

EMERGENCY PREPAREDNESS SIGNIFICANCE DETERMINATION PROCESS

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This is a complete re-write of the earlier version. No revision marking has been applied.

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EMERGENCY PREPAREDNESS SIGNIFICANCE DETERMINATION PROCESS

1.0 INTRODUCTION

The U.S. Nuclear Regulatory Commission's (NRC's) Emergency Preparedness Significance Determination Process (EP SDP) described in this appendix utilizes risk-informed qualitative analyses to estimate the risk significance of inspection FINDINGS related to licensee performance in meeting EP Cornerstone objectives and performance expectations. Attachment 3, "Significance Determination Process Basis Document," to Appendix B, "Technical Basis for Emergency Preparedness Significance Determination Process," to Inspection Manual Chapter 0308, "Reactor Oversight Process (ROP) Basis Document," provides the technical basis for the EP SDP.

2.0 DEFINITIONS, ABBREVIATIONS, AND ACRONYMS¹

The following terms, which are capitalized throughout the remainder of this appendix, are defined for the purpose of the EP SDP only. The individual section in which each term is primarily used provides additional clarification and guidance. The terms are ordered such that each definition builds on the preceding definitions.

- (a) **EMERGENCY PLAN (E-plan):** The document, or documents, that the licensee prepares and maintains that identifies and describes its methods for maintaining emergency preparedness (EP) and responding to emergencies.
- (b) **EMERGENCY RESPONSE ORGANIZATION (ERO):** The licensee's organization identified in the E-plan for responding to emergencies at the licensee's facility. The ERO includes the onshift staff and the augmentation staff in the designated licensee emergency response facilities.
- (c) **PLANNING STANDARD² (PS):** One of the 16 EP planning standards established in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.47(b) that the E-plan must meet and which are supported by the corresponding sections of Appendix E, "Emergency Planning and Preparedness for Production and Utilization Facilities," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities."
- (d) **REGULATORY REQUIREMENT:** Any EP-related requirement, including the PS, Appendix E to 10 CFR Part 50, 10 CFR 50.54(q), 10 CFR 50.54(t), 10 CFR 50.72, the E-plan, Commission orders, other commitments, licensee self-imposed requirements necessary for demonstrating compliance with the PS and

¹ In this document, acronyms may be plural or singular and are to be read in the context of the statement in which they appear.

² As used in this appendix, "PLANNING STANDARD" includes RISK-SIGNIFICANT PLANNING STANDARDS, but "RISK-SIGNIFICANT PLANNING STANDARD" excludes non risk-significant PLANNING STANDARDS.

Appendix E to 10 CFR Part 50, and commitments made under 10 CFR 50.47(c) and 10 CFR 50.54(s)(2)(ii).

- (e) RISK-SIGNIFICANT PLANNING STANDARD (RSPS): A subset of the PS, which includes the following four PS: 10 CFR 50.47(b)(4)—emergency classification system, (b)(5)—emergency notifications, (b)(9)—emergency assessment capability, or (b)(10)—emergency protective actions, and supported by the corresponding sections of Appendix E to 10 CFR Part 50. (Note that parts of 10 CFR 50.47(b)(10) are treated as not risk significant. See [Section 5.10](#) of this appendix for more information.)
- (f) PLANNING STANDARD FUNCTION (PSF): One or more functions that are considered essential to complying with a RSPS or PS. PSF are identified for assessing the significance of a FINDING that involves noncompliance with a RSPS or PS.
- (g) PROGRAM ELEMENTS (PE): Items that comprise the implementation aspects of a PSF. Such items correspond to the evaluation criteria (e.g., contained in NUREG-0654/FEMA-REP-1, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” or the licensee’s E-plan) that provides specific acceptable methods for complying with a PS. Note that the failure of a single PE does not always mean that a PSF cannot be accomplished.
- (h) PERFORMANCE DEFICIENCY (PD): An issue of concern that is the result of a licensee not meeting a REGULATORY REQUIREMENT for which the cause was reasonably within the licensee’s ability to foresee and correct and therefore should have been prevented. Not to be confused with “WEAKNESS,” defined below.
- (i) FINDING: A PD of more-than-minor significance. A FINDING may or may not be associated with regulatory noncompliance and, therefore, may or may not result in a violation. Only an issue of concern that is a more-than-minor PD (i.e., a FINDING) is processed through the EP SDP. This includes a PD that is associated with a more-than-minor traditional enforcement violation.
- (j) VIOLATION (VIO) The failure to comply with a legally binding regulatory requirement, such as a statute, regulation, order, license condition, or technical specification. A VIO may be associated with a FINDING or it may not.
- (k) FAILURE TO COMPLY (FTC): A FINDING that an EP program is noncompliant with a REGULATORY REQUIREMENT. An FTC is associated with *preparedness* issues, whereas an FTI is associated with *response* issues. [Attachment 2](#) illustrates the significance determination logic for an FTC.
- (l) FAILURE TO IMPLEMENT (FTI): A FINDING of an FTC during an actual radiological event that precluded effective implementation of a PE. In this case, the PE complies with the PS, and the PSF would have been accomplished had it

been implemented by the ERO. An FTI is associated with *response* issues, whereas an FTC is associated with *preparedness* issues. Attachment 1 depicts the significance determination logic for an FTI.

(m) LOSS OF RSPS [PS] FUNCTION: An FTC FINDING that one or more PE is not adequate, not compliant with the RSPS [PS], or otherwise not functional to such an extent that the RSPS [PS] FUNCTION would not be accomplished if an actual radiological emergency were to occur. One or more of the following reasons may apply:

- Certain E-plan commitments are not met.
- The E-plan is less than adequate.
- Implementing procedures are not effective.
- ERO personnel are not capable of implementing the PE.
- The EP program design is not fully adequate.

Although licensees must comply with all REGULATORY REQUIREMENTS, a LOSS OF RSPS [PS] FUNCTION will likely have greater significance than a noncompliance with other REGULATORY REQUIREMENTS (e.g., 10 CFR 50.54(t)).

(n) DEGRADATION OF RSPS [PS] FUNCTION: An FTC FINDING that one or more PE is not adequate or not compliant with the RSPS [PS], but reasonable assurance exists that the RSPS [PS] FUNCTION, although degraded, would be accomplished if an actual radiological emergency were to occur. One or more of the following reasons may apply:

- Certain E-plan commitments are not met.
- The E-plan is less than adequate.
- Implementing procedures are not effective.
- The EP program design is not fully adequate.

However, diverse or redundant PE, or other circumstances, allow the RSPS [PS] FUNCTION to still be accomplished, albeit in a degraded manner, if an actual radiological emergency had occurred.

(o) WEAKNESS: A level of ERO performance demonstrated during an exercise, drill, or training that provides performance opportunities to develop, maintain, or demonstrate key skills that would preclude effective implementation of the E-plan if it were to occur during an actual radiological emergency.

(1) A WEAKNESS identified by the licensee in its CRITIQUE is not a PD and is, therefore, neither an FTC nor an FTI.

(2) A deficient PE uncovered by the exercise and identified by the licensee in its CRITIQUE is a licensee-identified PD and is evaluated as an FTC. If identified by the inspector, the deficient PE is an NRC-identified PD and is evaluated as an FTC.

- (3) A licensee's failure to identify a WEAKNESS in a CRITIQUE, or failure to take timely corrective actions, is a PD and is evaluated as an FTC with PS 10 CFR 50.47(b)(14).
- (p) CRITIQUE: A formal or documented licensee assessment of the ERO performance following an exercise, drill, or training that provides performance opportunities to develop, maintain, or demonstrate key skills. In a CRITIQUE, which may occur in various venues and formats, WEAKNESSES are identified and subsequently entered into a corrective action system.
- (q) FULL-SCALE DRILL OR EXERCISE: An event that tests the integrated capability of the ERO to accomplish a major portion of the PSF(s). A FULL-SCALE DRILL OR EXERCISE is not limited to the evaluated biennial exercise, but does involve the following:
- (1) participation or simulation of multiple emergency response facilities (ERFs)
 - (2) assessment by a team of evaluators
 - (3) a subset of a "full participation exercise," as defined in Appendix E to 10 CFR Part 50
- (r) OFFSITE RESPONSE ORGANIZATIONS (OROs): Those entities having responsibility for managing the implementation of measures to protect public health and safety within the plume exposure pathway, ingestion pathway, and emergency planning zones (EPZs) in the event of an emergency. This would typically include State, county, municipal, or Tribal emergency management agencies, as applicable.
- (s) TIME OF DISCOVERY: The point in time when the licensee "knew or should have known" of a condition. See [Section 5.0.2.f](#) of this appendix for further discussion.
- (t) MITIGATING FACTORS: Considerations that an inspector may evaluate in determining whether or not a noncompliant PE is a LOST RSPS [PS] FUNCTION or a DEGRADED RSPS [PS] FUNCTION. Such factors might include the existence of a redundant emergency action level (EAL), backup capabilities identified in the E-plan, or other capabilities that allow the inspector to conclude that the PSF could be completed despite the inadequate PE. Generally, these factors must have been in place before the TIME OF DISCOVERY. These factors are credited only in determining the significance of the noncompliance. See [Section 5.0.2.b](#) of this appendix for further clarification.
- (u) COMPENSATORY MEASURES: An interim action taken by a licensee after discovery of a noncompliant PE to compensate for an inadequate PE such that there is a reasonable expectation that the associated PSF would be

accomplished, albeit in a degraded manner, should an actual radiological emergency occur before the completion of corrective actions to restore compliance. COMPENSATORY MEASURES, which must be viable, are credited only in determining the significance of the noncompliance. See [Section 5.0.2.\(h\)](#) of this appendix for further clarification.

In addition to the abbreviations and acronyms identified above, this appendix uses the following acronyms and abbreviations:

ANS—alert and notification system
DEP PI—drill and exercise performance performance indicator
EAL—emergency action level
EOF—emergency operations facility
EP—emergency preparedness/emergency planning
EP SDP—emergency preparedness significance determination process
EPIP—emergency plan implementing procedure
EPZ—emergency planning zone
ERF—emergency response facility
IC—initiating condition
JIC—joint information center
KI—potassium iodide
OSC—onsite support center
PAR—protective action recommendation
ROP—reactor oversight process
TSC—technical support center

3.0 ENTRY CONDITIONS AND GENERAL INSTRUCTIONS

3.1 Entry Conditions

Note: The EP SDP is applied to traditional enforcement FINDINGS only for the purposes of assigning a significance color. Review [Section 7.0](#) of this appendix to confirm that the EP Cornerstone FINDING is appropriately being treated under traditional enforcement rather than the Reactor Oversight Process (ROP).

- (a) An NRC inspector is directed by Appendix B, “Issue Screening,” to Inspection Manual Chapter 0612, “Power Reactor Inspection Reports,” to make an assessment of the significance of an issue of concern that has been determined to be a FINDING under the EP Cornerstone. This includes a FINDING treated under the ROP and those FINDINGS treated under traditional enforcement, subject to the following:
- (1) The EP SDP is not used to assess the significance of a FINDING under the EP Cornerstone that is caused by a FINDING under a different cornerstone,³ if the following is true:

³ This situation typically occurs when the E-plan relies upon equipment under the control of another cornerstone (e.g., an effluent radiation monitor (i.e., Health Physics Cornerstone) used in the EAL scheme).

- the licensee's performance would have been compliant if the FINDING in the other cornerstone had not occurred
- if a FINDING is being issued under the other cornerstone, and the deficiency will be corrected

If neither of the above conditions applies, then the EP SDP is to be used.

- (2) The EP SDP is not applied to ORO performance deficiencies. The Federal Emergency Management Agency (FEMA) evaluates the offsite preparedness and advises the NRC of its determinations, even in those cases in which the licensee has developed the offsite plans under 10 CFR 50.47(c)(1).

3.2 General Instructions

- (a) If the FINDINGS are related to REGULATORY REQUIREMENTS that are not associated with a PSF (e.g., 10 CFR 50.54(t); 10 CFR 50.72, "Immediate Notification Requirements for Operating Nuclear Power Reactors"; and requirements in Appendix E to 10 CFR Part 50 that do not support a PSF⁴), then assign Green significance, and proceed to Step 3.2.(c).
- (b) Identify the PSF(s) affected by the FINDING and assess the significance of each FINDING.
- (1) A FINDING may affect two or more PSF and each should be assessed for significance.
- (2) Include all associated issues in the inspection report to provide a complete record. This can be particularly important when additional information from the licensee causes the staff to reconsider a preliminary FINDING.
- (c) Assess the significance of each issue associated with a FINDING (e.g., multiple contributing issues).

Note: The significance of a FINDING is evaluated independently of the assessment of whether the FINDING constitutes a violation or, in the case of traditional enforcement, the severity level of that violation.

- (1) If the FINDING involved an actual radiological emergency (i.e., FTI), go to [Section 4.3](#) of this appendix to assess the significance of the FINDING.
- (2) If the FINDING was identified during a baseline or a program inspection, or identified by the licensee (i.e., FTC), go to [Section 5.0.3](#) of this appendix to assess the significance of the FINDING.

⁴ Sections 5.1 through 5.16 of this SDP, where applicable, identify the requirements of Appendix E to 10 CFR Part 50 that support the PS of 10 CFR 50.47(b).

4.0 ACTUAL EVENT IMPLEMENTATION ISSUE (FAILURE TO IMPLEMENT)

4.1 Background

This branch of the EP SDP is used to assess the significance of a PD that occurs during an actual radiological emergency (i.e., an FTI). An FTI signifies that a licensee has failed to follow its E-plan, which is a noncompliance with 10 CFR 50.54(q)(2). An FTI is associated with an emergency *response* issue, rather than an emergency *preparedness* issue.

4.2 Criteria

- (a) The significance of an FTI is assessed based on (1) the declared emergency classification and (2) whether the affected PSF is risk significant or not, as shown in [Attachment 1](#).
- (b) An FTI typically results from a PD on the part of the ERO. However, it is important to note that a PD that occurs during an actual radiological emergency may not rise to the level of an FTI, particularly if the deficiency is self-identified by the ERO and corrected in a timely manner such that the PSF is successfully accomplished. In addition, the failure of the ERO to implement a single PE does not always mean that the associated PSF was not accomplished. Examples include the following:
 - An operations support center (OSC) team was not fully briefed and had to return for tools but the assigned task was successfully completed.
 - Engineering efforts initially misdiagnosed the accident sequence, but the diagnosis was corrected by peer checking.
 - A notification form was not peer checked as required by emergency plan implementing procedures (EPIPs), but the information was found to be accurate.
- (c) NRC EP regulations require licensees to have the *capability* of making classifications, declarations, notifications, and initial protective action recommendations (PARs) within specific periods of time. Although explicit timeliness requirements are not provided in regulation for follow-up PARs or the notification of such PARs, the NRC expects that licensees will make follow-up PAR decisions as soon as possible after indications are available that a PAR threshold has been exceeded and will notify OROs of such PARs as soon as possible.⁵

⁵ Section IV.D.3 of Appendix E to 10 CFR Part 50 requires the licensee to have the capability to notify State and local governmental agencies within 15 minutes after declaring an emergency. PS 10 CFR 50.47(b)(5) requires that the content of initial and followup messages to the public be established. Evaluation Criterion II.E.3 in NUREG-0654/FEMA-REP-1 states that the initial notification should contain information as

- (1) Although a failure to meet these timeliness requirements may be a failed opportunity under the Drill and Exercise Performance Indicator (DEP PI), there may be defensible reasons for a delay during an actual radiological emergency if the delay has a minimal impact on the EP Cornerstone objective. Emergency classifications, declarations, notifications, and PARs that take longer than the specified time should be evaluated and a determination made as to whether the delay was justifiable. Generally, if the delay was caused by the licensee actively performing necessary safety-related actions to protect the public health and safety, and the delays did not deny OROs the opportunity to implement actions to protect public health and safety, a FINDING would not be issued. Each event response must be evaluated on a case-by-case basis.
- (2) Delays in classification, declaration, notification, or PARs caused by factors that were reasonably within the licensee's ability to foresee and prevent likely represent an FTC and should also be assessed in accordance with [Section 5.0.3](#) of this appendix.
- (d) The NRC expects that licensees will make accurate emergency declarations, PAR decisions, and notifications. The inspector should evaluate the effects of inaccurate declarations, PAR decisions, and notifications against the affected risk-significant PSF to determine whether the errors rise to the level of an FTI. For example, although an error on a completed notification form (e.g., an erroneous time) may be a failed opportunity under the DEP PI, a similar error during an actual radiological emergency might have little or no impact on ORO response efforts and a FINDING may not be warranted.
- (e) A PD that occurs in another ROP cornerstone can cause an emergency declaration issue. Consider the following examples:
- Shift personnel concluded, based on an erroneous protection signal that a main steamline break had occurred when all other plant indications suggested otherwise. Given this misdiagnosis, the shift manager declared an Alert based on an EAL threshold of "main steamline break," when no such declaration was warranted.
 - Because of a misinterpretation of a technical specification action statement, a plant was not placed in the required mode until 6 hours after the specified completion time. An EAL required a Notification of Unusual Event (NOUE) declaration (e.g., inability to reach required shutdown within technical specification limits). In this case, no declaration was made, as the mistaken interpretation was not recognized until after the plant entered the required mode.

to whether offsite protective measures may be necessary. Some licensees have included these criteria in their E-plans or implementing procedures.

In both of these examples, the emergency classification would have likely been correct if the performance in the other cornerstone had been adequate. As such, the issue of concern needs to be evaluated under that cornerstone, rather than the EP Cornerstone, if a FINDING will be issued under the other cornerstone. Otherwise, the PD should be treated as an FTI and assessed for significance under [Section 4.3](#) of this appendix.

- (f) Since the significance of a FINDING identified during actual radiological emergencies is based, in part, on the emergency classification level, an inaccurate declaration could affect the significance determination. The appropriate emergency classification level is to be used in Attachment 1 for assessing the significance of the FINDING, including the 10 CFR 50.47(b)(4) FINDING for the misclassification itself.
 - (1) The missed or delayed declaration may have caused another ERO PD to occur (e.g., the declaration of an NOUE instead of an Alert would have prevented timely augmentation of the onshift staff.) In these cases, the inspection report should identify the associated issues, but only the 10 CFR 50.47(b)(4) FINDING would be identified as an FTI and assessed for significance under [Section 4.3](#) of this appendix.
 - (2) However, if the additional PD was caused or exacerbated by factors other than the delayed or missed classification, an additional FINDING may be appropriate (e.g., the licensee failed to notify the NRC of the missed declaration within 1 hour of identification.)

4.3 Significance Determination

Note: The significance of a FINDING is evaluated independently of the assessment of whether the FINDING constitutes a violation or, in the case of traditional enforcement, the severity level of that violation.

- (a) Identify the REGULATORY REQUIREMENT affected by the FINDING.
- (b) Determine whether the FINDING is an FTI.
 - (1) If the FINDING did not involve a failure to implement a PS or RSPS, an FTI is not warranted.
 - (2) An FTI is analogous to a LOST RSPS [PS] FUNCTION, examples of which are provided in [Section 5.0](#) of this appendix. Those examples, while applicable only to an FTC, may be useful in informing the FTI determination.
 - (3) A FINDING that did not rise to the level of an FTI should be identified to the licensee as an opportunity for improvement.

- (c) Identify the emergency classification declared by the licensee and evaluate its appropriateness. If the classification was appropriate or underclassified, proceed to Step 4.3.(e) below.
- (d) If the licensee overclassified the actual event, then assess the significance of the 10 CFR 50.47(b)(4) FINDING as follows and continue with Step 4.3.(f):
 - (1) The minimum significance level for a misclassification during an actual radiological emergency is Green.
 - (2) If public officials implemented protective actions other than evacuation (e.g., sheltering, early closure of schools) for members of the public,⁶ then the significance level is White.
 - (3) If public officials implemented an evacuation of the general public,⁵ then the significance level is Yellow.
- (e) Assess the significance of the FTI using [Attachment 1](#) and the appropriate emergency classification level that was or should have been declared.
- (f) If the cause of the FINDING was one or more noncompliant PE (e.g., procedure or training shortcomings), also evaluate the FINDING as an FTC under [Section 5.0.3](#) of this appendix. If this results in a higher significance, treat the FINDING as an FTC.
- (g) Document the basis for the significance determination in the inspection report. Include all associated issues in the inspection report to provide a complete record. This can be particularly important if additional information from the licensee causes the staff to reassess a preliminary FINDING.

5.0 FAILURE TO COMPLY

5.0.1 Background

- (a) This branch of the EP SDP, illustrated in [Attachment 2](#), is used to assess the significance of an FTC. An FTC signifies that an EP program is noncompliant with a REGULATORY REQUIREMENT.
 - (1) An FTC is generally identified during normal program inspection activities and is related to an emergency *preparedness* issue, rather than an emergency *response* issue.
 - (2) However, a FINDING of an FTI during an actual emergency event may uncover an inadequate or noncompliant PE (e.g., procedure or training

⁶ If the ORO response was clearly inappropriate for the conditions present (e.g., ordering an evacuation of the EPZ upon receiving notification of an Alert emergency), assign Green significance.

shortcomings), the significance of which should also be assessed under this branch of the EP SDP, with the higher significance FINDING cited.

- (b) Sections 5.1 through 5.16 of the appendix correspond respectively to PS 10 CFR 50.47(b)(1) through (b)(16). Each section does the following:
- Identifies the PS and the associated PSF(s).
 - Identifies references to supporting requirements in Appendix E to 10 CFR Part 50 and the informing criteria of NUREG-0654/FEMA-REP-1.
 - Provides examples of FINDING(s) corresponding to, as appropriate, LOSS OF RSPS [PS] FUNCTION, DEGRADED RSPS [PS] FUNCTION, Green, and no FINDING.
- (c) The significance examples are neither all inclusive nor exclusive; instead, the examples are intended to inform significance determinations. These examples may or may not fully envelop the FINDING being considered. If no significance example envelops the FINDING being considered, it will be necessary to compare the FINDING against the definitions of LOSS OF RSPS [PS] FUNCTION, or DEGRADED RSPS [PS] FUNCTION in conjunction with [Attachment 2](#).

5.0.2 **Criteria**

- (a) Multiple PE may comprise the implementation aspects of each PS. These PE are developed from the PS, the supporting requirements in Appendix E to 10 CFR Part 50, the evaluation criteria guidance in NUREG-0654/FEMA-REP-1, and commitments made in the approved E-plan. PS functionality does not require compliance with every PE. An FTC with one or even a few inadequate PE is not necessarily a LOSS OF RSPS [PS] FUNCTION. Consequently, the inspector must determine whether the PSF could be accomplished in spite of the inadequate PE.
- (b) There may be circumstances in which the PE are found to be noncompliant but, because of mitigating factors, the inspector is able to determine that reasonable assurance exists that the PSF would be accomplished, albeit in a degraded manner, if an actual radiological emergency were to occur. In such cases, the PSF would be degraded rather than lost.
- (1) For example, an initiating condition that addresses a radioactive release contains two EALs: an indication on an effluent radiation monitor or a certain result from an analysis on a sample obtained from the effluent release stream. The licensee determined that the radiation monitor indication is in error—a noncompliance. Although the sample analysis results could provide a basis for an emergency declaration, there would be a delay in identifying and classifying an abnormal release. In this case, the PSF may be found to be degraded rather than lost.

- (2) To be considered in significance determinations, mitigating factors must have already been in place before the TIME OF DISCOVERY. [Section 5.0.2.\(h\)](#) of this appendix addresses measures implemented by the licensee to compensate *after identification* of the noncompliance.
- (c) Several significance examples address unavailability issues related to equipment and facilities. These examples are intended to encompass equipment, systems, and facilities specifically identified in the E-plan, or relied upon by the E-plan, as PE. Some of these resources may serve other functions in the plant design or operations. However, only the functions specifically identified in the E-plan should be considered when assessing the significance of the FINDING. For example, an effluent radiation monitor skid may include several monitor channels of which only one is used in an EAL threshold. Only a FINDING with that channel would be assessed significance under this EP SDP.
- (d) Time limits and percentages are provided to inject objectivity and thus consistency to the assessment process. These values should be used for any applicable FINDING in the absence of extenuating circumstances for which the predetermined criteria need to be reconsidered. In those rare cases, a different characterization of the FINDING could be appropriate so long as the basis for the deviation is justified and agreed to by the SDP and Enforcement Review Panel.
- (e) NRC EP regulations require licensees to have the capability of making classifications, declarations, notifications, and initial PARs within specific periods of time. Licensees establish these capabilities by providing sufficient personnel, procedures, equipment, training, instrumentation, and other resources necessary to perform the functions in a timely and accurate manner. A FINDING may exist if there is an issue of concern regarding the licensee's capability to make timely declarations, notifications, or PARs, should an actual radiological emergency occur. Consider the following examples:
- The licensee no longer has the personnel on shift to evaluate a seismic reading used in the EAL scheme.
 - The licensee's dose assessment capability no longer supports PAR development.
 - The licensee's EAL scheme allows an indeterminate delay in classifying a fire to await verification of a fire alarm.

Although explicit timeliness requirements are not provided in regulation for follow-up PARs or the notification of such PARs, the NRC expects that licensees will make follow-up PAR decisions as soon as possible after indications are available

that a PAR threshold has been exceeded and will notify OROs of such PARs as soon as possible.⁷

- (f) Many of the significance examples incorporate the concept of TIME OF DISCOVERY. It should be assumed that the condition occurred at this time including, as necessary, timely confirmation or analysis of raw indications (i.e., when the licensee “knew”).
 - (1) If a condition existed before it was discovered and it can be shown that the licensee missed an earlier opportunity to recognize the condition, the TIME OF DISCOVERY is the first missed opportunity (i.e., when the licensee “should have known”). A missed opportunity occurs when the activity failed to identify a condition or when corrective actions were not implemented upon identification.
 - (2) Opportunities to identify conditions and initiate corrective actions may include normal surveillances, log reviews, self-assessments, audits, quality assurance activities, NRC generic communications, industry operating experience reports, condition reports, and inspection reports.
 - (3) Consideration should be given to the opportunities for identification; the ease of discovery; specificity, relevance, and timing of a prior notification; and action(s) taken by the licensee.
- (g) A FINDING related to licensee identification of a PD that occurred in the past (normally older than 3 years) in engineering, design, or installation that is not reasonably linked to the licensee’s present performance may be a candidate for enforcement discretion. See the NRC Enforcement Policy for complete details. Examples of such FINDINGS for the EP Cornerstone could be miscalculated EAL thresholds for installed radiation monitors or deficiencies in emergency response facility design.
- (h) Some of the significance examples explicitly provide credit for viable measures that compensate for the inadequate PE. Many of these significance examples also specify duration for the condition, for example “...longer than 7 days from TIME OF DISCOVERY in the absence of COMPENSATORY MEASURES.” The following criteria should be considered before crediting a COMPENSATORY MEASURE in a significance determination:
 - (1) The measure must be capable of accomplishing the affected PSF in a reasonably comparable manner. For example, a company microwave link may be a viable COMPENSATORY MEASURE for a failure of a private telephone bridge if all OROs can still be notified without significant delay.

⁷ Section IV.D.3 of Appendix E to 10 CFR Part 50 requires the licensee to have the capability to notify State and local governmental agencies within 15 minutes after declaring an emergency. PS 10 CFR 50.47(b)(5) requires that the content of initial and followup messages to the public be established. Evaluation Criterion II.E.3 in NUREG-0654/FEMA-REP-1 provides that the initial notification contain information as to whether offsite protective measures may be necessary. Some licensees have included these criteria in their E-plans or implementing procedures.

However, “comparable” does not require the COMPENSATORY MEASURES to meet the same performance requirements as the primary method.

- (2) The measure must be in place before the end of the specified duration. If no duration is specified, the measure must have been implemented in a timely manner following discovery.
- (3) The specified duration is measured from the TIME OF DISCOVERY. If the condition is first identified by the inspector, it will be necessary to assess when the licensee *should have known* of the condition in determining the COMPENSATORY MEASURE credit.
- (4) The inspector should determine the following:
 - The measure was addressed in procedures, night orders, or the like, and ERO members were made aware of the measure.
 - ERO personnel expected to implement the measure have received training (unless the measure reasonably falls within the definition of “skill of the craft”).
 - The necessary equipment and personnel were readily available to implement the measure.
 - The licensee is placing an appropriate priority on completing corrective actions.
- (5) A COMPENSATORY MEASURE is used only in assessing *significance*; as such, a measure generally cannot be used to show *compliance* or in the case of traditional enforcement, establish a severity level.
- (6) See [Section 5.5](#) of this appendix for additional criteria for COMPENSATORY MEASURES for ANS outages.
- (7) The EP SDP allows COMPENSATORY MEASURES to continue to be used in certain situations in which the noncompliant PE was caused by major disruptive events (e.g., hurricanes, fires, explosions, loss of offsite power) or are the result of a planned outage of certain systems or facilities. The EP SDP recognizes that there may be delays in implementing corrective actions that are not completely under the control of the licensee. In these situations, such measures continue to be acceptable as long as the licensee implements the corrective actions with appropriate priority. The significance examples to which this provision applies are annotated to this effect.

5.0.3 Significance Determination

Note: The significance of a FINDING is evaluated independently of the assessment of whether the FINDING constitutes a violation or, in the case of traditional enforcement, the severity level of that violation.

- (a) If the FINDING is related to REGULATORY REQUIREMENTS that are not associated with a PSF (e.g., 10 CFR 50.54(t), 10 CFR 50.72, and requirements in Appendix E to 10 CFR Part 50 that do not support a PSF⁸), assign Green significance. Proceed to Step 5.0.3(d) below.
- (b) Identify the PSF(s) affected by the FINDING. A FINDING may affect two or more PSF and each should be assessed for significance.
- (c) Compare the identified FINDING to the examples tabulated in the appropriate section, and if needed, [Attachment 2](#), to identify the significance. The language of the PSF is generally broad and the determination of the significance of a FINDING may not always be obvious.
 - (1) The examples provided for each PSF are not intended to be all-inclusive or all-exclusive.
 - (2) More than one PE may be associated with the PSF, and varied facility-specific methods of implementation and a particular FINDING may not correspond directly to any particular example provided.
 - (3) Extenuating circumstances may need to be considered.
 - (4) In making the significance determination, the analyst will need to use judgment, informed by the examples that are provided. The cited supporting requirements and informing criteria should be considered as necessary. Reviewing previous inspection reports for a similar FINDING, where available, can provide additional insight.
- (d) The inspection report should note parallel related issues (i.e., more than one issue associated with a given FINDING), but only the most significant FINDING should be issued.
- (e) Document the basis for the significance determination in the inspection report.

⁸ Sections 5.1 through 5.16, as applicable, of this SDP identify the requirements of Appendix E to 10 CFR Part 50 that support the PS of 10 CFR 50.47(b).

5.1 10 CFR 50.47(b)(1), Emergency Response Responsibility

PLANNING STANDARD: Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

PS FUNCTIONS:

1. Responsibility for emergency response is assigned.
2. The response organization has the staff to respond and augment on a continuing basis (24/7 staffing) in accordance with the E-plan.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.A.1 through IV.A.8

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.A, and the licensee's approved E-plan

**Table 5.1-1
Significance Examples for
10 CFR 50.47(b)(1)**

LOSS OF PS FUNCTION: White FINDING	The ERO assigned responsibilities in the E-plan no longer has the authority or resources to respond on a continuing (24/7) basis.
DEGRAD. OF PS FUNC. Green FINDING:	An individual plant staffing change created an inability to assign responsibility on a continuous basis.
No FINDING:	A temporary plant staffing change created a lapse in a responsibility assignment for no longer than 24 hours.

Additional Guidance: None

5.2 10 CFR 50.47(b)(2), Onsite Emergency Organization

PLANNING STANDARD: On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available, and the interfaces among various onsite response activities and offsite support and response activities are specified.

PS FUNCTIONS:

1. Process ensures that onshift emergency response responsibilities are staffed and assigned.
2. Process for timely augmentation of onshift staff is established and maintained.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.A.2.a, b, c; IV.A.3; IV.A.9; and IV.C

Informing Criteria: NUREG-0654, Section II.B and the licensee's approved E-plan

Significance Examples

See [Table 5.2.1](#)

Additional Guidance:

EPPOS-3, "Emergency Preparedness Position (EPPOS) on Requirement for Onshift Dose Assessment Capability," dated November 8, 1995 [ML023040473]

Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, [ML092931123], identifies key ERO members.

NSIR/DPR-ISG-001, "Emergency Planning for Nuclear Power Plants" [ML113010523]

Information Notice (IN) 93-81, "Implementation of Engineering Expertise on Shift," dated October 12, 1993, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

Table 5.2-1 -- Significance Examples §50.47(b)(2)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS OF PS FUNCTION White FINDING	DEGRAD. PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(2)</p> <p>Process ensures that onshift emergency response responsibilities are staffed and assigned.</p> <p>Process for timely augmentation of onshift staff is established and maintained.</p>	<p>N/A</p>	<p>An EP responsibility for any key ERO member function is not assigned.</p> <p>ERO staffing levels are less than the staffing levels provided for by the licensee's onshift staffing analysis to the extent that more than one required ERO functional area (in accordance with E-plan commitments) would not be staffed.</p> <p>Scheduling and/or processes (not personnel error) for onshift staffing would allow two or more shifts to go below E-plan minimum staffing requirements within 30 days (e.g., 2 of 4 weekends in a month, 2 or more backshifts over a 30-day period).</p> <p>Staffing augmentation processes are routinely not capable of ensuring timely augmentation of the onshift emergency response staff to the extent that more than one required ERO functional area (in accordance with E-plan commitments) would not be filled (e.g., repetitive activation test failures or augmentation process design inadequacies).</p>	<p>Failure to recognize loss of minimum ERO staffing for more than a short duration (e.g., 2 hours) on two or more shifts in a 30-day period.</p> <p>Staffing processes would permit a shift to go below E-plan minimum staffing requirements, but there were no actual instances in which such shortages occurred.</p>	<p>Onshift staffing does not comply with E-plan commitments for a short period (e.g., 2 hours) while qualified personnel are being called in.</p> <p>An individual random occurrence of inadequate onshift staffing occurred during the inspection cycle.</p> <p>A lapse in ERO augmentation capability occurs for no longer than 24 hours, perhaps because of equipment failure or scheduling errors, for which COMPENSATORY MEASURES or corrective actions are implemented.</p> <p style="text-align: right;">(b)(2)</p>

5.3 10 CFR 50.47(b)(3), Emergency Response Support and Resources

PLANNING STANDARD: Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

PS FUNCTIONS:

1. Arrangements for requesting and using offsite assistance have been made.
2. State and local staff can be accommodated at the EOF in accordance with the E-plan.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.A.6 and IV.A.7

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.C, and the licensee's approved E-plan

Significance Examples
See [Table 5.3-1](#)

Additional Guidance: None

Table 5.3-1 -- Significance Examples §50.47(b)(3)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS OF PS FUNCTION White FINDING	DEGRAD. PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(3)</p> <p>Arrangements for requesting and using offsite assistance have been made.</p> <p>State and local staff can be accommodated at the EOF in accordance with the E-plan.</p>	<p>N/A</p>	<p>E-plan commitments for offsite assistance would no longer be met for medical, fire, or law enforcement support, including assistance for response to hostile actions.</p> <p>The EOF has been changed in such a manner that it would no longer accommodate OROs in accordance with the E-plan.*</p> <p><i>* Some E-plans accommodate OROs through means other than the physical presence of personnel in the EOF (e.g., video teleconferencing).</i></p>	<p>E-plan elements have degraded to the point that E-plan commitments for offsite assistance would no longer be met for support <u>other</u> than medical, fire, or law enforcement support, including assistance for response to hostile actions.</p> <p>Agreements with organizations committed in the E-plan as supporting the response effort have been allowed to lapse and are currently not being sought, but the agency remains willing to support the E-plan.</p>	<p>A memorandum of understanding or letter of agreement has lapsed but is under revision, and there is a commitment for continuing support.</p> <p style="text-align: right;">(b)(3)</p>

5.4 10 CFR 50.47(b)(4), Emergency Classification System

PLANNING STANDARD: A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

RSPS FUNCTION: A standard scheme of emergency classification and action levels is in use.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.B and IV.C

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.D, and the licensee's approved E-plan

The NRC has endorsed standard emergency classifications and action level schemes in Regulatory Guide 1.101, "Emergency Planning and Preparedness for Nuclear Reactors," as being acceptable alternatives for demonstrating compliance with this RSPS FUNCTION. Additionally, the NRC has allowed certain modifications to the classification schemes as outlined in EPPOS-1, "Acceptable Deviations from Appendix 1 of NUREG-0654 Based Upon the Staff's Regulatory Analysis of NUMARC/NESP-007, 'Methodology for Development of Emergency Action Levels'" dated June 1, 1995.

Significance Examples

See [Table 5.4-1](#) and
[Figure 5.4-1](#)

Additional Guidance:

NSIR/DPR-ISG-001, "Emergency Planning for Nuclear Power Plants" [ML113010523]

IN 1989-72, "Failure of Licensed Senior Operators to Classify Emergency Events Properly," dated October 24, 1989, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

IN 2005-19, "Effect of Plant Configuration Changes on the Emergency Plan," dated July 18, 2005, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

Regulatory Issue Summary (RIS) 2003-18, "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, Dated January 2003," dated October 8, 2003, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

RIS 2003-18, Supplement 1, "Use of NEI 99-01, 'Methodology for Development of Emergency Action Levels,' Revision 4, Dated January 2003," dated July 13, 2003, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

EAL schemes typically have a series of initiating conditions (IC), which represent the condition being classified and, for each IC, one or more EALs, which represent indications that the IC may be exceeded. As used herein, an EAL is ineffective when it no longer results in a timely and accurate declaration for the IC. A particular EAL may be a single indication or may include a list of redundant instrument channels. In either case, it is treated as a single EAL for significance purposes.

The significance examples differ by the licensee's ability to make the proper emergency declaration even with the ineffective EAL. An EAL may be rendered ineffective by changes to facility procedures, systems, or equipment; errors in numeric thresholds; or any other cause that could result in an IC, which should be declared, not being declared in a timely and accurate manner following the change(s). This does not include instruments that are temporarily out of service if timely corrective actions are being taken to restore the instrument(s).

EAL schemes often have either redundant or diverse indications for the same IC.⁹ Credit is to be given to these alternative EALs as MITIGATING FACTORS if they were part of the licensee's approved emergency classification scheme before the ineffective EAL was identified. One of the following two significance situations may exist:

- (1) If the alternative EALs are such that an accurate declaration of the IC would still be made, but delayed beyond the 15-minute timeliness capability requirement, the classification function is degraded. An example would be waiting on an analysis of a grab sample in lieu of observing a reading on a direct-indicating instrument.
- (2) If the alternative EALs are such that an accurate and timely declaration of the IC would still be made, the classification function is neither lost nor degraded. In this context, timely means within the 15-minute timeliness capability requirement. For example, loss or potential loss of the fuel barrier IC may include EALs such as reactor pressure vessel (RPV) level and drywell radiation monitor. A decreased RPV level is a precursor to core damage and can adequately compensate for an ineffective drywell radiation monitor threshold because the declaration will still be timely and accurate. However, a classification based on drywell radiation monitor threshold rather than an ineffective RPV level would likely be delayed (as the core damage must first occur for the radiation monitor to indicate).

The NRC expects declarations to be timely and accurate (See [Section 5.0.2](#) of this appendix). Unnecessary public protective actions caused by an overclassification are a concern since the public could be placed at increased health risks without realizing the dose avoidance benefit of a necessary protective action. The NRC encourages conservative decisionmaking in uncertain events. However, the licensee's emergency classification process should, to the extent possible, support timely and accurate declarations should an emergency occur. A deficient emergency classification process

⁹ For example, the loss of the fuel fission product barrier (i.e., the IC) might have EALs addressing containment radiation monitor reading, reactor vessel level, and core exit thermocouple reading.

that would result in an overclassification and cause the licensee to make a protective action recommendation, or cause OROs to implement protective actions (e.g., a nondiscretionary precautionary evacuation of schools on a Site Area Emergency) by procedure, should be identified as a DEGRADATION OF RSPS FUNCTION. A deficient emergency classification process that would result in an overclassification, but would not result in unnecessary public protective measures, should be identified as a Green FINDING.

See NSIR/DPR-ISG-001 for guidance on the timeliness criteria, including when the “clock” starts and stops for classification and declaration.

Predecisional

Table 5.4-1 -- Significance Examples §50.47(b)(4)

PLANNING STANDARD FUNCTION(s)	LOSS OF RSPS FUNCTION Yellow FINDING	DEGRAD. RSPS FUNC. White FINDING	Green FINDING	No FINDING Examples
<p>(b)(4)</p> <p>A standard scheme of emergency classification and action levels is in use.</p> <p>Continued</p>	<p>An EAL IC has been rendered ineffective such that any General Emergency would not be declared for a particular off-normal event.</p>	<p>An EAL IC has been rendered ineffective such that any General Emergency would not be declared for a particular off-normal event, but because of other EALs, an appropriate declaration could be made in a degraded manner (e.g., delayed).</p> <p>An EAL IC has been rendered ineffective such that any Site Area Emergency would not be declared for a particular off-normal event.</p>	<p>An EAL IC has been rendered ineffective such that any General Emergency would not be declared for a particular off-normal event, but because of other EALs, an appropriate declaration could be made in an accurate and timely manner.</p> <p>An EAL IC has been rendered ineffective such that any Site Area Emergency would not be declared for a particular off-normal event, but because of other EALs, an appropriate declaration could be made in a degraded manner (e.g., delayed).</p> <p>An EAL IC has been rendered ineffective such that any Alert or NOUE would not be declared, or declared in a degraded manner for a particular off-normal event.</p>	<p>(b)(4)</p>

Table 5.4-1 (Continued) -- Significance Examples §50.47(b)(4)

PLANNING STANDARD FUNCTION(s)	LOSS OF RSPS FUNCTION Yellow FINDING	DEGRAD. RSPS FUNC. White FINDING	Green FINDING	No FINDING Examples
<p>(b)(4) Continued</p> <p>A standard scheme of emergency classification and action levels is in use.</p> <p><small>*EAL classification process includes facility procedures; training; ERO staffing; system, instrumentation, or equipment; or other resources or capabilities necessary to complete a classification or declaration.</small></p>		<p>The EAL classification process* is not capable of classifying a General Emergency or a Site Area Emergency within 15 minutes or declaring the emergency promptly once the appropriate classification level is determined.</p> <p>The EAL classification process* would result in an overclassification that would lead to OROs implementing, by procedure (i.e., a non-discretionary action), unnecessary protective actions for the public. (In making this determination, consider only those public protective actions that would be triggered by an ORO receiving notification of a particular emergency classification (e.g., “when the plant reports this then do this”). This condition should also be considered met if the licensee would make a PAR to the OROs because of the overclassification.)</p>	<p>The EAL classification process* is not capable of classifying an Alert or NOUE within 15 minutes or declaring the emergency promptly once the appropriate classification level is determined.</p> <p>The EAL classification process* would result in an overclassification causing an unnecessary emergency declaration.</p> <p>Annual EAL review is not conducted with State and local governmental authorities.</p>	<p>A typographical or minor error in an EAL, which does not affect the declaration of the proper emergency class, is identified for correction.</p> <p style="text-align: right;">(b)(4)</p>

Figure 5.4-1 (NEW FIGURE)
Significance Determination for Ineffective EALs and Overclassification

EAL Deficiency	Classification Level	Impact of Deficient EAL	Finding	
EAL Issue	General Emergency	Event would not be declared	Yellow	
		Event would be declared in a degraded manner ¹	White	
		Event would be declared in a timely and accurate manner ¹	Green	
	Ineffective EAL ²	Site Area Emergency	Event would not be declared	White
			Event would be declared in a degraded manner ¹	Green
		NOUE or Alert	Event would be declared in a timely and accurate manner ¹	No Finding
			Event would not be declared	Green
	EAL Overclassification	NOUE or Alert	Event would be declared in a degraded manner ¹	Green
			Event would be declared in a timely and accurate manner ¹	No Finding
			Would result in unnecessary PARs for the public ³	White
		Would result in unnecessary classification	Green	

¹

Emergency condition would be declared because of unaffected redundant or diverse EAL thresholds.

²

An EAL is ineffective when it, in of itself, no longer results in a timely and accurate declaration for the initiating condition.

³

In making this determination, consider only those public protective actions that would be triggered by an ORO receiving notification of a particular emergency classification (e.g., an invalid General Emergency declaration). This significance logic does not apply to over classifications during an actual event.

5.5 10 CFR 50.47(b)(5), Emergency Notifications

PLANNING STANDARD: Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

RSPS FUNCTIONS:

1. Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing subsequent follow-up notifications.
2. Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway.
3. The public alert and notification system meets the design requirements of FEMA-REP-10, "Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants," or complies with the FEMA approved ANS design report and supporting FEMA approval letter.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.D.1 and IV.D.3

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.E and Appendix 3, and the licensee's approved E-plan

Additional criteria integral to this RSPS FUNCTION is found in FEMA REP-10.

Significance Examples
See [Table 5.5-1](#)

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain FINDING(s). See [Section 5.0.2.\(h\)](#) of this appendix for additional guidance.

IN 2002-25, "Challenges to Licensee's Ability to Provide Prompt Public Notification and Information During an Emergency Preparedness Event," dated August 26, 2002, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

IN 2005-06, "Failure to Maintain Alert and Notification System Tone Alert Radio Capability," dated March 30, 2005, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

In the notification significance examples, the scope of OROs is limited to those agencies that the licensee must directly notify of an emergency as described in the E-plan. This would typically include State, county, municipal, and Tribal emergency management agencies, but may include others that are notified by the licensee within 15-minutes of an emergency declaration..

Section IV.D.3 of Appendix E to 10 CFR Part 50 requires the licensee to demonstrate that the primary and backup ANS administrative and physical means of alerting the public have been established. The NRC uses the FEMA-approved final ANS design report as evidence that the means have been established. The following applies:

- Since the final ANS design report is approved by FEMA, licensee-proposed measures to compensate for ANS outages or failures must meet the criteria in [Section 5.0.2.\(h\)](#), and be reviewed by FEMA for acceptability, before being credited in determining significance. The Office of Nuclear Security and Incident Response/Division of Preparedness and Response (NSIR/DPR) staff will refer the issue to FEMA Headquarters for additional input.
- FEMA must approve substantive changes to the ANS, hardware, testing, and maintenance under 44 CFR 350, "Review and Approval of State and Local Radiological Emergency Plans and Preparedness." A review under 10 CFR 50.54(q)(3) is not sufficient.
- FEMA evaluation of licensee deviations from the FEMA-approved final ANS design report (e.g., licensee fails to perform maintenance described in the design report) will be obtained before citing a FINDING related to these deviations. The NSIR/DPR staff will refer the issue to FEMA Headquarters for its input. Subsequent enforcement will depend on the input received from FEMA.

An approved prearranged backup method of notification, described in the FEMA-approved ANS design report, that meets the performance requirements described in Section IV.D.3 of Appendix E to 10 CFR Part 50 for the primary notification means may be credited for determining compliance. Otherwise, the prearranged backup can serve as a COMPENSATORY MEASURE only for determining significance. (Note that this paragraph does not apply to primary ANS outages caused by planned maintenance and testing as identified in the FEMA-approved ANS Design Report.)

There is an extensive record of case law related to intervenor contentions regarding the requirements in 10 CFR 50.47(b)(5) or Section IV.D of Appendix E to 10 CFR Part 50 particularly, the "...about 15-minute..." performance criteria. In general, such rulings have precedence only for the contested docket, but may be useful in informing staff decisions. Assistance should be sought from NRC counsel. Some significant rulings include the following:

Generic CLI-80-40, 12 NRC 636; Indian Point 18 NRC 811, 18 NRC 939
San Onofre 15 NRC 1163, 17 NRC 346, 17 NRC 528; Seabrook 29 NRC 527, 31 NRC 213, 32 NRC 57; Shearon Harris 23 NRC 294, 24 NRC 532; Shoreham 21 NRC 644, 27 NRC 85, 28 NRC 275, 28 NRC 603; Vermont Yankee CLI-74-40, 8 AEC 809

PLANNING STANDARD FUNCTION(s)	LOSS OF RSPS FUNCTION Yellow FINDING	DEGR. OF RSPS FUNC. White FINDING	Green FINDING	No FINDING Examples
<p>(b)(5)</p> <p>Procedures for notification of State and local governmental agencies are capable of alerting them of the declared emergency within 15 minutes after declaration of an emergency and providing subsequent follow-up notifications.</p> <p>Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway</p> <p>The public ANS meets the design requirements of FEMA-REP-10 or complies with the FEMA approved ANS design report and supporting FEMA approval letter.</p> <p>Continued</p>	<p>The notification process (e.g., procedures, systems, and resources) is not capable of alerting ANY responsible ORO of the declared emergency within 15 minutes after declaring an emergency.</p> <p>—</p> <p>Loss of both the primary and backup methods of alerting the populations within 0–5 miles of the plant.</p> <p>—</p> <p>Deficiencies in the licensee’s program for performing ANS testing and maintenance results in a major loss of the system for a significant period from the TIME OF DISCOVERY (e.g., 100% over 35 days, greater than 80% over 45 days, greater than 40% over 90 days, greater than 20% over 6 months). This FINDING is not necessary if the ANS performance indicator (PI) has fallen below the white band during the period under consideration.</p>	<p>The notification process (e.g., procedures, systems, and resources) is not capable of alerting ALL responsible OROs of the declared emergency within 15 minutes after declaring an emergency.</p> <p>—</p> <p>Loss of both the primary and backup methods of alerting the population within 5–10 miles of the plant.</p> <p>Loss of the primary method of alerting 100% of the population within 0–5 miles of the plant with the prearranged backup capability still available. (See Additional Guidance section regarding a planned ANS outage.)</p> <p>—</p> <p>Deficiencies in the licensee’s program for performing ANS testing and maintenance degrade a portion of the system for a significant period from the TIME OF DISCOVERY (e.g., 100% over 25 days, greater than 48% over 45 days, greater than 24% over 90 days, greater than 12% over 6 months).</p>	<p>The notification process (e.g., procedures, systems, and resources) is not capable of providing follow-up notifications to ANY responsible OROs during an emergency.</p> <p>—</p> <p>Loss of the approved backup method of alerting the population within the plume exposure EPZ with the primary capability still available.</p> <p>—</p> <p>An individual siren has been available less than 70% of the time over a period of 12 months as a result of inadequate or delayed corrective actions.*</p> <p>An individual siren has not been available for a continuous period of greater than 4 months with inadequate or delayed corrective actions.*</p> <p>*These FINDINGS not necessary if the ANS PI has fallen below the green band during the period under consideration.</p>	<p>—</p> <p>An individual siren has been available for more than 70% of the time over a period of 12 months during which the ANS PI has been within the green band and the prearranged backup method could have been implemented during this period.</p> <p>(b)(5)</p>

Table 5.5-1 (Continued) -- Significance Examples §50.47(b)(5)

PLANNING STANDARD FUNCTION(s)	LOSS OF RSPS FUNCTION Yellow FINDING	DEGR. OF RSPS FUNC. White FINDING	Green FINDING	No FINDING Examples
<p>(b)(5) Continued</p> <p>The public ANS meets the design requirements of FEMA-REP-10 or complies with the FEMA approved ANS design report and supporting FEMA approval letter.</p>			<p>Licensee ANS test and maintenance programs do not comply with requirements in the ANS design report.</p> <p>Licensee made changes to the ANS or the testing and maintenance program, described in the ANS design report, without prior FEMA approval.</p> <p>Loss of an ANS design feature (e.g., feedback system, battery backup, loud hailing features) identified in the ANS design report.</p> <p>NOTE: See text on Page B-28 of this appendix with regard to obtaining FEMA evaluation of deviations from the ANS design report before citing a FINDING against one of these three examples.</p>	<p style="text-align: right;">(b)(5)</p>

5.6 10 CFR 50.47(b)(6), Emergency Communications

PLANNING STANDARD: Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

PS FUNCTIONS:

1. Systems are established for prompt communication among principal emergency response organizations.
2. Systems are established for prompt communication to emergency response personnel.

Supporting Requirements: 10 CFR Part 50, Appendix E, Section IV.E.9

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.F, and the licensee's approved E-plan

Significance Examples

See [Table 5.6-1](#)

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain FINDING(s). See [Section 5.0.2.\(h\)](#) of this appendix for additional guidance.

NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," [ML092931123], identifies key ERO members.

Table 5.6-1 -- Significance Examples §50.47(b)(6)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS OF PS FUNCTION White FINDING	DEGRAD PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(6)</p> <p>Systems are established for prompt communication among principal emergency response organizations.</p> <p>Systems are established for prompt communication to emergency response personnel.</p> <p><i>*In the event of major disruptive events (e.g., hurricane, fire, explosion, loss of power) or planned outages, COMPENSATORY MEASURES are acceptable while repair activities proceed with high priority.</i></p>	<p>N/A</p>	<p>Communications systems have degraded such that no communications channel between any two key ERO members is available in the TSC, EOF, or control room, including alternate facilities, or no communication channel between the ERO and OROs is available for longer than 24 hours from the TIME OF DISCOVERY in the absence of COMPENSATORY MEASURES.*</p> <p>Loss of communications capability, for longer than 7 days from the TIME OF DISCOVERY such that no communications channel between any key ERO member and any individual, group, or organization with whom that key ERO member is expected to interface (e.g., field teams, OROs) in the absence of COMPENSATORY MEASURES.*</p> <p>Backup power supplies for at least one onsite and one offsite communications systems are not functional for more than 30 days from the TIME OF DISCOVERY, in the absence of COMPENSATORY MEASURES.</p>	<p>Communications equipment for key ERO members in an emergency facility is degraded (e.g., many phones) at the TIME OF DISCOVERY in the absence of COMPENSATORY MEASURES.*</p> <p>Backup power supplies for at least one onsite and one offsite communications systems, as required by Appendix E to 10 CFR Part 50, are not functional for more than 3 days from the TIME OF DISCOVERY, in the absence of COMPENSATORY MEASURES.*</p>	<p>A few phones are out of service in any emergency center.</p> <p>Communications equipment is significantly degraded (e.g., many phones and more than two circuits) in any emergency center, such that implementation of the E-plan would be impacted for a short time (e.g., less than a day) before repair or COMPENSATORY MEASURES are implemented.</p> <p style="text-align: right;">(b)(6)</p>

5.7 10 CFR 50.47(b)(7), Emergency Public Information

PLANNING STANDARD: Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

PS FUNCTIONS:

1. EP information is made available to the public on a periodic basis within the plume exposure pathway EPZ.
2. Coordinated dissemination of public information during emergencies is established.

Supporting Requirements: 10 CFR Part 50, Appendix E, Section IV.D.2

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.G; NUREG-0696; and the licensee's approved E-plan

Significance Examples

See Table 5.7-1

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain FINDING(s). [See Section 5.0.2.\(h\)](#) of this appendix for additional guidance.

EPPOS-5, "Emergency Preparedness Position (EPPOS) on Emergency Planning Information Provided to the Public," dated December 4, 2002, [ML023040492]

Table 5.7-1 -- Significance Examples §50.47(b)(7)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS OF PS FUNCTION White FINDING	DEGRAD. PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(7)</p> <p>EP information is made available to the public on a periodic basis within the plume exposure pathway EPZ.</p> <p>Continued</p>	<p>N/A</p>	<p>Processes do not provide for the complete dissemination of EP-related public information such that the licensee does not provide information to all transient areas, EPZ segments, or other specialized/localized groups (e.g., hotels, recreational parks, select phone books, zip codes).</p> <p>EP-related public information documents do not contain the required information (e.g., how the public will be notified, what their actions should be, and principal points of contact for information during an emergency).</p> <p>Locations within the licensee's owner controlled area, accessible by individuals who have not completed appropriate access training, are not provided appropriate EP-related public information to which the licensee committed in the E-plan or, in the absence of E-plan commitment, Federal regulation.*</p> <p><i>*For some locations, signs and the like may be appropriate for disseminating public information.</i></p>	<p>EP-related public information has not been disseminated for a period longer than that to which the licensee committed in the E-plan or, in the absence of E-plan commitment, Federal regulation.</p> <p>Processes or procedures for disseminating information to the public are not maintained, such that significant elements of the public information process are degraded (e.g., contact lists are not effective, approval process cannot be implemented because of organizational changes, news releases are untimely, licensee news briefings are not coordinated with OROs).</p> <p>Locations within the licensee's owner controlled area, accessible by individuals who have not completed appropriate access training, are not provided EP-related public information for a period longer than that to which the licensee committed in the E-plan or, in the absence of E-plan commitment, Federal regulation.*</p>	<p>Documentation of the dissemination of EP-related public information documents is incomplete.</p> <p>(b)(7)</p>

Table 5.7-1 (Continued) -- Significance Examples §50.47(b)(7)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS OF PS FUNCTION White FINDING	DEGRAD. PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(7) Continued</p> <p>Coordinated dissemination of public information during emergencies is established.</p>	<p>N/A</p>	<p>Licensee processes would not provide for timely and accurate information releases to such an extent that the health and safety of the public would be compromised during emergencies (e.g., the ERO members are not knowledgeable with regard to emergency news center operations, procedures for disseminating information are not established, augmentation (call-out) processes would not ensure timely activation of the emergency news center, or untimely methods for information approval).</p> <p>Licensee processes would not coordinate news briefings to such an extent that the health and safety of the public would be compromised during emergencies (e.g., information is inaccurate, contradictory, or delayed).</p>	<p>Licensee processes at the joint information center would not provide for the issuance of a news release during an NOUE or Alert declaration in accordance with E-plan commitments.</p> <p>Familiarization programs for news media are not conducted as the licensee committed in the E-plan or, in the absence of E-plan commitment, Federal regulation.</p>	<p>(b)(7)</p>

5.8 10 CFR 50.47(b)(8), Emergency Facilities and Equipment

PLANNING STANDARD: Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

PS FUNCTIONS:

1. Adequate facilities are maintained to support emergency response.
2. Adequate equipment is maintained to support emergency response.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.E.1–4, IV.E.8, IV.G

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.G; NUREG-0696; and the licensee's approved E-plan

Significance Examples

See Table 5.8-1

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain FINDING(s). See [Section 5.0.2.\(h\)](#) of this appendix for additional guidance.

NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, [ML092931123], identifies key ERO members.

IN 2004-19, "Problems Associated with Back-up Power Supplies to Emergency Response Facilities and Equipment," dated November 4, 2004, <http://www.nrc.gov/reading-rm/doc-collections/#gen>

Table 5.8-1 -- Significance Examples §50.47(b)(8)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS OF PS FUNCTION White FINDING	DEGRAD. PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(8)</p> <p>Adequate facilities are maintained to support emergency response.</p> <p><i>*In the event of major disruptive events (e.g., hurricane, fire, explosion, loss of power) or planned outages, COMPENSATORY MEASURES are acceptable while repair activities proceed with high priority.</i></p> <p>Continued</p>	<p>N/A</p>	<p>The OSC, TSC, or EOF is not functional for a period of longer than 7 days from the TIME OF DISCOVERY, to the extent that any key ERO member could not perform his/her assigned E-plan functions, in the absence of COMPENSATORY MEASURES.*</p> <p>A backup or alternative emergency response facility is no longer capable of being activated in accordance with the E-plan for a period of longer than 30 days from the TIME OF DISCOVERY, without COMPENSATORY MEASURES.*</p>	<p>The OSC, TSC, or EOF is not functional for a period of longer than 24 hours from the TIME OF DISCOVERY, to the extent that any key ERO member could not perform his/her assigned E-plan functions, in the absence of COMPENSATORY MEASURES.*</p> <p>A backup or alternative emergency response facility is no longer capable of being activated in accordance with the E-plan for a period of longer than 7 days from the TIME OF DISCOVERY, without COMPENSATORY MEASURES.*</p> <p>Changes have been made to the OSC, TSC, or EOF that do not comply with the E-plan, but the facilities remain functional.</p> <p>A licensee having a primary EOF greater than 25 miles from a reactor site has not maintained adequate provisions for locating the NRC and offsite responders closer to the site (e.g., inadequate space, communication links with other licensee ERFs and with OROs, computer links with internet access, or copying equipment and office supplies).</p>	<p>Storage or transient items are found in an ERF, but responders are still able to activate the facility and perform assigned functions.</p> <p>(b)(8)</p>

Table 5.8-1 (Continued) -- Significance Examples §50.47(b)(8)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS OF PS FUNCTION White FINDING	DEGRAD. PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(8) Continued</p> <p>Adequate equipment is maintained to support emergency response.</p>	<p>N/A</p>	<p>Equipment necessary to implement the E-plan is not available or not functional, to the extent that any key ERO member could not perform his/her assigned functions, for a period of longer than 7 days from the TIME OF DISCOVERY, without COMPENSATORY MEASURES (e.g., lack of engineering documents would prevent TSC technical support from performing function). The availability of additional onsite equipment, in a reasonably timely manner, is considered to be a COMPENSATORY MEASURE for this PSF.</p>	<p>A significant amount of equipment necessary to implement the E-plan is not available or functional to the extent that any key ERO member could not perform his/her assigned functions, in the absence of COMPENSATORY MEASURES.</p>	<p>A few items of equipment or instrumentation to which the licensee committed in the E-plan are missing or out of calibration, but replacement equipment or instrumentation is available on site.</p> <p style="text-align: right;">(b)(8)</p>

5.9 10 CFR 50.47(b)(9), Emergency Assessment Capability

PLANNING STANDARD: Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

RSPS FUNCTION: Methods, systems, and equipment for assessment of radioactive releases are in use.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.B and IV.E.2

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.I, and the licensee's approved E-plan

Significance Examples

See Table 5.9-1

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain FINDING(s). See [Section 5.0.2.\(h\)](#) of this appendix for additional guidance.

EPPOS-3, "Emergency Preparedness Position (EPPOS) on Requirement for Onshift Dose Assessment Capability," dated November 8, 1995, [ML023040473]

Some significance examples refer to an incapability of providing technically adequate estimates of projected releases and doses. As with all significance examples, the focus is on a PD that is reasonably under the licensee's control to identify and prevent. Quantification of the magnitude of the error is not required. These errors may be identified during exercise when licensee results are compared to those performed by other entities. The following conditions are generally under the licensee's control:

- Inadequate procedures and training may cause users to select processing options or make data entries that are not appropriate for the particular projections being performed.
- Use of a dose projection model that does not account for site-specific and plant-specific meteorological regimes, terrain characteristics, release pathway configuration (e.g., elevated versus ground, building wake)
- Site- and unit-specific data files that adapt the modeling to a particular site (e.g., monitor efficiencies, terrain heights, stack heights, etc) are inconsistent with the site configuration.

Conversely, the inherent uncertainties in the components of a dose projection—source term, meteorology, and dose calculation—are generally not under the control of the licensee.

Table 5.9-1 -- Significance Examples §50.47(b)(9)

PLANNING STANDARD FUNCTION(s)	LOSS OF RSPS FUNCTION Yellow FINDING	DEGR. OF RSPS FUNC. White FINDING	Green FINDING	No FINDING Examples
<p>(b)(9)</p> <p>Methods, systems, and equipment for assessment of radioactive releases are in use.</p> <p><i>*Because of a systematic deficiency in input data, calculational methodology and assumptions, user procedures, user training, etc. Systematic deficiencies do not include normal uncertainties inherent to the dose assessment process or end user errors.</i></p> <p><i>**In the event of major disruptive events (e.g., hurricane, fire, explosion, loss of power) or planned outage, COMPENSATORY MEASURES are acceptable while repair activities proceed with high priority.</i></p>	<p>The dose projection process is incapable* of providing technically adequate estimates of radioactive material releases to the environment or projected offsite doses in any case.</p> <p>Equipment or systems necessary for dose projection are not functional for longer than 24 hours from the TIME OF DISCOVERY, to the extent that the licensee has no capability for immediate dose projection.</p>	<p>The field monitoring function (at least dose rate measurement and iodine presence determination) is unavailable for more than 72 hours from the TIME OF DISCOVERY without COMPENSATORY MEASURES**.</p> <p>The dose projection process is incapable* of providing technically adequate estimates of radioactive material releases to the environment or projected offsite doses in some cases.</p> <p>Equipment or systems necessary for dose projection are not functional for longer than 24 hours from the TIME OF DISCOVERY, to the extent that the licensee has no capability for immediate dose projection in facility emergency response centers as committed to in the E-plan.</p>	<p>The field monitoring function in accordance with the E-plan is unavailable for more than 72 hours from the TIME OF DISCOVERY, without COMPENSATORY MEASURES**.</p> <p>The dose projection process is incapable* of providing technically adequate estimates of radioactive material releases to the environment or projected offsite doses beyond 10 miles but less than 50 miles</p> <p>Equipment or systems necessary for dose projection are not functional for longer than 24 hours from the TIME OF DISCOVERY without COMPENSATORY MEASURES or corrective actions are inadequate or delayed.</p>	<p>Dose projection equipment and systems, or field monitoring capability, is not functional as committed in the E-plan for a period less than 24 or 72 hours, respectively, from the TIME OF DISCOVERY.</p> <p style="text-align: right;">(b)(9)</p>

5.10 10 CFR 50.47(b)(10), Emergency Protective Actions

PLANNING STANDARD: A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic use of potassium iodide (KI), as appropriate. Evacuation time estimates have been developed by applicants and licensees. Licensees shall update the evacuation time estimates on a periodic basis. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed

RSPS FUNCTIONS:

1. A range of public PARs (excluding KI) is available for implementation during emergencies.
2. ETEs for the population located in the plume exposure pathway EPZ are available to support formulation of PARs and have been provided to State and local governmental authorities.

PS FUNCTIONS:

1. KI is available for implementation as a protective action recommendation in those jurisdictions that chose to provide KI to the public.
2. A range of protective actions is available for emergency workers during emergencies, including hostile action events.

Supporting Requirements: Appendix E, Section IV.I

Informing Criteria: NUREG-0654/FEMA-REP-1, Sections II.J.1–8, II.J.2–6, and II.J.10; Supplement 3 to NUREG-0654; and the licensee’s approved E-plan

Significance Examples
See [Table 5.10-1](#)

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain FINDING(s). See [Section 5.0.2.\(h\)](#) of this appendix for additional guidance.

NUREG/CR-7002, “Criteria for Development of Evacuation Time Estimates Studies” [ML113010515]

NUREG-0654/FEMA-REP-1, Supplement 3, "Guidance for Protective Action Strategies" [ML113010596]

NSIR/DPR-ISG-001, "Emergency Planning for Nuclear Power Plants" [ML113010523]

(Remaining documents can be found at <http://www.nrc.gov/reading-rm/doc-collections/#gen>)

IN 1998-20, "Problems with Emergency Preparedness Respiratory Programs," dated June 3, 1998

RIS 2002-14, "Ensuring a Capability to Evacuate Individuals, Including Members of the Public, From the Owner-Controlled Area," dated April 8, 2002

RIS 2002-21, "National Guard and Other Emergency Responders Located in Licensee's Controlled Area," dated November 8, 2002

RIS 2003-12, "Clarification of NRC Guidance for Modifying Protective Actions," dated June 24, 2003

RIS-2004-13, "Consideration of Sheltering in Licensee's Range of Protective Action Recommendations," dated August 2, 2004, and Supplement 1, dated March 10, 2005

RIS-2005-08, "Endorsement of Nuclear Energy Institute (NEI) Guidance 'Range of Protective Actions for Nuclear Power Plant Incidents,'" dated June 6, 2005

IN 2002-14, "Ensuring a Capability to Evacuate Individuals, Including Members of the Public, from the Owner-Controlled Area" dated April 8, 2002

Table 5.10-1 -- Significance Examples §50.47(b)(10)

PLANNING STANDARD FUNCTION(s)	LOSS OF RSPS FUNCTION Yellow FINDING	DEGR. OF RSPS FUNC. White FINDING	Green FINDING	No FINDING Examples
<p>(b)(10)</p> <p>A range of public PARs (excluding KI) is available for implementation during emergencies.</p> <p>Approved ETEs for the population in the plume exposure pathway EPZ are available to support formulation of PARs and have been provided to State and local governmental authorities.</p> <p>Continued</p>	<p>The process does not provide PARs that are in accordance with E-plan commitments or Federal guidance to the extent that appropriate PARs would not be issued to cover affected populated areas within 5 miles of the site.</p> <p>—</p> <p>The process does not adequately address the owner controlled area (refer to IN 2002-14) to the extent that procedures, equipment, or personnel would not be capable of timely evacuation and processing of members of the public who might be present.</p>	<p>The process does not provide PARs that are in accordance with E-plan commitments or Federal guidance to the extent that appropriate PARs would not be issued to cover affected populated areas within 5 to 10 miles of the site.</p> <p>—</p> <p>The process does not adequately address the owner controlled area (refer to IN 2002-14) to the extent that procedures, equipment, or personnel would not consistently provide assurance of timely evacuation and processing of members of the public who might be present.</p> <p>—</p> <p>The ETE analysis has not been updated as required.</p>	<p>The process does not provide PARs that are in accordance E-plan commitments or Federal guidance to the extent that appropriate PARs would not be issued to cover affected populated areas beyond the plume exposure pathway EPZ, should they be necessary.</p> <p>—</p> <p>ETEs and updates to the ETEs were not provided to responsible OROs.</p> <p>The current public protective action strategies documented in EPIPs are not consistent with the current ETE.</p>	<p>Population distribution maps (not used for decisionmaking) are not updated to reflect the latest census data.</p> <p>(b)(10)</p>

Table 5.10-1 (Continued) -- Significance Examples §50.47(b)(10)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS of PS FUNCTION White FINDING	DEGRAD. OF PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(10) (Continued)</p> <p>KI is available for implementation as a PAR in those jurisdictions that choose to provide KI to the public.</p> <p>A range of protective actions is available for emergency workers during emergencies, including hostile action events.</p> <p>Continued</p>	<p>N/A</p>	<p>A significant fraction (e.g., greater than 25%) of the onsite notification system (e.g., plant page speakers) is out of service in occupied areas that would need to be evacuated during an emergency, without COMPENSATORY MEASURES, for longer than 7 days from the TIME OF DISCOVERY.</p> <p>The site evacuation process is deficient to the extent that it cannot be accomplished during an emergency.</p> <p>The accountability process is deficient to the extent that it cannot ensure that onsite accountability is achieved and maintained during an emergency.</p> <p>The site process for implementing protective actions during hostile action events is deficient to the extent that the site's capability to safely shut down the reactor or perform the RSPS functions of the E-plan is lost.</p>	<p>The process does not provide KI PARs that are in accordance with E-plan commitments or Federal guidance to the extent that appropriate KI PARs would not be issued to cover affected populated areas within the plume exposure pathway EPZ in those jurisdictions that choose to provide KI to the public.</p> <p>A fraction (e.g., greater than 10%) of the onsite notification system (e.g., plant page speakers) is out of service in occupied areas that would need to be evacuated during an emergency, without COMPENSATORY MEASURES, for longer than 24 hours from the TIME OF DISCOVERY.</p> <p>The site process for implementing protective actions during hostile action events is deficient to the extent that the site's capability to perform the functions of the E-plan is lost.</p>	<p>Plant page speakers are out of service in a few (e.g., less than 10%) normally occupied areas for less than 90 days.</p> <p>(b)(10)</p>

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS of PS FUNCTION White FINDING	DEGRAD. OF PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(10) (Continued)</p> <p>A range of protective actions is available for emergency workers during emergencies, including hostile action events.</p>	<p>N/A</p>	<p>Onsite respiratory protective equipment is degraded, or personnel are not qualified to use it, to the extent that the minimum complement of control room operators could not be protected for at least 4 hours (if needed) from the TIME OF DISCOVERY, without COMPENSATORY MEASURES.</p>	<p>Onsite respiratory protective equipment is not maintained in accordance with regulations or E-plan commitments.</p> <p>Emergency workers who would be required to use respiratory protective equipment are not qualified or trained to use that equipment.</p> <p>The KI program is not maintained in accordance with regulations or E-plan commitments.</p>	<p style="text-align: right;">(b)(10)</p>

5.11 10 CFR 50.47(b)(11), Emergency Radiological Exposure Control

PLANNING STANDARD: Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

PS FUNCTION: The resources for controlling radiological exposures for emergency workers are established.

Supporting Requirements: 10 CFR Part 50, Appendix E, Section IV.E.1

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.K, and the licensee's approved E-plan

**Table 5.11-1
Significance Examples for
10 CFR 50.47(b)(11)**

<p>LOSS OF PS FUNCTION: White FINDING</p>	<p>Radiological control equipment, instrumentation, processes and/or personnel necessary to control emergency workers' exposure is not available (e.g., out of service or calibration) to the extent that emergency work necessary to protect the health and safety of the public could not be performed during emergencies. The availability of additional equipment, on site, in a reasonably timely manner is considered a COMPENSATORY MEASURE for the PS.</p> <p>Resources for controlling exposures during emergencies will not ensure that exposures are maintained in accordance with E-plan commitments.</p>
<p>DEGRAD. OF PS FUNC. Green FINDING:</p>	<p>Radiological control equipment, instrumentation, processes, and/or personnel necessary to control emergency workers' exposure is not available to the extent that emergency work necessary to protect the health and safety of the public would be impaired during emergencies. The availability of additional equipment, on site, in a reasonably timely manner is considered a COMPENSATORY MEASURE for the PSF.</p>
<p>No FINDING:</p>	<p>A few items of equipment or instrumentation to which the licensee committed in the E-plan are missing or out of calibration, but replacement equipment or instrumentation would be available at the storage location or on site with reasonably rapid accessibility.</p>

Additional Guidance: None

5.12 10 CFR 50.47(b)(12), Emergency Medical Support

PLANNING STANDARD: Arrangements are made for medical services for contaminated injured individuals.

PS FUNCTION: Arrangements are made for medical services for contaminated, injured individuals.

Supporting Requirements: 10 CFR Part 50, Appendix E, Section IV.E.5-7

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.L, and the licensee's approved E-plan

**Table 5.12-1
Significance Examples for
10 CFR 50.47(b)(12)**

LOSS OF PS FUNCTION: White FINDING	No agreement exists with any qualified and properly equipped hospital or ambulance service for the care of contaminated, injured individuals.
DEGRAD. OF PS FUNC. Green FINDING:	An agreement for medical support with an organization has been allowed to lapse, but the organization remains willing to support the E-plan.
No FINDING:	A memorandum of understanding or letter of agreement has lapsed but is under revision, and there is a commitment for continuing support.

Additional Guidance: None

5.13 10 CFR 50.47(b)(13), Recovery and Reentry Planning

PLANNING STANDARD: General plans for recovery and reentry are developed.

PS FUNCTIONS: Plans for recovery and reentry are developed.

Supporting Requirements: None

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.M, and the licensee's approved E-plan

**Table 5.13-1
Significance Examples for
10 CFR 50.47(b)(13)**

LOSS OF PS FUNCTION: White FINDING	None
DEGRAD. OF PS FUNC. Green FINDING:	Recovery efforts are not preplanned. The recovery process is not exercised within an 8-year period.
No FINDING:	None

Additional Guidance:

Because of the nonemergency nature of recovery efforts, no LOSS OF PS FUNCTION would be assigned for failures in this area (i.e., any FTC would not exceed a Green FINDING).

5.14 10 CFR 50.47(b)(14), Drill and Exercise Program

PLANNING STANDARD: Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

PS FUNCTIONS:

1. A drill and exercise program (including, for example, radiological, medical, health physics) is established.
2. All exercises, drills, and training that provide performance opportunities to develop, maintain, and demonstrate key skills are assessed via a CRITIQUE process to identify WEAKNESSES.
3. Identified WEAKNESSES are corrected.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.F.1–2

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.N, and the licensee's approved E-plan

Significance Examples
See [Table 5.14-1](#) and
[Figures 5.14-1](#) and [5.14-2](#)

Additional Guidance:

See guidance in [Section 6.0](#) regarding correction of WEAKNESSES.

Identification of WEAKNESSES

A WEAKNESS is defined as a level of ERO performance demonstrated during an exercise, drill, or training that provides performance opportunities to develop, maintain, or demonstrate key skills that would preclude effective implementation of the E-plan, if the weakness were to occur during an actual emergency.

A failure of a CRITIQUE to identify a WEAKNESS observed by NRC inspectors is a CRITIQUE FINDING and should be processed against 10 CFR 50.47(b)(14) and Section IV.F.2.g of Appendix E, if the WEAKNESS could preclude effective implementation of the E-plan in an actual emergency (i.e., FTI).

Since a WEAKNESS is defined in the context of ERO performance, a PROGRAM ELEMENT issue related to the effectiveness and adequacy of the E-plan or its implementing procedures¹⁰ is not a WEAKNESS. Accordingly:

¹⁰ The E-plan contains the licensee's commitments to NRC regulations. The implementing procedures are the licensee's methods of implementing those commitments and may be used to judge effective, timely, and accurate implementation.

- A deficient PE uncovered by the exercise and identified by the licensee in its critique is a licensee-identified PD and is evaluated as a FTC.
- If identified by the inspector, the deficient PE is an NRC-identified PD and is evaluated as a FTC.
- Because of this dichotomy, inspectors will need to remain alert to the possibility that a WEAKNESS may have uncovered one or more inadequate PE.

A mistake or a misstep by ERO members that only detracts from the overall ERO performance should not be treated as a de facto WEAKNESS. Mistakes are likely to happen in the course of an exercise and many are corrected by the ERO (e.g., peer-checking), which should be viewed as an organizational strength. Failure to identify these mistakes as a WEAKNESS in the CRITIQUE is generally not a regulatory issue.

Inspectors must remain alert to exercise controller actions (e.g., coaching, prompting) that have the effect of masking an ERO WEAKNESS such that corrective actions might not be implemented. Failure of the licensee's CRITIQUE to identify the ERO performance WEAKNESS masked by the controller action is a CRITIQUE FINDING. (Even if identified in the CRITIQUE, the controller's action could result in a DEP PI opportunity being considered as a failure. See ROP FAQ No. 405 dated July 21, 2005.)

Classifications, PARs, and notifications could be accurate and timely (DEP PI opportunity successes) and there still be a WEAKNESS. Such a WEAKNESS needs to be identified and corrected since, under different circumstances, it could affect activities necessary for protecting the health and safety of the public. A failure to identify such a WEAKNESS in a CRITIQUE should be classified as a Green FINDING because of its lesser significance. Examples include the following:

- An emergency classification is made as anticipated by the scenario, but the classification was based on misinformation, lack of information, invalid indicators, or reliance on emergency director judgment EALs when explicit EALs were applicable.
- A PAR is developed as anticipated by the scenario, but the PAR was based on a dose assessment performed using erroneous input parameters (e.g., improper release duration, credit for filtration when none available).

Licensees perform CRITQUES in many different ways and the inspectors should be flexible in accepting mechanisms for WEAKNESS identification. The critical feature of any CRITIQUE is that a WEAKNESS is captured and entered into a corrective action system with appropriate priority, regardless of whether the WEAKNESS was verbalized at a CRITIQUE meeting.

If the inspector can be assured that all WEAKNESSES will be entered into a corrective action system, before disclosing the identified issues, the CRITIQUE should be considered acceptable.

However, if the inspector does not have assurance that a WEAKNESS has or will be captured and entered into the corrective action system, the CRITIQUE was not acceptable and a CRITIQUE FINDING exists.

The disposition of CRITIQUE observations also varies among sites. In any given exercise, the licensee will evaluate numerous evaluator observations, identify which observations rise to the level of a WEAKNESS, and prioritize resources for correction. Care should be taken to understand the logic underlying the suggested disposition before identifying it as a CRITIQUE FINDING. If the inspector identifies that a well-founded, evaluator-identified WEAKNESS was improperly dispositioned and was not entered into the corrective action system, a CRITIQUE FINDING exists since the NRC expects the licensee to enter identified WEAKNESSES and enter them into a corrective action system.

If the ERO performance during a biennial exercise is degraded to the extent that the inspector cannot find that reasonable assurance exists that adequate protective measures can be taken in the event of an actual radiological emergency or cannot find that the ERO has maintained key skills specific to emergency response, the NRC may require the conduct of a remedial exercise under Section IV.F.2.f of Appendix E to 10 CFR Part 50.

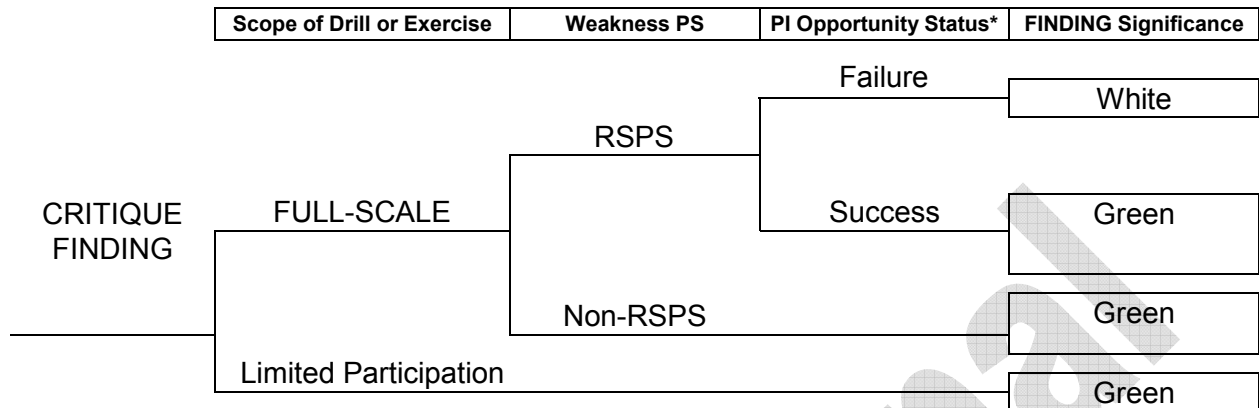
Table 5.14-1 -- Significance Examples §50.47(b)(14)

<p>PLANNING STANDARD FUNCTION(s)</p>	<p>Yellow FINDING</p>	<p>LOSS of PS FUNCTION White FINDING</p>	<p>DEGRAD. PS FUNC. Green FINDING</p>	<p>No FINDING Examples</p>
<p>(b)(14)</p> <p>A drill and exercise program (including, for example, radiological, medical, health physics) is established.</p> <p>Continued</p>	<p>N/A</p>	<p>More than two drills or exercises (excluding the biennial exercise) during a 2-year (calendar) period (e.g., radiological, medical, health physics) have not been conducted in accordance with the E-plan.</p> <p>A biennial exercise is not conducted during a 2-year (calendar) period without receiving an exemption.</p> <p>Exercises and drills are not sufficiently varied to ensure that all RSPS PE are tested within the exercise planning cycle</p> <p>ERO performance is such that a remedial exercise is required because the NRC cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency or the ERO failed to maintain and demonstrate key skills.</p>	<p>A drill has not been conducted during a 2-year (calendar) period in accordance with the E-plan.</p> <p>Exercises and drills are not sufficiently varied to ensure that all PS PE are tested within the exercise planning cycle.</p> <p>A biennial exercise does not provide opportunities for the ERO to demonstrate key emergency response skills identified in Appendix E Section IV.F.2.b in the control room, TSC, OSC, EOF, or JIC.</p> <p>Biennial exercises are not sufficiently varied to ensure ERO proficiency in responding to scenario elements identified in Appendix E Section IV.F.2.j and to minimize anticipatory responses caused by preconditioning of participants.</p> <p>A biennial exercise is not sufficiently technically accurate or challenging to adequately test the plans, procedures, equipment, and implementation of the licensee's emergency response capabilities.</p>	<p>A drill is rescheduled or cancelled, but the program remains compliant with the E-plan.</p> <p>A drill or exercise has not been conducted in accordance with the E-plan as a result of extenuating circumstances that the licensee has self-identified and, appropriately rescheduled with NRC approval obtained for rescheduled biennial exercise</p> <p>(b)(14)</p>

Table 5.14-1 (Continued) -- Significance Examples §50.47(b)(14)

PLANNING STANDARD FUNCTION(s)	Yellow FINDING	LOSS of PS FUNCTION White FINDING	DEGRAD. PS FUNC. Green FINDING	No FINDING Examples
<p>(b)(14) Continued</p> <p>All exercises, drills, and training that provide performance opportunities to develop, maintain, and demonstrate key skills, are assessed via a formal CRITIQUE process to identify WEAKNESSES.</p> <p>Identified WEAKNESSES are corrected.</p>	<p>N/A</p>	<p>Formal CRITIQUES are not conducted for more than two scheduled drills or exercises.</p> <p>The CRITIQUE process does not properly identify a WEAKNESS associated with an RSPS that is determined (by the NRC) to be a DEP PI opportunity failure during a FULL-SCALE DRILL OR EXERCISE.</p> <p>—</p> <p>The licensee failed to correct an RSPS WEAKNESS. (See Section 6.0, “Corrective Actions.”)</p>	<p>Formal CRITIQUES are not conducted for more than two scheduled training evolutions.</p> <p>The CRITIQUE process does not identify a WEAKNESS as a result of an ERO performance deficiency associated with a RSPS that is determined (by the NRC) as a DEP PI successful opportunity during a FULL-SCALE DRILL OR EXERCISE.</p> <p>The CRITIQUE process does not identify a WEAKNESS associated with a non-RSPS during a FULL-SCALE DRILL OR EXERCISE or any PS WEAKNESS during a limited facility interaction drill in which there is a limited team of evaluators (e.g., facility tabletop training drill, operator training simulator drill, individual facility training drill).</p> <p>The CRITIQUE process does not properly identify a WEAKNESS resulting from an ERO performance deficiency associated with RSPS 10 CFR 50.47(b)(9).</p> <p>—</p> <p>The licensee failed to correct a non-RSPS WEAKNESS. (See Section 6.0, “Corrective Actions.”)</p>	<p>(b)(14)</p>

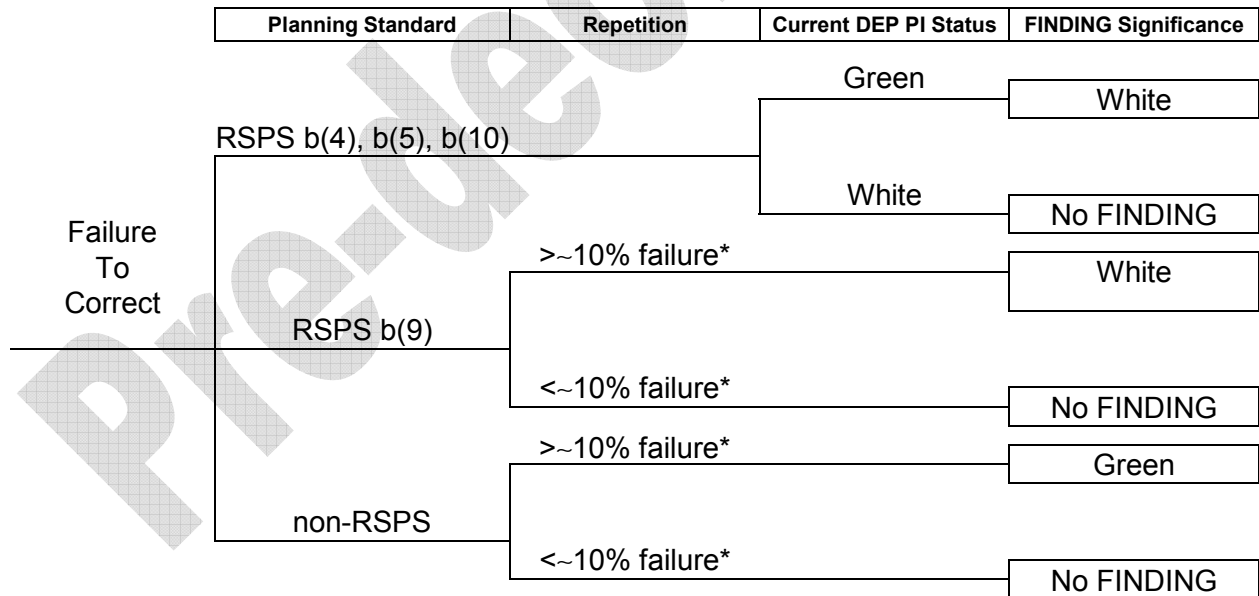
**Figure 5.14-1
Significance Determination for CRITIQUE FINDINGS (NEW FIGURE)**



*As determined by the NRC inspector.

With regard to the PI opportunity status branch, if the licensee fails to identify a RSPS WEAKNESS observed during a FULL-SCALE DRILL OR EXERCISE that is determined by the inspector to be a PI opportunity failure, the significance is White. All other CRITIQUE FINDINGS are assigned Green significance.

**Figure 5.14-2
Significance Determination for Failure to Correct a WEAKNESS (NEW FIGURE)**



*Including all observed WEAKNESSES having a common uncorrected root cause (e.g., inadequate ERO training). See [Section 6.0](#).

5.15 10 CFR 50.47(b)(15), Emergency Responder Training

PLANNING STANDARD: Radiological emergency response training is provided to those who may be called on to assist in an emergency.

PS FUNCTION: Training is provided to ERO personnel.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV.F.1–2

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.O, and the licensee's approved E-plan

**Table 5.15-1
Significance Examples for
10 CFR 50.47(b)(15)**

LOSS OF PS FUNCTION: White FINDING	ERO personnel would not be available (e.g., lapsed training) to provide continuous coverage (24 hours) for a key ERO function (as defined by NEI 99-02). NOTE: If the DEP and ERO PIs have been Green for the previous eight quarters, the significance should be Green.
DEGRAD. OF PS FUNC. Green FINDING:	ERO personnel would not be available (e.g., lapsed training) to provide continuous coverage (24 hours) for any ERO position listed in the licensee's E-plan. Unqualified personnel (e.g., lapsed training) are maintained on the ERO duty roster and are relied upon to respond during an emergency. ¹¹
No FINDING:	Personnel have not received required EP training, but other qualified personnel have been assigned to staff the affected positions.

Additional Guidance:

NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, [ML092931123], identifies key ERO members.

¹¹ If personnel have been removed from ERO duty, their lapsed training qualifications are not a regulatory concern.

5.16 10 CFR 50.47(b)(16), Emergency Plan Maintenance

PLANNING STANDARD: Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

- PS FUNCTION:**
1. Responsibility for E-plan development and review is established.
 2. Planners responsible for E-plan development and maintenance are properly trained.

Supporting Requirements: None

Informing Criteria: NUREG-0654/FEMA-REP-1, Section II.P, and the licensee's approved E-plan

**Table 5.16-1
Significance Examples for
10 CFR 50.47(b)(16)**

LOSS OF PS FUNCTION: White FINDING	None.
DEGRAD. OF PS FUNC. Green FINDING:	Responsibilities for E-plan development are not established. Planners did not receive initial and/or continuing training.
No FINDING:	None.

Additional Guidance:

Because of the nonemergency nature of E-plan development efforts, no LOSS OF PS FUNCTION would be assigned for failures in this area (i.e., any FTC would not exceed a Green FINDING).

6.0 GUIDANCE ON CORRECTIVE ACTIONS

6.1 Timeliness Guidelines

- (a) The NRC expects that licensees will resolve an identified WEAKNESS in a timely manner consistent with its risk significance. That said, it is important to note that the time it takes to correct a WEAKNESS may depend on various factors, not all of which may be under the licensee's direct control. The licensee determines the risk significance of a WEAKNESS and sets resolution priorities in accordance with its corrective action programs and other commitments. Root cause and extent of cause analyses may take 60 days or longer to complete. While immediate corrective actions, such as procedure changes, briefings, lessons-learned summaries, or COMPENSATORY MEASURES may be implemented rapidly, multiple longer term corrective actions may be necessary to fully resolve the WEAKNESS and prevent its reoccurrence.
- (b) This guidance, which should be interpreted as flexible guidelines, is intended to inform an inspector's evaluation of the timeliness of the corrective actions for an identified WEAKNESS. The following guidance is to be used when assessing timeliness of corrective actions:
- (1) An RSPS-related WEAKNESS is typically corrected within 90 days of identification.
 - (2) A PS-related WEAKNESS is typically corrected within 180 days of identification.
 - (3) Resolution of other WEAKNESSES is expected within the next evaluated biennial exercise cycle because of the lower risk significance of these efforts and expected lower priority of such efforts.
 - (4) EP-related corrective action systems may track enhancement suggestions that result from the drill program. These enhancement suggestions often add value to the EP program, but are not required and do not address WEAKNESSES. There is no NRC timeliness expectation for resolution of enhancement suggestions.

6.2 Considerations

- (a) If a WEAKNESS is corrected in less time than that suggested in Section 6.1.(b), above, further review of the timeliness of the corrective actions by the inspector is probably not necessary. If a WEAKNESS is not corrected within the time periods suggested in Section 6.1.(b), the inspector should review:
- (1) the licensee's schedule and prioritization rationale
 - (2) reasons for the delay

- (3) any actions being taken to accelerate completion (if any)
 - (4) the effect of any immediate corrective actions that may have already been taken
- (b) If the inspector finds that the licensee is not making a best effort to complete the corrective actions, or that the delay could potentially impact the effectiveness of the E-plan to protect public health and safety, an FTC with PS 10 CFR 50.47(b)(14) FINDING should be pursued.

6.3 Effectiveness of Corrective Actions

- (a) Although a licensee may have properly identified a WEAKNESS, entered it into the licensee's corrective action program, and implemented necessary corrective actions to prevent reoccurrence, the associated ERO performance may recur in subsequent drills and exercises. It is important to note that a single repetition of a WEAKNESS in a subsequent drill or exercise may not indicate a failure to correct a WEAKNESS. Conversely, success in a drill or exercise (e.g., by one well-drilled team) might not be a valid demonstration that a WEAKNESS has been corrected.
- (b) When a previously identified WEAKNESS in a particular PS recurs in a subsequent drill or exercise, the inspector should do the following:
- (1) Review the specific corrective actions identified.
 - (2) Verify that the corrective actions are complete.
 - (3) Review associated root cause and extent of condition analyses, if performed.
 - (4) Consider similar occurrences during responses to actual events, drills, exercises, and training evolutions.
 - (5) Consider the status of relevant PIs; for the DEP PI, review the performance for the individual RSPS as well as that for the overall PI (good performance in two RSPS can mask poor performance in the third).
 - (6) Review corrective actions, self-assessment, and inspection records for an entire inspection cycle with emphasis on similar performance deficiencies.
- (c) Assessment of the effectiveness of the corrective actions should be based on the complete history of the issue. The intent of the reviews suggested above is to uncover a pattern of recurring performance deficiencies in similar activities as a means to identify ineffective corrective actions.
- (d) A specific root cause of a WEAKNESS in a particular RSPS may have been corrected, and yet another WEAKNESS in the same RSPS but with a different

root cause may be observed in a subsequent drill or exercise. A trend in such repetitive WEAKNESSES, even though each may have a different root cause, could indicate that the root cause and extent of cause analyses may have been ineffective such that an unidentified (and uncorrected) root cause still exists. Accordingly, the WEAKNESS is uncorrected and a failure to correct a WEAKNESS needs to be considered as provided for in this section. In addition, a trend of repetitive WEAKNESSES may indicate the need to perform a root cause analysis of the trend.

- (e) If corrective actions are aggressive and appear to be complete but not yet fully effective, consideration may be given to allow more time for performance improvement (future drills should show such improvement).

7.0 Treatment of Traditional Enforcement Violations Specific to the Emergency Preparedness Cornerstone

7.1 Introduction

- (a) This section of the EP SDP provides guidance on identifying whether certain EP Cornerstone violations are to be treated under traditional enforcement or under the ROP. This section does not supersede the information in MC0612, but does clarify the generic information in terms of typical violations under the EP Cornerstone.
- (b) As provided in MC0612 and the NRC Enforcement Policy, certain violations are to be addressed in accordance with Section IV of the NRC Enforcement Policy (i.e., traditional enforcement). A traditional enforcement violation that is also a FINDING will be assigned a significance color in accordance with the EP SDP, as well as a traditional enforcement severity level. The NRC Enforcement Policy identifies four thresholds, the following two of which will be discussed in the context of the EP Cornerstone in this section of the EP SDP.
 - (1) a violation that has actual safety consequences (e.g., overexposures, actual releases greater than the standards in 10 CFR Part 20, “Standards for Protection against Radiation”)
 - (2) a violation that potentially impedes NRC’s ability to oversee a licensee’s performance

7.2 Violations with Actual Consequences

- (a) The Enforcement Policy provides the following example:

Violations during an actual General Emergency that prevents offsite response organizations from implementing protective actions, under their emergency plans, to protect public health and safety....¹²

- (b) Inspectors must evaluate all violations identified during an actual General Emergency against this threshold. Relevant violations could include failures to properly classify the event and declare a General Emergency, failures to notify the OROs of declaration, and failures to provide an adequate protective action recommendation to the OROs, to the extent that the above threshold is exceeded.

¹² The objective of EP is to provide for reductions of the consequences of a radiological emergency through the implementation of protective actions. Accordingly, only if the licensee’s FINDING precluded adequate protective measures can there be actual consequences to the public in the form of increased radiation exposures that might have been prevented had the appropriate protective action been recommended in a timely manner. An ORO’s failure to act on the licensee’s recommendation is not under the control of the licensee and is not, therefore, a FINDING.

- (1) A violation that reaches this threshold is addressed as a traditional enforcement violation, with a significance color as provided in Section 4.0 of the EP SDP.
- (2) A violation that does not reach this threshold is to be addressed as an FTI, as provided in [Section 4.0](#) of the EP SDP.

**Table 7.2-1
Actual Consequence Examples**

Reactor Oversight Process Examples	Traditional Enforcement Examples
During an actual General Emergency, licensee fails to dispatch field monitoring teams.	During an actual General Emergency, licensee makes either an inadequate PAR or delayed recommendation to the OROs.

7.3 Violations That Impeded the NRC’s Oversight Capability

Two categories of EP Cornerstone violations potentially fall within this threshold. The first includes violations related to licensee failures to obtain prior NRC approval for E-plan changes that reduce the effectiveness of the E-plan. The second includes violations related to licensee failures to make required notifications to the NRC.

- (a) The NRC regulations at 10 CFR 50.54(q)(3) allow a licensee to make changes to its E-plan without NRC approval only if the changes do not reduce the effectiveness of the plan and the plan, as changed, continues to meet the requirements in Appendix E to 10 CFR Part 50 and, for power reactor licensees, the PS of 10 CFR 50.47(b). A licensee’s failure to obtain NRC approval when required deprives the NRC of its ability to perform its regulatory oversight function and is to be processed as a violation of 10 CFR 50.54(q)(3) under traditional enforcement.
- (b) A failure to obtain prior approval occurs only if it had been the licensee’s intent to make a change to the approved E-plan and that the change was either (1) not evaluated for its impact on the effectiveness of the E-plan, (2) the evaluation was deficient, or (3) application was not made for prior approval where required.
- (c) There is often confusion regarding 10 CFR 50.54(q)(2) and 10 CFR 50.54(q)(3) because both reference “effectiveness.” The former requires that a licensee follow and maintain the effectiveness of an E-plan that meets the requirements in Appendix E to 10 CFR Part 50 and, for power reactor licensees, the PS of 10 CFR 50.47(b). A licensee’s failure to maintain the effectiveness of the plan is an FTC and treated under the ROP. For example, a licensee may fail to do the following:
 - (1) take timely and adequate COMPENSATORY MEASURES when an instrument system relied upon in the E-plan is out of service

- (2) perform periodic checks on communication systems or perform inventories on emergency kits as required by the E-plan
 - (3) perform training as required by the E-plan
- (d) In all of the above examples, the E-plan was adequate as written, but the licensee failed to follow or maintain the plan. Although the E-plan effectiveness may have been reduced by these failures, the E-plan had not been changed. Since no change was made to the E-plan, there can be no violation of 10 CFR 50.54(q)(3) and processing under traditional enforcement is not warranted (absent willfulness). However, if the licensee were to have implemented a change to the E-plan to compensate for the noncompliant condition and if that change resulted in a reduction in effectiveness, a violation of 10 CFR 50.54(q)(3) would need to be considered under traditional enforcement.

**Table 7.3-1
Improper E-Plan Change Examples**

Reactor Oversight Process Examples	Traditional Enforcement Examples
Noncompliance with 10 CFR 50.54(q)(2).	Noncompliance with 10 CFR 50.54(q)(3).
Seismic instrumentation relied upon in the EAL scheme was retired invalidating an EAL. No compensatory changes made to E-plan.	Licensee changed EAL scheme to use alternative method of assessing a seismic event that could not be performed 24/7, resulting in a reduction in effectiveness. Licensee did not request NRC approval.
Licensee incorrectly implemented a revised EAL threshold that had been correct in the 10 CFR 50.54(q) analysis that had approved the change.	Licensee implemented a revised EAL threshold for which the 10 CFR 50.54(q) evaluation did not recognize that the change would reduce the effectiveness of the E-plan. Licensee did not request NRC approval.
Offsite volunteer fire company identified in the E-plan for onsite response disbanded. No compensatory changes made to E-plan.	Offsite volunteer fire company identified in the E-plan for onsite response disbanded. Licensee changed the E-plan to refer to another fire company having a substantially longer response time, resulting in a reduction in effectiveness. Licensee did not request NRC approval.

- (e) NRC regulations at 10 CFR 50.47(b)(5) require that procedures be established for notification, by the licensee, of State and local OROs. Section IV.D of Appendix E to 10 CFR Part 50 requires that there be administrative and physical means for notifying local, State, and Federal¹³ officials and agencies and that the licensee have the capability to notify responsible State and local governments within 15 minutes after declaring an emergency. A licensee who fails to make notifications during an actual emergency does not comply with the 10 CFR 50.54(q)(2) provision that the licensee follow its E-plan. In the absence

¹³ Since 10 CFR 50.72 contains all of the NRC notification requirements for operating power reactors, this use of "Federal" is to be taken as Federal agencies other than the NRC that the licensee notifies as provided in the E-plan (e.g., U.S. Environmental Protection Agency, U.S. Department of Homeland Security, a military base located within the EPZ).

of willfulness or actual consequences, such a violation is a PD and is processed as a FTI.

- (f) NRC regulations at 10 CFR 50.72 require licensees to make reports of certain conditions and events, some of which could be related to emergency preparedness or emergency response. The NRC Enforcement Policy provides that a licensee’s failure to make a required report or notification, which actually impedes or influences regulatory action, is to be treated under traditional enforcement if it is significant to safety or security.
- (g) NUREG-1022, “Event Reporting Guidelines: 10 CFR 50.72 and 50.73,” provides guidance on making after-the-fact reports for missed emergency classifications. The guidance provides that an after-the-fact declaration is not necessary and that a 1-hour report of the discovery of the undeclared or misclassified event provides an acceptable alternative. A licensee’s failure to make such a report would be treated as a violation of 10 CFR 50.72(a)(1)(i) under traditional enforcement.¹⁴

**Table 7.3-2
Failure to Notify Examples**

Reactor Oversight Process Examples	Traditional Enforcement Examples
Licensee fails to make an emergency notification to one or more State or local OROs as required by Section IV.D of Appendix E to 10 CFR Part 50.	Licensee fails to make a report of an emergency declaration to the NRC, as required by 10 CFR 50.72.
Licensee fails to maintain the readiness of the Emergency Response Data System (ERDS).	Licensee fails to activate the ERDS within 1 hour after declaring an Alert or higher emergency.
Licensee’s E-plan does not provide for staffing of the emergency notification system (ENS) or health physics network (HPN) upon request.	Licensee fails to maintain an open, continuous communication channel with the NRC Operations Center when requested.

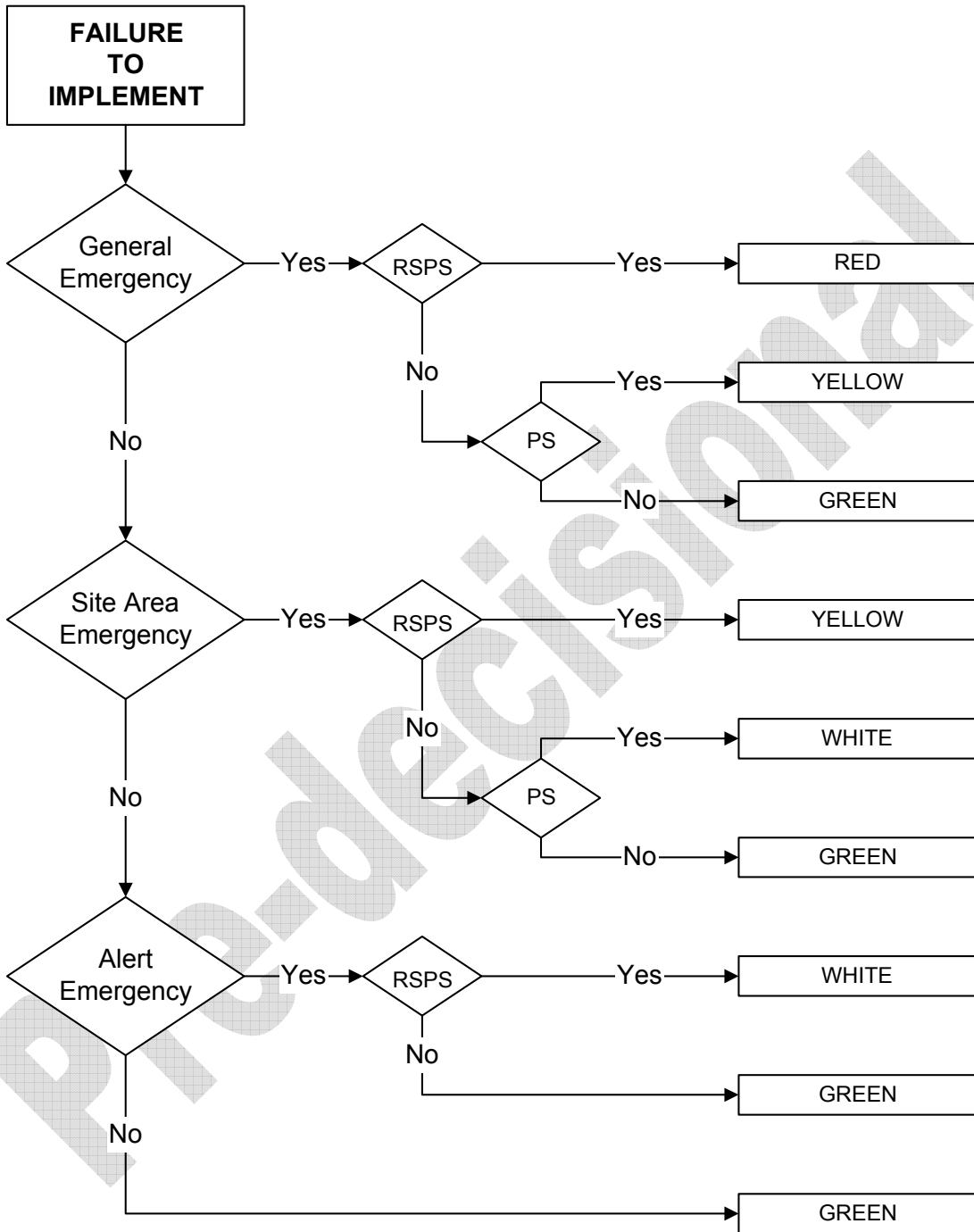
¹³ Although some licensees will notify State or local OROs of a missed classification, there is no regulatory requirement to do so unless the licensee declared the emergency (Section IV.D of Appendix E to 10 CFR Part 50).

Intentionally Blank

Predecisional

Attachment 1

FAILURE TO IMPLEMENT (ACTUAL EVENT) SIGNIFICANCE LOGIC

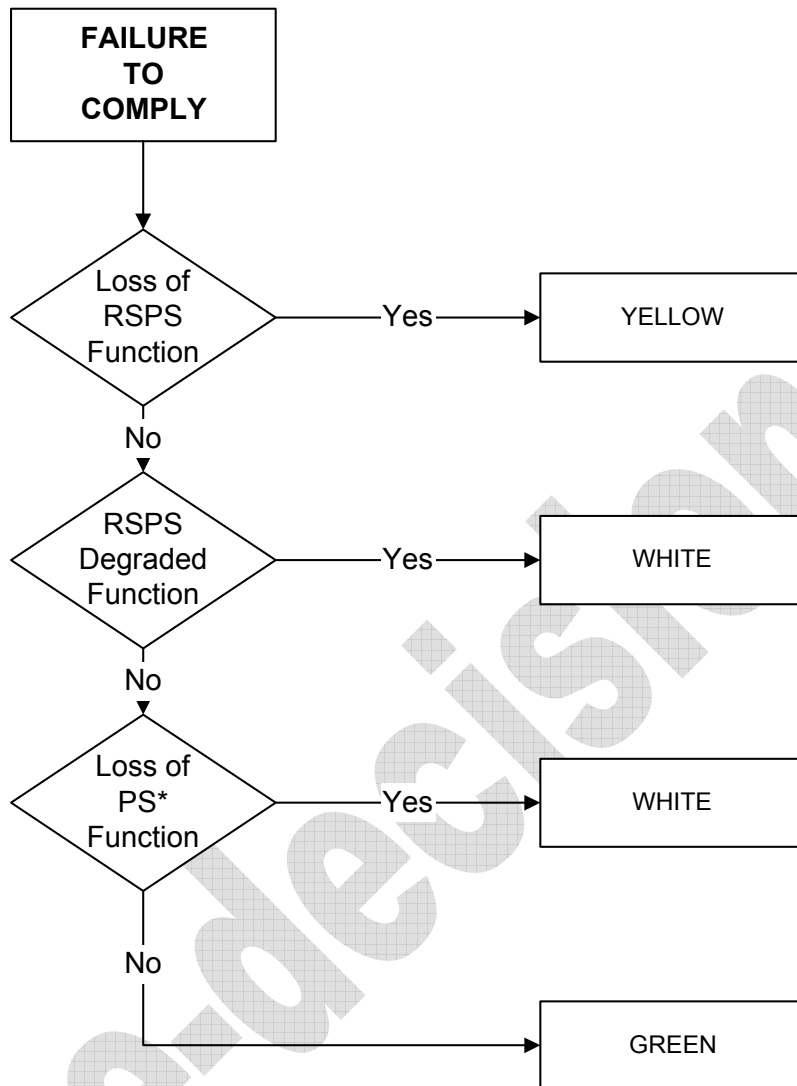


FAILURE TO IMPLEMENT: FAILURE TO COMPLY with a REGULATORY REQUIREMENT during an actual event in which the failure precluded effective implementation of PROGRAM ELEMENTS.

RSPS: Risk Significant Planning Standard; PS: Planning Standard

Attachment 2

FAILURE TO COMPLY SIGNIFICANCE LOGIC



FAILURE TO COMPLY: A program is noncompliant with a REGULATORY FUNCTION.

LOSS OF RSPS FUNCTION: PROGRAM ELEMENTS are not adequate, not compliant with the PLANNING STANDARDS, or otherwise not functional to such an extent that the RISK SIGNIFICANT PLANNING STANDARD FUNCTION is not available for emergency response.

DEGRADATION OF THE RSPS FUNCTION: PROGRAM ELEMENTS are not adequate or not compliant, but the RISK SIGNIFICANT PLANNING STANDARD FUNCTION, although degraded is available for emergency response.

LOSS OF PLANNING STANDARD FUNCTION: PROGRAM ELEMENTS are not adequate, not compliant with the PLANNING STANDARDS, or otherwise not functional to such an extent that the PLANNING STANDARD FUNCTION is not available for emergency response.

*RSPS functions are a subset of the PS functions. Thus, a RSPS function that is not loss or degraded would be Green.

Attachment 3

Revision History For IMC 0609 Appendix B

Commitment Tracking Number	Issue Date/ Change Notice	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
n/a	04/21/00 CN-00-07	Initial Issue	n/a	n/a	n/a
n/a	12/29/00 CN-00-30	EP SDP has been revised to include guidance for implementing EP SDP, which was not included in the initial issuance of this appendix. Revisions to the guidance was made based on regional comments.	n/a	n/a	n/a
n/a	03/06/03 CN-03-07	EP SDP has been revised to incorporate lessons-learned and to provide a white path for the risk significant planning standards. This revision also more closely aligns the EP cornerstone with the other cornerstones.	n/a	n/a	n/a
Above entries re-created in 2011 from the earlier change notices as this revision history was added for the 2012 revision					
n/a	XX/XX/XX CN xx-xxx	A complete re-write of the EP SDP initiated to address (1) new EP rule-making, (2) incorporate lessons-learned, (3) address use of EP SDP for assessing significance for traditional enforcement violations, (4) incorporate regional comments, (5) implement a new assessment protocol for §50.47(b)(4) findings, and (6) editorial reformatting to improve usability,	Yes	November 8, 2011 via VTC. All regional EP inspectors participated	ML112991114