



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NOV 09 1977

MEMORANDUM FOR: R. Boyd, Director, DPM
H. Denton, Director, DSE
R. Mattson, Director, DSS
V. Stello, Director, DOR

FROM: Michael B. Aycock, Secretary
Technical Activities Steering Committee

SUBJECT: PROCEDURES FOR SCHEDULE CHANGES AND
REVISIONS TO TASK ACTION PLANS

As promised at the last Steering Committee meeting, attached is a draft memorandum containing procedures for schedule changes and revisions to Task Action Plans for your review and comment. I encourage you to solicit comments from Task Managers within your divisions in conducting your review. Please provide any comments you have to me by COB Tuesday, November 15, 1977.

A handwritten signature in dark ink, appearing to read "M. B. Aycock", is written over a horizontal line.

Michael B. Aycock, Secretary
Technical Activities Steering
Committee

Enclosure:
As stated

cc: E. Case
L. Crocker
☒ G. Guibert
☒ W. Minners
D. Wigginton

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MAYcock:mmt
11-4-77

MEMORANDUM FOR:

R. Boyd, Director, DPM
H. Denton, Director, DSE
R. Mattson, Director, DSS
V. Stello, Director, DOR

FROM:

Edson G. Case, Acting Director, NRR

SUBJECT:

PROCEDURES AND RESPONSIBILITIES FOR SCHEDULING OF
GENERIC TECHNICAL ACTIVITIES AND REVISING TASK ACTION
PLANS

The statements of procedures and responsibilities provided in
Enclosures 1 and 2 should be utilized for all future actions related
to scheduling of generic technical activities and revising Task
Action Plans.

Edson G. Case, Acting Director, NRR

SCHEDULING PROCEDURES AND
RESPONSIBILITIES FOR GENERIC TECHNICAL ACTIVITIES

Development of New Schedules

Following approval of the Task Action Plan for each Category A* generic activity, the Task Manager, working with OMIPC, develops a detailed level "C" schedule for the generic review. After review and approval by the Lead Supervisor, the network is forwarded to the participating divisions in NRR for concurrence. Following agreement by all participating NRR organizations and discussions with outside organizations regarding their participation, the Task Manager prepares a memo to the Chairman of the Technical Activities Steering Committee from the Director of the Lead Division transmitting the schedule, indicating that the concurrence of the participating technical organizations has been achieved, and requesting approval. When the schedule is approved by the Technical Activities Steering Committee (TASC), the Task Manager apprises the other participants in the generic review (i.e., contractors, vendors, etc.) of the major milestones assumed for any submittals which are critical to the timely completion of the task.

Requests for Schedule Change

After establishing a schedule, the Task Manager is responsible for maintaining or improving established target dates. The Task Manager must notify his management immediately if it appears that a target date

*These procedures will be revised at a later date to accommodate Category B and C generic activities.

will slip by more than five working days. The vehicle for reporting slippages is the enclosed "Request for Schedule Change" form. The Task Manager is to indicate the responsibility and reason(s) for the slip, the impact on the remainder of the schedule, and the potential for recovery of lost time. The Task Manager is to attach a copy of the "Generic Issue Summary Report" computer printout for his or her project, on which the new estimated dates are to be entered next to the appropriate milestones. Any dates which are changed are considered to be estimates until approved by the Chairman, TASC.

Updating Generic Book Networks

As part of the monthly "turnaround" of the Generic Book, each Task Manager is responsible for updating both the Level "C" generic network and the "Generic Issue Summary Report" computer printout. Each month OMIPC issues a specific, self-explanatory schedule for updating. A target date (T) is the official schedule date for completion of a milestone approved by the Chairman, TASC. An estimated date (E) is the most recent estimate for completion of a milestone forecast by the Task Manager. An "E" date may be changed to a "T" date only after approval of a "Request for Schedule Change" by the Chairman, TASC. Both the Level "C" generic networks and the "Generic Issue Summary Report" computer printout update sheets should be reviewed by the Lead Supervisor of the project before these update sheets are transmitted to OMIPC for incorporation in the data base.

DRAFT

Generic Issue Summary Report

Level "C" milestone dates are entered into the computer by OMIPC following approval of each project schedule by the Technical Activities Steering Committee. These detailed schedules are updated by OMIPC upon receipt of approved "Requests for Schedule Change" and revised computer runs forwarded by Task Managers as part of the Generic Book update procedure. On a monthly basis, each Task Manager is provided with an updated version of his or her detailed project schedule in the form of the "Generic Issue Summary Report" computer printout.

Each reviewer assigned to a generic review will receive a listing of the milestones they are responsible for completing via the weekly TACS reviewer level reporting system. Should a reviewer foresee that a milestone will not be completed on the approved target date, it is the reviewer's responsibility to inform the Task Manager of the anticipated deviation. The Task Manager is the only person authorized to change a target date or an estimated date on a generic task schedule.

TEST MATRIX MONTICELLO T-QUENCHER TEST

Core Flow: 100% \pm 5%

Initial Vessel Pressure: 985 \pm 5 psi

Reactor Water Level: 29" \pm 1"

Discharge Bay: D SRV No: RV 2-71-A (Quencher) = Q

Discharge Bay: C SRV No: RV 2-71-E (Quencher)

Discharge Bay: E SRV No: RV 2-71-G (Quencher)

Time Closed Time

Test Number	Test Type (1)	Valve	Initial Conditions			Discharge Time (sec)	CVA (min:sec)	Pipe Cooling (hours)		Time Next Test Run	Comments
			Pipe Temp, Water Leg (2)	Pool Temp (°F)	Power Level (%) (3)			Q	R.H.		
2	SVA	A	CP, NWL	70-80	80-85	5	---	>2	--	1.5hr(4)	
501	SVA	A	CP, NWL			15	30:00	--	--	30min	
502	CVA	A	WP, NWL			5	---	>2	--	1hr	
[701]	SVA	A	CP, NWL			15	15:00	--	N/A	---	Optional (6)
[702]	CVA	A	WP, NWL			5	---	>2	N/A	2hr(4)	
801	SVA	A	CP, NWL			15	(7)	--	N/A	---	
802	CVA	A	HP, NWL			5	---	>2	N/A	2hr(4)	
901	SVA	A	CP, NWL			15	(7)	--	N/A	---	
902	CVA	A	HP, NWL			10 ⁵	(7)	--	N/A	---	
903	CVA	A	HP, NWL			10 ⁵	(7)	--	N/A	---	
904	CVA	A	HP, NWL			10 ⁵	(7)	--	N/A	---	
905	CVA	A	HP, NWL			5	---	>2	N/A	2hr(4)	
[1001]	SVA	A	CP, NWL			15	(7)	--	N/A	---	Optional (8)
[1002]	CVA	A	HP, NWL			10	(7)	--	N/A	---	
[1003]	CVA	A	HP, NWL			10	(7)	--	N/A	---	
[1004]	CVA	A	HP, NWL			10	(7)	--	N/A	---	
[1005]	CVA	A	HP, NWL			10	(7)	--	N/A	---	
[1006]	CVA	A	HP, NWL			5	(-)	>2	N/A	30min	

[] Denotes optional test.

PRELIMINARY

15

Core Flow: 100%

Initial Vessel Pressure: 985⁵ ± 0 psf

Reactor Water Level: 29' ± 1" → 0

Discharge Bay: D SRV No: RV 2-71-A (Quencher)

Discharge Bay: C SRV No: RV 2-71-E (Quencher)

Discharge Bay: E SRV No: RV 2-71-G (Quencher)

Test Number	Test Type (1)	Valve	Initial Conditions			Discharge Time (sec)	Time Closed Time		Time Next Test Run	Comments
			Pipe Temp, Water Leg (2)	Pool Temp (°F)	Power Level (%) (3)		CVA (min:sec)	Pipe Cooling (hours)		
1101	SVA	E	CP, NWL	70-80	80-85	15	(7)	-- N/A	---	
1102	CVA	E	HP, NWL			10	(7)	-- N/A	---	
1103	CVA	E	HP, NWL			10	(7)	-- N/A	---	
1104	CVA	E	HP, NWL			10	(7)	-- N/A	---	
1105	CVA	E	HP, NWL			5	---	-- N/A	30min	
1201	SVA	G	CP, NWL			15	(7)	-- N/A	---	Optional (9)
1202	CVA	G	HP, NWL			10	(7)	-- N/A	---	
1203	CVA	G	HP, NWL			10	(7)	-- N/A	---	
1204	CVA	G	HP, NWL			10	(7)	-- N/A	---	
1205	CVA	G	HP, NWL			5	(7)	-- N/A	30min	
[1301]	SVA	A	CP, NWL			15	(11)	--	---	Optional (10)
[1302]	CVA		HP, EWL			5	---	>2	2hr(4)	
[1401]	SVA		CP, NWL			15	(11)	--	---	Optional (10)
[1402]	CVA		HP, EWL			10	(11)	--	---	
[1403]	CVA		HP, EWL			10	(11)	--	---	
[1404]	CVA		HP, EWL			10	(11)	--	---	
[1405]	CVA		HP, EWL			5	---	>2	2hr(4)	
[1501]	SVA		LV, NWL			5	---	>2	2hr(4)	Optional (14)
[1502]	SVA		LV, NWL			5	---	>2	2hr(4)	
[1503]	SVA		LV, NWL			5	---	>2	2hr(4)	
[1601]	SVA		CP, NWL			5	---	>2	2hr(4)	Optional (15)
[1602]	SVA		CP, NWL			5	---	>2	2hr(4)	
[1603]	SVA		CP, NWL			5	---	>2	2hr(4)	
[1604]	SVA		CP, NWL			5	---	>2	2hr(4)	
1701	MVA	E, A, G.	CP, NWL	70-80	65-70	15	(7)	N/A	---	
1702	MVA	E, A, G.	HP, NWL	70-80	65-70	10	(7)	N/A	---	
1703	MVA	E, A, G.	HP, NWL	70-80	65-70	10	(7)	N/A	---	
1704	MVA	E, A, G.	HP, NWL	70-80	65-70	10	(7)	N/A	---	
1705	MVA	E, A, G.	HP, NWL	70-80	65-70	2	(7)	>2	2hr(4)	
18	Extended Blowdown	A	CP, NWL	(12)	(3)	(13)	---	--	---	

NOTES

(1) SVA = Single Valve Actuation

CVA = Consecutive Valve Actuation

(2) CP = Cool Pipe

WP = Warm Pipe

HP = Hot Pipe

NWL = Normal Water Leg

EWL = Elevated (transient) Water Leg

LV = Leaking SRV

(3) Initial power level to be chosen by Test Operations

(4) Time required for pipe temperature sensor T15 to return to within 5% of initial temperature.

(5)

(6) OPTIONAL EVA TEST WITH WARM PIPE TEMPERATURE

The objective of the 500 and 700 series test runs is to permit predictive evaluations of peak S/RV discharge line pressure before proceeding to the 800 series test run, in which the highest transient S/RV discharge line pressure is expected to occur. Performance of the 500 and 700 series test runs will provide assurance that the Level 1 Criteria (as defined in the Test Procedure) will not be exceeded. The optional 700 series test run will be performed if predictions from the 500 series test run indicate that the Level 2 Criteria will be exceeded in the 800 series test run.

(7) Predetermined valve closed time to be the minimum time required to assure that the water leg has returned to normal water level. Evaluation of the predicted water leg transient is to be based on water leg transient data from prior test runs for valve "A".

NOTES TO TABLE 5 (Continued).

(8) OPTIONAL CVA TEST RUNS FOR STATISTICAL SIGNIFICANCE

The 1000 series test run will be performed pending the results of an evaluation of the 900 series test run for statistical significance. The criteria for performing the 1000 series test run is as follows:

- A. Calculates the mean (\bar{x}) and standard deviation (σ) of the peak wall pressure at one location.
- B. Determine the MULTIPLIER on the mean to reach the 95-95 confidence-level design load from Figure 1.
- C. Apply this multiplier to the measured mean to determine the upper-bound of the tested pressure load.
- D. If the upper-bound pressure load is less than 15 psid, DO NOT perform the 1000 series test run.
- E. If the upper-bound pressure load is greater than 15 psid, DO perform the 1000 series test run.

- (9) Optional Test Runs with discharge into Bay E (SRV RV2-71G). The test data of discharge into Bay C shall be reviewed at test site by the monitoring teams of GE & NSP to determine the need of this test series.

(10) OPTIONAL CVA TEST RUNS WITH WATER LEG OVERSHOOT

- A. The 1300 test runs will be performed if, in previous test runs, the transient water leg in the SRV discharge line was at least 5 feet above the normal water leg height at any time greater than 2.5 seconds following closure of the SRV.
- B. The 1300 and 1400 series test runs will be performed if pre-test predictions, incorporating effects of observed maximum water leg height, indicate that Level 2 Criteria (as defined in the test procedure) will not be exceeded.

- (11) Predetermined valve closed time to be the time at which the water leg reaches its maximum height. Evaluation of the predicted water leg transient is to be based on data from prior test runs for valve "A".

NOTES TO TABLE 5 (Continued)

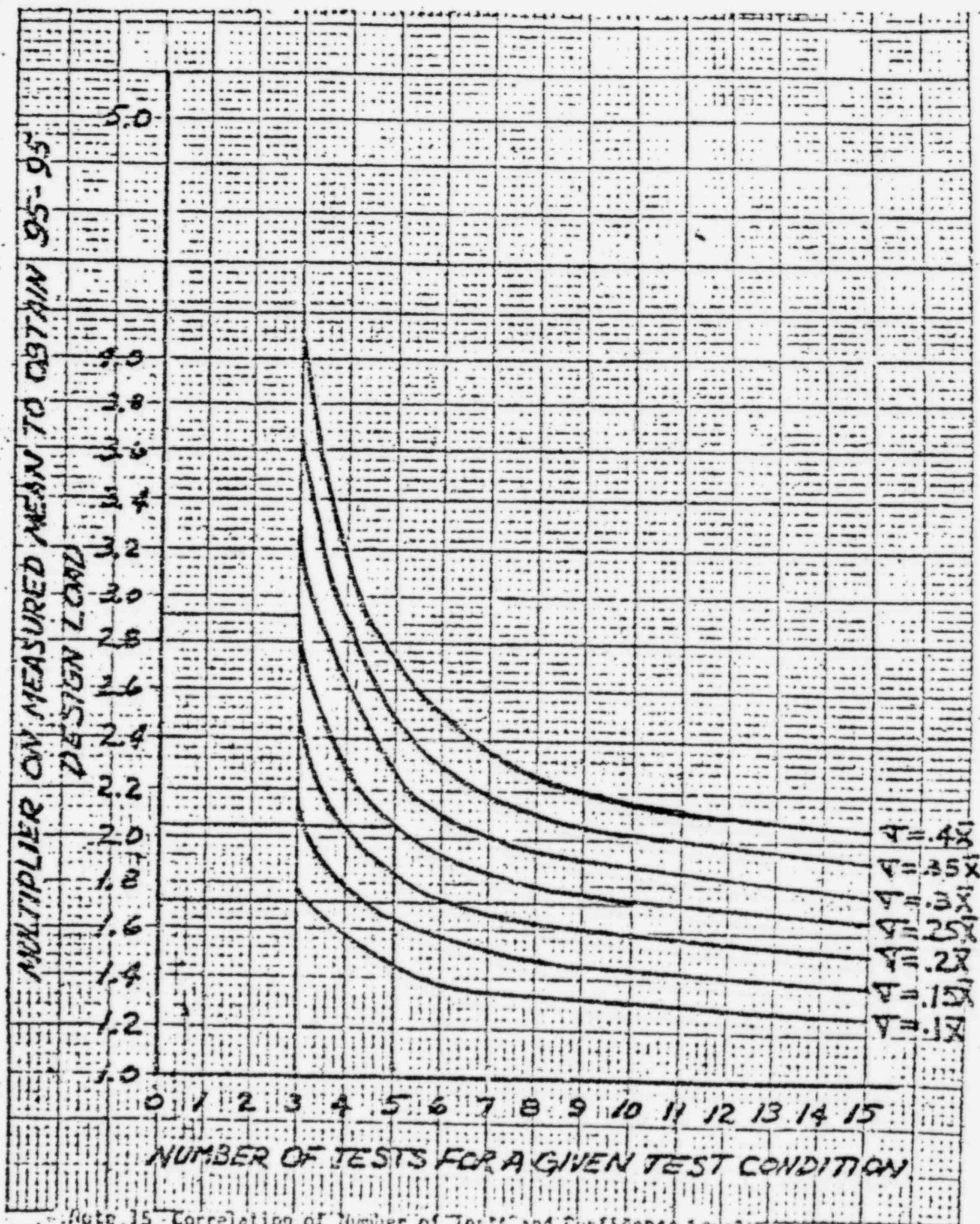
- (12) Pool temperature, as measured by plant instrumentation, shall be less than (service water temperature plus 10°F), but no cooler than 50°F, or lowest pool temperature obtainable within time acceptable by the plant management, and torus water level shall be between (-2) and (-4) inches (below NWL).
- (13) Extended SRV blowdown to continue until any of the following criteria are met: (Do Not run RHR during this test or within 30 minutes of valve closure).
- A. Average Temperature of T17, T25 and T23 reaches 110°F.
 - B. The predicted bulk pool temperature, based on initial temperature of T25, T43, T46, T49, reaches 90°F.
 - C. Either one of two plant pool temperature sensors reaches 95°F.
 - D. Torus water level reaches +7.5 inches (above NWL).
- (14) OPTIONAL LEAKING SRV TESTS
- A. Three optional leaking S/RV tests are to be performed if S/RV 2-71-A is determined to have started leaking after test 701 and if 3 leaking SRV tests have not been performed in conjunction with the preceeding test.
 - B. SRV 2-71-A will be determined to be leaking based on pipe temperature data evaluated by the on-site review teams.
- (15) OPTIONAL SVA TESTS
- The 1600 series test runs will be performed pending the results of an evaluation of SVA tests 2, 501, 801 and 901 for statistical significance. The criteria for performing the 1600 series test runs is as follows:

NOTES TO TABLE 5 (Continued)

(15) (Continued)

- A. Calculate the mean (\bar{x}) and standard deviation (σ) of the peak wall pressure at one location.
- B. Determine the MULTIPLIER on the mean to reach the 95-95 confidence-level design load from Graph on *FIGURE 1*.
- C. Apply this multiplier to the measured mean to determine the upper-bound of the tested pressure load.
- D. If the upper-bound pressure load is less than 9 psid, DO NOT perform the 1600 series test run.
- E. If the upper-bound pressure load is greater than 9 psid, DO perform the 1600 series test run.

NOTE: If performed as other Options, tests 701, 1001, 1301, and 1401 shall account for the 4 optional SVA tests and the 1600 test series shall not be run regardless of the results of the statistical evaluation.



Note: 15 Correlation of Number of Tests and Confidence Level

FIGURE 1

MONTICELLO T-QUENCHER TEST MATRIX

<u>TEST CONDITION</u>	<u>NO. REQUIRED</u>	<u>NO. OPTIONAL</u>	<u>OPTION TRIGGER</u>
SINGLE VALVE ACTUATION, COLD PIPE, NORMAL WATER LEVEL	4 0	4 4	IF STATISTICALLY ADJUSTED PEAK WALL PRESSURE EXCEEDS 9 psi AS PART OF CONSECUTIVE VALVE ACTUA- TION SERIES IF EXTRAPOLATION OF WARM PIPE RESULTS INDICATE HOT PIPE TEST WOULD EXCEED CRITERIA IF STATISTICALLY ADJUSTED PEAK WALL PRESSURE EXCEEDS 15 psi
CONSECUTIVE VALVE ACTUATION, WARM PIPE, NORMAL WATER LEVEL	1	1	
CONSECUTIVE VALVE ACTUATION, HOT PIPE, NORMAL WATER LEVEL	5	5	
MULTIPLE VALVE ACTUATION, COLD PIPE, NORMAL WATER LEVEL, BAYS C,D, & E	1	0	IF WATER LEVEL IS MORE THAN 5' ABOVE NORMAL, 2 1/2 SEC AFTER CLOSURE
CONSECUTIVE MULTIPLE VALVE ACTUATION, HOT PIPE, NORMAL WATER LEVEL BAYS C,D, & E	4	0	
CONSECUTIVE VALVE ACTUATION, HOT PIPE, ELEVATED WATER LEVEL	0	5	
SINGLE VALVE ACTUATION, LEAKING VALVE	0	3	IF VALVE LEAKS AND 3 PREVIOUS LEAKY VALVE TESTS HAVE NOT BEEN DONE
SINGLE VALVE ACTUATION, COLD PIPE, NORMAL WATER LEVEL, ADJACENT BAY			
BAY C	1	0	
BAY E	1	0	
CONSECUTIVE VALVE ACTUATION, HOT PIPE, NORMAL WATER LEVEL, ADJACENT BAY			
BAY C	4		
BAY E	4		
SINGLE VALVE, EXTENDED BLOWDOWN	1	0	
TOTALS	26	22	

TABLE I

SENSOR TYPES, NUMBER AND GENERAL LOCATION

	Number of Gauges/Number of Channels						Total Gauges/ Channels	Total Penetrations (2)
	Torus Region	Torus Pool	Torus Support	Quencher & Support	SRV Piping	Vacuum Breaker		
<u>Strain Gauges</u>								
Single	11/11	-	96/16	2/2	8/8	-	117/37	64
Rosette	47/141(1)	-	-	7/21	3/9	-	57/171	234
<u>Accelerometers</u>								
Uni-Axial	7/7	-	-	-	-	-	7/7	-
Bi-Axial	-	-	-	2/4	-	-	2/4	8
<u>Pressure Sensors</u>	34/34	4/4	-	2/2	5/5	1/1	46/46	194
<u>Water Leg Probes</u>	-	-	-	-	2/2	-	2/2	6
<u>Temperature Sensors</u> (Resistance Tempera- ture Detectors, RTD)	-	-	-	-	10/10	-	10/10	50
<hr/>								
TOTAL	99/193	4/4	96/16	13/29	28/34	1/1	241/277 (3)	556
Other RTD (Not on PCM)	-	34/34	-	-	5/5	-	39/39 (4)	-

(1) 2 in Bay C/D, 3 in Bay C, 2 in Bay A, all others in Bay D

(2) No. of Penetrations through manway cover and drain flange on torus

(3) Total number of gauges/channels connected to PCM recording system

(4) Total number of gauges/channels connected to DS-83 Scan recorder

C FORM 195

U.S. NUCLEAR REGULATORY COMMISSION

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NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

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INPUT FORM

DESCRIPTION

ENCLOSURE

Consists of response to NRC request concerning
Mark I Containment Program in-plant safety/
relief valve discharge load test with a T-
Quencher.....

RJL 11/8/77

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