

NRC INSPECTION MANUAL

CNRI/DOCP/RAB

INSPECTION MANUAL CHAPTER 0609 APPENDIX B

EMERGENCY PREPAREDNESS
SIGNIFICANCE DETERMINATION PROCESS

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0609B-01 INTRODUCTION

The U.S. Nuclear Regulatory Commission's (NRC's) Emergency Preparedness Significance Determination Process (EP SDP) described in this appendix utilizes **qualitative** risk-informed analyses to estimate the **safety** 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.

0609B-02 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, **prepared and maintained by** the licensee, that **identify** and **describe the licensee's** methods for maintaining emergency preparedness and responding to emergencies. **An emergency plan includes the plan as originally approved by the NRC and all subsequent changes made by the licensee with, and without, prior NRC review and approval in accordance with 10 CFR 50.90 and 50.54(q).**
- 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 on-shift staff and the augmentation staff in the designated licensee emergency response facilities.
- c. **PLANNING STANDARDS (PS)** (See Section 03.02, "Planning Standards, Risk, and Defense-in-Depth," for more background): One of the 16 standards delineated in 10 CFR 50.47(b) that onsite and offsite emergency plans must meet for the NRC to find reasonable assurance that adequate protective measures can and will be taken. Corresponding sections of Appendix E to 10 CFR Part 50 contain additional requirements applicable to licensees that are associated with these planning standards. To ensure that appropriate focus is maintained on the PS that have more impact on the development, and notification, of timely, accurate, and effective protection action recommendations (PARs) to OROs, they have been broken down into risk significant PS and non-risk significant PS.
 1. **RISK-SIGNIFICANT PLANNING STANDARDS (RSPS)**: The four RSPS are (b)(4) event classification, (b)(5) public notification, (b)(9) dose assessment, and (b)(10) offsite protective actions. Planning standards for (b)(2) adequate staffing and (b)(8) emergency response facilities have a direct relationship with the effective implementation of RSPS functions and of the site-specific emergency plan,

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.

respectively. Accordingly, these two planning standards are considered to be risk-significant for the purposes of this procedure. Note that the onsite protective actions part of (b)(10) is not considered to be risk significant.

2. **NON-RISK-SIGNIFICANT PLANNING STANDARDS (NON-RSPS):** The ten non-RSPS are: (b)(1) emergency response responsibility, (b)(3) emergency response support and resources, (b)(6) emergency communications, (b)(7) emergency public information, (b)(11) emergency radiological exposure control, (b)(12) emergency medical support, (b)(13) recovery and reentry planning, (b)(14) drill and exercise program, (b)(15) emergency responder training, and (b)(16) emergency plan maintenance.
 3. **Emergency response organization (ERO) staffing.** This includes the development of a staffing plan for continuous staffing of an on-shift ERO, timely augmentation of response capabilities, and documentation of all applicable offsite response activities and support. [10 CFR 50.47(b)(2) and Appendix E to 10 CFR Part 50 sections IV.A C, and E]
 4. **Emergency response facilities (ERF):** This includes ensuring that adequate ERFs and equipment to support the emergency response are provided and maintained. [10 CFR 50.47(b)(8) and Appendix E to 10 CFR Part 50 section IV.E]
- d. **EP REQUIREMENT:** Any requirement within the purview of the EP Cornerstone, including the PS, Appendix E to 10 CFR Part 50, 10 CFR 50.54(q), 10 CFR 50.54(t), the E-plan, Commission orders, other commitments, and licensee self-imposed requirements necessary for demonstrating compliance with the PS and 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. **PLANNING STANDARD FUNCTION (PSF):** A capability or resource necessary to prepare for, and respond to, a radiological emergency, as required by Section IV of Appendix E to 10 CFR Part 50 and the planning standards in 10 CFR 50.47(b) for nuclear power reactors. See 10 CFR 50.54(q)(1)(iii) for more information. PSFs are identified for assessing the significance of a finding that involves noncompliance with a PS. These PSFs are paraphrases of the planning standards in terms of the significant functions that need to be accomplished, or the capabilities that need to be in place, to maintain the effectiveness of the emergency plan and the emergency response capability. Within the emergency preparedness cornerstone, the significance of findings depends on whether the planning standards cannot be accomplished (i.e., LOSS OF PLANNING STANDARD FUNCTION) or can be accomplished only in a degraded manner (i.e., DEGRADED PLANNING STANDARD FUNCTION) with greater significance accorded to findings associated with certain planning standards deemed to have greater public safety significance. PSF is synonymous with EMERGENCY PLANNING FUNCTION (EPF) as used in Regulatory Guide (RG) 1.219.
- f. **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.

- g. FAILURE TO COMPLY (FTC): A finding that an EP program is noncompliant with an EP REQUIREMENT. An FTC is associated with preparedness issues, whereas a FAILURE TO IMPLEMENT (FTI) is associated with response issues. Attachment 2 illustrates the significance determination logic for an FTC.
- h. 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.
- i. LOSS OF RSPS or PS FUNCTION: An FTC finding that one or more PE is not adequate, not compliant with the RSPS or PS, or otherwise not functional to such an extent that the RSPS or PS FUNCTION would not be accomplished if an actual radiological emergency were to occur. One or more of the following reasons may apply:
 1. Certain E-plan commitments are not met.
 2. The E-plan is less than adequate.
 3. Implementing procedures are not effective or cannot be implemented as approved.
 4. ERO personnel are not available or capable of implementing the PE.
 5. The EP program design is not fully adequate.
 6. EP equipment or facilities are not available or capable of implementing the PE.

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

- j. DEGRADATION OF RSPS or PS FUNCTION: An FTC finding that one or more PE is not adequate or not compliant with the RSPS or PS, but reasonable assurance exists that the RSPS or PS FUNCTION, although degraded, would be accomplished if an actual radiological emergency were to occur. One or more of the following reasons may apply:
 1. Certain E-plan commitments are not met.
 2. The E-plan is less than adequate.
 3. Implementing procedures execute the EPlan in a less effective manner than approved. For instance, an EPlan element may still be implemented but in an untimely (i.e., delayed) manner. The impact of this delay on the ability to develop an accurate and timely PAR is the primary distinction between a degraded function and a loss of function.
 4. The EP program design is not fully adequate.
- k. 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 performance deficiency (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).
- l. 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.
- m. 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, and,
 3. a subset of a “full participation exercise,” as defined in Appendix E to 10 CFR Part 50.
- n. 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.
- o. TIME OF DISCOVERY: The point in time when the licensee “knew or should have known” of a condition. See Section 5.02.f of this appendix for further discussion.
- p. MITIGATING FACTORS (RISK INFORMING): 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 5.02.b of this appendix for further clarification.
- q. 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. COMPENSATORY MEASURES must have corresponding effectiveness review determinations (e.g., does the E-plan continue to be effective with the COMPENSATORY MEASURE in place) in accordance with 10 CFR 50.54(q) to support the interim action. Action(s) of a longer duration, or of a permanent nature, is considered a CORRECTIVE MEASURE and is processed in accordance with 10 CFR 50.54(q). See Section 5.02.h of this appendix for further clarification.

For example, action(s) taken when equipment needed for an EAL is out of service while waiting for parts is considered to be a COMPENSATORY MEASURE. Action(s) taken when equipment needed for an EAL no longer works adequately to support the EAL (i.e., the resolution is inadequate, equipment is obsolete, etc.) is considered to be a CORRECTIVE MEASURE. See Section 5.02.h of this appendix for further clarification.

- r. DRILL: A coordinated, supervised activity usually employed to validate a specific operation or function in a single agency or organization. Drills are commonly used to provide training on new equipment, develop or validate new policies or procedures, or practice and maintain current skills.
- s. EXERCISE: An instrument to train for, assess, practice, and improve performance in prevention, protection, mitigation, response, and recovery capabilities. Exercises can be used for testing and validating policies, plans, procedures, training, equipment, and interagency agreements; clarifying and training personnel in roles and responsibilities; improving interagency coordination and communications; improving individual performance; identifying gaps in resources; and identifying opportunities for improvement.
- t. ANNUAL: Every calendar year, except in cases relevant to 10 CFR 50.54(t) where annual means 365 days.
- u. CORRECTIVE ACTION: A concrete, actionable step that is intended to resolve EP program gaps and shortcomings experienced in drills, exercises, or actual events.
- v. TIMELY (TIMELY MANNER): Performing appropriate actions with a sense of urgency and without undue delay.

ABBREVIATIONS AND ACRONYMS

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 (DEP) performance indicator
EAL	emergency action level
EOF	emergency operations facility
EP	emergency preparedness/emergency planning
EP SDP	emergency preparedness significance determination process
EPIP	EPIP—emergency plan implementing procedure
EPZ	EPZ—emergency planning zone
ERF	ERF—emergency response facility
FEMA	FEMA—Federal Emergency Management Agency
IC	initiating condition
JIC	joint information center
KI	potassium iodide
OSC	onsite/operations support center
PAR	protective action recommendation
PD	performance deficiency (See IMC 0612 for definition)
ROP	reactor oversight process
SDP	significance determination process
TSC	technical support center

0609B-03 ENTRY CONDITIONS AND GENERAL INSTRUCTIONS

03.01 Background

The significance of findings made under the EP Cornerstone are based on the performance deficiency's (PD) level of actual or potential impact on public health and safety and/or its impact on the ability to implement a PS with actual or potential impact on public health and safety, which includes the consideration of all mitigating factors (risk-informing) relevant to the PD.

Attachment 1 provides a significance logic diagram for an FTI, and Attachment 2 provides a significance logic diagram for an FTC.

03.02 Planning Standards, Risk, and Defense-in-Depth

- a. The use of the term 'risk' within the EP program is based on a different context than that used in other programs and is not intended to imply that any PS is more, or less, important to the effectiveness of the emergency plan. Public radiological risk from nuclear plants is the potential for health and environmental harm from radioactive material released during an accident, while nuclear plant risk is the overall risk of such accidents, which is kept low through multiple safety barriers, trained staff, and redundant systems. The risk to the public is minimized through these designs, but the potential consequences include radioactive contamination of the environment and potential long-term health effects like cancer for nearby populations in the event of a major accident. In other words, nuclear plant risk refers to the potential for an accident to happen at the plant itself while public radiological risk refers to the potential impact on the public's health and the environment if an accident with a radioactive release occurs. For EP, the use of the term is based upon public radiological risk.
- b. The NRC policy statement "Safety Goals for the Operation of Nuclear Power Plants," (51 FR 30032) states, "...emergency response capabilities are mandated to provide additional defense-in-depth protection to the surrounding population." EP and many other elements of reactor safety (e.g., remote siting and containment) are implemented as a matter of prudence rather than in response to a quantitative analysis of accident probabilities. Accordingly, the EP SDP is risk-informed, rather than risk-based, and does not involve numerical estimates of risk metrics such as core damage frequency (CDF) or large early release fraction (LERF). The planning basis for EP is not predicated on a single accident sequence or even a limited number of sequences, but rather on a spectrum of accidents that differ in release characteristics, timing, and potential consequences. A low probability sequence may have the higher consequences, while a higher probability sequence could have lower consequences. Consequently, the probability of a reactor accident requiring implementation of the licensee's emergency plan has no relevance in determining the significance of EP findings. Colloquially, if the emergency plan is being activated in response to a radiological emergency, the event has occurred (i.e., probability = 1.0).
- c. Consistent with the current regulatory approach, the staff views the inclusion of emergency preparedness by reactor licensees as an essential element in NRC's "defense-in-depth" philosophy. Briefly stated, this philosophy (1) requires high quality in the design, construction, and operation of nuclear plants to reduce the likelihood of malfunctions in the first instance; (2) recognizes that equipment can fail and operators can make mistakes, thus requiring safety systems to reduce the chances that malfunctions will lead to accidents that release fission products from the fuel; and (3) recognizes that, in spite of these precautions, serious fuel damage accidents can happen, thus requiring containment structures and other safety features to prevent the release of fission products off site. The added feature of emergency planning to the defense-in depth philosophy provides that, even in the unlikely event of an offsite fission product release, there is reasonable assurance that emergency protective actions can be taken to protect the population around nuclear power plants.
- d. The planning standards establish the minimum requirements that onsite and offsite emergency plans must meet. The language of the planning standards is intentionally broad because the planning standards are applicable to both the licensee for the onsite emergency plan and the State and local authorities (also called offsite response

organizations (OROs)) for offsite emergency plans. The broad language also offers flexibility to address plant-specific, EPZ-specific, and jurisdictional-specific planning considerations. For example, individual facilities may have had to supply capabilities, methods, and resources different from those at another facility to compensate for facility-specific planning or response constraints or vulnerabilities in demonstrating compliance with the planning standards. These commitments are documented and approved in the emergency plan. To ensure that appropriate focus is maintained on the PS that have more impact on the development, and notification, of timely, accurate, and effective protection action recommendations (PARs) to OROs, they have been broken down into risk significant PS and non-risk significant PS. However, each PS is required to support an effective emergency plan.

1. The EP Cornerstone of the ROP will typically consider RSPS issues identified during inspections, or self-identified by licensees as part of the site oversight process, for elevated (greater-than-green) (GTG)) significance, if applicable, as these RSPS have a more direct impact on the corresponding EP functions. However, issues resulting from actual events will typically consider all the PS for elevated significance if necessary.
2. The need to differentiate between White findings and Green, or less significant, findings, is not needed for non-RSPS as the associated EP functions do not have a direct impact on public risk. If a non-RSPS function leads to a significant PD with an RSPS function, the GTG consideration will be based on the RSPS function, not the non-RSPS function. Note that reasonable assurance is still maintained with the White significance.

03.03 Entry Conditions

- a. An NRC inspector enters this EP SDP for potential findings related to EP REQUIREMENTS.
- b. Note that the EP Cornerstone of the ROP provides oversight of licensee emergency plan implementation and maintenance. Licensee emergency plans also consist of a compilation of other licensee programs (i.e., operations, maintenance, radiation protection, security, etc.) therefore PDs identified for EP may also be applicable in other ROP Cornerstones, and vice-versa. Inspectors should be aware of applicable potential issues identified in other ROP Cornerstones if they affect the emergency plan and should inform other program inspectors of potential EP PDs to consider the issue within their ROP Cornerstone. Coordination and communication between regional EP inspectors and their applicable program counterparts are a necessary component of the EP ROP to ensure that all potential PDs are risk-informed and performance-based.

03.04 General Instructions

- a. All PDs shall consider all relevant mitigating factors (risk-informing) prior to determining the significance. All potential GTG findings shall be discussed with the Office of the Chief Nuclear Reactor Inspector, Division of Oversight and Compliance Programs, Reactor Assessment Branch (CNRI/DOCP/RAB).
- b. Any PD related to an EP REQUIREMENT will be assessed for significance in accordance with this appendix, including PDs associated with violations being treated under traditional enforcement (TE), if any.

- c. If the PDs are related to EP REQUIREMENTS that are not associated with a PS (i.e., 10 CFR 50.54(t) and requirements in Appendix E to 10 CFR Part 50 that do not support a PS² and are not addressed in 05.03.01 through 05.03.16), then assign minor significance.
- d. Identify the PSF(s) affected by the finding and assess the significance of each PD.
 - 1. A PD 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.
- e. Assess the significance of each issue of concern associated with a finding (e.g., multiple contributing issues).
 - 1. If the finding involved an actual radiological emergency (i.e., FTI), go to Section 04.03 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 05.03 of this appendix to assess the significance of the finding.

0609B-04 ACTUAL EVENT IMPLEMENTATION ISSUE (FAILURE TO IMPLEMENT)

04.01 Background

This branch of the EP SDP is used to assess the significance of a finding 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 typically associated with an emergency response issue, rather than an emergency preparedness issue.

04.02 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:

² Sections 05.03.1 through 05.03.16 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).

1. An operations support center (OSC) team was not fully briefed and had to return for tools but the assigned task was successfully completed.
 2. Engineering efforts initially misdiagnosed the accident sequence, but the diagnosis was corrected by peer checking.
 3. 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.³
1. Although a failure to meet these timeliness requirements may be a failed opportunity under the Drill and Exercise Performance (DEP) Performance Indicator (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. **However, 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 05.03** 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:

³ 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 follow-up messages to the OROs and the public be established. Evaluation Criterion II.E.3 in NUREG-0654/FEMA-REP-1 states that the initial notification should contain information as to whether offsite protective measures may be necessary. Some licensees have included these criteria in their E-plans or implementing procedures.

1. Shift personnel concluded, based on an erroneous protection signal that a main steam line 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 steam line 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.

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 04.03** 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 on-shift 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 04.03** 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 **as soon as possible but** within 1 hour of identification.)

04.03 Significance Determination

- a. Identify the EP REQUIREMENT affected by the **performance deficiency**.
- b. Determine whether the **performance deficiency** is an FTI.
 1. If the **PD** 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 **Sections 5.1–5.16** of this appendix. Those examples, while applicable only to an FTC, may be useful in informing the FTI determination.
 3. A **PD** that did not rise to the level of an FTI should be identified to the licensee as an opportunity for improvement, and **should be screened as a minor PD**.

- c. Identify the emergency classification declared by the licensee and evaluate its appropriateness. If the classification was appropriate or under classified, proceed to **Step 04.03.e** below.
- d. If the licensee over classified the actual event, then assess the significance of the 10 CFR 50.47(b)(4) finding as follows and continue with **Step 04.03.f**:

Note: Consultation with CNRI/DOCP/RAB is required for any greater-than-green (GTG) finding. Consideration of all relevant mitigating factors shall be required for any GTG finding.

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 public⁴, then the significance level **may be** White.
 3. If public officials implemented an evacuation of the general **public**⁶, then the significance level **may be** 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 05.03** 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.

0609B-05 FAILURE TO COMPLY

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

⁴ 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), **consider** Green significance.

- b. Sections 05.03.01 through 05.03.16 of the appendix correspond respectively to PS 10 CFR 50.47(b)(1) through (b)(16). Each section does the following:
 - 1. Identifies the PS and the associated PSF(s).
 - 2. Identifies references to supporting requirements in Appendix E to 10 CFR Part 50 and the informing criteria of NUREG-0654/FEMA-REP-1.
 - 3. Provides examples of finding(s) corresponding to, as appropriate, LOSS OF RSPS [PS] FUNCTION, DEGRADED RSPS [PS] FUNCTION, and/or Green or minor PDs.
- c. The significance examples are neither all-inclusive nor exclusive; instead, the examples are intended to inform significance determinations and provide a starting point for the significance determination. 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. Additionally, consultation with CNRI/DOCP/RAB staff and other regional EP inspectors to gain additional insights on the proposed significance will help to ensure that the EP SDP is applied consistently.
- d. Findings associated with NON-RSPS (b)(2) or (b)(8) have the potential to impact the capability to implement an RSPS potentially resulting in a loss or degradation of an RSPS function(s). The following describes the method to assess the significance of these findings in conjunction with Attachments 2.1 and 2.2.
 - 1. A finding identified against PS (b)(2) or (b)(8) that impacts the implementation of a RSPS and causes one or more of the functions to be degraded may be assigned a White significance against PS (b)(2) or (b)(8) pending a review of all relevant mitigating factors.
 - 2. A finding identified against (b)(2) or (b)(8) that impacts the implementation of an RSPS and results in the loss of the capability to implement the RSPS, the impacted RSPS may be assigned a Yellow significance pending a review of all relevant mitigating factors.

05.02 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 is 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 was 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 05.02.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 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:
 1. The licensee no longer has the personnel on shift to evaluate a seismic reading used in the EAL scheme.
 2. The licensee's dose assessment capability no longer supports PAR development.
 3. 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.⁵

- 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. 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 and no COMPENSATORY MEASURES were implemented.” 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. However, “comparable” does not require the COMPENSATORY MEASURES to meet the same performance requirements as the primary method.

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 follow up 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.

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.
6. See **Section 05.03.05** 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.

05.03 Significance Determination

- a. If the PD is related to EP REQUIREMENTS that are not associated with a PSF (e.g., 10 CFR 50.54(q), 10 CFR 50.54(t), and requirements in Appendix E to 10 CFR Part 50 that do not support a PSF **not specifically addressed in 05.1 through 05.16**), it should **screen as a minor PD**.
- b. Identify the PSF(s)⁶ affected by the finding. A finding may affect two or more PSF and each should be assessed for significance.

⁶ Sections **05.03.01** through **05.03.16**, as applicable, of this EP SDP identify the requirements of Appendix E to 10 CFR Part 50 that support the PS of 10 CFR 50.47(b).

- 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. Identification of a PD of PS (b)(2) or (b)(8) will require an assessment of its impact on the capability to implement an RSPS function(s). Assess the PD of the PS (b)(2) or (b)(8) PSF into the RSPS FTC Significance Example Tables and determine which, if any, RSPS function(s) would be lost. Use Attachments 2.1 and 2.2 to assist in the significance assessment.
- e. Identification of a PD of PS (b)(14) will require an assessment of whether it impacts an RSPS function(s). Assess the FTC PD against Table 5.14-1 Significance Examples §50.47(b)(14) and determine which, if any, RSPS function(s) would be affected. Use Attachments 2.1 and 2.2 to assist in the significance assessment.
- f. **Document** the basis for the significance determination in the inspection report.

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

Additional Guidance: None

Significance Examples for §50.47(b)(1)

LOSS OF PS FUNCTION: Green 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. Minor PD:	An individual plant staffing change created an inability to assign responsibility on a continuous basis for greater than 48 hours.

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 on shift emergency response responsibilities are staffed and assigned.
2. Process for timely augmentation of on shift 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/FEMA-REP-1, Section II.A, and the licensee's approved E-plan

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 8, [ML24331A114], identifies key ERO members.

NSIR/DPR-ISG-01, "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>

Significance Examples for §50.47(b)(2)

PLANNING STANDARD FUNCTION(s)	Yellow Finding	LOSS OF PS FUNCTION White Finding	DEGRADED PS FUNCTION Green Finding
(b)(2)			
Process ensures that on shift emergency response responsibilities are staffed and assigned.	N/A	<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 on shift 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 on shift 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>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>
Process for timely augmentation of on shift staff is established and maintained.		Staffing augmentation processes are routinely not capable of ensuring timely augmentation of the on shift 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).	
			(b)(2)

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.2.a, b, c; IV.A.3; IV.A.9; and IV.C

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

Additional Guidance: None

Significance Examples for §50.47(b)(3)

PLANNING STANDARD FUNCTION(s)	LOSS OF PS FUNCTION Green Finding	DEGRADED PS FUNCTION Minor PD
(b)(3)		
Arrangements for requesting and using offsite assistance have been made.	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.	E–plan elements have degraded to the point that E–plan commitments for offsite assistance would no longer be met for support other than medical, fire, or law enforcement support, including assistance for response to hostile actions. 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.
State and local staff can be accommodated at the EOF in accordance with the E–plan.	The EOF has been changed in such a manner that it would no longer accommodate OROs in accordance with the E–plan.*	
	* Some E–plans accommodate OROs through means other than the physical presence of personnel in the EOF (e.g., video teleconferencing).	
		(b)(3)

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 FUNCTIONS

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.

Additional Guidance:

- NSIR/DPR-ISG-01, "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). These ineffective EAL examples do not apply to 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. 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. Other ICs generally may not be credited as MITIGATING FACTORS. One of the following **three** 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).
3. **The "potential loss" criteria for certain Fission Barrier Matrix EALs do not always have an alternative EAL in the classification scheme; therefore, credit cannot be given when assessing significance.**

The NRC expects declarations to be timely and accurate (See **Section 05.02** of this EP SDP). 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 **decision making** 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 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-01 for guidance on the timeliness criteria, including when the "clock" starts and stops for classification and declaration.

Significance Examples for §50.47(b)(4)

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	GREEN Finding
(b)(4)			
A standard scheme of emergency classification and action levels is in use.	An EAL has been rendered ineffective such that any General Emergency would not be declared for a particular off normal event.	<p>An EAL has been rendered ineffective such that any General Emergency would not be declared for a particular off normal event, but because of other EALs or ICs, an appropriate declaration could be made in a degraded manner (e.g., delayed).</p> <p>An EAL has been rendered ineffective such that any Site Area Emergency would not be declared for a particular off normal event.</p>	<p>An EAL has been rendered ineffective such that any General Emergency would not be declared for a particular off normal event, but because of other EALs or ICs, an appropriate declaration could be made in an accurate and timely manner.</p> <p>An EAL 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 or ICs, an appropriate declaration could be made in a degraded manner (e.g., delayed).</p> <p>An EAL 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>
		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>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>*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.</p>
Continued			(b)(4)

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	GREEN Finding
(b)(4) Continued			
A standard scheme of emergency classification and action levels is in use.		The EAL classification process* would result in an over classification 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.)	The EAL classification process* would result in an over-classification causing an unnecessary emergency declaration. Annual EAL review is not conducted with State and local governmental authorities.
		*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.	
			(b)(4)

Figure 5.4.1: Significance Determination for Ineffective EALs and Overclassification

EAL Deficiency	Classification Level	Impact of Deficient EAL	Finding	
EAL Issue	Ineffective EAL ²	General Emergency	Event would not be declared	Yellow
		General Emergency	Event would be declared in a degraded manner ¹	White
			Event would be declared in a timely and accurate manner ¹	Green
	Site Area Emergency	Event would not be declared	White	
		Event would be declared in a degraded manner ¹	Green	
		Event would be declared in a timely and accurate manner ¹	Minor	
	NOUE or Alert	Event would not be declared	Green	
		Event would be declared in a degraded manner ¹	Green	
		Event would be declared in a timely and accurate manner ¹	Minor	
	EAL Overclassification		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.

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 follow-up 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 FEMA REP Manual) 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 or the FEMA REP Manual.

Additional Guidance:

- IN 2024-02, "Impact on Licensee Emergency Plans from Changes Made by Offsite Response Organizations to Alert and Notification System," dated March 24, 2024.
- IN 2002-25, "Challenges to Licensee's Ability to Provide Prompt Public Notification and Information During an Emergency Preparedness Event," dated August 26, 2002
- IN 2005-06, "Failure to Maintain Alert and Notification System Tone Alert Radio Capability," dated March 30, 2005

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain finding(s). See Section 5.02.h. of this appendix for additional guidance.

The significance examples incorporate the concept of TIME OF DISCOVERY for consideration of significance. See Section 5.02.f of this appendix for additional guidance.

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. **CNRI/DOCP will coordinate with the Office of Nuclear Reactor Regulation/Division of Emergency Preparedness and Response (NRR/DEPR) staff to 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 CNRI/DOCP and NRR/DEPR 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 method can serve as a COMPENSATORY MEASURE only for determining significance. Primary ANS outages caused by planned maintenance and testing as identified in the FEMA-approved ANS Design Report are generally not FTCs.

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

Significance Examples for §50.47(b)(5)

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	Green Finding
(b)(5)			
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.	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.	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.	The notification process (e.g., procedures, systems, and resources) is not capable of providing follow-up notifications to ANY responsible OROs during an emergency.
Administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway	Loss of both the primary and backup methods of alerting the populations within 0–5 miles of the plant.	Loss of both the primary and backup methods of alerting the population within 5–10 miles of the plant. 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.)	Loss of the approved backup method of alerting the population within the plume exposure EPZ with the primary capability still available.
The public ANS meets the design requirements of FEMA-REP-10 (or FEMA REP manual) or complies with the FEMA approved ANS design report and supporting FEMA approval letter.	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).	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).	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. An individual siren has not been available for a continuous period of greater than 4 months with inadequate or delayed corrective actions.
Continued			(b)(5)

Significance Examples for §50.47(b)(5), cont.

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	Green Finding
(b)(5)			
The public ANS meets the design requirements of FEMA REP-10 (or FEMA REP Manual) or complies with the FEMA approved ANS design report and supporting FEMA approval letter.			<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>
			NOTE: Contact CNRI/DOCP/RAB to assist in obtaining FEMA evaluation of deviations from the ANS design report before citing a finding against one of these three examples.
			(b)(5)

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

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain finding(s). See Section 5.02.h. of this appendix for additional guidance.

The significance examples incorporate the concept of TIME OF DISCOVERY for consideration of significance. See Section 5.02.f of this appendix for additional guidance.

Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 8, [ML24331A114], identifies key ERO members.

Significance Examples for §50.47(b)(6)

PLANNING STANDARD FUNCTION(s)	LOSS OF PS FUNCTION Green Finding	DEGRADED PS FUNCTION Minor PD
(b)(6)		
<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>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 and no COMPENSATORY MEASURES were implemented.*</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) and no COMPENSATORY MEASURES were implemented.*</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 and no COMPENSATORY MEASURES were implemented.</p>	<p>Communications equipment for key ERO members in an emergency facility is degraded (e.g., many phones) at the TIME OF DISCOVERY and no COMPENSATORY MEASURES were implemented.*</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 and no COMPENSATORY MEASURES were implemented.*</p>
	<p>*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.</p>	
		(b)(6)

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

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain finding(s). See Section 05.02.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]

Significance Examples for §50.47(b)(7)

PLANNING STANDARD FUNCTION(s)	LOSS OF PS FUNCTION Green Finding	DEGRADED PS FUNCTION Minor PD
(b)(7)		
<p>EP information is made available to the public on a periodic basis within the plume exposure pathway EPZ.</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>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>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>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>*For some locations, signs and the like may be appropriate for disseminating public information.</p>	
<p>Coordinated dissemination of public information during emergencies is established.</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 knowledge-able 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>
		(b)(7)

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.E1–4, IV.E.8, IV.G

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

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain finding(s). See Section 05.02.h. of this appendix for additional guidance.

The significance examples incorporate the concept of TIME OF DISCOVERY for consideration of significance. See Section 05.02.f of this appendix for additional guidance.

The principal functional areas of emergency response are, as established in 10 CFR Part 50, Appendix E, §IV.F.2.b: management and coordination of emergency response, accident assessment, event classification, notification of offsite authorities, assessment of the onsite and offsite impact of radiological releases, protective action recommendation development, protective action decision making, plant system repair, and mitigative action implementation.

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>

The TSC, and the EOF in certain cases, have habitability requirements in NUREG-0696 that derive in part from the habitability requirements for the main control room. Although neither document is explicitly applicable to TSCs or EOFs, the following additional guidance may be useful in informing issues related to TSC and EOF habitability.

GL 2003-01, “Control Room Habitability,” dated June 12, 2003, <http://www.nrc.gov/reading-rm/doc-collections/gen-letters/2003/gl03001.pdf>

RIS 2006-04, “Experience With Implementation of Alternative Source Terms,” dated March 7, 2006, <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/2006/ri200604.pdf>

Significance Examples for §50.47(b)(8)

PLANNING STANDARD FUNCTION(s)	LOSS OF PS FUNCTION White Finding	DEGRADED PS FUNCTION Green Finding
(b)(8)		
Adequate facilities are maintained to support emergency response.	<p>The OSC, TSC, or EOF is not functional, to the extent that any principal functional area of emergency response assigned to the facility could not be performed, for a period of longer than 7 days from the TIME OF DISCOVERY and no COMPENSATORY MEASURES were implemented.*</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, and no COMPENSATORY MEASURES were implemented.*</p>	<p>The OSC, TSC, or EOF is not functional to the extent that any principal functional area of emergency response assigned to the facility could not be performed, for a period of longer than 24 hours from the TIME OF DISCOVERY, and no COMPENSATORY MEASURES were implemented.*</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, and no COMPENSATORY MEASURES were implemented.*</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>
	*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.	

Significance Examples for §50.47(b)(8), cont.

PLANNING STANDARD FUNCTION(s)	LOSS OF PS FUNCTION White Finding	DEGRADED PS FUNCTION Green Finding
(b)(8) Continued		
Adequate equipment is maintained to support emergency response.	<p style="text-align: center;">—</p> <p>Equipment necessary to implement the E–plan is not available or not functional, to the extent that any principal functional area of emergency response could not be performed, for a period of longer than 7 days from the TIME OF DISCOVERY, and no COMPENSATORY MEASURES were implemented. (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 style="text-align: center;">—</p> <p>A significant amount of equipment necessary to implement the E–plan is not available or functional to the extent that any principal functional area or emergency response could not be performed, and no COMPENSATORY MEASURES were implemented.</p>
		(b)(8)

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 FUNCTIONS

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

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain finding(s). See Section 05.02.h of this appendix for additional guidance.

The significance examples incorporate the concept of TIME OF DISCOVERY for consideration of significance. See Section 05.02.f 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 adequate estimates of **current and** 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 **as the relative magnitude of the error(s) may negatively affect an ECL determination, PAR declaration, or change over a given time period⁷. Key attributes for the determination of a potential PD include, but are not limited to, the following:**

- The instrumentation and/or equipment used for dose assessment modeling, which are typically also used in other areas of the emergency plan and other plant licensing basis documentation (LBD), are not being maintained in accordance with licensee or manufacturer procedure(s).
- Time-based energy corrections are not applied adequately to the model, or in some cases, within the instrumentation. Note that a PD exists if these time-based energy corrections are part of the model and part of the instrumentation package, i.e., done twice.
- A calculation related to the instrumentation has errors (note that this may require a parallel review for PS (b)(4)).

⁷ The "in-containment accident source term" will normally be a function of time and will involve consideration of fission products being released from the core into the containment as well as removal of fission products by plant features intended to do so (e.g., spray systems) or by natural removal processes.

- The projected dose assessment is incorrect and leads to an inaccurate PAR [also consider (b)(10)]. Note that a PD may exist regardless of the direction (conservative or non-conservative) the error had on the PAR.
- Procedures for dose assessment are not adequate to support adequate PAR development, up to and including manual dose calculations if required to be performed.
- Licensee developed dose assessments are significantly different than that done by OROs or by the NRC such that the licensee's PAR would be different than what would be developed from the ORO or NRC dose assessment.

These errors may be identified during an exercise when licensee results are compared to those performed by other entities, as a result of inspection (EP or RP), or licensee identified. The following conditions are generally under the licensee's control:

- Inadequate maintenance or engineering procedures and/or training leads to instrumentation (maintenance, calibration, or installation), or calculation, errors which in turn lead to dose assessment inaccuracies.
- Inadequate procedures and/or training may cause users to select processing options or make data entries that are not appropriate for the dose assessment being performed.
- Use of a dose assessment 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.

There are inherent uncertainties with dose assessment modeling due to fuel characteristics, containment action(s) to mitigate the possible or actual radiologic release, and the effects that real-time meteorology has on the release. However, the significance of the PD must be based upon the impact the PD has on the public. Therefore, if the PD does not change the ECL, or does not change the PAR, then the PD should be no greater than GREEN significance. However, if the PD could have led to an incorrect ECL or PAR, but the specific circumstances of the PD did not result in an incorrect ECL or PAR, the PD can still be considered to have GTG significance since this PS is a fundamental component of the overall ability of the emergency plan to adequately mitigate the consequences of the radiological release to the public. Discuss any PDs with CNRI/DOCP/RAB and the Reactor Inspection Branch (RIB) prior to determining significance. Also consider forwarding the PD information to regional RP inspectors for review via the RP Cornerstone of the ROP. Any resultant findings for the EP and/or RP cornerstones should be coordinated at the regional level, with input from the applicable EP and RP program owners, and be consistent between the regions.

Significance Examples for §50.47(b)(9)

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	Green Finding
(b)(9)			
Methods, systems, and equipment for assessment of radioactive releases are in use.	All equipment or systems necessary for dose assessments, including backup methods, are not functional for longer than 24 hours from the TIME OF DISCOVERY to the extent that the licensee has no capability, including backup methods, for immediate dose assessment.	All equipment or systems necessary for dose assessments, including backup methods, are not functional for longer than 24 hours from the TIME OF DISCOVERY and no COMPENSATORY MEASURES** were implemented, or corrective actions are inadequate.	Equipment or systems necessary for dose assessments, <u>not</u> including backup methods, are not functional for longer than 24 hours from the TIME OF DISCOVERY were implemented, or corrective actions are inadequate or unreasonably delayed.
<p>*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. Note that a delay in providing the correct ECL or PAR may not necessarily be considered a LOSS of RSPS function but rather a DEGRADED RSPS function, consult with CNRI for assistance in this determination.</p>	The dose projection process is incapable* of providing the appropriate ECL or PAR such that public protective actions would be negatively impacted (i.e., evacuation recommendation is not provided, or provided without the necessary projected radiological consequences (without this error) warranting such a recommendation).	The dose projection process is compromised* such that the determination of the appropriate ECL or PAR would be negatively impacted (i.e., evacuation recommendation is not provided or unreasonably delayed, or provided without the necessary projected radiological consequences (without this error) warranting such a recommendation. [Note that the public impact must show that the PD has a direct impact on public health and safety, i.e., given the exact same circumstances the PD would cause an evacuation recommendation when one was not needed (without the PD) or fails to result in a reasonably timely evacuation PAR when needed. Consult with CNRI for determination.]	The dose projection process is incapable* of providing accurate estimates of radioactive material releases to the environment or projected offsite doses beyond 10 miles but less than 50 miles.
<p>**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.</p>		The field monitoring functions of dose rate measurement and iodine presence determination are unavailable for more than 72 hours from the TIME OF DISCOVERY and no COMPENSATORY MEASURES** were implemented.	The field monitoring functions (not related to dose rate measurement or iodine presence determination, e.g., typically limited to environmental sampling activities), are unavailable for more than 72 hours from the TIME OF DISCOVERY, and no COMPENSATORY MEASURES** were implemented**.
			(b)(9)

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.

a. 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.

b. PS FUNCTIONS

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

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

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain finding(s). See Section 05.02.h of this appendix for additional guidance.

The significance examples incorporate the concept of TIME OF DISCOVERY for consideration of significance. See Section 05.02.f 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-01, “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

Significance Examples for §50.47(b)(10)

PLANNING STANDARD FUNCTION(s)	LOSS of RSPS FUNCTION Yellow Finding	DEGRADED RSPS FUNCTION White Finding	Green Finding
<p>(b)(10)</p> <p>RSPS</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>The PAR process* does not provide for timely initial and subsequent PARs that are in accordance with E-plan commitments or Federal guidance to the extent that necessary evacuation or sheltering PARs would not be issued to cover affected areas** within 5 miles of the site.</p> <p>The capability to implement protective actions within the owner controlled area (refer to IN 2002-14) is deficient 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 PAR process* does not provide for timely initial and subsequent PARs that are in accordance with E-plan commitments or Federal guidance to the extent that necessary evacuation or sheltering PARs would not be issued to cover affected areas** within 5 to 10 miles of the site.</p> <p>The capability to implement protective actions within the owner controlled area (refer to IN 2002-14) is deficient 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>The ETE analysis has not been updated as required.</p>	<p>The PAR process* does not provide for timely initial and subsequent PARs that are in accordance E-plan commitments or Federal guidance to the extent that necessary evacuation or sheltering PARs would not be issued to cover affected areas** beyond the plume exposure pathway EPZ.</p> <p>The PAR process* provides an initial or subsequent PAR that recommends members of the public be evacuated unnecessarily from areas where the PAGs are not predicted to be exceeded based upon the existing or projected plant conditions, meteorological conditions, or dose assessments.</p> <p>ETEs and updates to the ETEs were not provided to responsible OROs.</p> <p>The current public protective action strategies documented in EIPs are not consistent with the current ETE.</p>
<p>*Process" includes the licensee's PAR strategy, procedures, equipment, training, and ERO staffing necessary to develop a PAR.</p> <p>**Includes any area where the public may be present including areas over water.</p>			
Continued			(b)(10)

Significance Examples for §50.47(b)(10), cont

PLANNING STANDARD FUNCTION(s)	Yellow Finding	LOSS of PS FUNCTION Green Finding	DEGRADED PS FUNCTION Minor PD
(b)(10) Continued			
<p>PS</p> <p>A range of protective actions is available for emergency workers during emergencies, including hostile action events.</p> <p>KI is available for implementation as a PAR in those jurisdictions that choose to provide KI to the public.</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 for longer than 7 days from the TIME OF DISCOVERY, and no COMPENSATORY MEASURES were implemented.</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>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, and no COMPENSATORY MEASURES were implemented.</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 for longer than 24 hours from the TIME OF DISCOVERY, and no COMPENSATORY MEASURES were implemented.</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>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 emergency worker KI program is not maintained in accordance with regulations or E-plan commitments.</p> <p>The PAR process* does not provide for timely initial and subsequent PARs, which include KI distribution, that are in accordance with E-plan commitments or Federal guidance to the extent that necessary KI PARs would not be issued to cover affected populated areas** within the plume exposure pathway EPZ in those jurisdictions that opt to provide KI to the public.</p>
			(b)(10)

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 FUNCTIONS

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

Additional Guidance:

The significance examples provide for COMPENSATORY MEASURES as means of mitigating the significance of certain finding(s). See Section 05.02.h of this appendix for additional guidance.

Significance Examples for §50.47(b)(11)

<p>LOSS OF PS FUNCTION: Green 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>DEGRADATION OF PS FUNCTION Minor PD:</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>

PLANNING STANDARD

Arrangements are made for medical services for contaminated injured individuals.

PS FUNCTIONS

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

Additional Guidance: None

Significance Examples for §50.47(b)(12)

LOSS OF PS FUNCTION: Green Finding	No agreement exists with any qualified and properly equipped hospital or ambulance service for the care of contaminated, injured individuals.
DEGRADATION OF PS FUNCTION Minor PD:	An agreement for medical support with an organization has been allowed to lapse, but the organization remains willing to support the E-plan.

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

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).

Significance Examples for §50.47(b)(13)

LOSS OF PS FUNCTION: Green Finding	None
DEGRADATION OF PS FUNCTION Minor PD:	Recovery efforts are not preplanned. The recovery process is not exercised within an 8-year period.

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 (i.e., unannounced, radiological, medical, health physics, environmental, communication, etc.) is established and at the required frequencies.
2. All exercises, drills, and training provide performance opportunities to develop, maintain, and demonstrate key skills.
3. 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.
4. Identified weaknesses are corrected.
5. Exercise scenarios vary during an 8-year EP cycle per App E.IV.F.2.j.(iii).

RSPS FUNCTIONS (Only to the extent that an RSPS is impacted)

1. The critique process captures weaknesses associated with an RSPS that may impact the DEP-PI during an evaluated exercise.
2. The critique process captures weaknesses associated with an RSPS that may impact an RSPS function during an evaluated exercise.

Supporting Requirements: 10 CFR Part 50, Appendix E, Sections IV

Informing Criteria: NUREG-0654/FEMA-REP-1, RG 1.219, and the licensee's approved E-plan

Additional Guidance:

See guidance in [Section 06, GUIDANCE ON CORRECTIVE ACTIONS](#), 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 procedures⁸ is not a WEAKNESS.

Accordingly:

- a. 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.
- b. If identified by the inspector, the deficient PE is an NRC-identified PD and is evaluated as an FTC.
- c. 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 PD.

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:

- a. 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.
- b. 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).

⁸ 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.

Licensees perform CRITIQUES 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.

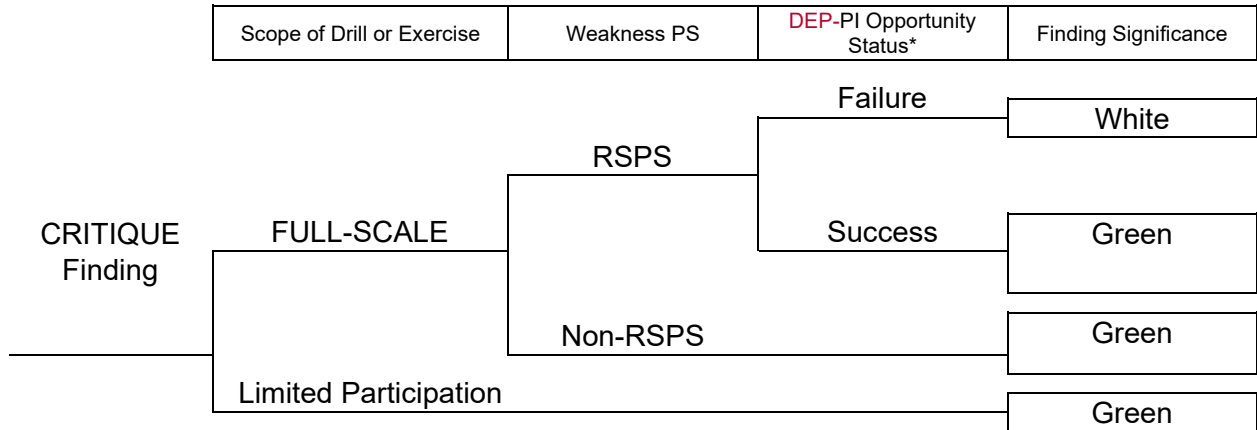
The disposition of CRITIQUE observations also varies among sites. In any given exercise, the licensee will evaluate numerous evaluator observations, identify which observations rise to the level of a WEAKNESS, and prioritize resources for correction. Care should be taken to understand the logic underlying 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.

Significance Examples for §50.47(b)(14)

PLANNING STANDARD FUNCTION(s)	DEGRADED RSPS FUNCTION White Finding	LOSS of PS FUNCTION Green Finding
(b)(14)		
<p>A drill and exercise program (i.e., unannounced, radiological, medical, health physics, environmental, communication, etc.) is established and at the required frequencies.</p> <p>All exercises, drills, and training provide performance opportunities to develop, maintain, and demonstrate key skills.</p> <p>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.</p> <p>Identified weaknesses are corrected.</p> <p>Exercise scenarios vary during an 8-year EP cycle per App E.IV.F.2.j.(iii).</p> <p>The critique process captures weaknesses associated with an RSPS that may impact the DEP-PI during an evaluated exercise.</p> <p>The critique process captures weaknesses associated with an RSPS that may impact an RSPS function during an evaluated exercise.</p> <p>* RSPS (b)(9) is emphasized due to effective dose assessment being a key, i.e., risk significant, component of the E-plan as it is the primary means to develop accurate PARs in a timely manner.</p>	<p>The critique process does not properly identify a weakness associated with an RSPS that is determined (by the NRC) to be a missed DEP PI opportunity (failure) during an evaluated exercise.</p> <p>The critique process does not properly identify a weakness associated with an RSPS that is determined (by the NRC) to negatively impact an RSPS function during an evaluated exercise.</p> <p>The licensee failed to correct an RSPS weakness identified in an evaluated exercise, including those with a common or similar root cause, such that the weakness recurs.</p>	<p>The critique process does not properly identify a weakness associated with an RSPS that is determined (by the NRC) to be a successful DEP PI opportunity during an evaluated exercise.</p> <p>The critique process does not properly identify a weakness associated with a non-RSPS function during an evaluated exercise.</p> <p>The critique process does not properly identify a weakness associated with RSPS (b)(9) but the RSPS function is not lost, i.e., only degraded.*</p> <p>The critique process does not identify a weakness associated with any PS (non-RSPS) 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>Ineffective control of an exercise that directly, or indirectly, leads to a PS weakness is not identified during the critique process.</p> <p>Key ERO skills are not demonstrated during an evaluated exercise.</p> <p>Exercises and drills are not sufficiently varied within the exercise planning cycle.</p> <p>Drills, exercises, or tests are not conducted at the required frequencies (also consider traditional enforcement).</p> <p>The licensee failed to correct a PS (i.e., non-RSPS) weakness identified in an evaluated exercise such that the weakness recurs.</p> <p>ERO performance is such that a remedial exercise (full or limited) is required because the NRC cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency, the ERO failed to maintain and demonstrate key skills, or the scenario is not technically sufficient or challenging to adequately assess the capabilities of the ERO to implement the E-plan effectively.</p>
		(b)(14)

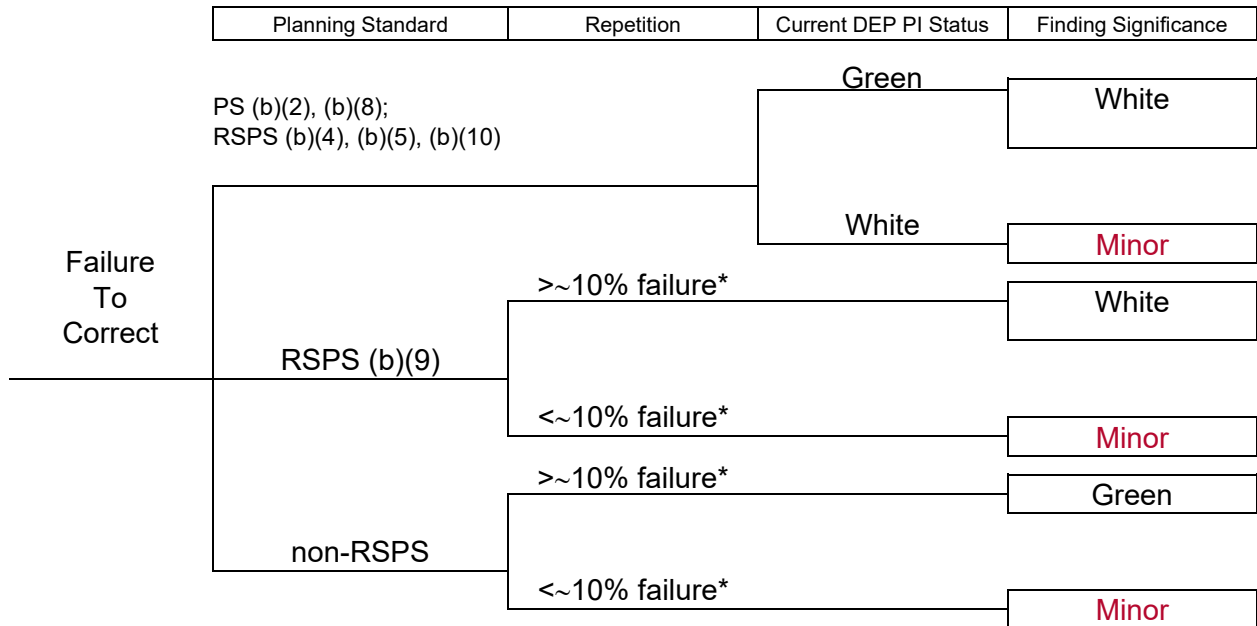
Figure 5.14.1: Significance Determination for CRITIQUE Findings



*As determined by the NRC inspector.

With regard to the DEP-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 5.14.1: Significance Determination for Failure to Correct a WEAKNESS



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

PLANNING STANDARD

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

PS FUNCTIONS

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

Additional Guidance:

Nuclear Energy Institute (NEI) 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 8, [ML24331A114], identifies key ERO members.

Significance Examples for §50.47(b)(15)

LOSS OF PS FUNCTION: Green 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.
DEGRADATION OF PS FUNCTION Minor PD:	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. ⁹

⁹ Since the PS applies only to personnel relied upon to respond during an emergency, a PD does not exist if personnel were removed from the ERO duty roster when their training qualification lapsed. Re-evaluate the performance deficiency (PD) determination and if the PD remains, it is minor.

PLANNING STANDARD

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

PS FUNCTIONS

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

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).

Significance Examples for §50.47(b)(16)

LOSS OF PS FUNCTION: White Finding	None.
DEGRAD. OF PS FUNC. Green (or minor PD depending mitigating factor review) Finding:	Responsibilities for E–plan development are not established. Planners did not receive initial and/or continuing training.

06.01 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.

06.02 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.

06.03 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.

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).

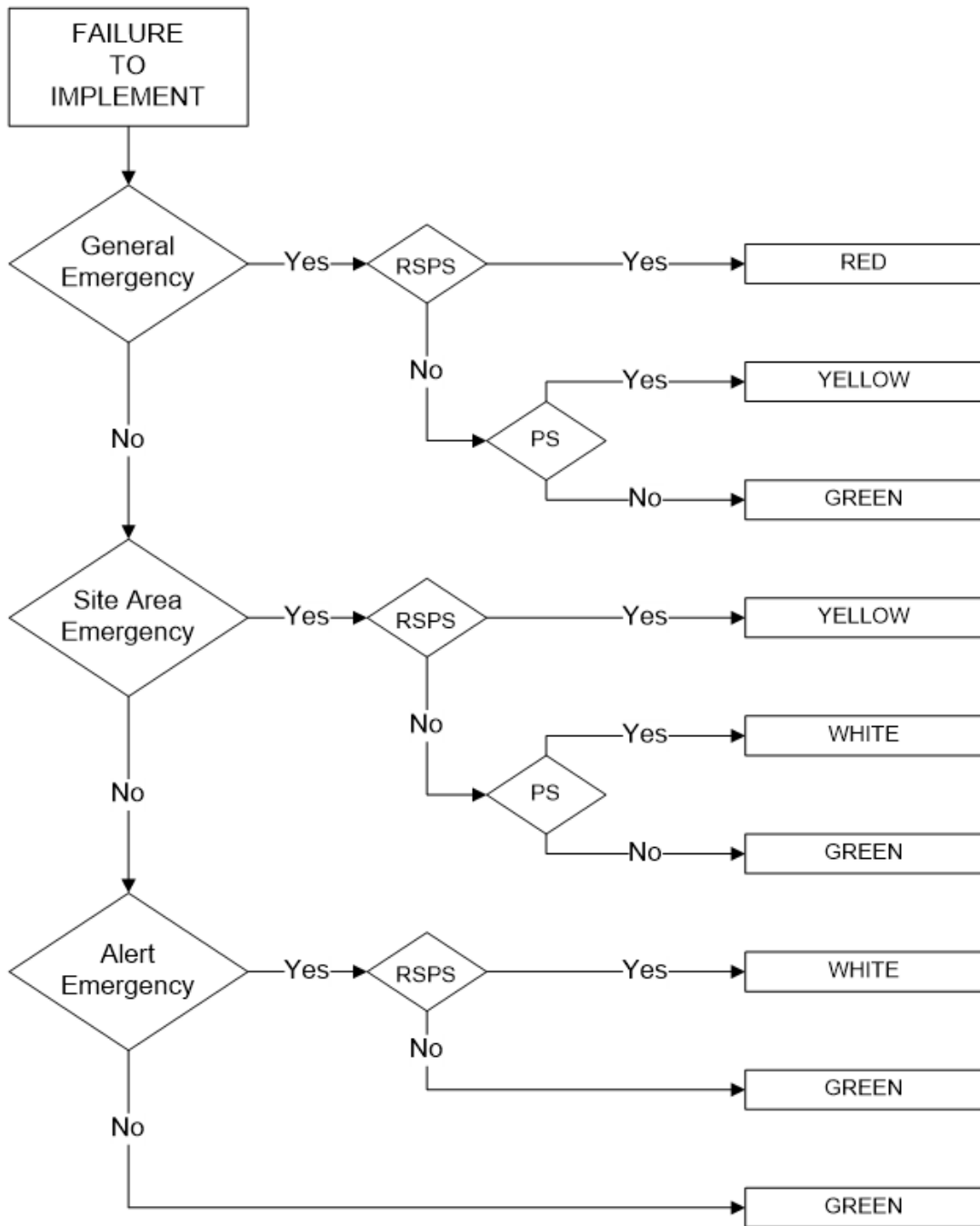
ATTACHMENTS

Attachment 1 - Failure to Implement (Actual Event) Significance Logic

Attachment 2 - Failure to Comply Significance Logic

Attachment 3 - Revision History for IMC 0609 Appendix B

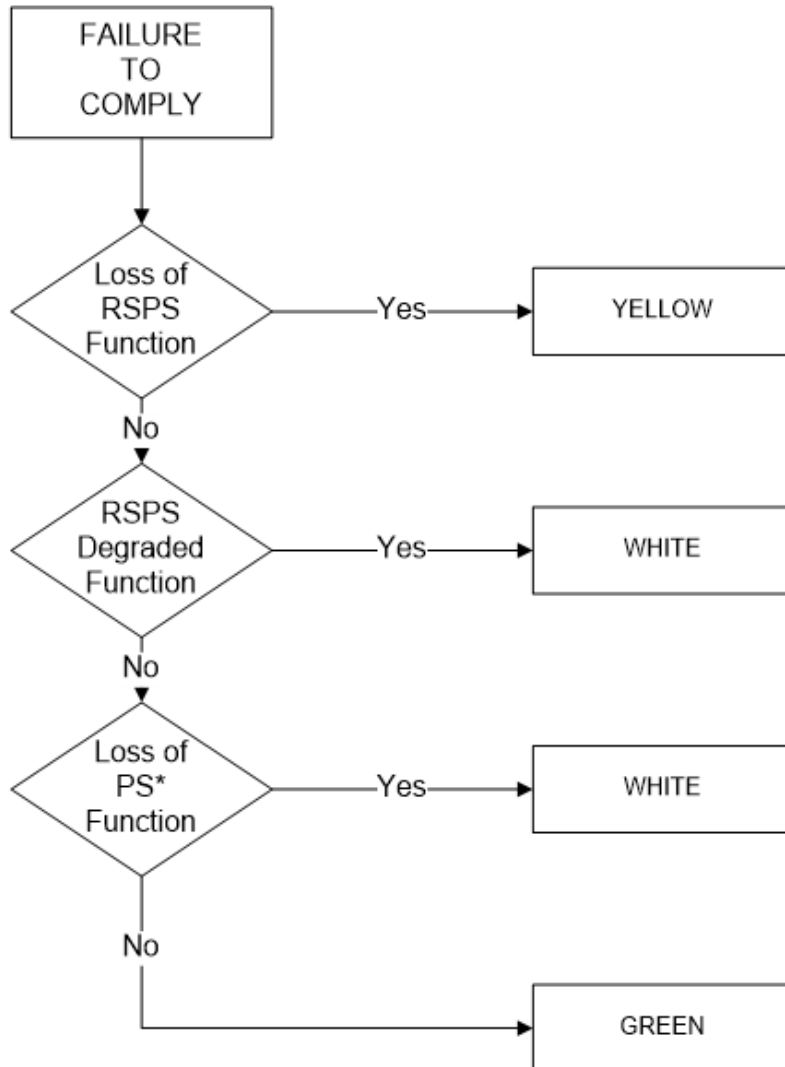
Attachment 1: Failure to Implement (Actual Event) Significance Logic
(Pending review of all relevant mitigating factors)



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
(Pending review of all relevant mitigating factors)



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	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional Non-Public Information)
n/a	04/21/00 CN 00-007	Initial Issue	n/a	n/a
n/a	12/29/00 CN 00-030	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	03/06/03 CN 03-007	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	ML120090270 02/24/12 CN 12-003	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.	November 8, 2011 via VTC. All regional EP inspectors participated	

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional Non-Public Information)
	ML13270A478 09/23/14 CN 14-021	<p>Note: this revision to the EP SDP was issued for regional review three times due to the identification of additional needed changes from review comments. Some of the proposed changes have since been rendered moot by other revisions. The comments were combined in a single resolution: The change listing below is a delta from the 2/24/2012 version.</p> <p>Several changes were made to the EP SDP address experience in implementing the 2/24/2012 revision: (1) References to §50.72 in the definition of REGULATORY REQUIRE-MENT were omitted as the failure to make a required report is not a PD under the EP Cornerstone and is treated under TE; (2) conforming changes for (1); (3) changed “EAL IC” in §5.4 to read “EAL” to remove confusion; (4) additional guidance was added to §5.8 regarding TSC/EOF habitability and examples were revised; (5) In §§5.6, 5.8, 5.9, and 5.10 changed “in absence of COMPENSATORY MEASURES” to read “and no COMPENSATORY MEASURES were implemented,” to address mistaken interpretation of the original language;</p> <p>(6) revised several examples in §5.8 to replace the emphasis on the ability of one key ERO member with an emphasis instead on the facilities’ ability to perform principal functional areas of emergency response; (7) added guidance on principal functional areas to §5.8. In response to comments that the EP SDP repeated guidance already in IMC 0612, made several changes: (8) omitted definitions of PERFORMANCE DEFICIENCY, FINDING, an VIOLATION, and made instances of those terms lower case in the text; (9) changed definition of REGULATORY REQUIREMENT to read EP REQUIREMENT to address mistaken interpretation that the EP SDP didn’t address findings that were not violations; (10) Clarified definition of WEAKNESS; (continued)</p>	The changes to the EP SDP have been discussed with regional personnel through presentations at the annual EP counterpart meetings (most recent: May 2013)	ML14209B024

Commitment Tracking Number	Accession Number Issue Date Change Notice	Description of Change	Description of Training Required and Completion Date	Comment Resolution and Closed Feedback Form Accession Number (Pre-Decisional Non-Public Information)
		(11) made several changes to section 3.1 and 3.2; (12) Section 7.0 was deleted (See IMC0612 App G); (13) omitted the “no finding” column from the significance example tables; (14) other references to “no finding” were modified (in footnotes) to direct the user to IMC 0612 Appendix B and to reconsider the more-than-minor determination. Clarified “populated area” in Table 5.10-1.		
	ML15128A462 09/22/15 CN 15-017	Changes made to significance examples in Table 5.10-1 to provide an example for an over-conservative PAR. Conforming changes made to other examples in this table. Addresses issues that arose in processing Enforcement Action EA 15-072. Editorial changes made to other examples in this table for clarity	Regional EP specialists were made aware of this changes during the development of the change and during the comment period. Changes were also discussed during monthly counterpart calls. 07/09/2015	ML15190A137
	ML26120A535 05/14/26 CN 26-022	Changes made to incorporate SRM-SECY-22-0089. Revision also incorporated EP Initiatives implemented per EO 14300 Section 5(g) and the Advance Act, Sect 507. These changes are based upon: <ul style="list-style-type: none"> • Re-baseline of EP SDP to incorporate lessons-learned, enhance inspections, add guidance, clarify significance levels applicable to an EP program, and enhance consistency. • Enhance guidance for (b)(9) significance determination based upon lessons learned. 	Regional EP specialists on 5/6/2026.	ML26133A297