

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8610220196 DOC. DATE: 86/10/17 NOTARIZED: YES DOCKET #
 FACIL: 50-410 Nine Mile Point Nuclear Station, Unit 2, Niagara Moha 05000410
 AUTH. NAME AUTHOR AFFILIATION
 MANGAN, C. V. Niagara Mohawk Power Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 ADENSAM, E. G. BWR Project Directorate 3

SUBJECT: Forwards draft initial prototype test program for MSIVs per 861015 meeting on const deficiency rept. Program will confirm correlation between across-seat & between-seat leak testing methods.

DISTRIBUTION CODE: BO01D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5
 TITLE: Licensing Submittal: PSAR/FSAR Amdts & Related Correspondence

NOTES:

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID CODE/NAME		LTR	ENCL		ID CODE/NAME		LTR	ENCL
	BWR EB		1	1	BWR EICSB		2	2	
	BWR FOB		1	1	BWR PD3 LA		1	1	
	BWR PD3 PD		1	1	HAUGHEY, M	01	2	2	
	BWR PSB		1	1	BWR RSB		1	1	
INTERNAL:	ACRS	41	6	6	ADM/LFMB		1	0	
	ELD/HDS3		1	0	IE FILE		1	1	
	IE/DEPER/EPB	36	1	1	IE/DGAVT/QAB	21	1	1	
	NRR BWR ADTS		1	0	NRR PWR-B ADTS		1	0	
	NRR BWR N. L.		1	1	NRR/DHFT/MTB		1	1	
	<u>REG FILE</u>	04	1	1	RGN1		3	3	
	RM/DDAMI/MIB		1	0					
EXTERNAL:	BNL (AMDTS ONLY)		1	1	DMB/DSS (AMDTS)		1	1	
	LPDR	03	1	1	NRC PDR	02	1	1	
	NSIC	05	1	1	PNL GRUEL, R		1	1	

TOTAL NUMBER OF COPIES REQUIRED: LTR 36 ENCL 31

1942

1942

...

...

...

...

...

...

...

...

...

...

...

...

...

...

October 17, 1986
(NMP2L 0914)

Ms. Elinor G. Adensam, Director
BWR Project Directorate No. 3
U.S. Nuclear Regulatory Commission
7920 Norfolk Avenue
Washington, DC 20555

Dear Ms. Adensam:

Re: Nine Mile Point Unit 2
Docket No. 50-410

During a meeting with the NRC Staff on October 15, 1986, Niagara Mohawk indicated that we would incorporate several specific commitments in our final report on the Construction Deficiency related to the excessive leakage of the Main Steam Isolation Valves. These commitments are supplementary to those already identified in our interim report on this problem. In addition to providing this information in the final report, which is scheduled to be submitted on October 22, 1986, we have decided to explicitly identify and provide these commitments prior to the completion of the final report to assist the Staff's review and evaluation. Specifically, these commitments are related to leak testing of the Main Steam Isolation Valves, after the Main Steam Isolation Valve full isolation test, and the provisions to be included in the initial prototype testing of these valves.

The initial prototype testing program will be conducted on a valve with a ball surface, seal ring spring configuration and actuator which reflect the actual valves installed in Unit 2. This test program will confirm the correlation between across-the-seat and between-the-seat leak testing methods. Finally, the test report will address the confirmation of the valves' acceptability for the first operating cycle. This test report will be provided to the NRC within 45 days of the completion of the prototype testing. A milestone schedule for the prototype testing will be included in the final 50.55(e) report. The latest draft of the initial prototype test program is attached to this letter, and Niagara Mohawk will continue to keep the NRC informed of the further development of this program.

Very truly yours,


C. V. Mangan
Senior Vice President

AFZ/pns
2148G
xc: W. A. Cook, NRC Resident Inspector
Project File (2)

8610220196 861017
PDR ADOCK 05000410
S PDR

Boo!



11

12

13

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
Niagara Mohawk Power Corporation)
(Nine Mile Point Unit 2))

Docket No. 50-410

AFFIDAVIT

C. V. Mangan, being duly sworn, states that he is Senior Vice President of Niagara Mohawk Power Corporation; that he is authorized on the part of said Corporation to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

C. Mangan

Subscribed and sworn to before me, a Notary Public in and for the State of New York and County of Onondaga, this 17th day of October, 1986.

Christine Austin
Notary Public in and for
Onondaga County, New York

My Commission expires:
CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 4787687
Commission Expires March 30, 1987

CHRISTINE AUSTIN
Notary Public in the State of New York
Qualified in Onondaga Co. No. 437687
Exp. 12/30/19

DRAFT

NMP-2 MAIN STEAM ISOLATION VALVE (MSIV)
INITIAL PROTOTYPE TEST PROGRAM

I. Valve Configuration to be Tested

The valve configuration to be tested will duplicate to the maximum extent practical the valve and actuator configuration at NMP-2. Specifically, the test configuration will include a full scale MSIV and a hydraulic actuator which is functionally identical to the installed actuator. Features to be included are the modified force spring pack; a new or recoated ball (equivalent to the balls to be installed); and reference design Stellite seat rings, packing, thrust washer, bearings and other internals. Actuator components will be essentially identical to the installed actuator; the structural support is expected to be somewhat less rigid than the NMP-2 seismic support arrangement.

II. Test Conditions

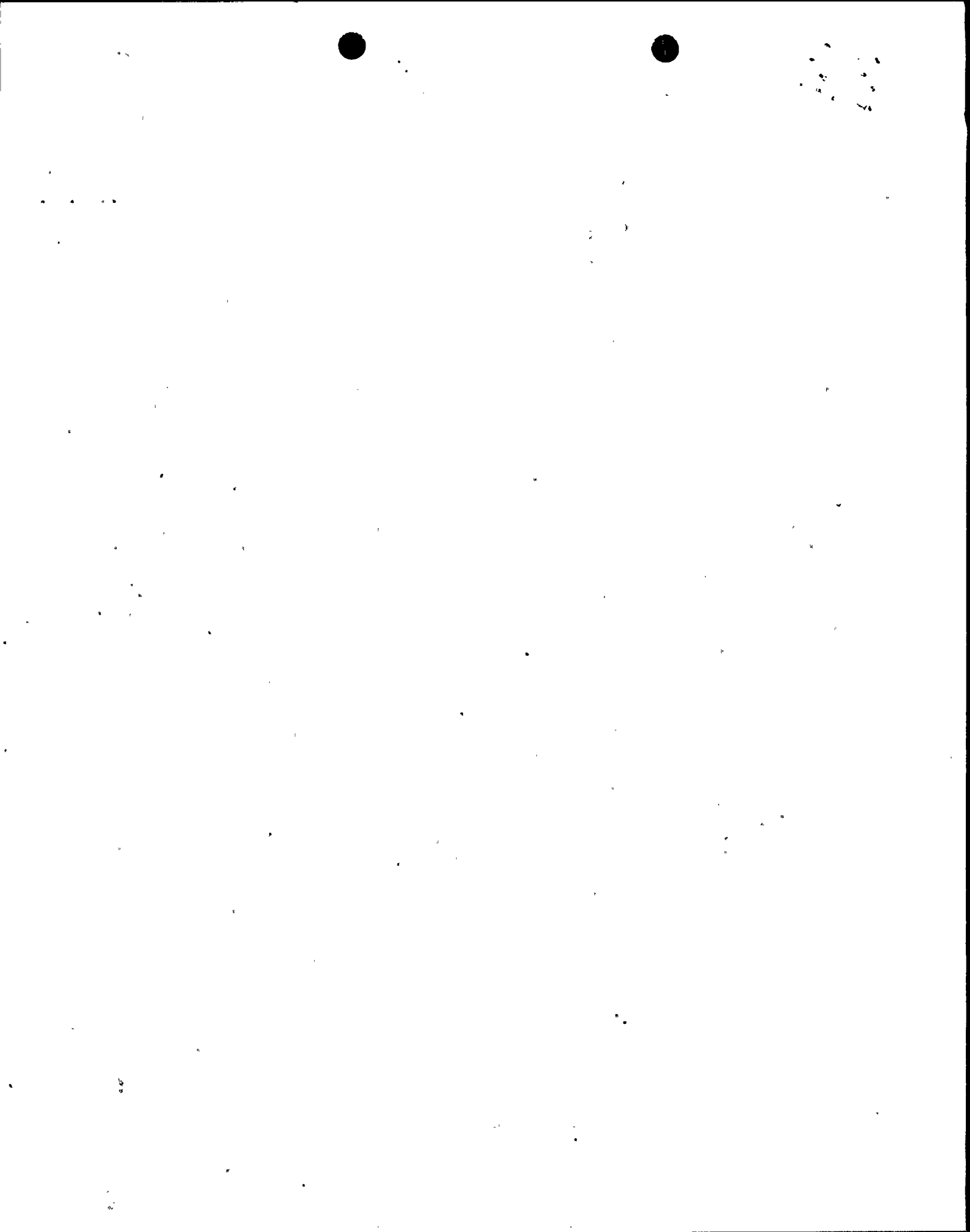
Test conditions will duplicate to the extent practical normal plant operating and test conditions. Specifically, prototype test conditions will include:

- Ambient pressure and temperature conditions
- Normal operating pressure and temperature conditions
- Steam flow rates consistent with facility limitations
- Technical Specification leak test conditions

III. Test Objectives

The primary objective of the prototype test program is to verify the operability of the MSIV and actuator design and materials installed in NMP-2 for at least one operating cycle under anticipated normal operating and test conditions. This will include:

- Verification of the mechanical integrity of the valve and actuator for the expected operating and test cycles.
- Demonstration of valve leak tightness for the expected valve duty cycles.
- Demonstration of the ability to close the valve within Technical Specification limits under normal operating pressure and temperature steam conditions.



- ° Verification of the conservatism of the between-the-seat leak test method as an alternative to across-the-valve seat leakage tests.

A second objective of the prototype test program is to provide baseline data for evaluation of (1) the long term suitability of the valve and (2) potential design and material improvements.

IV. Test Scope

Details of specific tests to be performed are under development by NMPC. It is expected that the prototype tests will include the following types of tests:

- ° Cyclic operation tests which simulate the expected valve duty cycle, e.g., ambient condition cyclic tests, valve closure time tests, partial closure surveillance tests under normal steam conditions and full closure tests at high steam flow rate at operating pressure and temperature.
- ° Valve leak tests duplicating in-plant Type C leak tests. Tests would be performed periodically during the valve cyclic tests to monitor the effect of wear/degradation on valve leak rate. Tests will include across-the-valve pressurization and between-the-seats pressurization. Leakage of other valve seals will also be monitored.
- ° Periodic disassembly and examination of critical components of the valve and actuator during the test program.

The test valve, actuator and facility will be instrumented to allow monitoring of valve and actuator performance. Additionally, test instrumentation may be installed to investigate specific phenomena as considered appropriate. Special instrumentation requirements will be included in the test plan.

V. Schedule

The schedule for initial prototype testing is based on availability of the test valve and actuator and a suitable test facility. At present, the anticipated schedule is as follows:

- ° Procurement of test valve - in progress. Delivery expected by January 1, 1987.
- ° Procurement of test valve actuator - arrangements being finalized to obtain an actuator from a cancelled power plant. Expect delivery by January 1, 1987.



100

- Identification and preparation of test facility - in progress. Expect to complete facility in time to support tests starting in February, 1987.
- Testing - to be performed in the February-March, 1987 time frame with the objective of completing initial prototype tests by April 1, 1987.

VI. Reporting

Reporting milestones include:

- Test plan
- Final report of tests

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100