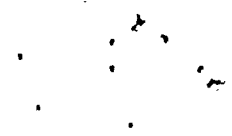


Attachment A

Revise the Technical Specifications as follows:

<u>Remove</u>	<u>Insert</u>
3.1-6	3.1-6 and 3.1-6a
3.1-9	3.1-9 and 3.1-9a
3.5-1 through 3.5-3	3.5-1 through 3.5-3a
3.5-5	3.5-5 and 3.5-5a
3.5-15	3.5-15
NA	3.5-22
3.6-2	3.6-2
4.1-7	4.1-7
4.1-10	4.1-10
4.1-12 and 4.1-13	4.1-12 and 4.1-13
4.3-5	4.3-5 and 4.3-6
4.4-11	4.4-11 and 4.4-11a

8502260277 850221
PDR ADDCK 05000244
PDR



1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is crucial for ensuring the integrity of the financial system and for providing a clear audit trail.

2. The second part of the document outlines the specific procedures for recording transactions. It details the steps involved in entering data into the system, from initial recording to final verification.

3. The third part of the document addresses the issue of data security. It discusses the various measures that can be taken to protect sensitive information from unauthorized access and loss.

4. The fourth part of the document discusses the importance of regular backups. It explains how backups can help to ensure that data is not lost in the event of a system failure or disaster.

5. The fifth part of the document discusses the importance of training. It explains that all users of the system must be properly trained to ensure that they are able to use the system correctly and safely.

6. The sixth part of the document discusses the importance of documentation. It explains that all procedures and policies must be clearly documented to ensure that they can be followed consistently.

7. The seventh part of the document discusses the importance of communication. It explains that all users must be kept informed of any changes to the system or procedures.

8. The eighth part of the document discusses the importance of monitoring. It explains that the system must be monitored regularly to ensure that it is operating correctly and that any problems are identified and resolved as quickly as possible.

9. The ninth part of the document discusses the importance of evaluation. It explains that the system must be evaluated regularly to ensure that it is meeting its intended purpose and that any necessary improvements are made.

10. The tenth part of the document discusses the importance of review. It explains that all transactions must be reviewed regularly to ensure that they are accurate and that any discrepancies are identified and corrected.

11. The eleventh part of the document discusses the importance of compliance. It explains that the system must be designed to comply with all relevant laws and regulations.

12. The twelfth part of the document discusses the importance of transparency. It explains that all transactions must be clearly visible to all users to ensure that there is no suspicion of fraud or manipulation.

13. The thirteenth part of the document discusses the importance of accountability. It explains that all users must be held accountable for their actions and that any misuse of the system must be reported and investigated.

14. The fourteenth part of the document discusses the importance of integrity. It explains that the system must be designed to ensure that all data is accurate and that no unauthorized changes are made.

15. The fifteenth part of the document discusses the importance of confidentiality. It explains that all data must be protected from unauthorized access and that any breaches must be reported and investigated.

3.1.1.5 Pressurizer

Whenever the reactor is at hot shutdown or critical, the pressurizer shall have at least 100 kw of heaters operable and a water level maintained between 12% and 87% of level span. If the pressurizer is inoperable due to heaters or water level, restore the pressurizer to operable status within 6 hours or have the RHR system in operation within an additional 6 hours.

3.1.1.6 Reactor Coolant System Vents

a. When the reactor is at hot shutdown or critical, at least one reactor coolant system vent path consisting of two valves in series shall be operable and closed* at each of the following locations:

1. Reactor Vessel head
2. Pressurizer steam space

*The PORV block valve is not required to be closed but must be operable if the PORV is capable of being opened.

b. With one or more vents at the above reactor coolant system vent path locations inoperable, startup may commence and/or power operation may continue provided at least one vent path is operable and the inoperable vent paths are maintained closed with motive power removed from the valve actuator of all the valves in the inoperable vent paths. If the requirements of 3.1.1.6a are not met within 30 days, be in hot shutdown within 6 hours and below 350°F within the following 30 hours.

c. With all of the above reactor coolant system vent paths inoperable; maintain the inoperable vent paths closed with power removed from the valve actuators of all the valves in the inoperable vent paths, and restore at least one of the vent paths to operable status within 72 hours or be in hot shutdown within 6 hours and below 350°F within the following 30 hours.

Bases

The plant is designed to operate with all reactor coolant loops in operation and maintain the DNBR above the limit value during all normal



Temperature requirements for the steam generator correspond with measured NDT for the shell and allowable thermal stresses in the tube sheet.

Each of the pressurizer code safety valves is designed to relieve 288,000 lbs. per hr. of saturated steam at the valve set point. Below 350°F and 350 psig in the reactor coolant system, the residual heat removal system can remove decay heat and thereby control system temperature and pressure. If no residual heat were removed by any of the means available, the amount of steam which could be generated at safety valve relief pressure would be less than half the valves' capacity. One valve, therefore, provides adequate defense against overpressurization.

The power operated relief valves (PORVs) operate to relieve RCS pressure below the setting of the pressurizer code safety valves. These relief valves have remotely operated block valves to provide a positive shutoff capability should a relief valve become inoperable. The electrical power for both the relief valves and the block valves is capable of being supplied from an emergency power source to ensure the ability to seal this possible RCS leakage path. The requirement that 100 kw of pressurizer heaters and their associated controls be capable of being supplied electrical power from an emergency bus provides assurance that these heaters can be energized during a loss of offsite power condition to maintain natural circulation at hot shutdown and during cooldown.⁽³⁾

Reactor Coolant System Vents

Reactor Coolant System Vents are provided to exhaust noncondensable gases and/or steam from the primary system that could inhibit natural circulation core cooling. The operability of at least one reactor coolant system vent path from the reactor vessel head and one from the pressurizer steam space ensures the capability exists to perform this function.

The valve redundancy of the reactor coolant system vent paths serves to minimize the probability of inadvertent or irreversible actuation while ensuring that a single failure of a vent valve, power supply or control system does not prevent isolation of the vent path.

The function, capabilities, and testing requirements of the reactor coolant system vent systems are consistent with the requirements of Item II.B.1 of NUREG-0737, "Clarification of TMI Action Plan Requirements", November 1980.

References

- (1) FSAR Section 14.1.6
- (2) FSAR Section 7.2.3
- (3) Letter from L.D. White, Jr. to D. L. Ziemann, USNRC, dated October 17, 1979

3.5 Instrumentation Systems

Applicability:

Applies to plant instrumentation systems.

Objective:

To delineate the conditions of the plant instrumentation and safety circuits and to limit the release of radioactive materials.

Specification:

3.5.1 Operational Safety Instrumentation

3.5.1.1 The number of Minimum Operable Channels for instrumentation shown on Tables 3.5-1 through 3.5-3 shall be OPERABLE for plant operation at rated power.

3.5.1.2 In the event the number of channels of a particular subsystem in service falls below the limit given in the columns entitled Minimum Operable Channels, operation shall be limited according to the requirement shown in the last column of Tables 3.5-1 through 3.5-3.

3.5.2 Accident Monitoring Instrumentation

3.5.2.1 The accident monitoring instrumentation channels shown in Table 3.5-4 shall be operable whenever the reactor is at hot shutdown or is critical.

3.5.2.2 While critical, with the number of operable accident monitoring instrumentation channels less than the Total Required Number of Channels shown in Table 3.5-4, either restore the inoperable channel(s) to operable status within 7 days, or be in at least hot shutdown within the next 12 hours.

- 3.5.2.3 While critical, with the number of operable accident monitoring instrumentation channels less than the MINIMUM CHANNELS OPERABLE requirements of Table 3.5-4, either restore the inoperable channel(s) to operable status within 48 hours or be in at least hot shutdown within the next 12 hours.
- 3.5.2.4 The radiation accident monitoring instrumentation channels shown in Table 3.5-7 shall be operable, whenever the reactor is at hot shutdown or is critical. With one or more radiation monitoring channels inoperable, take the action shown in Table 3.5-7. Startup may commence or continue consistent with the action statement.
- 3.5.3 Engineered Safety Feature Actuation Instrumentation
- 3.5.3.1 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels shown in Tables 3.5-2 and 3.5-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.5-5.
- 3.5.3.2 With an instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.5-5, declare the channel inoperable and apply the applicable ACTION requirement of Tables 3.5-2 and 3.5-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint Value.
- 3.5.3.3 With an instrumentation channel inoperable, take the action shown in Tables 3.5-2 and 3.5-3.

THE UNIVERSITY OF CHICAGO PRESS

3.5.4 Radioactive Effluent Monitoring Instrumentation

3.5.4.1 The radioactive effluent monitoring instrumentation shown in Table 3.5-6 shall be operable at all times with alarm and/or trip setpoints set to ensure that the limits of Specifications 3.9.1.1 and 3.9.2.1 are not exceeded. Alarm and/or trip setpoints shall be established in accordance with calculational methods set forth in the Offsite Dose Calculation Manual.

3.5.4.2 If the setpoint for a radioactive effluent monitor alarm and/or trip is found to be higher than required, one of the following three measures shall be taken immediately:

- (i) the setpoint shall be immediately corrected without declaring the channel inoperable; or
- (ii) immediately suspend the release of effluents monitored by the affected channel; or
- (iii) declare the channel inoperable.

3.5.4.3 If the number of channels which are operable is found to be less than required, take the action shown in Table 3.5-6.

3.5.5 Control Room HVAC Detection Systems

3.5.5.1 During all modes of plant operation, detection systems for chlorine gas, ammonia gas and radioactivity in the control room HVAC intake shall be operable with setpoints to isolate air intake adjusted as follows:

chlorine,	≤ 5 ppm
ammonia,	≤ 35 mg/m ³
radioactivity, particulate	$\leq 1 \times 10^{-8}$ uc/cc
iodine	$\leq 9 \times 10^{-9}$ uc/cc
noble gas	$\leq 1 \times 10^{-5}$ uc/cc

3.5.5.2 With one of the detection systems inoperable, within 1 hour isolate the control room HVAC air intake. Maintain the air intake isolated except for short periods, not to exceed 1 hour a day, when fresh air makeup is allowed to improve the working environment in the control room.

Basis

During plant operations, the complete instrumentation systems will normally be in service. Reactor safety is provided by the Reactor Protection System, which automatically initiates appropriate action to prevent exceeding established limits. Safety is not compromised, however, by continuing operation with certain instrumentation channels out of service since provisions were made for this in the plant design. This specification outlines limiting conditions for operation necessary to preserve the effectiveness of the reactor control and protection system when any one or more of the channels is out of service.

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents. The alarm and/or trip setpoints for these instruments are calculated in accordance with the ODCM to ensure that alarm and/or trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The operability and use of this instrumentation is consistent with the requirements of General Design Criterion 64 of Appendix A to 10 CFR Part 50. Control room HVAC detection systems are designed to prevent the intake of chlorine, ammonia and radiation at concentrations which may prevent plant operators from performing their required functions. Concentrations which initiate isolation of the control room HVAC system have been established using the guidance of several established references (2-4).

The chlorine isolation setpoint is $1/3$ of the toxicity limit of reference 2 but slightly greater than the short term exposure limit of reference 4. The ammonia setpoint is established at approximately $1/3$ of the toxicity limit for anhydrous ammonia in reference 2 and equal to the short term exposure limit of reference 4.

The setpoints for radioactivity correspond to the maximum permissible concentrations of reference 3 for Cs-137, I-131 and Kr-85.

References

- 1) Updated FSAR - Section 7.2.
- 2) USNRC Regulatory Guide 1.78, June 1974, Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release.
- 3) 10 CFR 20 Appendix B, Table I.
- 4) Threshold Limit Values for Chemical Substances and Physical Agents in the Work Environment, 1982. Published by American Conference of Governmental Industrial Hygienists.



TABLE 3.5-4

Accident Monitoring Instrumentation

<u>INSTRUMENT</u>	<u>TOTAL REQUIRED NO. OF CHANNELS (7)</u>	<u>MINIMUM CHANNELS OPERABLE (7)</u>
1. Pressurizer Water Level (1)	2	1
2. Auxiliary Feedwater Flow Rate (2)(3)	2/steam generator	1/steam generator
3. Steam Generator Water Level - Wide Range (3)	1/steam generator	1/steam generator
4. Reactor Coolant System Subcooling Margin Monitor (4)	2	1
5. Pressurizer PORV Position Indicator (5)	2/Valve	1/Valve
6. PORV Block Valve Position Indicator (1)	1/Valve	0/Valve
7. Pressurizer Safety Valve Position Indicator (5)	2/Valve	1/Valve
8. Containment Pressure (8)	2	1
9. Containment Water Level (Narrow Range, Sump A)	1(6)	1(6)
10. Containment Water Level (Wide Range, Sump B)	2	1
11. Core-Exit Thermocouples	4/core quadrant	2/core quadrant

Notes

- (1) Emergency power for pressurizer equipment, NUREG-0737, item II.G.1.
- (2) Auxiliary feedwater system flow indication, NUREG-0737, item II.E.1.2.
- (3) Only 2 out of the 3 indications (two steam generator auxiliary feedwater flow and one wide-range steam generator level) are required to be operable, NUREG-0737, item II.E.1.2.
- (4) Instrumentation for detection of inadequate core cooling, NUREG-0737, item II.F.2.1.
- (5) Direct indication of relief and safety valve position, NUREG-0737, item II.D.3. Two channels include a primary detector and RTD as the backup detector.
- (6) Operation may continue with less than the minimum channels operable provided that the requirements of Technical Specification 3.1.5.3 are met.
- (7) See Specification 3.5.2 for required action.
- (8) Containment pressure monitor, NUREG-0737, item II.F.1.4.

TABLE 3.5-7

Radiation Accident Monitoring Instrumentation

<u>Instrument</u>	<u>Minimum Channels Operable</u>	<u>Action</u>
1. Containment Area (R-29 and R-30)	2	1
2. Noble Gas Effluent Monitors		
i. Plant Vent (R-14A)	1	1
ii. A Main Steam Line (R-31)	1	1
iii. B Main Steam Line (R-32)	1	1
iv. Containment Purge (R-12A)	1	1
v. Air Ejector (R-15A)	1	1

Action Statements

Action 1 - With the number of operable channels less than required by the Minimum Channels Operable requirements, either restore the inoperable channel(s) to operable status within 7 days of the event, or prepare and submit a Special Report to the Commission within 30 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to operable status.



1
2
3
4
5
6
7
8
9
10
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

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

3.6.3 Containment Isolation Valves

3.6.3.1 With one or more of the isolation valve(s) specified in Table 3.6-1 inoperable, maintain at least one isolation valve operable in each affected penetration that is open and either:

- a. Restore the inoperable valve(s) to operable status within 4 hours, or
- b. Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or
- c. Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or
- d. Be in at least hot shutdown within the next 6 hours and in cold shutdown within the following 30 hours.

Isolation valves are inoperable from a leakage standpoint if the leakage is greater than that allowed by 10 CFR 50 Appendix J.

3.6.4 Combustible Gas Control

3.6.4.1 When the reactor is critical, at least two independent containment hydrogen monitors shall be operable. One of the monitors may be the Post Accident Sampling System.

3.6.4.2 With only one hydrogen monitor operable, restore a second monitor to operable status within 30 days or be in at least hot shutdown within the next 6 hours.

3.6.4.3 With no hydrogen monitors operable, restore at least one monitor to operable status within 72 hours or be in at least hot shutdown within the next 6 hours.

NO 00011 311 1 1950 01 005 531 007 1 31154

NO 00011 311 1 1950 01 005 531 007 1 31154

TABLE 4.1-1 (CONTINUED)

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
25. Containment Pressure	S	R	M	Narrow range containment pressure (-3.0, +3 psig) excluded
26. Steam Generator Pressure	S	R	M	
27. Turbine First Stage Pressure	S	R	M	
28. Emergency Plan Radiation Instruments	M	R	M	
29. Environmental Monitors	M	NA	NA	
30. Loss of Voltage/Degraded Voltage 480 Volt Safeguards Bus	NA	R	M	
31. Trip of Main Feedwater Pumps	NA	NA	R	
32. Steam Flow	S	R	M	
33. T _{AVG}	S	R	M	
34. Chlorine Detector, Control Room Air Intake	NA	R	M	
35. Ammonia Detector, Control Room Air Intake	NA	R	M	
36. Radiation Detectors, Control Room Air Intake	NA	R	M	

4.1-7

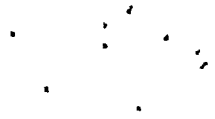
PROPOSED

The diagram shows a 3D coordinate system with axes labeled x, y, and z. A red dot represents the pollutant source. A color gradient, ranging from blue (low concentration) to red (high concentration), is shown around the source, indicating the spatial distribution of the pollutant concentration. The concentration is highest near the source and decreases as the distance from the source increases.

TABLE 4.1-3

Accident Monitoring Instrumentation Surveillance Requirements

<u>Instrument</u>	<u>Channel Check</u>	<u>Channel Calibration</u>	<u>Channel Test</u>
1. Pressurizer Water Level (1)	see Table 4.1-1	see Table 4.1-1	NA
2. Auxiliary Feedwater Flow Rate (4)	see Section 4.8.1	R	NA
3. Reactor Coolant System Subcooling Margin Monitor (2)	M	R	NA
4. Pressurizer PORV Position Indicator (primary detector) (3)	M	NA	R
5. Pressurizer PORV Position Indicator (RTD - backup detector) (3)	M	R	NA
6. PORV Block Valve Position Indicator (1)	M	NA	R
7. Pressurizer Safety Valve Position Indicator (primary detector) (3)	M	R	NA
8. Pressurizer Safety Valve Position Indicator (RTD - backup detector) (3)	M	R	NA
9. Containment Pressure	M	R	NA
10. Steam Generator Water Level - Wide Range	M	R	NA
11. Containment Water Level (Narrow Range, Sump A)	M	R	NA
12. Containment Water Level (Wide Range, Sump B)	M	R	NA
13. Core Exit Thermocouples	M	R	NA
14. Containment Area High Range Radiation (R-29 and R-30) (5)	M	R	M
(1) Emergency Power Supply Requirements for Pressurizer Level Indicators - NUREG 0578 Item 2.1.1			
(2) Instrumentation for Detection of Inadequate Core Cooling - NUREG 0578 Item 2.1.1			
(3) Direct Indication of Power Operated Relief Valve and Safety Valve Position - NUREG 0578 item 2.1.3.a			
(4) Auxiliary Feedwater Flow Indication to Steam Generator NUREG 0578 item 2.1.7.b			
(5) Acceptable criteria for calibration are provided in Table II.F.1-3 of NUREG 0737			



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

101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150

TABLE 4.1-5

Radioactive Effluent Monitoring Surveillance Requirements

<u>Instrument</u>	<u>Channel Check</u>	<u>Source Check</u>	<u>Functional Test</u>	<u>Channel Calibration</u>
1. Gross Activity Monitor (Liquid)				
a. Liquid Rad Waste (R-18)	D(7)	M(4)	Q(1)	R(5)
b. Steam Generator Blowdown (R-19)	D(7)	M(4)	Q(1)	R(5)
c. Turbine Building Floor Drains (R-21)	D(7)	M(4)	Q(1)	R(5)
d. High Conductivity Waste (R-22)	D(7)	M(4)	Q(1)	R(5)
e. Containment Fan Coolers (R-16)	D(7)	M(4)	Q(2)	R(5)
f. Spent Fuel Pool Heat Exchanger (R-20)	D(7)	M(4)	Q(2)	R(5)
2. Plant Ventilation				
a. Noble Gas Activity (R-14) (Alarm and Isolation of Gas Decay Tanks)	D(7)	M	Q(1)	R(5)
b. Particulate Sampler (R-13)	W(7)	N.A.	N.A.	R(5)
c. Iodine Sampler (R-10B and R-14A)	W(7)	N.A.	M	R(5)
d. Flow Rate Determination	N.A.	N.A.	N.A.	R(6)
3. Containment Purge				
a. Noble Gas Activity (R-12)	D(7)	PR	Q(1)	R(5)
b. Particulate Sampler (R-11)	W(7)	N.A.	Q(1)	R(5)
c. Iodine Sampler (R-10A and R-12A)	W(7)	N.A.	M	R(5)
d. Flow Rate Determination	N.A.	N.A.	N.A.	R(6)
4. Air Ejector Monitor (R-15 and R-15A)	D(7)	M	M(2)	R(5)
5. Waste Gas System Oxygen Monitor	D	N.A.	N.A.	Q(3)
6. Main Steam Lines (R-31 and R-32)	M	N.A.	Q	R

THE UNIVERSITY OF CHICAGO PRESS

1

2

3

4

5

6

7

8

9

10

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

TABLE 4.1-5 (Continued)

TABLE NOTATION

- (1) The Channel Functional Test shall also demonstrate that automatic isolation of this pathway and control room alarm occur if any of the following conditions exist:
 1. Instrument indicates measured levels above the alarm and/or trip setpoint.
 2. Power failure.
- (2) The Channel Functional Test shall also demonstrate that control room alarm occurs if any of the following conditions exist:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Power failure.
- (3) The Channel Calibration shall include the use of standard gas samples containing a nominal:
 1. Zero volume percent oxygen; and
 2. Three volume percent oxygen.
- (4) This check may require the use of an external source due to high background in the sample chamber.
- (5) Source used for the Channel Calibration shall be traceable to the National Bureau of Standards (NBS) or shall be obtained from suppliers (e.g. Amersham) that provide sources traceable to other officially-designated standards agencies.
- (6) Flow rate for main plant ventilation exhaust and containment purge exhaust are calculated by the flow capacity of ventilation exhaust fans in service and shall be determined at the frequency specified.
- (7) Applies only during releases via this pathway.

- a) to demonstrate a reactor coolant loop operable, the reactor coolant pump(s), if not in operation, shall be demonstrated operable at least once per 7 days by verifying correct breaker alignments and indicated power availability.
- b) to demonstrate a residual heat removal pump is operable, the surveillance specified in the Inservice Pump and Valve Test Program prepared pursuant to 10 CFR 50.55a shall be performed.

4.3.5.4 When the reactor is at cold shutdown or when the average coolant temperature is between 200°F and 350°F and fuel is in the reactor, at least one coolant loop shall be verified to be in operation and circulating reactor coolant at least once per 12 hours.

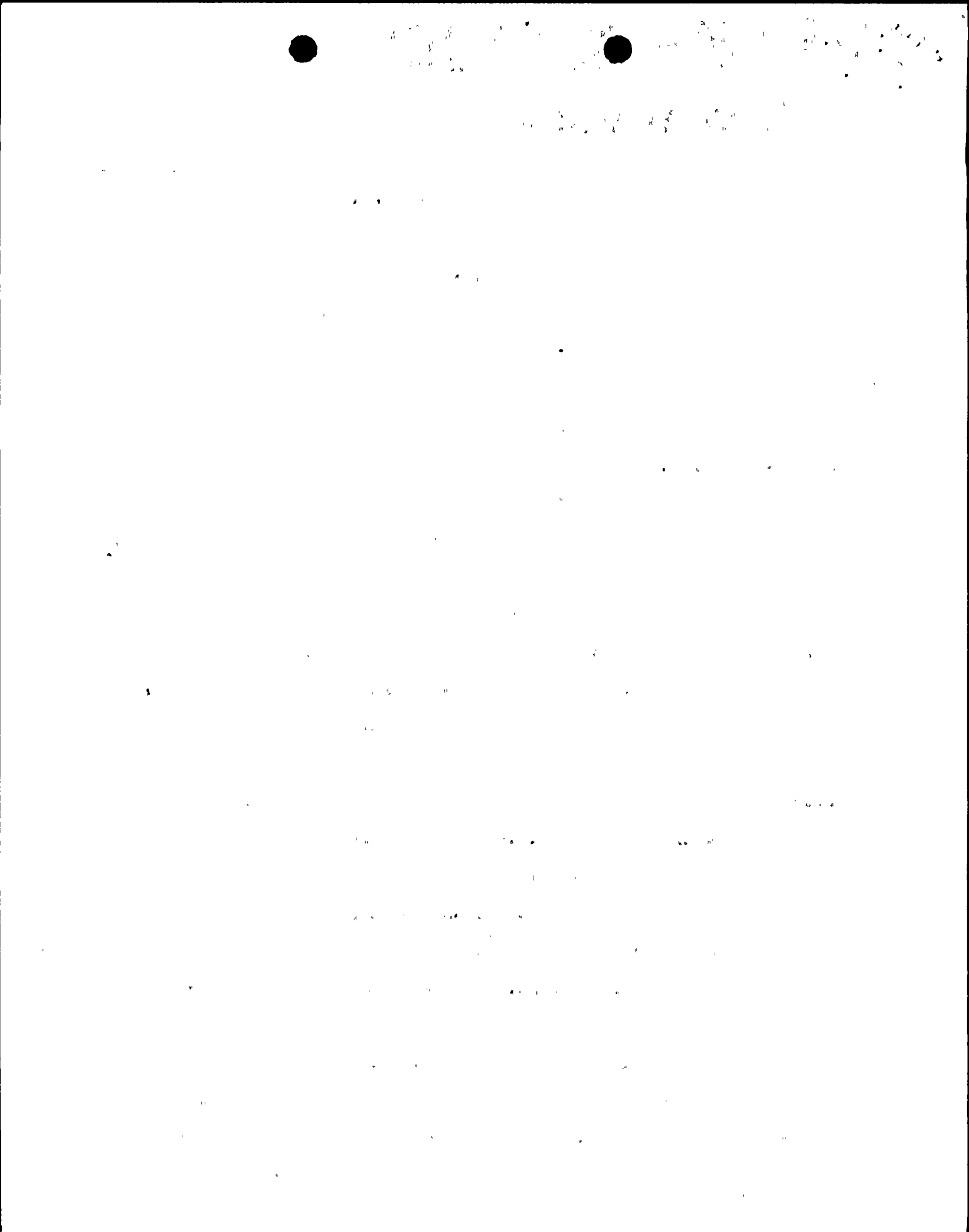
4.3.5.5 In addition to the above requirements, in order to demonstrate that a reactor coolant loop is operable, the steam generator water level shall be greater than or equal to 16% of the narrow range instrument span.

4.3.5.6 Each reactor coolant system vent path shall be demonstrated operable at least once per 18 months by:

1. Verifying all manual isolation valves in each vent path are locked in the open position.
2. Verifying flow through the reactor coolant vent system vent paths using either liquid or gas.

Basis:

This material surveillance program monitors changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region of the reactor resulting from exposure to



neutron irradiation and the thermal environment. The test data obtained from this program will be used to determine the conditions under which the reactor vessel can be operated with adequate margins of safety against fracture throughout its service life.

The surveillance requirements on pressurizer equipment will assure proper performance of the pressurizer function and give early indication of malfunctions.

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY
530 SOUTH EAST ASIAN AVENUE
CHICAGO, ILLINOIS 60607

RECEIVED
JAN 10 1964

TO THE DIRECTOR
OF THE UNIVERSITY OF CHICAGO
FROM THE DEPARTMENT OF CHEMISTRY
CHICAGO, ILLINOIS 60607

the tendon containing 6 broken wires) shall be inspected. The acceptance criterion then shall be no more than 4 broken wires in any of the additional 4 tendons. If this criterion is not satisfied, all of the tendons shall be inspected and if more than 5% of the total wires are broken, the reactor shall be shut down and depressurized.

4.4.4.2 Pre-Stress Confirmation Test

- a. Lift-off tests shall be performed on the 14 tendons identified in 4.4.4.1a above, at the intervals specified in 4.4.4.1b. If the average stress in the 14 tendons checked is less than 144,000 psi (60% of ultimate stress), all tendons shall be checked for stress and retensioned, if necessary, to a stress of 144,000 psi.
- b. Before reseating a tendon, additional stress (6%) shall be imposed to verify the ability of the tendon to sustain the added stress applied during accident conditions.

4.4.5 Containment Isolation Valves

- 4.4.5.1 Each isolation valve specified in Table 3.6-1 shall be demonstrated to be operable in accordance with the Ginna Station Pump and Valve Test Program submitted in accordance with 10 CFR 50.55a.

4.4.6 Containment Isolation Response

- 4.4.6.1 Each containment isolation instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION, and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.1-1.
- 4.4.6.2 The RESPONSE TIME of each containment isolation function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific function as shown in the "Total No. of Channels" Column of Table 3.5-3. The response time limit shown on Table 3.6-1 does not include diesel generator starting times but does include valve travel times for all valves that change position. The times determined in independent tests, such as electronic response of portions of the initiating circuitry and valve travel times, may be combined to determine the total function response time.

• •

• • • •

•

THE NEW YORK PUBLIC LIBRARY

ASTOR LENOX TILDEN FOUNDATION

500 N. 5TH ST. NEW YORK, N. Y.

THE NEW YORK PUBLIC LIBRARY

• • •

•

• • • •

THE NEW YORK PUBLIC LIBRARY

4.4.7 Containment Hydrogen Monitors

- 4.4.7.1 Demonstrate that two hydrogen monitors are operable at least daily by verifying that the unit is on or in standby.
- 4.4.7.2 At least once per quarter perform a channel calibration using two sample gases containing known concentrations of hydrogen.

Basis:

The containment is designed for an accident pressure of 60 psig. (1) While the reactor is operating, the internal environment of the containment will be air at approximately atmospheric pressure. The maximum temperature of the steam-air mixture at the peak accident pressure of 60 psig is calculated to be 286° F.

Attachment B

Licensees were requested to propose additional TMI Technical Specifications by Generic Letter 83-37. Enclosure 1 to that letter detailed eleven topics that were to be addressed in the plant technical specifications. Each of these topics has been considered as outlined below.

(1) Reactor Coolant System Vents (II.B.1)

New specifications 3.1.1.6 and 4.3.5.6 are proposed which require operability and surveillance testing of this equipment. Consistent with our current approved practice, valve cycling requirements will be included in the Ginna ISI program in Appendix C of the Quality Assurance Manual.

(2) Post Accident Sampling (II.B.3)

The post accident sampling capability required by NUREG-0737 has been provided. Existing technical specification 6.8.1.a requires that applicable procedures recommended by Regulatory Guide 1.33 be established, implemented and maintained. This requires that procedures exist to respond to emergency conditions and significant events, for control of radioactivity including sampling and monitoring and for control of measuring and test equipment. In addition, technical specification 6.8.1.e requires that procedures be established for implementation of the Emergency Plan. Additional specifications are unnecessary and will only add to the already sizable volume of specifications and place an additional burden on operators and those required to know the technical specifications. Plant readiness to cope with emergency conditions is periodically audited by NRC Inspection and Enforcement.

(3) Long-Term Auxiliary Feedwater System Evaluation (II.E.1.1)

Post TMI auxiliary feedwater system specifications were included in Amendment 42 and are found in sections 3.4 and 4.8. Additional correspondence related to this system is found in references 4 through 20 of a letter from John E. Maier to Dennis M. Crutchfield, USNRC, dated January 19, 1982. Alignment of safeguards systems was also addressed by RG&E letter dated May 22, 1980 from L. D. White, Jr. to Dennis M. Crutchfield and was approved by a letter from Mr. Crutchfield dated June 16, 1982.

... ..

... ..

... ..

... ..

... ..

(4) Noble Gas Effluent Monitors (II.F.1)

Operability of the post accident noble gas effluent monitors is required by proposed specification 3.5.2.4. Surveillance of these monitors is required by technical specification Table 4.1-5.

(5) Sampling and Analysis of Plant Effluents (II.F.1.2)

Additional specifications are unnecessary as described in (2) above. The existing technical specifications along with the specifications proposed in (4) above assure that the required capability exists.

(6) Containment High Range Radiation Monitor (II.F.1.3)

Containment area high range radiation monitor operability and surveillance requirements are given in proposed specification 3.5.2.4 and Table 4.1-3.

(7) Containment Pressure Monitor (II.F.1.4)

Containment pressure monitor operability and surveillance requirements have been added in proposed revisions to Tables 3.5-4 and 4.1-3.

(8) Containment Water Level Monitor (II.F.1.5)

Containment pressure monitor operability and surveillance requirements have been added in proposed revisions to Tables 3.5-4 and 4.1-3.

(9) Containment Hydrogen Monitor (II.F.1.6)

Proposed specifications 3.6.4 and 4.4.7 include operability and surveillance requirements for the containment hydrogen monitors.

(10) Instrumentation for Detection of Inadequate Core Cooling (II.F.2)

Operability and surveillance requirements for the subcooling margin monitors and core exit thermocouples are included in revised Tables 3.5-4 and 4.1-3. RG&E has committed to install a differential pressure type reactor vessel water level instrument by 1986. Appropriate technical specifications will be proposed for the water level instrument after its installation and testing is complete.

(11) Control Room Habitability Requirements (III.D.3.4)

Control room HVAC detection systems operability and surveillance requirements are included in proposed specification 3.5.5 and revised Table 4.1-1. Approval

of the existing plant configuration to meet control room habitability requirements was issued in an NRC letter from Dennis M. Crutchfield to John E. Maier dated April 11, 1983. Operability and surveillance requirements for the control room emergency air treatment system are given in existing technical specifications 3.3.5 and 4.5.2.3.6 through 4.5.2.3.9.

In accordance with 10 CFR 50.91, the proposed changes to the Technical Specifications have been evaluated against three criteria to determine if the operation of the facility in accordance with the proposed amendment would:

1. involve a significant increase in the probability or consequences of an accident previously evaluated; or
2. create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. involve a significant reduction in a margin of safety.

None of the proposed changes will have an adverse impact as judged against these criteria.

Each of the proposed changes noted above constitute an additional limitation, restriction or control not presently included in the technical specifications or incorporates an additional surveillance requirement. These proposed changes thus conform to the Commission's example (ii) of changes that do not involve a significant hazards consideration.

In addition to the proposed changes addressed above, minor revisions have also been made which are administrative in nature. Table 3.5-4 has been revised to reference the requirements of NUREG-0737 instead of NUREG-0578, to correctly describe pressurizer discharge pipe temperature elements as RTDs instead of thermocouples, and to reflect that auxiliary feedwater flow indication is required for each steam generator instead of each pump. A note has been deleted from Table 4.1-1 which required that the loss of voltage/degraded voltage surveillance specification be effective no later than the Spring 1982 refueling outage. These administrative changes conform to the Commission's example (i) of changes that do not involve a significant hazards consideration.

The total required number of channels and the minimum channels operable have been reduced to 2 and 1 respectively for pressurizer water level on Table 3.5-4. This parameter was previously used in the actuation of engineered safety features and an additional channel was required to accommodate two-out-of-three actuation logic and allow for a single failure. This parameter is now used only to perform a monitoring function. Simple redundancy is adequate to perform the intended function. The number of channels that will be required is consistent with NRC Standard Technical Specifications and with other recently imposed post-

accident monitoring requirements for other parameters. This change, thus, does not involve a significant hazards consideration.

Therefore, a no significant hazards consideration is warranted for the proposed technical specification changes.

