SYSTEM VERTICAL SLICE REVIEW (SVSR)

PROJECT INSTRUCTION

PI-01

SVSR IMPLEMENTATION CHECKLISTS AND WORKBOOK

	Signature	Date
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FORM 3 PART O

IPEEE

CHECKLIST QUESTIONS AND INSTRUCTIONS

INSTRUCTIONS

IPEEE review has been deleted per NRC letter dated September 22, 1998.

1. IPEEE is reviewed using the following checklist and the results of the review are recorded on Form 3 Part O.

2. The System Lead Engineer or Specialist shall use the following questions/requirements as the basis for preparing the specific review questions to be utilized by the inspection team.

3. The SLE or Specialist reviews the following questions, expanding them as required, and completes the appropriate system specific form in the workbook.

   Note: these questions/requirements are customized for each selected system and do not require the SLE or Specialist to include each question if it is not applicable to the selected system.

4. If applicable, the SLE or Specialist may use other checklist question contained in the system review checklist or Appendix A.

A. IPEEE REVIEW CRITERIA

- Was the Millstone Unit 2 IPEEE performed consistent with the Licensing and Design Bases requirements.

- Was the Millstone Unit 2 IPE performed consistent with the Licensing and Design Bases requirements?

FORM 3 PART U

STATION BLACKOUT

CHECKLIST QUESTIONS AND INSTRUCTIONS

INSTRUCTIONS

Effective September 4, 1998, Station Blackout review will be completed by the NRC as part of their Significant Items List (SIL) Closeout Inspection.

1. Station Blackout is reviewed using the following checklist and the results of the review are recorded on Form 3 Part U.

2. The System Lead Engineer or Specialist shall use the following questions/requirements as the basis for preparing the specific review questions to be utilized by the inspection team.

3. The SLE or Specialist reviews the following questions, expanding them as required, and completes the appropriate system specific form in the workbook.

   Note: these questions/requirements are customized for each selected system and do not require the SLE or Specialist to include each question if it is not applicable to the selected system.

4. If applicable, the SLE or Specialist may use other checklist question contained in the system review checklist or Appendix A.

A. STATION BLACKOUT REVIEW CRITERIA

The following questions will be used to screen the system for Station Blackout applicability. A yes answer will require a more detailed review as defined in Section B.

Section A - Station Blackout Review Screening

- Is the system being reviewed identified in the Millstone Unit SBO response scenario as being utilized?

Section B - Station Blackout Review

- Are the system SBO functions identified in NNECo's SBO scenario consistent with the NUMARC document?
- Can the components perform the required function as described in the SBO scenario?
- Are all of the system components required to perform the SBO function listed in the SBO equipment list?
- Do the MEPL and PMMS entries for the system identify the SBO function
- correctly for the components required for SBO?
- Do any SBO related calculations for the system follow the NUMARC guidance for method, use the correct inputs and are correctly performed to obtain a correct result?
- Verify that any containment isolation valves in the system will fail closed in an SBO or can be manually closed.
- Verify that any system electrical equipment that is powered from the alternate AC source during an SBO can be connected to the alternate AC source and that all of the breakers required are identified on the SBO Component list.
- Verify the DC and AC loads used in SBO Power requirement calculations for system components are correct.
- Verify that any system instrumentation required during an SBO is powered from an available source and is correctly identified in the station operating procedures.
- Review SBO Emergency Operating Procedures for the system to assure that they correctly implement the SBO scenario.

FORM 3 PART V

APPENDIX R

CHECKLIST QUESTIONS AND INSTRUCTIONS

INSTRUCTIONS

Effective September 4, 1998, Appendix R review will be completed by the NRC as part of their Significant Items List (SIL) Closeout Inspection.

1. Appendix R is reviewed using the following checklist and the results of the review are recorded on Form 3 Part V.

2. The System Lead Engineer or Specialist shall use the following questions/requirements as the basis for preparing the specific review questions to be utilized by the inspection team.

3. The SLE or Specialist reviews the following questions, expanding them as required, and completes the appropriate system specific form in the workbook.

   Note: these questions/requirements are customized for each selected system and do not require the SLE or Specialist to include each question if it is not applicable to the selected system.

4. If applicable, the SLE or Specialist may use other checklist question contained in the system review checklist or Appendix A.

A. APPENDIX R CRITERIA

The following questions will be used to screen the system for Appendix R applicability. A yes answer will require a more detailed review as defined in Section B.

Section A - Appendix R Review Screening

- Is the system (or any portion of the system) necessary for safe plant shutdown in the event of a 10CFR50 Appendix R fire?

Section B - Appendix R Review

- Are the system and the specific safe shutdown components appropriately defined in the plant Appendix R documentation and in the operating procedures used by operating personnel for a fire scenario?
- Does the Appendix R documentation demonstrate compliance to the separation criteria of 10CFR50 Appendix R, Section III.G.2 for the safe shutdown components and circuits?
- Are local manual operations or local administrative actions (if applicable) adequately defined?
- Is alternative or dedicated shutdown capability (e.g. remote shutdown for a main control room fire) provided in accordance with 10CFR50 Appendix R, Section III.L?
- For the fire areas requiring the use of the system for safe shutdown, does the Appendix R documentation demonstrate the availability of the necessary support systems; e.g. electrical power, control power, service water, HVAC?
- Have the equipment and circuits necessary for safe shutdown been identified?
- Has the impact of fire barriers/wrap on cable derating been addressed?
- For manual actions necessary for safe shutdown, has the required lighting and communication been provided?
- Have associated circuits been identified and their impact addressed?
- For the system under reviews, do the circuits and equipment required for safe shutdown have adequate separation or fire barriers in representative fire zones.

PART B.2 SYSTEM PROGRAM/TOPICAL SUMMARY

Instructions: (1) The OE will summarize which of the program areas are included in the licensing basis of the system. This Part should not be completed until the detail reviews in Parts E through W have been completed.

(2) The OE needs to assure that NNECo has considered the applicability of EACH program/topical area. When dispositioning the question below, the OE needs to review the licensing basis or program to the extent that NNECo considered it during in the system design.

NOTE: Because these are topical areas, NNECo licensing basis needs to consider each program/topical area for applicability. However, EACH area may not effect/impact the system and hence not be applicable to the licensing/design basis.

Form 3 Reference Section Part	PROGRAM/TOPICAL AREA	APPLICABLE TO THE SYSTEM CURRENT LICENSING BASIS
E	Anticipated Transients Without SCRAM (ATWS)	❒ Yes ❒ No
F	Control Room Design Review	❒ Yes ❒ No
G	Environmental Qualification of Electrical Equipment (EQ)	❒ Yes ❒ No
H	Erosion/Corrosion	❒ Yes ❒ No
I	External Events/Hazards	❒ Yes ❒ No
J	Generic Letter 89-10 (MOV)	❒ Yes ❒ No
K	Heavy Loads	❒ Yes ❒ No
L	High and Moderate Energy Line Breaks (HELB/MELB)	❒ Yes ❒ No
M	Inservice Inspection	❒ Yes ❒ No
N	Inservice Testing/10 CFR50 Appendix J Testing	❒ Yes ❒ No
O	IPEEE	Deleted
P	Master Equipment and Parts List (MEPL)	❒ Yes ❒ No
Q	Regulatory Guide 1.97 Compliance	❒ Yes ❒ No
R	Separation/Independence/Diversity	❒ Yes ❒ No
S	Set Point Control	❒ Yes ❒ No
T	Single Failure	❒ Yes ❒ No
U	Station Blackout	❒ Yes ❒ No