PDR

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

DESIGNATED ORIGINAL

Certified By

January 31, 1984

Mr. James B. MacRae
Office of Management and Budget
Reports Management, Room 3201
New Executive Office Building
Washington, D.C. 20503

Dear Mr. MacRae:

In accordance with Section 3507 of Public Law 96-511 of December 11, 1980 and regulations of the Office of Management and Budget (OMB), I am enclosing for OMB review copies of Standard Form-83 and the Supporting Statement covering Required Actions Based on Generic Implications of Salem ATWS Events.

The estimated respondent burden is 50,233 hours annually.

In accordance with the Nuclear Regulatory Commission's procedures, my staff has reviewed this proposed information collection for duplication and found no similar requirement in the agency. Therefore, we are transmitting this material for appropriate OMB review and approval.

Sincerely,

Patricia G. Norry, Director
Office of Administration

Enclosures:
As stated

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SUPPORTING STATEMENT FOR NRC PROGRAM

CONCERNING SALEM ATWS EVENTS

1. Justification

a. Need for the Information Collection

The primary mission of the Nuclear Regulatory Commission is to ensure that the design, construction, and operation of the nuclear power plants do not endanger the health and safety of the general public. Extensive investigations and reviews following the Anticipated Transient Without Scram (ATWS) events on February 22 and 25, 1983, at Salem Nuclear Plant Unit 1 indicated the necessity for improving the design and management of the nuclear power plants. An ATWS event occurs when a condition arises at the nuclear power plant in which the reactor should automatically shutdown, but for some reason does not. In the case of Salem an abnormal occurrence arose in which the reactor did not trip automatically. A number of requirements are ordered by the Commission to improve overall management capability and the reliability of the reactor trip system. These supplemental requirements are intended to provide additional protection in the operation of the nuclear facilities based on the experience from the Salem 1 ATWS events.

The general types of information collection include: (a) letters of commitment, (b) descriptive information of how a requirement will be satisfied, (c) engineering analyses supporting the need or lack of need to modify a nuclear power plant, (d) development and implementation of plant procedures and records, (e) replies to Commission Orders, and (f) applications for amendment to operating licensees (changes in Technical Specifications). The reporting requirements are mandatory for all licensees and operating license applicants. This information is available only from the licensees and operating license applicants. However, in those cases where parts of the information have been submitted to the NRC previously, those parts may be referenced and resubmittal is not required. The information will be reviewed by the NRC staff to ensure that the requirements are properly implemented at nuclear reactor facilities.

b. Practical Utility of the Information Collection

The information requested will be reported to the NRC. NRC needs the information to assess the conformance of the licensees to the additional requirements established by the staff to provide additional protection in the operation of the facility. The staff will review the information provided by the licensees and the operating license applicants, and ensure that they comply with the requirements. It is the Commission's policy not to specify the time frame for which licensees and applicants must conform to new requirements such as those resulting from the Salem ATWS events. Plant specific schedules will be developed by the Project Managers and these will then be confirmed such that enforceability exists.

c. Duplication with Other Collections of Information

This information is not available except through the licensees and operating license applicants. Required information does not duplicate or overlap other information collections made by the NRC.

d. Consultation Outside NRC

The NRC has received input from different owners groups and vendors from the nuclear industry prior to developing these improvements.

2. Description of the Information Collection

a. Number and Type of Respondents

These reporting requirements will affect approximately 80 operating power plants and approximately 40 plants under construction. NRC maintains a list of operating units and their licensees.

b. Reasonableness of the Schedule for Collecting Information

The NRC staff has not developed a plant specific schedule. The staff has developed generic guidelines to negotiate schedules which are established based upon the safety significance of the particular requirement in question and on the staff's assessment of how quickly the licensees can accomplish the various tasks. The negotiated schedule will accomodate other important activities underway and provide licensees with flexibility in being responsive to this set of actions.

c. Method of Collecting the Information

The requested information is phased over a two-three year period. Based upon the safety significance of the particular requirement, the licensee is required to maintain the record at the site for review by the NRC; submit the information before making any changes in the design for prior approval by the NRC; or submit the information for NRC review after the changes are completed. This approach minimizes the reporting requirements without compromising the safety of the operating nuclear power plants.

d. Record Retention Period

All non asterisked items discussed in Enclosure 1 require the licensees to respond on a one-time only basis. The information submitted by the licensee will be retained by the licensee for the duration of the facility operating license, for 40 years.

e. Copies to be Submitted

One copy will be submitted. Additional copies will be made by NRC.

3. Estimation of Respondent Reporting Burden

The burden of the information gathering systems has been estimated on an item-by-item basis. This estimate is noted in Enclosure 2 and considers that the burden encompassed all of the types itemized in section 1 above.

The estimates in Enclosure 2 are all for one-time burdens. These estimates are based on NRC experience as well as available information from industry. The total one-time burden to the licensees is estimated to be 57,000 man-hours in FY-84, 53,700 man-hours in FY-85, and 40,000 man-hours in FY-86. These burdens only include the recordkeeping and reporting efforts which are undertaken by the licensees to be responsive to the additional requirements established by the staff. The cost of engineering analysis and equipment installation is not included in this burden. (There is no anticipated reactor downtime associated with this action).

In addition to the burden presented in Enclosure 2, there are some recurring costs. Some of the items require additions to the Technical Specifications. Technical Specifications carry with them recordkeeping and reporting requirements. Records must be kept to show that the plant is in compliance with the Technical Specifications and reports are required when the plant parameters fall outside of bounds specified in the Technical Specifications. The incremental paperwork burden caused by the changes and additions to the Technical Specifications should be less than 2000 man-hours per year for all licensees.

4. Estimate of Cost to Federal Government

The total cost to the government of the information gathering requirement is about 40,500 professional man-hours. These costs will be incurred on a one-time basis. Recurrent costs associated with the implementation of the Technical Specifications are an integral part of the NRC Inspection and Enforcement Program which will not be increased as a result of the new requirements. The total cost to the Federal Government is 2.4 million dollars. (Based on the assumption of $60 per NRC staff hour for review)

ENCLOSURE 1

REQUIRED ACTIONS BASED ON GENERIC IMPLICATIONS OF SALEM ATWS EVENTS

*Requirement is Recurrent

1.1 POST-TRIP REVIEW (PROGRAM DESCRIPTION AND PROCEDURE)

Position

Licensees and applicants shall describe their program for ensuring that unscheduled reactor shutdowns are analyzed and that a determination is made that the plant can be restarted safely. A report describing the program for review and analysis of such unscheduled reactor shutdowns should include, as a minimum:

1. The criteria for determining the acceptability of restart.

2. The responsibilities and authorities of personnel who will perform the review and analysis of these events.

3. The necessary qualifications and training for the responsible personnel.

4. The sources of plant information necessary to conduct the review and analysis. The sources of information should include the measures and equipment that provide the necessary detail and type of information to reconstruct the event accurately and in sufficient detail for proper understanding. (See Action 1.2)

5. The methods and criteria for comparing the event information with known or expected plant behavior (e.g., that safety-related equipment operates as required by the Technical Specifications or other performance specifications related to the safety function).

6. The criteria for determining the need for independent assessment of an event (e.g., a case in which the cause of the event cannot be positively identified, a competent group such as the Plant Operations Review Committee, will be consulted prior to authorizing restart) and guidelines on the preservation of physical evidence (both hardware and software) to support independent analysis of the event.

7. Items 1 through 6 above are considered to be the basis for the establishment of a systematic method to assess unscheduled reactor shutdowns. The systematic safety assessment procedures compiled from the above items, which are to be used in conducting the evaluation, should be in the report.

Applicability

This position applies to all licensees and OL applicants.

Type of Review

For licensees, a post-implementation review of the program and procedures will be conducted or the staff will perform a pre-implementation review if desired by the licensee. NRR will perform the review and issue Safety Evaluations.

For OL applicants, the NRR review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants shall submit a report describing their program addressing all the items in the position.

Techncial Specification Changes Required

No changes to Technical Specifications are required.

References

Section 2.2 of NUREG-1000
Regulatory Guide 1.33
ANSI N18.7-1976/ANS-3.2
Item I.C.5 of NUREG-0660
10 CFR 50 - 50.72

1.2 POST-TRIP REVIEW - DATA AND INFORMATION CAPABILITY

Position

Licensees and applicants shall have or have planned a capability to record, recall and display data and information to permit diagnosing the causes of unscheduled reactor shutdowns prior to restart and for ascertaining the proper functioning of safety-related equipment.

Adequate data and information shall be provided to correctly diagnose the cause of unscheduled reactor shutdowns and the proper functioning of safety-related equipment during these events using systematic safety assessment procedures (Action 1.1). The data and information shall be displayed in a form that permits ease of assimilation and analysis by persons trained in the use of systematic safety assessment procedures.

A report shall be prepared which describes and justifies the adequacy of equipment for diagnosing an unscheduled reactor shutdown. The report shall describe as a minimum:

1. Capability for assessing sequence of events (on-off indications)

    1. Brief description of equipment (e.g., plant computer, dedicated computer, strip chart)

    2. Parameters monitored

    3. Time discrimination between events

    4. Format for displaying data and information

    5. Capability for retention of data and information

    6. Power source(s) (e.g., Class IE, non-Class IE, non-interruptable)

2. Capability for assessing the time history of analog variables needed to determine the cause of unscheduled reactor shutdowns, and the functioning of safety-related equipment.

    1. Brief description of equipment (e.g., plant computer, dedicated computer, strip charts)

    2. Parameters monitored, sampling rate, and basis for selecting parameters and sampling rate

    3. Duration of time history (minutes before trip and minutes after trip)

4. Format for displaying data including scale (readability) of time histories

5. Capability for retention of data, information, and physical evidence (both hardware and software)

6. Power source(s) (e.g., Class IE, non-Class IE, non-interruptable)

3. Other data and information provided to assess the cause of unscheduled reactor shutdowns.

4. Schedule for any planned changes to existing data and information capability.

Applicability

This position applies to all licensees and OL applicants.

Type of Review

Data and information capability will be reviewed by NRR to determine whether adequate data and information will be available to support the systematic safety assessment of unscheduled reactor shutdowns. NRR will perform the reviews and issue a Safety Evaluation.

For licensees, a post-implementation review of the program and procedures will be conducted by NRR or the staff will perform a pre-implementation review if desired by the licensee.

For OL applicants, the NRR review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants shall submit a report describing their data and information capability for unscheduled reactor shutdowns.

Technical Specification Changes Required

To be determined based on evaluation of required documentation.

References

Section 2.2 of NUREG-1000.

2.1 EQUIPMENT CLASSIFICATION AND VENDOR INTERFACE (REACTOR TRIP SYSTEM COMPONENTS)

Position

Licensees and applicants shall confirm that all components whose functioning is required to trip the reactor are identified as safety-related on documents, procedures, and information handling systems used in the plant to control safety-related activities, including maintenance, work orders, and parts replacement. In addition, for these components, licensees and applicants shall establish, implement and maintain a continuing program to ensure that vendor information is complete, current and controlled throughout the life of the plant, and appropriately referenced or incorporated in plant instructions and procedures. Vendors of these components should be contacted and an interface established. Where vendors can not be identified, have gone out of business, or will not supply the information, the licensee or applicant shall assure that sufficient attention is paid to equipment maintenance, replacement, and repair, to compensate for the lack of vendor backup, to assure reactor trip system reliability. The vendor interface program shall include periodic communication with vendors to assure that all applicable information has been received. The program should use a system of positive feedback with vendors for mailings containing technical information. This could be accomplished by licensee acknowledgement for receipt of technical mailings. The program shall also define the interface and division of responsibilities among the licensees and the nuclear and nonnuclear divisions of their vendors that provide service on reactor trip system components to assure that requisite control of and applicable instructions for maintenance work are provided.

Applicability

This action applies to all licensees and OL applicants.

Type of Review

For licensees, a post-implementation review will be conducted. NRR will perform these licensing reviews and issue a Safety Evaluation.

For OL applicants, the NRR review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants should submit a statement confirming that they have reviewed the Reactor Trip System components and conform to the position regarding equipment classification. In addition, a summary report describing the vendor interface program shall be submitted for staff review. Vendor lists of technical information, and the techncial information itself, shall be available for inspection at each reactor site.

Technical Specification Changes Required

No changes to Technical Specifications are required.

Reference

Section 2.3.1 of NUREG-1000.
Section 2.3.2 of NUREG-1000.

2.2 EQUIPMENT CLASSIFICATION AND VENDOR INTERFACE (PROGRAMS FOR ALL SAFETY-RELATED COMPONENTS)

Position

Licensees and applicants shall submit, for staff review, a description of their programs for safety-related* equipment classification and vendor interface as described below:

1. For equipment classification, licensees and applicants shall describe their program for ensuring that all components of safety-related systems necessary for accomplishing required safety functions are identified as safety-related on documents, procedures, and information handling systems used in the plant to control safety-related activities, including maintenance, work orders and replacement parts. This description shall include:

    1. The criteria for identifying components as safety-related within systems currently classified as safety-related. This shall not be interpreted to require changes in safety classification at the systems level.

    2. A description of the information handling system used to identify safety-related components (e.g., computerized equipment list) and the methods used for its development and validation.

    3. A description of the process by which station personnel use this information handling system to determine that an activity is safety-related and what procedures for maintenance, surveillance, parts replacement and other activities defined in the introduction to 10 CFR 50, Appendix B, apply to safety-related components.

    4. A description of the management controls utilized to verify that the procedures for preparation, validation and routine utilization of the information handling system have been followed.

    5. A demonstration that appropriate design verification and qualification testing is specified for procurement of safety-related components. The specifications shall include qualification testing for expected safety service conditions and provide support for the licensees' receipt of testing documentation to support the limits of life recommended by the supplier.

*Safety-related structures, systems, and components are those that are relied upon to remain functional during and following design basis events to ensure: (1) the integrity of the reactor coolant boundary, (2) the capability to shut down the reactor and maintain it in a safe shutdown condition, and (3) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guidelines of 10 CFR Part 100.

6. Licensees and applicants need only to submit for staff review the equipment classification program for safety-related components. Although not required to be submitted for staff review, your equipment classification program should also include the broader class of structures, systems, and components important to safety required by GDC-1 (defined in 10 CFR Part 50, Appendix A, "General Design Criteria, Introduction").

2. For vendor interface, licensees and applicants shall establish, implement and maintain a continuing program to ensure that vendor information for safety-related components is complete, current and controlled throughout the life of their plants, and appropriately referenced or incorporated in plant instructions and procedures. Vendors of safety-related equipment should be contacted and an interface established. Where vendors cannot be identified, have gone out of business, or will not supply information, the licensee or applicant shall assure that sufficient attention is paid to equipment maintenance, replacement, and repair, to compensate for the lack of vendor backup, to assure reliability commensurate with its safety function (GDC-1). The program shall be closely coupled with action 2.2.1 above (equipment qualification). The program shall include periodic communication with vendors to assure that all applicable information has been received. The program should use a system of positive feedback with vendors for mailings containing technical information. This could be accomplished by licensee acknowledgment for receipt of technical mailings. It shall also define the interface and division of responsibilities among the licensee and the nuclear and nonnuclear divisions of their vendors that provide service on safety-related equipment to assure that requisite control of and applicable instructions for maintenance work on safety-related equipment are provided.

Applicability

This action applies to all licensees and OL applicants.

Type of Review

For licensees, a post-implementation review will be conducted. NRR will perform the review and issue a Safety Evaluation.

For OL applicants, the NRR review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants should submit a report that describes the equipment classification and vendor interface programs outlined the position above.

Technical Specification Changes Required

No changes to the Technical Specifications are required.

References

Section 2.3.1 of NUREG-1000.
Section 2.3.2 of NUREG-1000.

*3.1 POST-MAINTENANCE TESTING (REACTOR TRIP SYSTEM COMPONENTS)

Position

The following actions are applicable to post-maintenance testing:

1. Licensees and applicants shall submit the results of their review of test and maintenance procedures and Technical Specifications to assure that post-maintenance operability testing of safety-related components in the reactor trip system is required to be conducted and that the testing demonstrates that the equipment is capable of performing its safety functions before being returned to service.

2. Licensees and applicants shall submit the results of their check of vendor and engineering recommendations to ensure that any appropriate test guidance is included in the test and maintenance procedures or the Technical Specifications, where required.

3. Licensees and applicants shall identify, if applicable, any post-maintenance test requirements in existing Technical Specifications which can be demonstrated to degrade rather than enhance safety. Appropriate changes to these test requirements, with supporting justification, shall be submitted for staff approval. (Note that action 4.5 discusses on-line system functional testing.)

Applicability

This action applies to all licensees and OL applicants.

Type of Review

For licensees, a post-implementation review will be conducted for actions 3.1.1 and 3.1.2 above. The Regions will perform these licensing reviews and issue Safety Evaluations. Proposed Technical Specification changes resulting from action 3.1.3 above will receive a pre-implementation review by NRR.

For OL applicants, the review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants should submit a statement confirming that actions 3.1.1 and 3.1.2 of the above position have been implemented.

Technical Specification Changes Required

Changes to Technical Specifications, as a result of action 3.1.3, are to be determined by the licensee or applicant and submitted for staff approval, as necessary.

Reference

Section 2.3.4 of NUREG-1000.

*3.2 POST-MAINTENANCE TESTING (ALL OTHER SAFETY-RELATED COMPONENTS)

Position

The following actions are applicable to post-maintenance testing:

1. Licensees and applicants shall submit a report documenting the extending of test and maintenance procedures and Technical Specifications review to assure that post-maintenance operability testing of all safety-related equipment is required to be conducted and that the testing demonstrates that the equipment is capable of performing its safety functions before being returned to service.

2. Licensees and applicants shall submit the results of their check of vendor and engineering recommendations to ensure that any appropriate test guidance is included in the test and maintenance procedures or the Technical Specifications where required.

3. Licensees and applicants shall identify, if applicable, any post-maintenance test requirements in existing Technical Specifications which are perceived to degrade rather than enhance safety. Appropriate changes to these test requirements, with supporting justification, shall be submitted for staff approval.

Applicability

This action applies to all licensees and OL applicants.

Type of Review

For licensees, a post-implementation review will be conducted for actions 3.2.1 and 3.2.2 above. The Regions will perform these licensing reviews and issue Safety Evaluations. Proposed Technical Specification changes resulting from action 3.2.3 above will receive a pre-implementation review by NRR.

For OL applicants, the review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants should submit a statement confirming that actions 3.2.1 and 3.2.2 of the above position have been implemented.

Technical Specification Changes Required

Changes to Technical Specifications, as a result of action 3.2.3, are to be determined by the licensee or applicant for staff approval, as necessary.

Reference

Section 2.3.4 of NUREG-1000.

4.1 REACTOR TRIP SYSTEM RELIABILITY (VENDOR-RELATED MODIFICATIONS)

Position

All vendor-recommended reactor trip breaker modifications shall be reviewed to verify that either: (1) each modification has, in fact, been implemented; or (2) a written evaluation of the technical reasons for not implementing a modification exists.

For example, the modifications recommended by Westinghouse in NCD-Elec-18 for the DB-50 breakers and a March 31, 1983, letter for the DS-416 breakers shall be implemented or a justification for not implementing shall be made available. Modifications not previously made shall be incorporated or a written evaluation shall be provided.

Applicability

This action applies to all PWR licensees and OL applicants.

Type of Review

For licensees, a post-implementation review will be conducted. The Regions will perform these licensing reviews and issue Safety Evaluations.

For OL applicants, the NRR review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants should submit a statement confirming that this action has been implemented.

Technical Specifications Required

No changes to Technical Specifications are required.

Reference

Section 3 of NUREG-1000.

4.2 REACTOR TRIP SYSTEM RELIABILITY (PREVENTATIVE MAINTENANCE AND SURVEILLANCE PROGRAM FOR REACTOR TRIP BREAKERS)

Position

Licensees and applicants shall describe their preventative maintenance and surveillance program to ensure reliable reactor trip breaker operation. The program shall include the following:

1. A planned program of periodic maintenance, including lubrication, housekeeping, and other items recommended by the equipment supplier.

2. Trending of parameters affecting operation and measured during testing to forecast degradation of operability.

3. Life testing of the breakers (including the trip attachments) on an acceptable sample size.

4. Periodic replacement of breakers or components consistent with demonstrated life cycles.

Applicability

This action applies to all PWR licensees and OL applicants.

Type of Review

Actions 4.2.1 and 4.2.2 will receive a post-implementation review by NRR. A pre-implementation review will be performed by NRR for actions 4.2.3 and 4.2.4 (the circuit breaker life testing program and the component testing/replacement requirements based upon the life testing results). A Safety Evaluation will be issued.

For OL applicants, NRR will perform the reviews for actions 4.2.1 and 4.2.2 on a schedule consistent with the licensing schedule. NRR will perform a pre-implementation review for actions 4.2.3 and 4.2.4 (the circuit breaker life testing program and the component testing/replacement requirements based upon the life testing results). Safety Evaluations will be issued.

Documentation Required

Licensees and applicants should submit descriptions of their programs to ensure compliance with this action.

Technical Specification Changes Required

No changes to Technical Specifications are required.

Reference

Section 3 of NUREG-1000.

*4.3 REACTOR TRIP SYSTEM RELIABILITY (AUTOMATIC ACTUATION OF SHUNT TRIP ATTACHMENT FOR WESTINGHOUSE AND B&W PLANTS)

Position

Westinghouse and B&W reactors shall be modified by providing automatic reactor trip system actuation of the breaker shunt trip attachments. The shunt trip attachment shall be considered safety related (Class IE).

Applicability

This action applies to all Westinghouse and B&W licensees and OL applicants.

Type of Review

For licensees, a pre-implementation review shall be performed for the design modifications by NRR. A Safety Evaluation will be issued.

For OL applicants, the NRR review will be performed consistent with the licensing schedule.

Technical Specification changes, if required, will be reviewed prior to implementation.

Documentation Required

Licensees and applicants should submit a report describing the modifications.

Technical Specification Changes Required

Licensees are to submit any needed Technical Specification change requests prior to declaring the modified system operable.

Reference

Section 3 of NUREG-1000.

4.4 REACTOR TRIP SYSTEM RELIABILITY (IMPROVEMENTS IN MAINTENANCE AND TEST PROCEDURES FOR B&W PLANTS)

Position

Licensees and applicants with B&W reactors shall apply safety-related maintenance and test procedures to the diverse reactor trip feature provided by interrupting power to control rods through the silicon controlled rectifiers.

This action shall not be interpreted to require hardware changes or additional environmental or seismic qualification of these components.

Applicability

This action applies to B&W licensees and OL applicants only.

Type of Review

For licensees, a post-implementation review will be conducted. The Regions will conduct the licensing review and issue a Safety Evaluation.

For OL applicants, the review will be performed consistent with the licensing schedule.

Documentation Required

Licensees and applicants should submit a statement confirming that this action has been implemented.

Technical Specification Changes Required

Include the silicon controlled rectifers in the appropriate surveillance and test sections of the Technical Specifications.

Reference

Section 3 of NUREG-1000.

*4.5 REACTOR TRIP SYSTEM RELIABILITY (SYSTEM FUNCTIONAL TESTING)

Position

On-line functional testing of the reactor trip system, including independent testing of the diverse trip features, shall be performed on all plants.

1. The diverse trip features to be tested include the breaker undervoltage and shunt trip features on Westinghouse, B&W (see Action 4.3 above) and CE plants; the circuitry used for power interruption with the silicon controlled rectifiers on B&W plants (see Action 4.4 above); and the scram pilot valve and backup scram valves (including all initiating circuitry) on GE plants.

2. Plants not currently designed to permit periodic on-line testing shall justify not making modifications to permit such testing. Alternatives to on-line testing proposed by licensees will be considered where special circumstances exist and where the objective of high reliability can be met in another way.

3. Existing intervals for on-line functional testing required by Technical Specifications shall be reviewed to determine that the intervals are consistent with achieving high reactor trip system availability when accounting for considerations such as:

    1. uncertainties in component failure rates
    2. uncertainty in common mode failure rates
    3. reduced redundancy during testing
    4. operator errors during testing
    5. component "wear-out" caused by the testing

Licensees currently not performing periodic on-line testing shall determine appropriate test intervals as described above. Changes to existing required intervals for on-line testing as well as the intervals to be determined by licensees currently not performing on-line testing shall be justified by information on the sensitivity of reactor trip system availability to parameters such as the test intervals, component failure rates, and common mode failure rates.

Applicablity

This action applies to all licensees and OL applicants.

Type of Review

For licensees, a post-implementation review will be conducted for action 4.5.1. The Regions will perform these licensing reviews and issue Safety Evaluations. Actions 4.5.2 and 4.5.3 will require a pre-implementation review by NRR. Results will be issued in a Safety Evaluation.

For OL applicants, the NRR review should be performed consistent with the licensing schedule.

Documentation Required

For item 4.5.1, licensees and applicants should submit a statement confirming that this action has been implemented.

For item 4.5.2, licensees and applicants should submit a report describing the modifications for staff review.

For item 4.5.3, licensees and applicants should submit proposed Technical Specification changes for staff review.

Technical Specification Changes Required

For licensees, Technical Specification changes are required.

For OL applicants, Technical Specifications will be incorporated as part of the license.

Reference

Section 3 of NUREG-1000.

ENCLOSURE 2

TABLE 1

PAPERWORK BURDEN FOR LICENSEES FROM SALEM

ATWS EVENTS REQUIREMENTS

Items	Licensee Burden - Recordkeeping/Reporting (man-hours)			
	FY 84	FY-85	FY 86	TOTAL
1.1 Post-Trip Review (Program Description and Procedure)	500/4,500	-/-	-/-	5,000
1.2 Post-Trip Review (Data and Information Capability)	400/3,600	600/5,400	-/-	10,000
2.1 Equipment Classification and Vendor Interface (Reactor Trip System Components)	18,000/2,000	-/-	-/-	20,000
2.2 Equipment Classification and Vendor Interface (Programs for all Safety-Related Components)	18,000/2,000	36,000/4,000	36,000/4,000	100,000
3.1 Post-Maintenance Testing (Reactor Trip System Components)	1,125/375	-/-	-/-	1,500
3.2 Post-Maintenance Testing (All other Safety-Related Components)	1500/500	2,250/750	-/-	5,000
4.1 Reactor Trip System Reliability (Vendor-Related Modifications)	1,080/120	-/-	-/-	1,200
4.2 Reactor Trip System Reliability (Preventative Maintenance and Surveillance Program for Reactor Trip Breakers)	450/450	750/750	-/-	2,400
4.3 Reactor Trip System Reliability (Automatic Actuation of Shunt Trip Attachment)	120/2,280	80/1,520	-/-	4,000
4.4 Reactor Trip System Reliability (Improvements in Maintenance and Test Procedures for B&W Plants)	-/-	200/200	-/-	400
4.5 Reactor Trip System Reliability (System Functional Testing)	-/-	960/240	-/-	1,200
TOTAL	57,000	53,700	40,000	150,700

The average annual burden is 50,233 hrs over a three year period.

ENCLOSURE 2

TABLE 2

PAPERWORK BURDEN FOR NRC FROM SALEM ATWS EVENTS REQUIREMENTS

Item	NRC Burden (man-hours)			
	FY 84	FY 85	FY 86	TOTAL
1.1 Post-Trip Review (Program Description and Procedure)	2,000	2,000	-	4,000
1.2 Post-Trip Review (Data and Information Capability)	2,000	4,000	-	6,000
2.1 Equipment Classification and Vendor Interface (Reactor Trip System Components)	2,000	1,000	-	3,000
2.2 Equipment Classification and Vendor Interface (Programs for all Safety-Related Components)	-	4,000	2,000	6,000
3.1 Post-Maintenance Testing (Reactor Trip System Components)	2,000	1,000	-	3,000
3.2 Post-Maintenance Testing (All other Safety-Related Components)	-	3,000	1,000	4,000
4.1 Reactor Trip System Reliability (Vendor-Related Modifications)	1,000	-	-	1,000
4.2 Reactor Trip System Reliability (Preventative Maintenance and Surveillance Program for Reactor Trip Breakers)	3,000	3,000	-	6,000
4.3 Reactor Trip System Reliability (Automatic Actuation of Shunt Trip Attachment)	3,000	3,000	-	6,000
4.4 Reactor Trip System Reliability (Improvements in Maintenance and Test Procedures for B&W Plants)	-	1,000	-	1,000
4.5 Reactor Trip System Reliability (System Functional Testing)	-	500	-	500
TOTAL	15,000	22,500	3,000	40,500

The average annual burden is 13,500 hours over a three year period.