

ENCLOSURE 3 - NUCLEAR ENGINEERING PROCEDURE

NE-3.1, Rev 3, "Safety Evaluations"

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Organizational Unit	NUCLEAR OPERATIONS	Page	1 9
	NUCLEAR ENGINEERING	Date	6/15/84
Issued/Revised by		Date	
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	EQA D. Gummy 6-18-84		

1.0 Purpose

1.1 This procedure describes the guidelines established by Nuclear Engineering to ensure that Safety Evaluations are performed in compliance with 10 CFR 50.59, the Nuclear Quality Assurance Program, and the Plant Safety Review and Evaluation Program (References 6.1, 6.4, 6.12, respectively).

1.2 This procedure also stipulates the NSRG review requirement for those proposed changes which do not constitute an Unreviewed Safety Question.

2.0 Applicability

This procedure applies to Nuclear Engineering personnel performing Safety Evaluations for all proposed changes in the Fermi-2 plant and to procedures as described in the FSAR and for proposed tests or experiments not described in the FSAR.

Nuclear Production has an equivalent process for those areas under their scope of responsibility. These areas of responsibility will be delineated separately in the relevant procedures.

3.0 Responsibility

- 3.1 The General Supervisor, Nuclear Safety and Plant Engineering is responsible for the development, control and implementation of this procedure.
- 3.2 Cognizant supervisors responsible for processing change, test, or experiment packages are responsible for assignment, completion, and initial distribution of the Preliminary Safety Review and Safety Evaluations described herein.
- 3.3 The assigned responsible engineer is responsible for performing the Preliminary Safety Reviews and Safety Evaluations described by this procedure.
- 3.4 Information Systems is responsible for permanent filing of Preliminary Safety Reviews and Safety Evaluations and for their subsequent distribution.

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4.0 Interface



Nuclear Safety and Plant Engineering interfaces with the following Edison organizations:

- 4.1 Nuclear Safety Review Group (NSRG)
- 4.2 Onsite Review Organization (OSRO)
- 4.3 Quality Assurance
- 4.4 Nuclear Production
- 4.5 Generation Engineering Department (GED)

5.0 Definitions

- 5.1 Preliminary Safety Review - A technical review of any proposed change, test, or experiment to determine if the proposed change, test, or experiment requires a Safety Evaluation.
- 5.2 Safety Evaluation - A technical evaluation which provides the bases for determining whether a proposed facility or procedure change, test, or experiment involves an Unreviewed Safety Question as stipulated 10 CFR 50.59.
- 5.3 Safety Related - Plant features necessary to ensure:
 - 5.3.1. The integrity of the reactor coolant pressure boundary.
 - 5.3.2. The capability to shut down the reactor and maintain it in a safe shutdown condition.
 - 5.3.3. The capability to prevent or mitigate the consequences of accidents that could result in offsite exposure comparable to the guidelines of 10 CFR Part 100.
- 5.4 Unreviewed Safety Question - A proposed change in the facility or procedures as described in the FSAR or, tests, or experiments not described in the FSAR involves an Unreviewed Safety Question, if:
 - 5.4.1 The probability of occurrence or the consequences of an accident or malfunction of equipment, important to safety, previously evaluated in the Safety Analysis Report or previously issued License Amendment is increased; or

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- 5.4.2 The possibility of an accident or malfunction, different than any evaluated previously in the Safety Analysis Report, or previously issued License Amendment is increased; or
- 5.4.3 The margin of safety as defined in the basis for the Plant Technical Specifications is reduced.
- 5.5 Accident Analysis - A formal and documented engineering analysis of the facility's response to postulated disturbances in process variables and equipment malfunctions or failures. The analysis is performed to determine the consequences of such postulated disturbances, malfunctions and failures involved with the safety of plant personnel, the public and the environment. It also evaluates the capability built into the facility to mitigate such failures and situations, and/or to identify the limitations of expected performance of such mitigating capability.
- 5.6 Independent Safety Review - A written review of material that describes the safety implications of a proposed change, by a group or committee not responsible for the origination of the material subject to review. 
- 5.7 Q-List - Items designated as Safety Related which must conform to QA Level I requirements (Reference 6.1?).
- 5.8 Safe Shutdown - Those systems used to achieve and maintain a safe shutdown condition (hot and cold) of the plant exclusive of the Reactor Protection System and accident mitigation features of Engineered Safeguards (see Section 7.4, FSAR).
- 5.9 Engineered Safeguards - Those systems provided to mitigate the consequences of postulated accidents. (see Chapter 6, FSAR).
- 5.10 Reactor Protection System - Those systems and subsystems required to effect a scram if monitored system variables exceed pre-established limits.
- 6.0 References
- 6.1 U. S. Codes of Federal Regulations, 10 CFR 50.59
- 6.2 U. S. Codes of Federal Regulations, 10 CFR 50, Appendix B
- 6.3 U. S. NRC Regulatory Guide 1.33, Revision 2, "Quality Assurance Program Requirements (Operation)"
- 6.4 NOD-14 Nuclear Operations Management Plan 

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- 6.5 Fermi-2 FSAR, Chapter 15, "Accident Analysis" :
- 6.6 Fermi-2, Plant Technical Specifications *
- 6.7 NE-1.3, "Staffing, Training and Qualification of Personnel"
- 6.8 NE-2.1.4, "Operating License Amendments"
- 6.9 NE-2.1, "Licensing and Regulatory Requirements"
- 6.10 NE-1.4.1, "NSRG's Review of Written Safety Evaluations"
- 6.11 EF2 Project Q-List, PIS No. A30-00-0-000-QX028
- 6.12 NOP-103, Program Description, Plant Safety Review and Evaluation Program
- 6.13 NOP-106, Program Description, Design Change Program
- 6.14 Plant Administrative Procedure 12.000.53, "Guidelines for Determination of Safety Related Systems, Equipment and Procedures"
- 6.15 NOIP 11.000.49, "Document Control and Records Management"

7.0 Discussion

- 7.1 This procedure provides for a Safety Evaluation of all proposed changes, tests and experiments in conformance with 10 CFR 50.59, and includes all Engineering Design Packages, Engineering Change Requests, procedure changes, etc.

A two step process is prescribed for such Safety Evaluations. The first involves a screening process called a Preliminary Safety Review to determine if a Safety Evaluation as described in 10 CFR 50.59 is required. If this review determines that a Safety Evaluation is required, the second step is the performance of the actual Safety Evaluation to determine if an Unreviewed Safety Question is involved.

In performing the Preliminary Safety Review, it should be noted that the intent of 10 CFR 50.59 is to limit the requirement for Safety Evaluations to facility and procedure changes, tests and experiments which could impact the safety of operations including radiation protection for plant personnel. Thus, Safety Evaluations are required for the following categories.

- o Changes in the Facility as Described in the FSAR

This pertains to any changes in the facility which alter the design, function or method of performing the function of a

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component, system or structure described in the FSAR. This would apply to components, systems and structures described either in the written portion of the FSAR or in the drawings contained therein.

o Changes in Procedures as Described in the FSAR

This pertains not only to procedures discussed in the Initial Operations and Organizational Chapters of the FSAR, but also to other procedural-type commitments such as the emergency plan and modes and sequences of plant operation described in the FSAR.

o Conduct Tests and Experiments Not Described in the FSAR

This pertains to the performance of an operation not described in the FSAR which could have an adverse effect on safety-related systems.

Accordingly, if the proposed activity affects the safety function of a related system, a Safety Evaluation is required. However, it is important to understand that the term "Unreviewed Safety Questions" is not necessarily limited to those matters which may be considered "Safety Related." Modification to, or addition of, non-safety-related equipment could also constitute an Unreviewed Safety Question. Therefore, all modifications must be reviewed in accordance with Section 8.0 to determine whether or not an Unreviewed Safety Question is involved. Merely stating that an item is not safety related is not sufficient justification to preclude a Safety Evaluation or to exclude the possibility that an Unreviewed Safety Question exists.

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Thus, circumstances requiring a Safety Evaluation include:

- o A proposed change to any safety-related structure, system, component, or procedure described in the FSAR.
- o Any proposed change, test or experiment which does not ordinarily involve safety-related functions, but which, by their introduction or alteration, could create an Unreviewed Safety Question.
- o Any proposed change, test or experiment which modifies significant characteristics described in the text and drawings of the FSAR, including, but not limited to, potential for personnel radiation exposure, performance criteria, margins of safety, materials compatibility, methods of control, drawing configurations, operational sequences, and procedural objectives or intent.

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- o Any proposed change, test or experiment which involves systems or components required for compliance with the Limiting Conditions for Operation (LOC's) defined in the Technical Specifications.
- o Any proposed change, test or experiment which modifies the accepted parameters, assumptions, or analyses described in Chapter 15 of the FSAR, Accident Analyses.
- o Any proposed test or experiment which is not described in the FSAR which could impact safety-related systems.
- o Any change to the Technical Specifications.

The Safety Evaluation Requirement Checklist and Safety Evaluation Form appended to this procedure are structured to provide guidance in making the determinations required by Preliminary Safety Review and Safety Evaluations respectively, as defined herein. Additional guidance including specific examples of proposed changes and test and experiments that require and do not require a Safety Evaluation as specified by 10 CFR 50.59 has been extracted from the NRC I&E Manual and is appended to this procedure (Attachment 9.3).

- 7.2 The General Supervisor, Nuclear Safety and Plant Engineering may also initiate a Safety Evaluation of a proposed change:
- o At the request of the Vice President, Nuclear Operations.
 - o At the request of the NSRG.
 - o At the request of the NRC.
 - o When the General Supervisor independently determines a Safety Evaluation to be necessary.
- 7.3 Accident Analyses may be required to resolve an Unreviewed Safety Question determination.

8.0 Procedure

8.1 Preliminary Safety Review

- 8.1.1 A cognizant supervisor will assign a responsible engineer to formally identify the proposed change, test, or experiment and to perform a preliminary safety review to determine if a safety evaluation is necessary by completing the Safety Evaluation Requirement Checklist (Attachment 9.1).

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8.1.2 If upon completion of this review, all boxes in Section 3 of the checklist are marked "No," the conclusion is reached that a Safety Evaluation is not necessary, and the change may be pursued without further evaluation. | 3

1. A written basis for this conclusion is included and the necessary signoff completed.
2. The supervisor is responsible for ensuring that the completed checklist is attached to the document package as identified in Section 1 of the checklist and one copy of the checklist is transmitted to Information Systems for filing.
3. Information Systems, upon receipt of the completed checklist, will immediately assign and affix a file number in the space provided and then process for permanent filing.

8.1.3 If in the course of this review, any boxes in Section 3 of the checklist are marked "Yes," a Safety Evaluation is necessary to determine if an Unreviewed Safety Question exists. The responsible engineer will note this conclusion in Section 4 of the checklist and then directly proceed to complete the Safety Evaluation in accordance with Section 8.2 below. | 3

8.2 Safety Evaluation

8.2.1 The responsible engineer will perform and document a Safety Evaluation utilizing the Safety Evaluation Form. The previously completed checklist becomes part of the Safety Evaluation and is attached to the form.

8.2.2 When compiling the Safety Evaluation, the responsible engineer ensures that the written evaluation contains the following:

1. A brief description of the change and reason for change (Section 1 of the checklist). This information will be used to compile the required annual report to the NRC of changes, tests and experiments.
2. Identification of the safety functions and corresponding FSAR and Technical Specification sections which would be affected by the change. (Sections 2 and 3 of the checklist). The affected safety functions can be obtained from sources such as; | 3

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the FSAR, the Plant Technical Specifications, outside engineers and vendors, Nuclear Engineering personnel or files, reports, submittals to the NRC, NRC Safety Evaluation Reports for Fermi 2, Functional System Descriptions and equipment specifications.

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3. A description of the effects if any, of the change, test or experiment, including the systems capability to prevent accidents or mitigate the consequence(s).
4. The basis or bases for the conclusion. This may be a written argument, calculations, engineering reports, etc., as deemed necessary. Calculations may be performed by Nuclear Engineering and/or an outside agent. The conclusion for a trivial or simple change may be sufficiently supported by a written argument in the space provided on the form.
5. Documentation of any items required to support the evaluation. These documents must be attached or referenced in the written Safety Evaluation.
6. A conclusion as to whether or not the proposed change, test, or experiment includes an Unreviewed Safety Question by checking appropriate box on the form.

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- 8.2.3 The responsible engineer signs and dates the completed form and submits it, along with any additional, supporting information and/or documents (necessary to support the safety evaluation) to his/her respective supervisor.
- 8.2.4 The cognizant supervisor is responsible for delegating an engineer to review the written safety evaluation. This reviewing engineer must be someone other than the engineer who originally prepared the safety evaluation, and must possess some degree of expertise in the area being reviewed. Completion of the review will be noted by the signature of the reviewing engineer prior to returning to the cognizant supervisor.
- 8.2.5 If the Safety Evaluation shows that an Unreviewed Safety Question is not involved, the proposed change, test or experiment may proceed without NRC concurrence unless a change to the Technical Specifications; considered to be part of the license, is required.

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8.2.6 If any of the boxes in Sections 1-3 are marked "Yes", an Unreviewed Safety Question may be involved. In this event, one of three options must be chosen: 13

1. Cancel proposed action.
2. Revise proposed action and/or analysis, and re-cycle through the review process.
3. Prepare and submit an application for amendment of the operating license (Reference 6.8).

8.2.7 Disposition and approval of the proposed modification based on the written Safety Evaluation and supporting documentation will be made by the supervisor. The supervisor will be responsible for ensuring that the original of the completed Safety Evaluation (checklist, form, and any attachments) is transmitted to Information Systems for distribution and filing and one copy is attached to the document package as identified in Section 1 of the checklist.

8.2.8 Information Systems, upon receipt of the completed Safety Evaluation will immediately assign and affix a single file number to both the checklist and form in the spaces provided. Single copies are then transmitted to the Secretary, NSRG and Lead Independent Safety Engineer as indicated on the form unless otherwise directed by these two individuals. One copy is processed for permanent filing.

8.3 NSRG Review Requirements

8.3.1 Should the proposed change involve an Unreviewed Safety Question, an independent safety review of the corresponding request for a license amendment will be performed by the NSRG prior to submittal to the NRC for approval, and prior to implementation.

8.3.2 The Safety Evaluation for a change that did not constitute an Unreviewed Safety Question will undergo an after-the-fact independent review by the NSRG following the guidance provided in Reference 6.10.

9.0 Attachments

9.1 Safety Evaluation Requirement Checklist

9.2 Nuclear Safety Evaluation Form

9.3 "10 CFR 50.59 - Changes to Facilities, Procedures and Tests (or Experiments)," excerpt from NRC I&E Manual, 6/1/76.

SAFETY EVALUATION REQUIREMENT CHECKLIST
(10CFR 50.59)

File No: _____

1. IDENTIFICATION OF PROPOSED CHANGE

- PROCEDURE #: _____
- SET POINT CHANGE _____
- TEST REPORT #: _____

- SCOPE DOCUMENT #: _____
- EDP #: _____
- OTHER: _____

Description: _____

2. CLASSIFICATION

Are the procedure(s), system(s), equipment or structures involved, or does the activity affect:

- | | | | | | |
|----------------|------------------------------|-----------------------------|---------------------------|------------------------------|-----------------------------|
| Level 1 | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Engineered Safeguards | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Safe Shutdown | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Reactor Protection System | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Safety Related | <input type="checkbox"/> Yes | <input type="checkbox"/> No | Security System | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

3. PRELIMINARY SAFETY REVIEW (Determine if Safety Evaluation required)

- Yes ___ No ___ Does the change affect the ability of a safety related item to perform its safety function?
- Yes ___ No ___ Does the change modify significant characteristics or procedures described in the FSAR?
List Section(s): _____
- Yes ___ No ___ Does the change, test, or experiment involve systems or components required for compliance with the LO's defined in Technical Specifications?
- Yes ___ No ___ Does this change modify assumptions utilized in accident analyses described in Chapter 15 of the FSAR?
List Section(s): _____
- Yes ___ No ___ Is a test or experiment involved which affects plant safety and is not described in the FSAR?
- Yes ___ No ___ Is a change to the Technical Specifications required?
List Section(s): _____
- Yes ___ No ___ In the judgment of the evaluator, is a Safety Evaluation required?
(See Section 7.0 of procedure for additional guidance.)

If the answers to all questions in Section 3 are "No", a Safety Evaluation is not required. Complete this checklist including a written basis for the negative conclusion.

Basis for negative conclusion: _____

If the answer to any question in Section 3 is "Yes", check "Yes" in Section 4 and proceed directly to the Safety Evaluation Form. Leave Section 5, below, blank and attach this checklist to the Safety Evaluation Form.

4. SAFETY EVALUATION REQUIRED: Yes No

5. PREPARED BY _____ Date _____

APPROVED BY _____ Title _____ Date _____

Distribution (if no Safety Evaluation required):

- o Attach to documentation package
- o Original to Information Systems: (Hans Ebner)

SAFETY EVALUATION FORM
(10CFR 50.59)

File No: _____

(Determine if the activity involves an Unreviewed Safety Question.)

1. Has the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR been increased? ___ Yes ___ No

State Basis: _____

2. Has the possibility of an accident or malfunction of a different type than any evaluated previously in the FSAR been created? ___ Yes ___ No

State Basis: _____

3. Has the margin of safety, as defined in the basis for any Technical Specification in the FSAR, been reduced? ___ Yes ___ No

State Basis: _____

If the answer to any of the above questions is "Yes", an Unreviewed Safety Question is involved.

4. UNREVIEWED SAFETY QUESTION: ___ Yes ___ No

5. PREPARED BY _____ DATE _____

REVIEWED BY _____ DATE _____

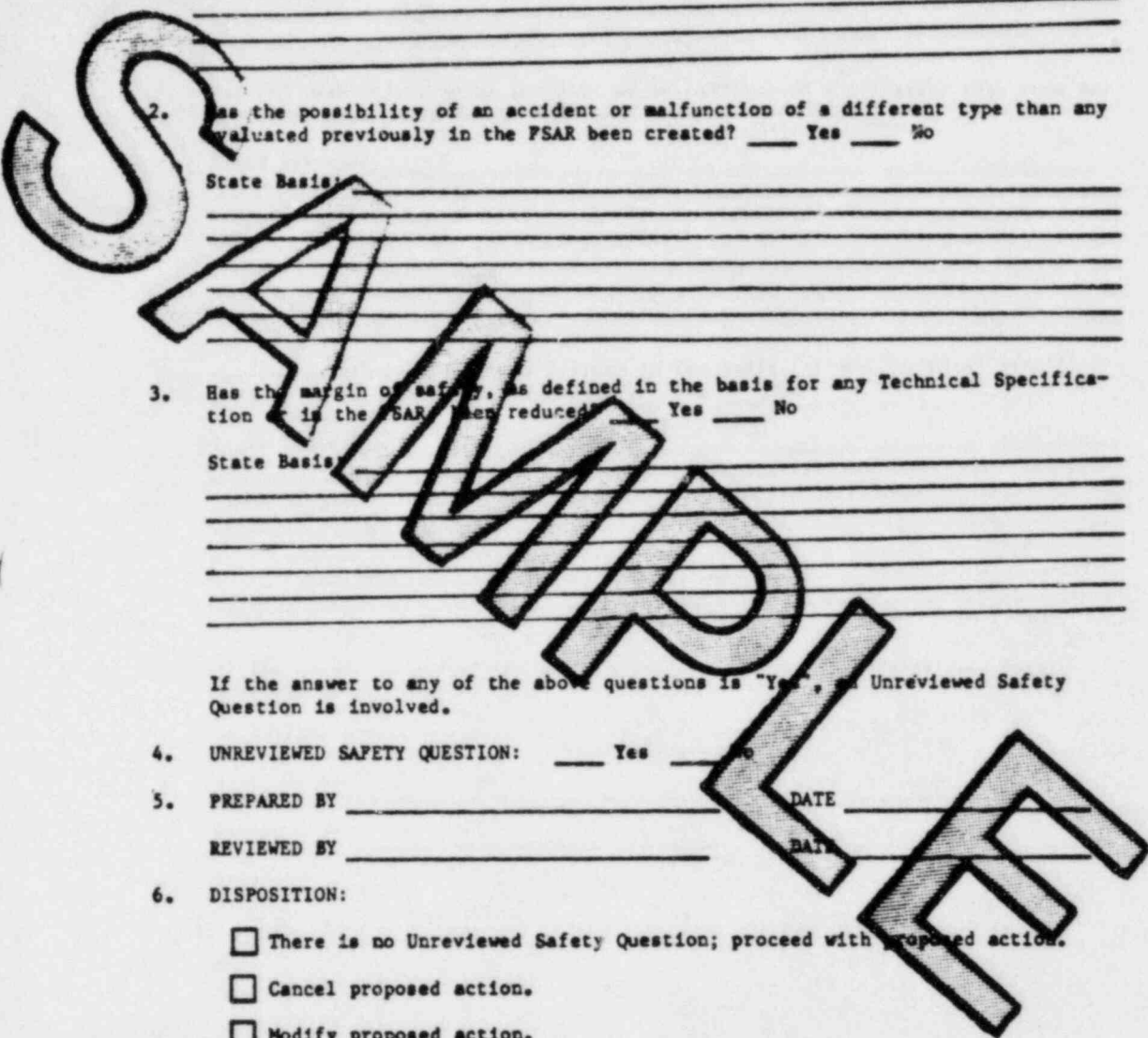
6. DISPOSITION:

- There is no Unreviewed Safety Question; proceed with proposed action.
- Cancel proposed action.
- Modify proposed action.
- Request NRC approval of proposed action through Licensing Engineer. Note that if a change in the Technical Specifications is desired, NRC approval is required regardless of the answer to Section 4.
 - Technical Specification Change
 - Other

Approved by _____ Title _____ Date _____

Distribution: Attach to documentation package
 Original to Information System: (Hans Ebner)

-File
 -NSRG (Jane Lenart)
 -Lead Independent
 Safety Engineer





INSPECTION AND ENFORCEMENT MANUAL

DQASIP

10 CFR 50.59

PART 9800 CFR DISCUSSIONS CHANGES TO FACILITIES, PROCEDURES AND TESTS (OR EXPERIMENTS)

A. PURPOSE

The purpose of this guidance is to clarify the specific 10 CFR 50.59 language relating to the type of proposed changes, tests, or experiments that require a record of the safety evaluation specified in 10 CFR 50.59(b). It is not intended that this guidance delineate specific licensee review criteria which may be used to identify proposed changes, tests, or experiments that require a safety evaluation as specified by 10 CFR 50.59(b).

B. POLICY

This revision to this CFR Discussion does not represent a change in IE policy. The discussion section has been revised to clarify the application of 10 CFR 50.59 to controls for using jumpers/lifted leads and to procedure changes. Also, the 10 CFR 50.59 flowchart (Appendix 1) was updated.

C. APPLICABILITY: 2515

D. DISCUSSION

1. 10 CFR 50.59 is composed of three essential parts:

- a. Paragraph (a)(1) is permissive in that it allows the licensee to make changes to the facility and its operation as described in the Safety Analysis Report (SAR) without prior approval, provided a change in Technical Specifications (TS) is not involved or an "unreviewed safety question" does not exist. Criteria for determining whether an unreviewed safety question exists are defined in Paragraph (a)(2).
- b. Paragraph (b) requires that the licensee maintain records of changes made under the authority of Paragraph (a)(1). These records must include a written safety evaluation which provides the basis for determining whether an unreviewed safety question exists. Paragraph (b) also requires that a report (at least annually) of such changes be submitted to the NRC.
- c. Paragraph (c) requires that proposed changes in Technical

Issue Date: 01/01/84

10 CFR 50.59 AND TESTS (OR EXPERIMENTS)

Specifications be submitted to the NRC as an application for license amendment. Likewise, proposed changes to the facility or procedures and the proposed conduct of tests which involve an unreviewed safety question must be submitted to the NRC as an application for license amendment.

2. It should be noted that the safety evaluation required by 10 CFR 50.59 is only one of the several evaluations and reviews required by the NRC. Most Technical Specifications require that onsite review groups review proposed procedures and modifications or changes to plant equipment or components affecting safety. These review requirements are applicable whether or not the equipment or component is described in the SAR. As a result of the TS required reviews, the need for a safety evaluation to meet 10 CFR 50.59 requirements may be identified. Appendix 1 delineates a typical overall review scheme at a facility.
3. This guidance is to be applied during inspection of facilities holding operating licenses under 10 CFR 50 and is primarily directed toward:
 - a. Changes made to those systems and procedures described in the SAR, and
 - b. Performance of tests not described in the SAR.
4. Within the context of this guidance, any proposed change to a system or procedure as described in the SAR either by text or drawings should be reviewed by the licensee to determine whether it involves an unreviewed safety question. Changes may involve an unreviewed safety question even though they are "beyond the second isolation valves," or they do not serve a normal safety-related function, since alteration may introduce an unreviewed safety question.
5. Maintenance activities which do not result in a change to a system (permanent or temporary), or which replace components with replacement parts procured to the same (or equivalent) purchase specification, do not require a written safety evaluation to meet 10 CFR 50.59 requirements. However, if components described in the SAR are removed, or their function is altered, or if substitute components are utilized, or if changes remain following completion of a maintenance activity, a safety evaluation is required to meet the provisions of 10 CFR 50.59 and the change must be reported to the NRC as required by 10 CFR 50.59(b).
6. In all cases requiring a written safety evaluation, the safety evaluation must provide the basis for determination that the proposed change does or does not involve an unreviewed safety question. A simple statement of conclusion in itself is not sufficient; however, depending upon the significance of the change, the safety evaluation may be quite brief.

7. Listed below are examples of various changes to facilities, systems, procedures, and tests which are typical of those requiring a 10 CFR 50.59 safety evaluation and those which do not require a safety evaluation under the requirements of 10 CFR 50.59.

a. Changes in the Facility As Described in the Safety Analysis Report. This pertains to any changes in the facility which alter the design, function, or method of performing the function of a component, system, or structure described in the SAR. This would apply to components, systems, and structures described either in the written portion of the SAR or in the drawings contained therein. Contrasting examples of each case are:

(1) Components. Replacement of thermocouple in the diesel high-bearing temperature automatic shutdown circuitry (if such a component were described in the SAR) with one made by the same manufacturer, but encompassing different response characteristics, would require a safety evaluation to meet the requirements of 10 CFR 50.59.

On the other hand, replacement of a thermocouple in the diesel high-bearing temperature automatic shutdown circuitry (if such a component were described in the SAR) with one encompassing equivalent response characteristics, but made by a different manufacturer, would not require a safety evaluation under the requirements of 10 CFR 50.59.

(2) Systems. Modifications of the diesel shutdown circuitry (described in the SAR) to provide an automatic diesel shutdown on high-bearing temperature (shutdown feature not described in application) would require a safety evaluation to meet the requirements of 10 CFR 50.59. On the other hand, if the methods of initiating automatic diesel shutdown are not described in the SAR, specific automatic shutdown features may be rendered inoperable without the conduct of a safety evaluation under the requirements of 10 CFR 50.59.

(3) Structures. The erection of a concrete block shield wall within the containment building (shield wall is not described in the SAR) would require a safety evaluation to meet the requirements of 10 CFR 50.59. On the other hand, deletion of a shield wall within the containment building (shield wall not described in the SAR) would not require a safety evaluation under the requirements of 10 CFR 50.59.

(4) Jumpers/Lifted Leads. Licensee controls over jumpers lifted/leads should include a documented review process consistent with the one presented in Appendix R

1. If it is determined that use of a jumper/lifted lead results in a change to the facility as described in the SAR and that the resultant change will impact on safety of operation, then a safety evaluation is required. This approach should apply to all types of temporary modifications. Generally, if a plant system is changed by use of jumpers/lifted leads so that it will function differently than described in the SAR, a safety evaluation would be required.

On the other hand, use of jumpers/lifted leads that result in plant conditions already analyzed and approved by NRC would not require a safety evaluation. For example, bypassing protection channels in a manner already described in the SAR would not constitute an unreviewed safety question and would not require a safety evaluation under the requirements of 10 CFR 50.59. It is expected that only a small percentage of a licensee's jumpers/lifted leads will require a written safety evaluation

- b. Changes in Procedures As Described in the SAR. This pertains not only to procedures discussed in the initial operations and organizational chapters of the SAR, but also to other procedural-type commitments, such as the emergency plan and modes and sequences of plant operation described in the SAR. If a procedure results in a deviation from the steps listed in the SAR or will result in a system operation which deviates from the way that system is described in the SAR, then a safety evaluation should be performed. Contrasting examples of the above follow.

- (1) If in the description of the radioactive waste system in the SAR, the licensee states that the Shift Supervisor will authorize all radioactive liquid releases, a safety evaluation to meet the requirements of 10 CFR 50.59 would be required before assigning this function to another individual. On the other hand, if the SAR merely states that radioactive liquid releases will be authorized as detailed by plant procedures, the licensee's redesignation of the authorization function would not require a safety evaluation under the requirements of 10 CFR 50.59.
- (2) If the reactor startup procedure, as described in the SAR, contains eight fundamental sequences, the licensee's decision to eliminate one of the sequences would require a safety evaluation to meet the 10 CFR 50.59 requirements. On the other hand, if the licensee consolidated the eight fundamental sequences but did not alter the basic functions performed, it would not be necessary to conduct a safety evaluation under the requirements of 10 CFR 50.59.

- c. Conduct Tests and Experiments Not Described in the SAR. This pertains to the performance of an operation not described in the SAR which could have an adverse effect on safety-related systems. Contrasting examples of such tests or experiments are:
- (1) Some plants in the startup testing program have performed a deboration to critical with all rods inserted. Since this test is performed without deference to the "one stuck rod criterion," a safety evaluation to meet the requirements of 10 CFR 50.59 would be required if the test is not delineated in the SAR. Since this test may decrease the margin of safety defined in the TS basis, it should, in most instances, be classified as an unreviewed safety question. On the other hand, a test to demonstrate the calibration of the nuclear instrumentation system by performance of a secondary plant heat balance would not require a safety evaluation under the requirements of 10 CFR 50.59, even if such a test was not delineated in the SAR, since the test does not involve an abnormal mode of operation.
 - (2) A test to determine if the boric acid evaporator may also be used for concentration of the steam generator blowdown effluent (function not described in the SAR) would require a safety evaluation to meet the requirements of 10 CFR 50.59, since secondary system chemicals could possibly have a deleterious effect on some components within the reactor coolant pressure boundary. On the other hand, an experiment to determine the decontamination factor of the liquid waste concentrator with influent activities of 10^{-2} Ci/ml and 10^{-5} Ci/ml would not require a safety evaluation under the requirements of 10 CFR 50.59 since such an experiment would not represent departure from normal operational modes.
- d. General Guidance. It should be noted that the SARs for a number of older facilities contain floor plans of onsite buildings that may include trivial detail such as the locating of dividing walls between various offices. From a rigid reading 10 CFR 50.59, it is possible to infer that the removal of a dividing wall between two offices constitutes a change from the facility described in the SAR, and therefore requires a safety evaluation. However, the intent of 10 CFR 50.59 is to limit the requirement for written safety evaluations to facility changes, tests, and experiments which could impact the safety of operations.

END

