Testing

<u>DATE</u>	<u>COLD SHUTDOWN</u>	<u>ABOVE COLD SHUTDOWN</u>
Quarterly Testing		
4/15/80	-	0.1 hour
6/24/80	-	0.1 hour
9/18/80	-	0.1 hour
12/8/80	0.1 hour	-
TOTAL	0.1 hours	0.3 hours
Refueling Testing		
8/9/78	1 hour	-
8/12/78	1	-
8/13/78	1	-
8/14/78	5	-
11/9/79	4	-
12/7/79	1	-
12/12/79	1	-
12/17/79	1	-
12/27/79	1	-
10/1/80	1	-
TOTAL	17 hours	
Cold Shutdown Testing		
7/29/80	1	-
12/3/80	1	-
12/17/80	1	-
TOTAL	3 hours	
Variable Testing		
8/14/78	1	-
3/26/79	1	-
1/22/80	1	-
TOTAL	3 hours	

RHR System Testing - Cont'd

<u>DATE</u>	<u>COLD SHUTDOWN</u>	<u>ABOVE COLD SHUTDOWN</u>
Retests		
12/7/79	2 hours	-
12/27/79	2	-
7/29/80	1	-
11/5/80	-	2 hours
11/30/80	-	2
12/1/80	1	-
12/16/80	1	-
TOTAL	7 hours	4 hours

Safety Injection System Testing

<u>DATE</u>	<u>COLD SHUTDOWN</u>	<u>ABOVE COLD SHUTDOWN</u>
Refueling Testing		
8/13/78	2.5 hours	-
12/14/79	1	-
12/17/79	1.5	-
11/2/80	1	-
TOTAL	6 hours	
Cold Shutdown Testing		
10/27/80	0.2 hours	-
TOTAL	0.2 hours	
Retests		
11/6/79	2 hours	-
12/27/79	1	-
12/28/79	2	-
8/11/80	1	-
12/16/80	2	-
TOTAL	8 hours	

Accumulator Testing

<u>DATE</u>	<u>COLD SHUTDOWN *</u>	<u>ABOVE COLD SHUTDOWN</u>
Refueling Testing		
7/13/78	4	-
11/1/78	4	-
TOTAL	8 hours	
Cold Shutdown Testing		
7/29/80	1.3 hours	-
12/3/80	1.3	-
12/17/80	1.3	-
TOTAL	3.9 hours	
Variable Testing		
4/8/77	1.3 hours	-
8/14/78	1.3	-
3/26/79	1.3	-
12/3/79	1.3	-
1/22/80	1	
TOTAL	6.2 hours	
Retest		
11/18/80	1	-
TOTAL 19.10 hours		

* Accumulators are isolated from the RCS when the RCS pressure is less than 1000 psig during normal plant operation.

Boron Injection Tank Testing

<u>DATE</u>	<u>COLD SHUTDOWN</u>	<u>ABOVE COLD SHUTDOWN</u>
Refueling Testing		
8/9/78	1 hour	-
12/12/79	1	-
TOTAL	2 hours	
Cold Shutdown Testing		
10/27/80	0.2 hours	-
TOTAL	0.2 hours	
Retests		
12/28/79	2 hours	-
TOTAL	2 hours	

Recirculation Pumps Testing

<u>DATE</u>	<u>COLD SHUTDOWN</u>	<u>ABOVE COLD SHUTDOWN</u>
Refueling Testing		
8/13/78	1 hour	-
12/17/79	1	-
TOTAL	2 hours	

TABLE 2

ECC Systems Testing Outages, April 6, 1976 to December 31, 1980

		Cold Shutdown (hours)	Above Cold Shutdown (hours)
Component	Boron Injection Tank		
Outage dates	9/19/76 to 9/30/76		
Duration		262	-
Cause	Corroded weld on outlet line		
Corrective Action	Defective weld repaired		
Component	#31 Safety Injection Pump		
Outage dates	4/4/77 to 4/7/77		
Duration		-	68
Cause	Low discharge pressure		
Corrective Action	Replaced pump internals		
Component	Safety Injection Valves 856B, H,J,K		
Outage dates	11/8/77		
Duration		20	-
Cause	Valve leaks		
Corrective Action	Repack valves		
Component	#32 Residual Heat Removal Pump		
Outage dates	11/23/77 to 12/2/77		
Duration		240	-
Cause	Seal water supply leak		
Corrective Action	Repaired leak at seal package		
Component	#31 Residual Heat Removal Pump		
Outage dates	3/28/78 to 3/29/78		
Duration		-	8
Cause	Seal housing leak		
Corrective Action	Raised seal housing and replaced gasket		

Table 2 cont'd

		Cold Shutdown (hours)	Above Cold Shutdown (hours)
Component	#31 RHR Pump		
Outage dates	6/13/78		
Duration		20	-
Comment	Modification to provide an emergency cooling water supply		
Component	#32 RHR Pump		
Outage dates	8/15/78 to 8/16/78		
Duration		24	-
Cause	Seal leakage		
Corrective Action	Replaced mechanical seal		
Component	RHR Valve 897A		
Outage dates	12/11/78 to 12/12/78		
Duration		20	-
Cause	Valve cover leak		
Corrective Action	Replaced gasket and per- formed general maintenance		
Component	RHR Valve 838D		
Outage dates	11/3/79 to 11/5/79		
Duration		48	-
Cause	Valve gasket leak		
Corrective Action	Repaired gasket		
Component	#32 RHR Pump		
Outage dates	11/9/79 to 11/10/79		
Duration		24	-
Cause	Seal leakage		
Corrective Action	Replace mechanical seal		
Component	Safety Injection Valve 856A		
Outage dates	12/30/79 to 12/31/79		
Duration		24	-
Cause	Improper valve operation		
Corrective Action	Replaced limitorque operation		

Table 2 cont'd

Component		Cold Shutdown (hours)	Above Cold Shutdown (hours)
Component	Accumulator Valve 891C		
Outage dates	1/17/80		
Duration		20	-
Cause	Valve malfunction		
Corrective Action	Rewired operator		
Component	RHR Valve 745B		
Outage dates	11/9/80 to 11/12/80		
Duration		96	-
Cause	Valve malfunctions		
Corrective Action	Installed auxiliary contacts		
Component	#32 RHR Pump		
Outage dates	11/13/80 to 11/15/80		
Duration		48	-
Cause	Seal leakage		
Corrective Action	Replaced mechanical seal		
Component	#32 RHR Pump		
Outage dates	11/26/80 to 11/28/80		
Duration		48	-
Cause	Damaged seal injection line		
Corrective Action	Replaced seal injection line		
Component	#32 RHR Pump		
Outage dates	12/16/80		
Duration		12	-
Cause	Seal flange leak		
Corrective Action	Replaced seal flange gasket		