

GUIDELINES FOR THE REVIEW OF REVISIONS TO POWER REACTOR RADIOLOGICAL EMERGENCY PLANS AND EMERGENCY ACTION LEVELS

REVISION: 0

EFFECTIVE DATE: January 27, 2012

1.0 PURPOSE

The purpose of this office procedure is to describe the process for the Division of Preparedness and Response (DPR) in the Office of Nuclear Security and Incident Response (NSIR) staff to conduct a technical review of changes made to a licensee's emergency plan and/or emergency action levels (EALs) under Section 50.54(q) of Part 50 to Title 10 of the *Code of Federal Regulations* (10 CFR) that do not constitute a reduction in effectiveness (RIE).

2.0 APPLICABILITY

This procedure is intended to be used by DPR staff to review revisions to existing licensee emergency plans and EALs. This procedure applies to changes to emergency plans and EALs implemented by a licensee without prior NRC approval in accordance with 10 CFR 50.54(q)(3) as not constituting an RIE. This procedure includes a technical review of all changes to EALs and a sampling of other emergency plan changes.

This activity is associated with the risk significant planning standard 10 CFR 50.47(b)(4). The recognition and subsequent classification of events is a risk-significant activity because classification can cause activation of the emergency response organization (ERO) and notification of governmental authorities. Further, if an EAL has been changed in a manner that results in an RIE in the emergency plan, the EALs may not produce the appropriate emergency classification.

Licensee submittals that are required per NRC regulations or have been identified by the licensee under 10 CFR 50.54(q) as requiring prior NRC approval, such as license amendments and EAL scheme changes should not be reviewed by DPR staff using this office procedure.

Reviews of both EAL and emergency plan changes under this office procedure do not constitute NRC's approval and, as such, changes remain subject to future inspections and enforcement action.

3.0 OBJECTIVES

The objective of this procedure is to provide general guidance to DPR staff in their review of licensee changes to emergency plans and EALs to ensure compliance with NRC regulations. This is accomplished by performance of the following:

- Review of all EAL changes to determine if any changes reduced the effectiveness of the emergency plan.

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- Review, on a sample basis, emergency plan changes to determine if any changes reduced the effectiveness of the emergency plan.

4.0 BACKGROUND

10 CFR 50.54(q) states, in part, that

“(3) The licensee may make changes to its emergency plan without NRC approval only if the licensee performs and retains an analysis demonstrating that the changes do not reduce the effectiveness of the plans and the plans, as changed, continue to meet the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b).”

“(4) The changes to a licensee’s emergency plan that reduce the effectiveness of the plan may not be implemented without prior approval by the NRC. A licensee desiring to make such a change after [INSERT DATE 60 DAYS AFTER THE EFFECTIVE DATE OF THE FINAL RULE] shall submit an application for an amendment to its license. In addition to the filing requirements of §§ 50.90 and 50.91, the request must include all emergency plan pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the licensee’s emergency plan, as revised, will continue to meet the requirements in appendix E to this part and, for nuclear power reactor licensees, the planning standards of § 50.47(b).”

“(5) The licensee shall retain a record of each change to the emergency plan made without prior NRC approval for a period of three years from the date of the change and shall submit, as specified in § 50.4, a report of each such change made after [INSERT DATE 60 DAYS AFTER THE EFFECTIVE DATE OF THE FINAL RULE], including a summary of its analysis, within 30 days after the change is put in effect.”

EAL schemes as endorsed by the NRC via Regulatory Guide (RG) 1.101, “Emergency Planning and Preparedness for Nuclear Power Reactors” (Revision 4), are as follows:

- NUREG-0654/FEMA-REP-1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” Revision 1, November 1980, Appendix 1
- NUMARC/NESP-007, Rev. 2 “Methodology for Development of Emergency Action Levels,” January 1992 (NUMARC)

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- Nuclear Energy Institute 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, January 2003

Revision 5 to NEI 99-01 dated February 2008, was subsequently endorsed via letter dated February 22, 2008 (Agencywide Document Access and Management System (ADAMS) Accession No. ML080430535).

In order to clarify both the process for making changes to emergency plans for power reactors under 10 CFR 50.54(q) and for performing an RIE assessment, the following guidance was issued by NRC staff:

- RG 1.219, "Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors"
- Regulatory Issue Summary (RIS) 2005-02, Rev. 1, "Clarifying the Process for Making Emergency Plan Changes," April 19, 2011

Note: Applies to the extent that it does not conflict with RG 1.219; provides additional guidance to assist in determining whether changes to the emergency plan reduce its effectiveness.

- RIS 2003-18, "Use of Nuclear Energy Institute (NEI) 99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, January 2003"

Licensees make changes to their emergency plan for many reasons. On occasion, emergency plans may undergo an extensive change. For example, the combination of multiple plans from different sites due to a change of site ownership would constitute an extensive change. These emergency plan changes may be implemented without prior approval if the changes are in accordance with 10 CFR 50.54(q)(3) and would be reviewed under this procedure.

5.0 BASIC REQUIREMENTS

5.1 Document Collection

- a. The 10 CFR 50.54(q) Coordinator, as designated by the DPR Branch Chief responsible for operating reactor licensing actions, will ensure, via the NSIR Information Technology Coordinator, that they have access to the resource mailbox NSIRDPR-ORLT.Resource@nrc.gov.
- b. The 10 CFR 50.54(q) Coordinator will regularly monitor the email account (at least once every 2 to 3 weeks) for changes to power reactor licensee emergency plans, emergency plan implementing procedures, and EALs.

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- c. Log and track identified emergency plan, emergency plan implementing procedure, and EAL changes for screening and review using the designated Master Schedule located in SharePoint.
- d. Perform a review of identified emergency plans and EAL changes in accordance with Sections 5.2 and 5.3.
- e. Provide a quarterly report of screenings and reviews conducted within the calendar quarter and a summary of results to the DPR Branch Chief responsible for operating reactor licensing activities.

5.2 EAL Change Review

- a. Perform an EAL Change Review in accordance with Enclosure 1, "EAL Change Review Flowchart," and associated reference documents to determine if any of the changes implemented by the licensee have resulted in an RIE. All EAL changes a licensee has made shall be reviewed to ensure that no EAL change resulted in a reduction in effectiveness of the emergency plan.
- b. Guidelines for the EAL change review process:
 - i. Review changes which are not purely administrative (e.g. typographical corrections)
 - ii. Review the licensee's documentation used to support their 10 CFR 50.54(q) RIE determination to determine if the licensee's position is justifiable and appropriate.
 - iii. A review of security-related EALs or EAL Bases Document changes should be performed to ensure consistency with the Security Contingency Plan. The reviewer should consider consulting with NSIR security specialists when conducting reviews of security-related EALs and EAL Bases Documents.
 - iv. If the licensee made the EAL change(s) due to receipt of a Safety Evaluation Report (SER), or due to NRC direction given to licensees via advisories, orders, bulletins, etc., review the change and evaluate if the change was made in accordance with the stated SER or NRC direction.
 - v. Place a copy of the reviewed document into the Sharepoint folder labeled "E-Plan / EAL Changes for Detailed Review."

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- c. If clarification or additional information is needed for the EAL change, including a copy of licensee's 50.54(q) change evaluation, the reviewer should contact the appropriate Regional EP Inspector to initiate any required communications with the licensee and obtain required information. Any information obtained from the licensee shall be entered into ADAMS by the DPR staff reviewer.
- d. The reviewer will charge the hours spent performing this task to the site-specific report number in the Human Resources Management System (HRMS) Time and Labor Module.

5.3 Emergency Plan Change Review

Note: Licensees may develop alternative methods for meeting the planning standards and these should be considered for adequacy; however, these alternative methods should have been reviewed by the NRC prior to implementation.

- a. A sample of the identified Emergency Plan changes shall be reviewed using the criteria outlined in Enclosure 2.
 - i. Review changes which are not purely administrative (e.g., typographical corrections), and compare against the licensee's emergency plan as defined in Section 3.5 of RG 1.219.
 - ii. Where appropriate, perform a review of the security contingency plan to ensure consistency with the emergency plan. If needed, consult with NRC security specialists.
- b. For the sample chosen, complete the following:
 - i. Perform an in-depth review of emergency plan changes against the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50, as provided in NUREG-0654, Section II, to determine if an RIE exists.
 - ii. Place a copy of the reviewed document into the SharePoint folder labeled "E-Plan / EAL Changes for Detailed Review."
- c. If clarification or additional information is needed for the Emergency Plan change, including a copy of licensee's §50.54(q) change evaluation, the reviewer should contact the appropriate Regional EP Inspector to initiate communications with the licensee to obtain required information. Information

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obtained from the licensee shall be entered into ADAMS by the DPR staff reviewer.

- d. Review, if necessary, lower tier documents that may be in the scope of a review if those lower tier documents are required to be controlled by the licensee using 10 CFR 50.54(q). Refer to RG 1.219, §3.5.
- e. The reviewer will charge the hours spent performing this task to the site-specific report number in HRMS.

5.4 Documentation of Staff Review

- a. The review should be documented in an internal memorandum from the reviewer to the Branch Chief responsible for operating reactor licensing activities for disposition and entered into ADAMS as publicly-available / non-sensitive. The memorandum should specify whether the change(s) resulted in an RIE. Documentation of this review will also be provided to the cognizant NRC Regional Office for inclusion in the subject licensee's Quarterly Inspection Report.
- b. Sample internal memorandum wording for EAL and emergency plan changes with no apparent RIE is as follows:

Since the last review of this program area, the following emergency plan changes and/or EAL changes were implemented based on the licensee's determination, in accordance with 10 CFR 50.54(q)(3), that the changes resulted in no reduction in effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50.

Licensee Name	Title of Document	ADAMS #
[Insert]	[Insert]	[Insert]

The reviewer conducted a sampling review of the emergency plan changes, and/or a review of EAL changes to evaluate for potential reductions in effectiveness of the Plan. However, this review was not documented in a Safety Evaluation Report and does not constitute formal NRC approval of the changes.

Therefore, these changes remain subject to future NRC inspection in their entirety.

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- c. If the reviewer determines that an emergency plan / EAL change may not be in compliance with the requirements of 10 CFR 50.47(b), the situation may be a failure to meet a planning standard. Refer to RG 1.219 to aid in determining potential RIEs.

Note: An emergency plan or EAL change determined to be an RIE is considered a violation of 10 CFR 50.54(q)(4), because the licensee failed to obtain NRC approval for the change. This type of violation is dispositioned using the traditional enforcement process and assigned a severity level. If the violation is due to a performance deficiency, a significance color is assigned using the EP Significance Determination Process (IMC 0609, Appendix B). See IMC 0612, Appendix B and the NRC Enforcement Policy.

- i. Discuss the assessment of the licensee's §50.54(q) evaluation and the apparent RIE with the respective DPR Headquarters Inspection Team member and applicable NRC Regional inspectors.
- ii. Complete the evaluation of the finding and coordinate with the regional Enforcement Coordinator, through the respective Regional Branch Chief, for assignment of severity level.

6.0 RESPONSIBILITIES AND AUTHORITIES

All DPR staff conducting emergency plan-related technical reviews are responsible for applying this procedure. DPR staff are also encouraged to suggest procedure improvements to either their management or to the assigned technical contact. Responsibilities and authorities are described below:

6.1 Branch Chief, Division of Preparedness and Response (DPR) / Operating Reactor Licensing

- a. Assist in planning, coordinating, and scheduling of required emergency plan and EAL reviews.
- b. Provide guidance and direction for technical reviews and serve as the management interface between Headquarters staff and the Region.
- c. Review and concur on the results of all emergency plan and EAL review determinations, and if required, communicate these results to the appropriate Region for possible enforcement action.

6.2 10 CFR 50.54(q) Coordinator

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- a. Identify changes to emergency plans and EALs submitted by power reactor licensees under 10 CFR 50.4 and track for screening and review.
- b. Conduct a detailed review of a sample of the identified emergency plan changes using the Enclosure 2 criteria. In addition, if necessary, review lower tier documents that may be in the scope of a review if those lower tier documents are controlled by the licensee using 10 CFR 50.54(q).
- c. Review all licensee EAL changes and EAL bases document changes, if applicable, to determine if any change constitutes an RIE.
- d. Interface with the Regional Inspectors as required to obtain additional information to complete the reviews.
- e. Provide a written evaluation of emergency plan and EAL reviews to the Branch Chief responsible for operating reactor licensing actions for review and concurrence.
- f. Maintain designated Master Schedule and SharePoint folder to accurately reflect status and closeout of review.

7.0 PERFORMANCE MEASURES

This procedure verifies aspects of the Emergency Preparedness Cornerstone for which there are no other indicators to measure performance.

8.0 PRIMARY POINTS OF CONTACT

Joseph D. Anderson, Chief
DPR/ORLOB
(301) 415-4114

Michael Norris, Team Leader
DPR/ORLOB
(301) 415-4098

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9.0 RESPONSIBLE ORGANIZATION

The Operating Reactor Licensing and Outreach Branch, Division of Preparedness and Response, is the responsible organization.

10.0 EFFECTIVE DATE

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11.0 REFERENCES

- 10 CFR 50.54 (q), 10 CFR 50.47(b) (4)
- Regulatory Issue Summary (RIS) 2005-02, Rev. 1, "Clarifying the Process for Making Emergency Plan Changes," April 19, 2011
- Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Power Reactors," Revision 4, July 2003
- Regulatory Guide 1.219, "Guidance On Making Changes to Emergency Plans for Nuclear Power Reactors," December 2010 - DRAFT
- NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, November 1980, Appendix 1
- NUMARC/NESP-007, Rev.2, "Methodology for Development of Emergency Action Levels," January 1992 (NUMARC)
- NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 4, January 2003
- NEI 99-01, "Methodology for Development of Emergency Action Levels," Revision 5, February 2008
- Regulatory Issue Summary 2003-18, "Use of Nuclear Energy Institute (NEI) 99-01, Methodology for Development of Emergency Action Levels," Revision 4, January 2003
- Nuclear Regulatory Commission Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process"
- Nuclear Regulatory Enforcement Policy, Section 2.3.2

NUCLEAR SECURITY AND INCIDENT RESPONSE

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Attachments:

1. Enclosure 1: EAL Change Review Flowchart
2. Enclosure 2: Emergency Plan Change Review Flowchart

DISTRIBUTION:

ACCESSION NO.: ML 112430223

Publicly Available Non-Sensitive

OFFICE	BC: ORLOB/DPR/NSIR	BC: IRIB/DPR/NSIR	BC: NRLB/DPR/NSIR	DD: DPR/NSIR	OGC	BC: AMT/PMDA/N SIR
NAME	J. Anderson	B. Kahler	K. Williams	M. Thaggard	H. Benowitz	C. Raynor for
DATE	08/10/2011	08/11/2011	09/09/2011	09/14/2011	10/17/2011	11/08/11

OFFICE	D:PMDA/NSIR	D: DPR/NSIR
NAME	C.Rheaume	R. Lewis
DATE	11/16/11	12/21/11

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Enclosure 1: EAL Change Review Flowchart

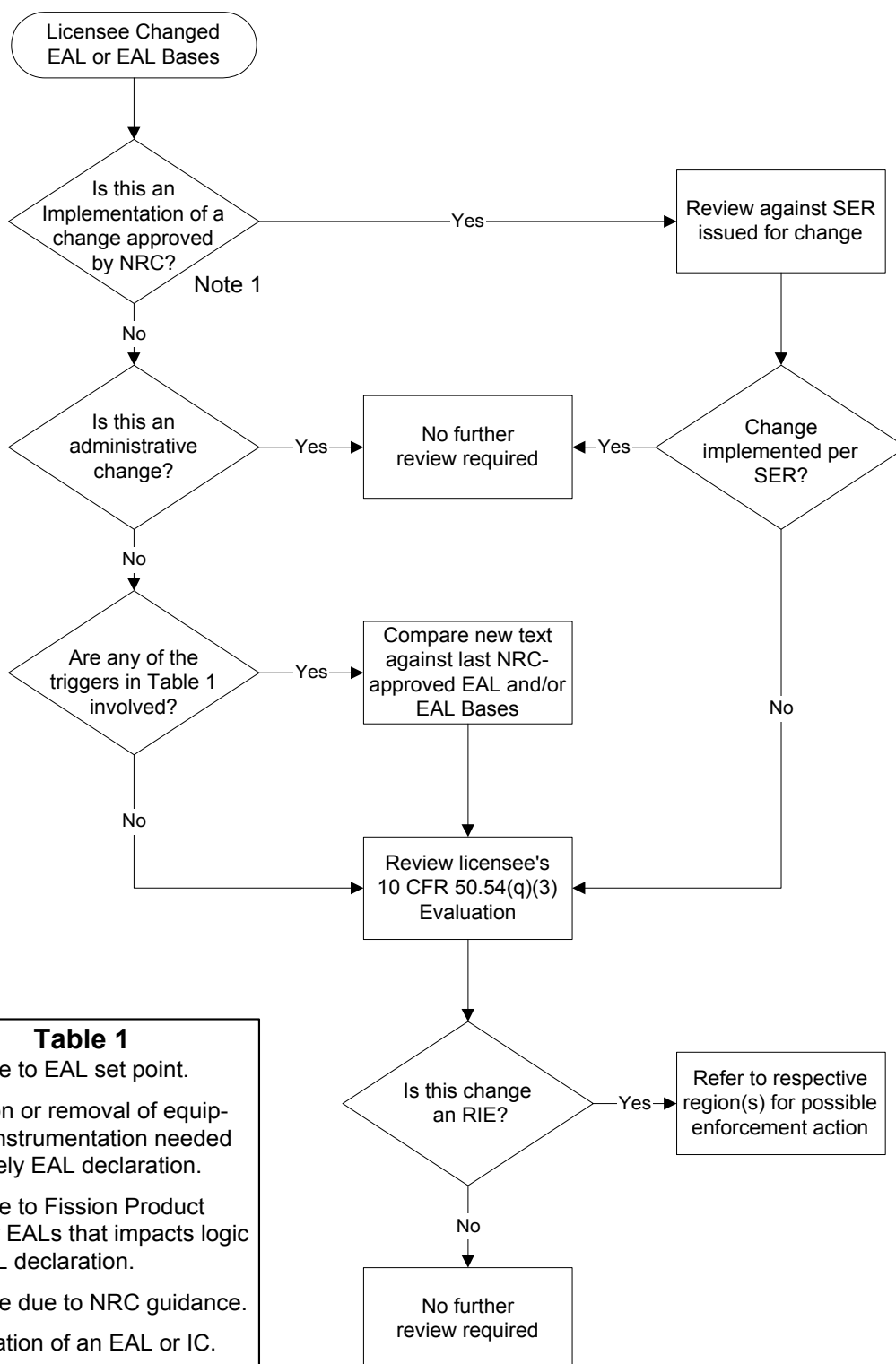


Table 1

Change to EAL set point.

Addition or removal of equipment/instrumentation needed for timely EAL declaration.

Change to Fission Product Barrier EALs that impacts logic for EAL declaration.

Change due to NRC guidance.

Elimination of an EAL or IC.

Change that is significantly different than previous EAL.

Removal of E-Plan content to a lower-tier document.

1. e.g., a EAL and/or EAL Bases change that had been submitted for NRC review and approved by a SER.

Enclosure 2: Emergency Plan Review Flowchart

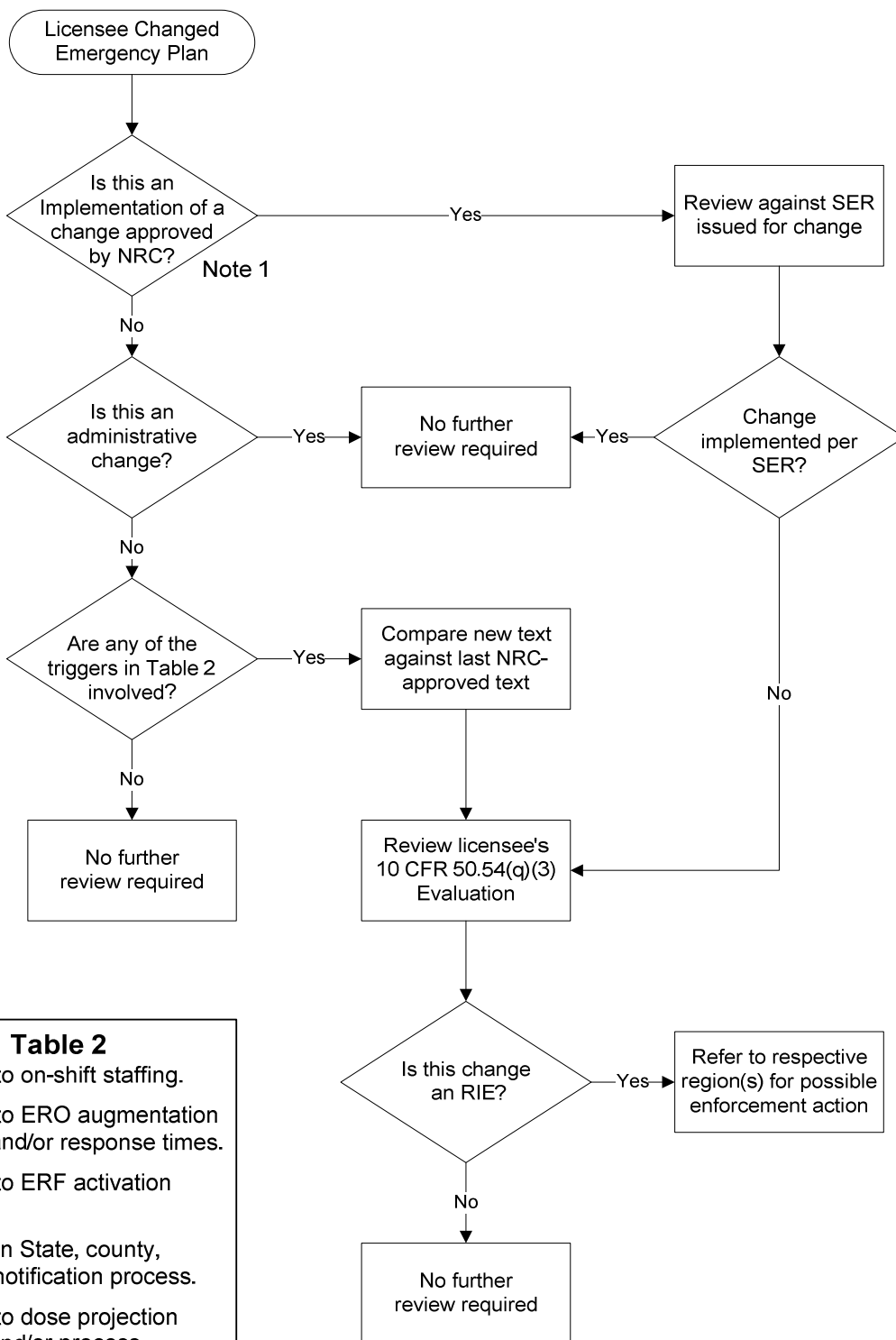


Table 2

Change to on-shift staffing.
 Change to ERO augmentation staffing and/or response times.
 Change to ERF activation times.
 Change in State, county, Federal notification process.
 Change to dose projection system and/or process.
 Change to PAR and/or process.
 Removal of E-plan content to a lower-tier document.

1. e.g., a plan change that had been submitted for NRC review and approved by a SER.