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EGG-NTA-7484 March 1987

INFORMAL REPORT

TECHNICAL EVALUATION REPORT FOR THE PALISADES PLANT, RESPONSE TO NRR GENERIC LETTER 83-37

E. V. Mobley

Prepared for the U.S. NUCLEAR REGULATORY COMMISSION

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TECHNICAL EVALUATION REPORT OF THE PALISADES PLANT RESPONSE TO THE U.S. NUCLEAR REGULATORY COMMISSION, OFFICE OF NUCLEAR REACTOR REGULATION'S GENERIC LETTER NO. 83-37

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Docket No. 50-255

E. V. Mobley

Published March 1987

Idaho National Engineering Laboratory EG&G Idaho, Inc.

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ABSTRACT

This EG&G Idaho, Inc., report evaluates the submittals provided by Consumers Power Company for the Palisades Plant. The submittals are in response to Generic Letter No. 83-37, "NUREG-0737 Technical Specifications (TS)". Applicable sections of the Technical Specifications are evaluated to determine compliance to the guidelines established in the Generic Letter.

FOREWORD

This report is supplied as part of the "Technical Assistance for Operating Reactors Licensing Actions" being conducted for the U.S. Nuclear Regulatory Commission, Washington D.C., by EG&G Idaho, Inc., NRR and I&E Support.

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Docket No. 50-255 TAC No. 54555

TECHNICAL EVALUATION REPORT PALISADES PLANT

1. INTRODUCTION

On November 1, 1983, a letter was sent by the Director, Division of Licensing, "To All Pressurized Water Reactor Licensees." This Generic Letter 83-37 provided NRC Staff guidance on the content of the Technical Specifications (TS) associated with certain items in NUREG-0737.² The responses to Generic Letter $83-37^{1}$ filed to date by the Consumers Power Company for the Palisades Plant include (a) Technical Specification Change Request (TSCR) dated August 30, 1982, $\frac{3}{6}$ (b) Information dated October 19, 1982, 4 (c) TSCR dated November 5, 1982, 5 placed on hold by letter dated March 5, 1986, 6 (d) TSCR dated July 9, 1984, 7 (e) TSCR dated July 31, 1984, modified by TSCR dated October 25, 1984, (f) TSCR dated September 17, 1984, ¹⁰ supplemented by TSCRs dated May 31, 1985, 11 June 21, 1985, 12 and October 28, 1985, 13 (g) TSCR dated November 19, 1984, revised by TSCR dated February 28, 1986, 15 and (h) TSCR dated November 21, 1985.¹⁶ The following report provides the evaluation of the CPC submittals and indicates information and action required for resolving the remaining issues.

2. DISCUSSION AND EVALUATION

The Licensee was requested to provide Technical Specifications for several different systems. Each of these proposals is discussed and evaluated in an individual subsection below.

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

The Generic Letter contains the following statement:

"At least one reactor coolant system vent path (consisting of at least two valves in series which are powered from emergency buses) shall be operable and closed at all times (except for cold shutdown and refueling) at each of the following locations:

- a. Reactor Vessel Head
- b. Pressurizer steam space
- c. Reactor coolant system high point

"A typical Technical Specification for reactor coolant system vents is provided in Enclosure 3. For the plants using a power operated relief valve (PORV) as a reactor coolant system vent, the block valve is not required to be closed if the PORV is operable."

Evaluation

The Licensee has proposed the addition 3 of Technical Specification Section 3.1.9 and revision of Table 4.2.2.

This item is being reviewed by the NRC Staff and no further evaluation is being performed as part of this report.

2.2 Postaccident Sampling (II.B.3)

The Generic Letter contains the following statement:

"Licensees should ensure that their plant has the capability to obtain and analyze reactor coolant and containment atmosphere samples under accident conditions. An administrative program should be established, implemented and maintained to ensure this capability. The program should include:

- a) training of personnel
- b) procedures for sampling and analysis, and
- c) provisions for maintenance of sampling and analysis equipment

"It is acceptable to the Staff, if the licensee elects to reference this program in the administrative controls section of the Technical Specifications and include a detailed description of the program in the plant operation manuals. A copy of the program should be easily available to the operating staff during accident and transient conditions."

A model Technical Specification for postaccident sampling is provided¹ that requires the capability to sample and analyze radioactive iodines and particulates in plant gaseous effluents.

Evaluation

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The Licensee proposed the addition, in letter dated July 9, 1984, ⁷ of Technical Specification Section 6.17.

This item is being reviewed by the NRC Staff and no further evaluation is being performed as part of this report.

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

The Generic Letter contains the following statement:

"The objective of this item is to improve the reliability and performance of the auxiliary feedwater (AFW) system. Technical Specifications depend on the results of the licensee's evaluation and staff review of each plant. The limiting conditions of operation (LCO) and surveillance requirements for the AFW system should be similar to safety-related systems. Typical generic Technical Specifications are provided in Enclosure 3. These specifications are for a plant which has three auxiliary feedwater pumps. Plant specific Technical Specifications could be established by using the generic Technical Specifications for the AFW system."

Evaluation

The Licensee proposed changes, in letters dated September 17, 1984, ¹⁰ May 31, 1985, ¹¹ June 21, 1985, ² and October 28, 1985, ¹³ in Technical Specifications Sections 3.3, Emergency Core Cooling System; 3.5, Steam and Feedwater Systems; 4.6, Safety Injection and Containment Spray System Tests; 4.9, Auxiliary Feedwater System; and Tables 3.17.4 and 4.1.3. The four Licensee submittals ¹⁰⁻¹³ were reviewed by the NRC Staff and found acceptable. ¹⁷ The Safety Evaluation is enclosed with the notification of issue of Amendment No. 96.

Item II.E.l.l of the Generic Letter¹ is closed.

2.4 Noble Gas Effluent Monitors (II.F.1.1)

The Generic Letter contains the following statement:

"Noble gas effluent monitors provide information, during and following an accident, which are considered helpful to the operator in accessing the plant condition. It is desired that these monitors be operable at all times during plant operation, but they are not required for safe shutdown of the plant. In case of failure of the monitor, appropriate actions should be taken to restore its operational capability in a reasonable period of time. Considering the importance of the availability of the equipment and possible delays involved in administrative controls, 7 days is considered to be the appropriate time period to restore the operability of the monitor. An alternate method for monitoring the effluent should be initiated as soon as practical, but no later than 72 hours after the identification of the failure of the monitor. If the monitor is not restored to operable conditions within 7 days after the failure a special report should be submitted to the NRC within 14 days following the event, outlining the cause of inoperability, actions taken and the planned schedule for restoring the system to operable status."

A model Technical Specification for noble gas effluent monitors is also provided that specifies monitor locations and measurement ranges.

Evaluation

The Licensee proposed changes, in letter dated November 5, 1982,⁵ in Technical Specifications Table 4.1.2 and replacement of Tables 3.17.4 and 4.1.3. These proposed changes were placed on hold, pending revisions, by Licensee letter dated March 5, 1986.⁶ A revision to Table 3.24.2 was proposed in letter dated October 25, 1984.⁹ See also Section 3 of this report.

Revision and resubmittal of the November 5, 1982, Technical Specifications change request for Item II.F.1.1 is required to meet the Generic Letter.

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

The Generic Letter¹ contains the following statement:

"Each operating nuclear power reactor should have the capability to collect and analyze or measure representative samples of radioactive iodines and particulates in plant gaseous effluents during and following an accident. An administrative program should be established, implemented and maintained to ensure this capability. The program should include:

- a) training of personnel
- b) procedures for sampling and analysis, and
- c) provisions for maintenance of sampling and analysis equipment

"It is acceptable to the staff, if the licensee elects to reference this program in the administrative controls section of the Technical Specifications and include a detailed description of the program in the plant operation manuals. A copy of the program should be readily available to the operating staff during accident and transient conditions."

A model Technical Specification for postaccident sampling is provided that requires the capability to sample and analyze radioactive iodines and particulates in plant gaseous effluents.

Evaluation

The Licensee proposed changes, in letter dated November 5, 1982, 5 in Technical Specifications Table 4.1.2 and replacement of Tables 3.17.4 and 4.1.3. The requested changes 5 were modified by letter dated July 31, 1984. These proposed changes 5 were placed on hold, pending revisions, by Licensee letter dated March 5, 1986. See also Section 3 of this report.

Revision and resubmittal of the November 5, 1982, Technical Specifications change request for Item II.F.1.1 is required to meet the Generic Letter.

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

The Generic Letter contains the following statement:

"A minimum of two in containment radiation-level monitors with a maximum range of 10^8 rad/hr (10^7 R/hr for photon only) should be operable at all times except for cold shutdown and refueling outages. In case of failure of the monitor, appropriate actions should be taken to restore its operational capability as soon as possible. If the monitor is not restored to operable condition within 7 days after the failure, a special report should be submitted to the NRC within 14 days following the event, outlining the cause of inoperability, actions taken and the planned schedule for restoring the equipment to operable status.

"Typical surveillance requirements are shown in Enclosure 3. The setpoint for the high radiation level alarm should be determined such that spurious alarms will be precluded. Note that the acceptable calibration techniques for these monitors are discussed in NUREG-0737."

Evaluation

The Licensee proposed changes, in letter dated November 5, 1982,⁵ in Technical Specifications Table 4.1.2 and replacement of Tables 3.17.4 and 4.1.3. These proposed changes were placed on hold, pending revisions, by Licensee letter dated March 5, 1986.⁶ See also Section 3 of this report Revision and resubmittal of the November 5, 1982, Technical Specifications change request for Item II.F.1.3 is required for compliance with the Generic Letter.

2.7 Containment Pressure Monitor (II.F.1.4)

The Generic Letter¹ contains the following statement:

"Containment pressure should be continuously indicated in the control room of each operating reactor during Power Operation, Startup and Hot Standby modes of operation. Two channels should be operable at all times when the reactor is operating in any of the above mentioned modes. Technical Specifications for these monitors should be included with other accident monitoring instrumentation in the present Technical Specifications. Limiting conditions for operation (including the required Actions) for the containment pressure monitor should be similar to other accident monitoring instrumentation included in the present Technical Specifications. Typical acceptable LCO and surveillance requirements for accident monitoring instrumentation are included in Enclosure 3."

Evaluation

The proposed Technical Specifications 5 include revised Tables 3.17.4, 4.1.2, and 4.1.3 that apply to Item II.F.1.4 of the Generic Letter.

This item is being reviewed by the NRC Staff and no further evaluation is being performed as part of this report.

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

The Generic Letter¹ contains the following statement:

"A continuous indication of containment water level should be provided in the control room of each reactor during Power Operation, Startup and Hot Standby modes of operation. At least one channel for narrow range and two channels for wide range instruments should be operable at all times when the reactor is operating in any of the above modes. Narrow range instruments should cover the range from the bottom to the top of the containment sump. Wide range instruments should cover the range from the bottom of the containment to the elevation equivalent to a 600,000 gallon (or less if justified) capacity.

"Technical Specifications for containment water level monitors should be included with other accident monitoring instrumentation in the present Technical Specifications. LCOs (including the required Actions) for wide range monitors should be similar to other accident monitoring instrumentation included in the present Technical Specifications. LCOs for narrow range monitor should include the requirement that the inoperable channel will be restored to operable status within 30 days or the plant will be brought to Hot Shutdown condition as required for other accident monitoring instrumentation. Typical acceptable LCO and surveillance requirements for accident monitoring instrumentation are included in Enclosure 3."

Evaluation

The proposed Technical Specifications 5 include revised Tables 3.17.4 and 4.1.3 that apply to Item II.F.1.5 of the Generic Letter 1 .

This item is being reviewed by the NRC Staff and no further evaluation is being performed as part of this report.

2.9 Containment Hydrogen Monitor' (II.F.1.6)

The Generic Letter contains the following statement:

"Two independent containment hydrogen monitors should be operable at all times when the reactor is operating in Power Operation or Startup modes. LCO for these monitors should include the requirement that with one hydrogen monitor inoperable, the monitor should be restored to operable status within 30 days or the plant should be brought to at least a hot standby condition within the next 6 hours. If both monitors are inoperable, at least one monitor should be restored to operable status within 72 hours or the plant should be brought to at least hot standby condition within the next 6 hours. Typical surveillance requirements are provided in Enclosure 3."

Evaluation

The Licensee proposed changes, in letter dated November 5, 1982, 5 in Technical Specifications Table 4.1.2 and replacement of Tables 3.17.4 and 4.1.3. These proposed changes were placed on hold, pending revisions, by Licensee letter dated March 5, 1986. See also Section 3 of this report.

Revision and resubmittal of the November 5, 1982, Technical Specifications change request for Item II.F.1.6 is required to meet the Generic Letter.

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

The Generic Letter contains the following statement:

"Subcooling margin monitors, core exit thermocouples, and a reactor coolant inventory tracking sytem (e.g., differential pressure measurement system designed by Westinghouse, Heated Junction Thermocouple System designed by Combustion Engineering, etc.) may be used to provide indication of the approach to, existence of, and recovery from inadequate core cooling (ICC). These instrumentation should be operable during Power Operation, Startup, and Hot Shutdown modes of operation for each reactor.

"Subcooling margin monitors should have already been included in the present Technical Specifications. Technical Specifications for core exit thermocouples and the reactor coolant inventory tracking system should be included with other accident monitoring instrumentation in the present Technical Specifications. Four core-exit thermocouples in each core quadrant and two channels in the reactor coolant tracking system are required to be operable when the reactor is operating in any of the above mentioned modes. Minimum of two core-exit thermocouples in each quadrant and one channel in the reactor coolant tracking system should be operable at all times when the reactor is operating in any of the above mentioned modes. Typical acceptable LCO and surveillance requirements for accident monitoring instrumentation are provided in Enclosure 3."

Evaluation

The Licensee proposed changes, in letter dated November 21, 1985,¹⁶ to Technical Specifications Tables 3.17.4 and 4.1.3.

This item is being reviewed by the NRC Staff and no further evaluation is being performed as part of this report.

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

The Generic Letter¹ contains the following statement:

"Licensees should assure that control room operators will be adequately protected against the effects of the accidental release of toxic and/or radioactive gases and that the nuclear power plant can be safely operated or shutdown under design basis accident conditions. If the results of the analyses of postulated accidental release of toxic gases (at or near the plant) indicate any need for installing the toxic gas detection system, it should be included in the Technical Specifications. Typical acceptable LCO and surveillance requirements for such a detection system (e.g. chlorine detection system) are provided in Enclosure 3. All detection systems should be included in the Technical Specifications.

"In addition to the above requirements, other aspects of the control room habitability requirements should be included in the Technical Specifications for the control room emergency air cleanup system. Two independent control room emergency air cleanup systems should be operable continuously during all modes of plant operation and capable of meeting design requirements. Sample Technical Specifications are provided in Enclosure 3."

Evaluation

The Licensee letter dated October 19, 1982,⁴ includes an analysis to show that an offsite chlorine release would not result in exceeding toxicity limits in the control room. It is also shown⁴ that for the cooling tower treatment chemicals used, no onsite chlorine evaluation is required. No Chlorine Detection Specification¹ is required. The system was accepted by the NRC Staff by the SER transmitted on April 29, 1983.¹⁸

The Licensee proposed changes, in letter dated November 19, 1984,¹⁴ in a number of Technical Specifications Sections. The Sections¹⁴ which pertain to Control Room Habitability are 3.14, Control Room Emergency Air Cleanup System, Limiting Conditions for Operation and Part 1 of Table 4.2.3, HEPA Filter and Charcoal Adsorber Systems, Control Room Emergency Air Cleanup System. In the Palisades proposed changes¹⁴ Part 1 of Table 4.2.2 comprises the Surveillance Requirements for LCO Specification 3.14. Together, the Palisades LCO 3.14¹⁴ plus Part 1 of Table 4.2.3¹⁴ correspond to the Generic Letter model 3/4.7.7, Control Room Emergency Air Cleanup System. The November 19, 1984¹⁴, proposal differs from the Generic Letter¹ as follows:

2.11.1. The Licensee Limiting Condition for Operation¹⁴ (LCO) 3.14.1 includes system details a. through d. that are not in the Generic Letter.¹

Details a. through d. of the LCO¹⁴ provide clarification and are judged acceptable.

2.11.2. The Licensee LCO¹⁴ uses names instead of numbers for mode designation.

The mode names used by the Licensee are equivalent to the mode numbers in the Generic Letter and are judged acceptable.

2.11.3. The Licensee Action, ¹⁴ LCO 3.14.1, for modes above cold shutdown reads, "...be in at least hot <u>shutdown</u> within the next <u>12</u> hours, and in cold shutdown within the following <u>48</u> hours." The Generic Letter model reads, "...be in at least hot <u>standby</u> within the next <u>6</u> hours and in cold shutdown within the following <u>30</u> hours." The mode required by the Licensee¹⁴ is lower, but times are longer, than those shown in the Generic Letter¹ model. Additional information is required to establish the degree of equivalence for the compensating effects of mode and time.

The rationale for the mode and times in the Action¹⁴ for conditions above cold shutdown is required to meet the Generic Letter.¹

2.11.4. The Licensee Actions¹⁴ a. and b, LCO 3.14.1, for cold shutdown and refueling conditions do not include the provisions, as in the Generic Letter¹ model, for operation of the Control Room Emergency Air Cleanup System in recirculation and continuation of some reactor core operations.

From the standpoint of safety, the Licensee Action¹⁴ for cold shutdown and refueling is conservative and is judged acceptable.

2.11.5. The Licensee Surveillance Requirement¹⁴ (SR), Table 4.2.3 Item 1.a, uses less than or equal to 90°F, not 80°F as in the Generic Letter¹ model, for the control room temperature that verifies the emergency air cleanup system operability. Although a control room approaching 90°F would be edging out of the comfort zone on charts commonly used for air conditioning system design, up to 90°F can reasonably be defined as habitable for some specific purposes.

The value of less than or equal to 90°F to verify Control Room Emergency Air Cleanup System operability is judged acceptable.

2.11.6. The Licensee SR,¹⁴ Table 4.2.3 Item 1.b, does not include the phrase "on a staggered test basis" like the Generic Letter¹ model, and the first sentence under Item 1 reads, "<u>The</u> Control Room ...system...," not "Each control room... system..." The Generic Letter¹ model requirement for testing of each system on a staggered basis provides the desired degree of assurance that the Control Room Emergency Air Cleanup System function will be achieved.

Clarification that both systems are to be tested and justification for omission of the staggered test basis are required to meet the Generic Letter. 1

2.11.7. The Licensee SRs, 14 Table 4.2.3 Items 1.c. and 1.e. states "once per refueling cycle," instead of "once per 18 months," as in the Generic Letter¹ model, for the maximum interval for several operability verification tests. The extremes, or mean and deviation, or some other measure of refueling cycle length is needed to establish the degree to which the intent of the Generic Letter¹ is met.

Justification for the use of refueling cycle instead of 18 months for the test interval in Table 4.2.3 Items 1.c. and 1.e. is required to meet the Generic Letter. 1

2.11.8. The Licensee SR, ¹⁴ Table 4.2.3 Item 1.c. states the interval for verification of operability test as: "At least once per ...or (1) after... maintenance ...or (2) following...painting..." The Generic Letter ¹ model also uses <u>or</u>, but in the corresponding parts of Regulatory Guide 1.52 <u>and</u> is used. The use of <u>and</u> is preferable because <u>or</u> could be read as being an alternate to the basic testing interval.

Clarification of the testing interval is required to meet the Generic Letter. 1^{-1}

2.11.9. The Licensee SR,¹⁴ Table 4.2.3 Item 1.c., requires an operability test after <u>major</u> painting. A criterion, procedure, or other documented method for deciding how much painting warrants a test is needed by plant personnel.

Information on the availability to plant personnel of a method for determining of how much painting warrants a system test is required to meet the Generic Letter.¹

2.11.10. The Licensee SR,¹⁴ Table 4.2.3, does not include a requirement for a bypass flow test, as in the Generic Letter¹ model, that applies to systems with diverting valves.

Confirmation that the system does not have diverting values, or other justification for omission of the bypass flow test, is required to meet the Generic Letter.

2.11.11. The Licensee SR, ¹⁴ Table 4.2.3 Item 1.e.1, allows 8 in. water gauge, not 6 in. water gauge like the Generic Letter 1 model, for the maximum pressure drop access the combined filters.

The reasons for specifying 8 in. water gauge for combined filter pressure drop are required to meet the Generic Letter.

2.11.12. The Licensee SR,¹⁴ Table 4.2.3 Item 1.e.2, does not include the Phase A designation, like the Generic Letter model, preceding the isolation test signal.

The reasons for omission of the Phase A designation is required to meet the Generic Letter. 1

2.11.13. A revision to the proposed¹⁴ Section 3.14 was requested in Licensee letter dated February 28, 1986.¹⁵ The change requested ^{15*} is for Actions that would reduce operability requirements for the Control Room Emergency Air Cleanup System (CREACS) under conditions in which containment integrity is not required. One argument presented by the Licensee is based primarily on the low probability of a fuel handling or boron dilution incident. The Generic Letter states that two systems should be operable continuously during all modes and, in addition, control room habitability requirements are specifically not limited to radioactivity releases. The Generic Letter requirement includes any toxic gas, such as smoke. The analyses pertaining only to containment integrity do not adequately support a reduction in the CREACS Action requirements in the Generic Letter¹.

Another argument presented¹⁵ by the Licensee is that if containment integrity is not required, control room habitability requirements should not apply because only specific reactivity-related operations with low accident potential are allowed. Even though the accident potential may be

low, the proposed Technical Specifications appear to allow a reactivity-related operation to start or continue when the control room is not habitable and are therefore judged not acceptable.

Further justification is required to meet the Generic Letter.

3. ADDITIONAL INFORMATION NEEDED TO COMPLETE THE REVIEW

In Section 2, "Discussion and Evaluation," it is shown that to meet the Generic Letter,¹ additional information from or action by the Licensee is required for some items. Following is a compilation of the needed information or action.

o Noble Gas Effluent Monitors (II.F.1.1.)

o <u>Sampling and Analysis of Plant Effluents (II.F.1.2)</u>

o <u>Containment High-Range Radiation Monitor (II.F.1.3)</u>

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

These items are on hold pending revisions, per Licensee request." Provide the revised Technical Specifications.

o <u>Control Room Habitability Requirements (III.D.3.4)</u>.

See also Item 2.11.3. Provide a change request to the Technical Specifications to conform to the Generic Letter or provide acceptable rationale for the modes and associated times in the Action for conditions above cold shutdown, LCO 3.14.1.

See also Item 2.11.6. Provide a change request to the Technical Specifications to conform to the Generic Letter or provide clarification to indicate that both systems are to be tested. Table 4.2.3. Item 1.

- See also Item 2.11.6. Provide a change request to the Technical Specifications to conform to the Generic Letter or provide justification for not requiring tests on a staggered basis, Table 4.2.3 Item 1.6.

See also Item 2.11.7. Provide a change request to the Technical Specifications to conform to the Generic Letter¹ or provide justification for use of refueling cycle instead of 18 months for the test interval, Table 4.2.3 Items 1.c 14 and 1.e.

- See also Item 2.11.8. Provide clarification to indicate what, in any event, is the longest test interval, 14 Table 4.2.3 Item 1.c.
- See also Item 2.11.9. Provide information on the method for determination of how much painting warrants a system test, Table 4.2.3 Item 1.c.
- See also Item 2.11.10. Provide one of the following: Confirmation that the system does not have diverting valves, or justification for omission of the bypass flow test. See Generic Letter¹ model SR 4.7.7.c.1.
- See also Item 2.11.11. Provide the reasons for specifying 14 8 in. water gauge pressure drop, Table 4.2.3 Item 1.c.1.
- See also Item 2.11.12. Provide the reasons for omission of the Phase A designation, Table 4.2.3. Item 1.e.2.
- See also Item 2.11.13. Withdraw the Action change request¹⁵ or provide additional justification for the Action change request.¹⁵

4. SUMMARY

The following item is considered to be consistent with the Generic Letter:

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

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The following item differs from the Generic Letters $\frac{1}{1}$

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

The following items will be reviewed by the NRC Staff:

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

- o Postaccident Sampling (II.B.3)
- o Noble Gas Effluent Monitors (II.F.1.1)

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

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

o Containment Pressure Monitor (II.F.1.4)

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

o Containment Hydrogen Monitor (II.F.1.6)

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

5. REFERENCES

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