ATTACHMENT 1

ZION NUCLEAR POWER STATION

PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

APPENDIX A

NUREG 0737 REQUIREMENTS

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/scl:0357T:2

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LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.8.9 The accident monitoring instrumentation channels shown in Table 3.8.9-1 shall be OPERABLE.	4.8.9. Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and Instrument CHANNEL CALIBRATION operations at the frequencies shown in Table 4.8.9-1.
APPLICABILITY: MODES 1, 2 and 3	
ACTION: a. With the number of OPERABLE accident monitoring instrument channels less than the Required Number of Channels shown in Table 3.8.9-1, (Col. 2), either restore the inoperable channel(s) to OPERABLE status within 7 days, or be in at least MODE 4 within the next 12 hours.*	
b. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels Operable requirements of Table 3.8.9-1, (Col. 3), either restore the inoperable channel(s) to OPERABLE status within 48 hours, or be in at least MODE 4 within the next 12 hours.	
c. The provisions of Specifications 3.0.4 are not applicable.	
*This action does not apply to the PORV Position Indicator or the PORV Block Valve Position Indicator if the Block Valve on the associated line is known to be closed either by verification within 7 days or by system status knowledge prior to indication failure.	

INSTRUMENT (PARAMETER)	1 TOTAL NO. OF CHANNELS	2 REQUIRED NO. OF CHANNELS	3 MINIMUM NO. OF CHANNELS
1. Containment Pressure (Narrow Range)	4	2	1
2. Containment Pressure (Wide Range)	2	2	1
3. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	4-(1/loop)	2	1
4. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	4-(1/loop)	2	1
5. Reactor Coolant Pressure (Wide Range)	2	2	1
6. Steam Line Pressure	12-(3/SG)	2/SG	1/SG
7. Pressurizer Water Level	3	2	1
8. Steam Generator Water Level (Narrow Range)	12-(3/SG)	2/SG	1/SG
9. Steam Generator Water Level (Wide Range)	4-(1/SG)	2	1
10. Refueling Water Storage Tank Level	2	2	1
11. Auxiliary Feedwater Flow	4-(1/SG)	2	1
12. Reactor Coolant System Subcooling Margin*	3*	2*	1*
13. PORV Position Indication**	2/valve	2/valve	1/valve
14. PORV Block Valve Position Indication	1/valve	1/valve	0
15. Safety Valve Position Indication	3-(1/valve)	2	1
16. Core Exit Thermocouples	65	4/core quadrant	2/core quadrant
17. Containment Water Level (2 Narrow Range), (2 Wide Range) and (2 sets of Sump Lights)	6	2#	2#
18. Reactor Vessel Water Level:			
a. Wide range (At least one RCP running)	2	1#	1#
b. Narrow range (All RCP's off)	2	1#	1#

* The Reactor Coolant Subcooling Margin is determined by two methods; a) computer analysis (2 channels) or, b) a procedure performed by the operator (1 channel).

** The PORV Position Indication consists of 1) stem-mounted limit switch (primary indication) and 2) an acoustical monitoring system (backup indication)

\# Operation may continue for up to 30 days with less than the specified number of channels OPERABLE.

Accident Monitoring Instrumentation
Table 3.8.9-1

INSTRUMENT (PARAMETER)	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure (Narrow Range)	M	R
2. Containment Pressure (Wide Range)	M	R
3. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
4. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
5. Reactor Coolant Pressure (Wide Range)	M	R
6. Steam Line Pressure	M	R
7. Pressurizer Water Level	M	R
8. Steam Generator Water Level (Narrow Range)	M	R
9. Steam Generator Water Level (Wide Range)	M	R
10. Refueling Water Storage Tank Level	M	R
11. Auxiliary Feedwater Flow	M	R
12 Reactor Coolant System Subcooling Margin	M	R
13. PORV Position Indication	M	R
14. PORV Block Valve Position Indication	M	R
15. Safety Valve Position Indication	M	R
16. Core Exit Thermocouples	M	R
17. Containment Water Level (Narrow Range, Wide Range and Sump Lights)	M	R
18. Reactor Vessel Water Level	M	R

M: Monthly
R: Refueling

Accident Monitoring Instrumentation Surveillance Requirements

Table 4.8.9-1

INSTRUMENT (PARAMETER)	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure (Narrow and Wide Range)	M	R
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure (Wide Range)	M	R
5. Steam Line Pressure	M	R
6. Pressurizer Water Level	M	R
7. Steam Generator Water Level (Narrow Range)	M	R
8. Steam Generator Water Level (Wide Range)	M	R
9. Refueling Water Storage Tank Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11 Reactor Coolant System Subcooling Margin	M	R
12. PORV Position Indicator	M	R
13. PORV Block Valve Position Indicator	M	R
14. Safety Valve Position Indicator	M	R
15. Core Exit Thermocouples	M	R
16. Containment Water Level (Narrow Range) and Containment Recirculation Sump Lights	M	R
17. Containment Water Level (Wide Range)	M	R
18. Reactor Vessel Water Level (Wide Range)	M	R
19. Reactor Vessel Water Level (Narrow Range)	M	R

M: Monthly
R: Refueling

Accident Monitoring Instrumentation Surveillance Requirements

Table 4.8.9-1

The OPERABILITY of the Service Water System ensures that sufficient cooling capacity is available for continued operation of safety related equipment during normal and accident conditions. In the split discharge header OPERATING mode (Unit 1 & 2 with separate discharge headers), two OPERATING pumps and one standby are required for normal operation. In the cross-tied discharge header OPERATING mode (Unit 1 & 2 with common discharge header), three pumps have sufficient capacity for normal operation but five pumps to be OPERABLE with only one pump from either unit satisfying this requirement for the other unit, are required to provide sufficient redundancy. In an accident or shutdown mode, only one pump per unit is required.

For the Service Water System, the OPERABILITY requirements include consideration of the standby AC & DC power supplies so that a single failure of the "0" diesel generator will not cause a common mode failure in the Service Water System; "0" diesel generator powers the emergency busses for Service Water pumps 1A and 2A.

A Hydrogen Recombiner System is installed to remove the hydrogen and oxygen gases that accumulate in the containment atmosphere following a loss-of-coolant accident. (7) The containment Hydrogen Monitoring System is used to determine the effectiveness of this system.

The CHANNEL CALIBRATION of the hydrogen monitors requires disassembly and electronic testing, adjustment and reassembly of the instrument, therefore the REFUELING CYCLE frequency is deemed adequate.

The instrumentation, equipment, and procedures for the tests which are required on the ventilation filter system will generally conform to the recommendations of ANSI N510-1975.

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables during and following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations", and NRC Generic Letters 82-16 and 83-37 "NUREG-0737 Technical Specifications".

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(1) FSAR Chapter 9
(2) FSAR Section 6.2
(3) FSAR Section 6.2.3
(4) FSAR Section 14.3
(5) FSAR Section 9.3
(6) FSAR Section 9.6 & FSAR answer to question 9.1
(7) FSAR Section 6.8

Instrument	Minimum Channels Operable	Action	Applicable Modes
4. Auxiliary Building Ventilation and Miscellaneous Ventilation Stack			
A. Gas Activity Monitor			
1. 0R-0014 or	1	6	All
2. 1R-PR25 and 2R-PR25	1	6	All
3. 0R-PR18B Gas	1	6	All
4. 1R-PR49E (Channel 5)	1	4	All
5. 2R-PR49E (Channel 5)	1	4	All
B. Iodine Monitor			
1. 1R-PR49C (Channel 3)	1	8	All
2. 2R-PR49C (Channel 3)	1	8	All
C. Particulate Monitor			
1. 0R-PR18A Particulate	1	6	All
2. 1R-PR49A (Channel 1)	1	8	All
3. 2R-PR49A (Channel 1)	1	8	All
D. Flow Rate Monitor			
1. 1LP-084	1	9	All
2. 2LP-084	1	9	All
5. Service Building Ventilation			
A. Gas Activity Monitor	1	8	All
1. 0R-PR22	1	8	All
B. Particulate/Iodine Monitor			
1. 0R-PR36	1	8	All
6. Steam Generator Atmospheric Relief and Safety Valves			
1. 1R-PR58	1	10	1,2,3,7
2. 2R-PR58	1	10	1,2,3,7
3. 1R-PR59	1	10	1,2,3,7
4. 2R-PR59	1	10	1,2,3,7
5. 1R-PR60	1	10	1,2,3,7
6. 2R-PR60	1	10	1,2,3,7
7. 1R-PR61	1	10	1,2,3,7
8. 2R-PR61	1	10	1,2,3,7

Radioactive Gaseous Effluent Monitor Instrumentation (Continued)
Table 3.12-1 (Continued)

ACTION 4 - With the number of OPERABLE channels less than the minimum number required, effluent releases via this pathway may continue for up to 30 days provided grab samples are taken at least once per shift and these samples are ana'yzed for gross activity within 24 hours. In addition, initiate an alternate method (if feasible) of monitoring the appropriate parameter(s) within 72 hours, and:

1. Either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
2. Conduct a Station Review within 14 days fo'lowing the event, outlining the action taken, the cause of the inoperability and the planned schedule for restoring the system to OPERABLE status.

ACTION 5 - With the number of channels OPERABLE less than the minimum number required, the contents of the tank may be released to the environment provided that prior to initiating the release:

1. At least two independent samples of the tank's content are analyzed, and
2. At least two technically qualified members of the facility staff independently verify the release rate calculations and discharge flow path valving; otherwise suspend release of radioactive effluents via this pathway.

ACTION 6 - With the number of channels OPERABLE less than the minimum number required, effluent releases via this pathway may continue for up to 30 days provided grab samples are taken at least once per shift and these samples are analyzed for gross activity within 24 hours.

ACTION 7 - With the number of channels OPERABLE less than the minimum number required, and no redundant monitor OPERABLE in this flow path, immediately suspend PURGING of radioactive effluents via this pathway.

ACTION 8 - With the number of channels OPERABLE less than the minimum number required, effluent releases via this pathway may continue for up to 30 days provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.12.1.

ACTION 9 - With the number of OPERABLE channels less than the minimum number required, effluent releases via this pathway may continue provided the flow rate is estimated at least once per shift while release is in progress.

ACTION 10 - With the number of OPERABLE channels less than the minimum number required, initiate an alternate method (if feasible) of monitoring the appropriate parameter(s) within 72 hours, and:

1. Either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
2. Conduct a Station Review within 14 days following the event outlining the action taken, the cause of the inoperability and the planned schedule for restoring the system to OPERABLE status.

ACTION 11 - With the number of OPERABLE channels less than the minimum number required, suspend vent and purge operations and close each vent and purge valve providing direct access from the containment atmosphere to the outside atmosphere or suspend the movement of nuclear fuel and reactor components in the vicinity of the reactor, refueling cavity, and transfer canal (containment side).

ACTION 12 - With the number of OPERABLE channels less than the minimum number required, effluent releases via this pathway may continue provided the effluent flow is being accounted for in the total plant effluent.

Action 27: With the number of channels OPERABLE less than the minimum number required, effluent via this pathway may continue provided the gross radioactivity level (beta/gamma or isotopic) is determined at least once per day. If the inoperable channel is not returned to OPERABLE status within 30 days conduct a Station Review to determine a plan of action to restore the channel to operability.

Action 28: With the number of channels OPERABLE less than the minimum number required, comply with the surveillance requirements 4.3.3.A.2 and 4.3.3.B.

Action 30: With the number of OPERABLE channels less than the minimum number required, initiate an alternate method (if feasible) of monitoring the appropriate parameter(s) within 72 hours, and:

1) Either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or

2) Conduct a Station Review within 14 days following the event outlining the action taken, the cause of the inoperability and the planned schedule for restoring the system to OPERABLE status.

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.17 Ventilation	4.17 Ventilation
3.17.1 Applicability Applies to the testing of particulate filters and charcoal adsorbers in safety-related air filtration systems.	4.17.1 Applicability Applies to the testing of particulate filters and charcoal adsorbers in safety related air filtration systems.
Objective To verify that leakage efficiency and iodine removal efficiency are within acceptable limits.	Objective To verify that leakage efficiency and iodine removal efficiency are within acceptable limits.
Specification Safety-related ventilation filters shall be periodically tested.	Specification
A. The control room makeup air charcoal adsorbers system shall be OPERABLE at all times, except as specified in 3.17.1.B.	A. The control room makeup charcoal adsorber system shall be demonstrated OPERABLE: 1. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 90°F, and 2. At least once every 31 days, the control room charcoal booster fans shall be started from the control room. Performance will be acceptable, if the fan starts upon actuation and directs air through the charcoal adsorbers and operates for at least 15 minutes.
B. From and after the date that the control room makeup air charcoal adsorber system is made or found inoperable for any reason, restore the system to OPERABLE status within 7 days or be in at least MODE 3 within the next 6 hours and in MODE 5 within the following 30 hours.	B. Not Applicable.

Basis:

3.17 The plant ventilation systems are described in Reference(1). The filters listed in Tables 4.17-1 and 4.17-2 serve the Auxiliary Building, the Fuel Building, the Control Room and the containment ventilation systems.

All exhaust air from the Auxiliary Building and Fuel Building will be routed through HEPA (high efficiency air particulate) filters. Exhaust air from areas which may be contaminated by iodine are also filtered by charcoal if high radiation levels are detected.

The OPERABILITY of the control room ventilation system ensures that 1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and 2) the Control Room will remain habitable for operations personnel during and following all credible accident conditions.

The Control Room air is automatically routed through HEPA and charcoal filters, if high radiation is detected.

The containment purge exhaust air is always routed through HEPA filters.

The containment circulating air is routed as necessary through the HEPA filters and charcoal filters of the charcoal fans prior to personnel access or containment purging.

The aircraft fire detection system is designed to mitigate the consequences of an aircraft crash into the areas of ventilation ducts where the effects of a fire from the aircraft fuel could affect operation of plant equipment necessary for plant shutdown. This system is designed to prevent flames and fuel from entering the ventilation duct system.(2)

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(1) FSAR Section 9.10
(2) FSAR Section 2.2[illegible]

6.2. Plant Operating Procedures

1. Written procedures including applicable checkoff lists covering items listed below shall be prepared, implemented, and maintained:

   A. Normal startup, operation, and shutdown of the reactor and other systems and components involving nuclear safety of the facility.

   B. Refueling operations.

   C. Actions to be taken to correct specific and foreseen potential malfunctions of systems or components including responses to alarms, suspected primary system leaks, and abnormal reactivity changes.

   D. Emergency conditions involving potential or actual release of radioactivity – "Generating Stations Emergency Plan" and station emergency and abnormal procedures.

   E. Instrumentation operation which could have an effect on the safety of the facility.

   F. Preventive and corrective maintenance operations which could have an effect on the safety of the facility.

   G. Surveillance and testing requirements.

   H. Tests and experiments.

   I. Procedures to ensure safe shutdown of the plant.

   J. Station Security Plan and implementing procedures.

   K. Fire Protection Program implementation.

   L. Post Accident Sampling Program which will ensure the capability to: obtain and analyze reactor coolant and containment atmosphere samples, collect and analyze or measure radioactive iodine and particulates in plant gaseous effluents under accident conditions. The program shall include the following:
   (i) Training of personnel,
   (ii) Procedures for sampling and analysis,
   (iii)Provisions for maintenance of sampling and analysis equipment.

   M. Working hours of the Shift Engineer, Shift Control Room Engineer, Shift Foreman, and Nuclear Station Operator such that the heavy use of overtime is not routinely required.

6.2 (Continued)

2. Radiation control procedures shall be prepared, implemented and maintained. These procedures shall specify permissible radiation exposure limits and shall be consistent with the requirements of 10CFR 20. The radiation protection program shall meet the requirements of 10CFR 20.

3. Procedures for items identified in Specification 6.2.1 and any changes to such procedures shall be reviewed and approved by the Operating Engineer and the Technical Staff Supervisor in the areas of operation and fuel handling, and by the Maintenance Assistant Superintendent and Technical Staff Supervisor in the areas of plant maintenance, instrument maintenance, and plant inspection. Procedures for items identified in Specification 6.2.2 and any changes to such procedures shall be reviewed and approved by the Technical Staff Supervisor and the Health Physics Supervisor/Chemistry Supervisor or designees. At least one person approving each of the above procedures shall hold a valid Senior Reactor Operator's license. In addition, these procedures and changes thereto must have the authorization of the Station Manager or designee before being implemented.

   Work and instruction type procedures which implement approved maintenance or modification procedures shall be approved and authorized by the Production Superintendent. The "Maintenance/Modification Procedure" utilized for safety related work shall be so approved only if procedures referenced in the "Maintenance/Modification Procedure" have been approved as required by 6.2.1. Procedures which do not fall within the requirements of 6.2.1 or 6.2.2 may be approved by the Department Heads.

4. Temporary changes to procedures identified in Specifications 6.2.1 and 6.2.2 above may be made provided:

   A. The intent of the original procedure is not altered.

   B. The change is approved by two members of the plant management staff, at least one of whom holds a Senior Reactor Operator's License on the unit affected.

   C. The change is documented, reviewed by the Onsite Review and Investigative Function and approved by the Station Manager or designee within 14 days of implementation.

5. Drills of the emergency procedures described in Specification 6.2.1.D shall be conducted at the frequency specified in the Generating Station Emergency Plan. These drills will be planned so that during the course of the year, communication links are tested and outside agencies are contacted.

6.3 Action to be Taken in the Event of a Reportable Event in Plant Operation:

Any Reportable Event shall be promptly reported to the Vice President PWR Operations or his designated alternate. The incident shall be promptly reviewed pursuant to Specification 6.1.7.B.2.(j) and a separate report for each reportable event shall be prepared in accordance with the requirements of 10CFR 50.73.

ATTACHMENT 2

ZION NUCLEAR POWER STATION

PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

APPENDIX A

NUREG 0737 REQUIREMENTS

DESCRIPTION/JUSTIFICATION

OF PROPOSED CHANGES

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Attachment 2

Description and Justification of Changes

Page iii:

a) Item 3.8.9 - revised title from "Equipment for Evaluating Post LOCA" to "Accident Monitoring Instrumentation" to be consistent with Standard Tech Specs.

Page v:

a) Item 6.4 and 6.5 - revised page number from 310 to 311. Pages were not revised with Amendment 115/104.

Page X:

a) Item 4.8.9-1 - revised page number from 192b to 192c. Required since new page added for accident monitoring table.

Page 184:

a) Item 3.8.9 ACTION a: revised to be consistent with NUREG 0737 and Standard Tech Specs.

b) Item 3.8.9 ACTION b: revised to be consistent with NUREG 0737 and Standard Tech Specs.

c) Item 4.8.9: - changed 3.8.9 to 4.8.9 (typo) and revised requirement to be consistent with NUREG 0737 and Standard Tech Specs.

d) *Note - changed "Indication" to "Indicator" similar to Table 3.8.9-1.

Page 192a:

a) Column 3 - changed title to be consistent with NUREG 0737, Table 3.3-10.

b) Item 1 - added Containment Pressure (Wide Range) to the total number of Containment Pressure Channels. Both narrow and wide range containment pressure instruments meet the requirements of Reg Guide 1.97, Rev. 3.

c) Item 10 - added "Rate" to noun name to more clearly define the parameter as described in NUREG-0737, Table 3.3-10.

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d) Items 11- revised Total Number of Channels of RCS subcooling to 3 channels, since there are 2 channels of installed subcooling instrumentation and one additional channel that can be considered by procedurally calculating RCS subcooling using inputs from RCS wide range pressure instrumentation and Average of the 10 Highest Core Exit Thermocouples or the highest RCS Hot Leg temperature.

Page 1925:

a) Item 12 - changed "Indication" to "Indicator" per NUREG 0737, Table 3.3-10

b) Item 13 - changed "Indication" to "Indicator" per NUREG 0737, Table 3.3-10.

c) Item 14 - changed "Indication" to "Indicator" per NUREG 0737, Table 3.3-10.

d) Item 15 - added new instrumentation "Core Exit Thermocouples" as required by NUREG 0737 Item II.F.2. Instrumentation has been approved by letter from S. A. Varga (NRC) to D. L. Farrar (CECo) dated August 18, 1986.

e) Item 16 - added new instrumentation "Containment Water Level (Narrow Range) and Containment Recirculation Sump Lights" as required by NUREG 0737 Item II.F.1.5. Note: There are 2 containment water level narrow range channels that monitor the Containment Sump and 2 channels of Containment Recirculation Sump indicating lights that monitor the Containment Recirculation Sump water level. It is recommended that the Containment Recirculation Sump indicating lights be considered as two additional channels of Containment Water Level (Narrow Range) instruments. This is because the Containment Recirculation Sump lights overlap the total indicating range of the Containment Sump water level instruments. Added # note to table 3.8.9-1 for this item. Note allows for operation up to 30 days with less than the specified number of channels OPERABLE per NUREG 0737, Table 3.3-10.

f) Item 17 - added new instrumentation "Containment Water Level (Wide Range) as required by NUREG 0737, Item II.F.1.5 and Table 3.3-10. Added ## note to table 3.8.9-1 for this item. Note allows for operation up to 30 days with less than the minimum channels operable, provided at least one channel of Containment Recirculation Sump level indicating lights and one channel of Containment Sump water level are operable. See item k) on ## Note.

g) Item 18 & 19- added new instrumentation "Reactor Vessel Water Level" per NUREG 0737, Item II.F.2. The system is a differential pressure measurement system designed by Westinghouse. Item 18, Reactor Vessel Water Level (Wide Range) requires at least one reactor coolant pump (RCP) running to provide reliable indication. Item 19, Reactor Vessel Water Level (Narrow Range) requires all RCPs to not be running in order to provide reliable indication. Added ### note to Table 3.8.9-1 for this item.

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h) *Note - added numbers of channels to each method of monitoring RCS subcooling.

i) **Note - revised note to change "Indication" to "Indicators".

j) #Note - revised note to be consistent with NUREG 0737, Table 3.3-10.

k) ##Note - note allows for continued operation for up to 30 days with Containment Water Level (Wide Range) less than Minimum Channels Operable provided at least one set of Containment Recirculation Sump indicating lights and one channel of Containment Water Level (Narrow Range) instruments are operable. The basis for this deviation from NUREG 0737 requirement of 7 days is because the Containment Water Level (Wide Range) instruments are located inside containment but outside the missile barrier. The instrument sensing lines are oil filled and would require draining, evacuating and refilling the lines after repairs are completed by the vendor. It would be difficult to accomplish repairs within 7 days. With two trains of independent containment water level (narrow range) instruments operable, identification of an abnormal increase in containment water level during this period of time should be considered as acceptable.

l) ###Note - note allows for continued operation with either Wide Range or Narrow Range instruments less than Minimum Required Operable, provided Core Exit Thermocouples and RCS Subcooling Margin instruments are operable. In addition, a Station Review must be conducted within 7 days to determine the cause of inoperability, plan of action to take and schedule for restoring the system to operable status. This note is justified by letter from S. A. Varga (NRC) to D.L. Farrar (CECo) dated August 18, 1986. Since the Zion Station Emergency Operating Procedures are written allowing for use of the Reactor Vessel Water Level System or Core Exit Thermocouples in the detection of an inadequate core cooling condition, the unit may continue operation until repairs can be accomplished on the system. It would require the unit to be placed in the Cold Shutdown condition with the Reactor Coolant System depressurized to allow realignment of the Reactor Vessel Water Level System following isolation and repair of an instrument sensor.

Page 192c

a) Item 1 - added Containment Pressure (Wide Range) to allow for additional qualified instruments to be used for monitoring containment pressure during accident conditions.

b) Item 10 - added "Rate" to noun name to more clearly define parameter as described in NUREG 0737, Table 4.3-7.

c) Item 12 - changed "Indication" to "Indicator" to be consistent with NUREG 0737, Table 4.3-7.

d) Item 13 - changed "Indication" to "Indicator" to be consistent with NUREG 0737, Table 4.3-7.

e) Item 14 - changed "Indication" to "Indicator" to be consistent with NUREG 0737, Table 4.3-7.

f) Item 15 - added new item "Core Exit Thermocouples" as required by NUREG 0737, Table 4 3-7.

g) Item 16 - added new item "Containment Water Level (Narrow Range) and Containment Recirculation Sump Lights" as required by NUREG 0737, Table 4.3-7.

h) Item 17 - added new item "Containment Water Level (Wide Range)" as required by NUREG 0737, Table 4.3-7.

i) Item 18 - added new item "Reactor Vessel Water Level (Wide Range)" as required by NUREG 0737, Table 4.3-7.

j) Item 19 - added new item "Reactor Vessel Water Level (Narrow Range)" as required by NUREG 0737, Table 4.3-7.

Page 195:

a) Capitalized definitions "OPERABILITY", "OPERATING", "CHANNEL CALIBRATION" and "REFUELING CYCLE" to be consistent with Tech Spec requirements for definitions.

b) Added NRC Generic Letter 83-37 to last paragraph to identify recommendation for NUREG-0737 Technical Specifications and also dates of referenced documents.

Page 236a:

a) Items 4.A.4 and 4.A.5 Action statements have been changed from Action statement 6 to new Action statement 4 on Page 237.

Page 237:

a) Added new Action statement 4 similar to NUREG 0737, Enclosure 3 Model Tech Spec Table 3.3-6, Action 30. However, action statement retains current requirement of Action 6 which allows for effluent releases via this pathway for up to 30 days provided grab samples are taken at least once per shift and analyzed within 24 hours for gross activity.

b) Revised Action statement 10 to be similar to NUREG 0737, Enclosure 3, Model Tech Spec Table 3.3-6, Action 30, with the following difference. A Station Review will be conducted within 14 days following the event versus submitting a Special Report to the Commission within 14 days of the event. This exception from the sample Tech Spec is requested since the condition will be reportable under the LER program per 10 CFR 50.36(c)(2) and 10 CFR 50.73, if the action statement is exceeded. Duplicate reporting requirements is an unnecessary administrative burden.

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Page 252a:

a) Action 30: Revised to be consistent with the requirement of GL 83-37, Enclosure 3, Model Tech Spec Table 3.3-6, Action 30. This change is the same as Action statement 10 on Page 237.

Page 281:

a) Revised Technical Specification 3.17.1.A to control room makeup air charcoal absorber system to be OPERABLE at all times.

b) Revised Technical Specification 3.17.1.B to capitalize "OPERABLE" and change "hot shutdown" to "MODE 2" and "cold shutdown" to "MODE 5" to be consistent with other recent Zion Tech Spec Changes.

c) Revised Surveillance Requirement 4.17.1.A to include verifying control room air temperature is less than or equal to 90°F every 12 hours The limitation of 90°F has been determined to be an upper limit for personnel habitability requirements and control room equipment operation. This limit is the same as that approved for Commonwealth Edison's, Byron and Braidwood Station Technical Specifications.

Page 287:

a) Added statement on control room ventilation system to ensure 1) that ambient air temperature does not exceed allowable temperature for equipment and instrumentation and 2) control room will remain habitable for operations personnel during and following all credible accident conditions

Page 310: No Changes - Items from page 309 shifted to page 310.

a) Item 6.2.1.L- revised to add requirements of Post-Accident Sampling Program as per NUREG 0737, Item II.B.3 and GL 83-37, Enclosure 3. This change also incorporates requirements of Item II.F.1.2, (Sampling and Analysis of Plant Effluents).

/scl:0357T:8

ATTACHMENT 3

ZION NUCLEAR POWER STATION

PROPOSED CHANGES TO TECHNICAL SPECIFICATIONS

APPENDIX A

NUREG 0737 REQUIREMENTS

EVALUATION OF SIGNIFICANT HAZARDS

Attachment 3

Evaluation of Significant Hazards Consideration

This proposed license amendment involves changes that must be evaluated for no significant hazards consideration. The changes consist of the following items:

1) Addition of Containment Pressure (Wide Range), Core Exit Thermocouples, Containment Water Level (Narrow and Wide Range) and Reactor Vessel Water Level (Narrow and Wide Range) instrumentation to Technical Specification 3/4.8.9, Accident Monitoring Instrumentation, Tables 3/4.8.9-1.

2) Revision of action requirements for inoperable Noble Gas Effluent Monitors in Technical Specifications 3/4.12.3, Radioactive Gaseous Effluent Monitor Instrumentation, Table 3.12-1.

3) Revision of action requirements for inoperable Containment High-Range Radiation Monitors in Technical Specification 3/4.14.1, Radiation Monitoring Instrumentation, Table 3.14-1.

4) Inclusion of control room air temperature limitation into Technical Specification Surveillance Requirement 4.17.1.A.

5) Revision of Post-Accident Sampling Program Administrative Technical Specification 6.2.1.L to include specific requirements of the program.

10 CFR 50.92 states that a proposed amendment will involve a no significant hazards consideration if the proposed amendment does not:

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.

The discussion below addresses each of these three criteria and demonstrates that the proposed amendment involves a no significant hazards consideration.

Item 1. This proposed change is being made in accordance with Generic Letter 83-37 which identifies items from NUREG 0737 that are required to be included in our Technical Specifications. The additional instrumentation being added to the Accident Monitoring Instrumentation System i.e.; Containment Pressure (Wide Range), Core Exit Thermocouples, Containment Water Level (Narrow and Wide Range), and Reactor Vessel Water Level (Narrow and Wide Range), will provide additional indication to aid in identifying degraded core conditions. The addition of these instruments will enhance response to accidents as evaluated in the Final Safety Analysis Report and thus will not involve a significant increase in the probability or consequences of any accident previously analyzed.

The addition of a control room air temperature limitation in Technical Specification 4.17.1.A, will ensure that action is taken to maintain the control room environment habitable for operators during all plant conditions. This change will not impact on any accident analysis addressed in the FSAR.

Changes to the requirements for inoperable containment high range area radiation monitors, noble gas effluent radiation monitors and steam generator atmospheric relief and safety valves radiation monitors have been made more conservative. They do not impact on any accidents previously analyzed in the FSAR.

Clarification of the Post-Accident Sampling Program is an administrative change and does not affect any accidents previously analyzed.

Item 2. The instruments added to the Accident Monitoring Instrumentation System will be used to improve the identification of plant conditions during and after an accident has occurred. In addition, changes to the Technical Specifications for the radiation monitoring system, control room environment and post-accident sampling program will enhance overall plant operations. These changes also will not have an effect on the generation of any external event such as earthquakes or tornadoes. Thus, they do not create the possibility of a new or different kind of accident than any previously evaluated for Zion Station.

Item 3. As discussed above, this proposed amendment will upgrade the Accident Monitoring Instrumentation System, Radiation Monitoring System, Control Room Ventilation System and the Post-Accident Sampling Program at Zion Station. Thus the additional requirements in this proposed amendment increases the margin of safety at Zion Station.

The proposed changes of this amendment are intended to upgrade the requirements of the Accident Monitoring System, Radiation Monitoring System, Control Room Ventilation System and the Post-Accident Sampling Program. Thus, example (ii) is applicable in this instance. Example (ii) states:

(ii) A change that constitutes an additional limitation, restriction, or control not presently included in the Technical Specifications; for example, a more stringent surveillance requirement.

Therefore, since the application for amendment satisfies the criteria specified in 10CFR 50.92 and is similar to an example for which no significant hazards consideration exists, Commonwealth Edison Company has made a determination that the amendment involves no significant hazards consideration.

ATTACHMENT 4

ZION NUCLEAR POWER STATION

STATUS OF GENERIC LETTER 83-37

ENCLOSURE 1, ITEMS

Attachment 4

Status of Generic Letter 83-37 Enclosure 1 Items

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

Response: Item is addressed by current Technical Specifications 3/4.3.1.G. and Bases 3/4.3.1 which was approved by Technical Specification Amendments 86 and 76 for Unit 1 and Unit 2 respectively. Reference: letter for S. A. Varga (NRC) to D. L. Farrar (CECo) dated September 9, 1983.

Item (2) Postaccident Sampling (II.B.2)

Response: Item is addressed by revising current Technical Specification 6.2.1.L Post-Accident Sampling Program to describe what has to be sampled and analyzed under accident conditions. The change also includes requirements of the program, such as: a) training of personnel, b) procedures for sampling and analysis, and c) provisions for maintenance of sampling and analysis equipment. The change is similar to GL 83-37, Enclosure 3, Model Tech Spec 6.8.4.

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

Response: Item is addressed by current Technical Specification 3/4.7.2 and Bases 3/4.7. which was approved by Technical Specification Amendment 80 and 70 for Unit 1 and 2 respectively. Reference: letter from S. A. Varga (NRC) to L. O. DelGeorge (CECo) dated January 21, 1983.

Item (4) Noble Gas Effluent Monitors (II.F.1.1)

Response: Item is addressed by revising current Technical Specification 3.12.3.A, Table 3.12-1. Change will be similar to GL 83-37, Enclosure 3, Model Tech Spec 3.3.3.1, Table 3.3-6 Action Item 30, with the exception of requiring a Station Review to be performed within 14 days in lieu of a Special Report.

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

Response: Item is addressed by incorporating requirements into the Post Accident Sampling Program as addressed in Item (2) above by utilizing GL 83-37, Enclosure 3, Model Tech Spec 6.8.4.

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

Response: Item is addressed by revising Action item 30 of Technical Specification 3/4.3.14 Plant Radiation Monitoring, Table 3.14-1. Change will be similar to GL 83-37, Enclosure 3, Model Tech Spec 3.3.3.1, Table 3.3-6 Action 30 with the exception of requiring a Station Review to be performed within 14 days in lieu of a Special Report.

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

Response: Item is addressed by revising current Technical Specification 3/4.8.9 Table 3.8.9-1. Containment Pressure (Wide Range) will be added to the total number of Containment Pressure Channels. Both Narrow Range and Wide Range instruments meet the requirements of Reg Guide 1.97, Rev. 3.

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

Response: Item is addressed by incorporating requirements into the Accident Monitoring Instrumentation Technical Specification as described in GL 83-37, Enclosure 3. However, Containment Recirculation Sump Level Indicating Lights are being added as 2 additional Containment Water Level (Narrow Range) instrument channels.

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

Response: Item is addressed in Technical Specification 3/4.8.8.B, per Technical Specification Amendment 87 and 77 for Unit 1 and Unit 2 respectively. Reference: letter from J. Norris (NRC) to D. L. Farrar (CECo) dated March 14, 1985.

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

Response: Item is addressed by incorporating into Technical Specification 3/4.8.9, Tables 3.8.9-1 and 4.8.9-1, Core Exit Thermocouples and Reactor Vessel Water Level instruments. In addition, RCS Subcooling Margin monitors are being revised to identify a total of 3 channels. This instrumentation has been previously approved for use in the detection of inadequate core cooling by letter from S. A. Varga (NRC) to D. L. Farrar (CECo) dated August 18, 1986.

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

Response: Item is addressed and found acceptable by the Commission per letter from S. A. Varga (NRC) to L. O. DelGeorge CECo dated June 24, 1987. Control room temperature limitation requirements have been included in Technical Specification 4.17.1.A.