APPENDIX B

EMERGENCY PREPAREDNESS
FUEL CYCLE SIGNIFICANCE DETERMINATION PROCESS

1.0 INTRODUCTION

The Emergency Preparedness (EP) Cornerstone and its basis are described in Inspection Manual Chapter (IMC) RFCOP Basis Document. The cornerstone objective and performance expectation are the bases for the related inspection program .

The Emergency Preparedness cornerstone objective is to "Ensure that the licensee is capable of implementing adequate measures to protect public health and safety in the event of a radiological emergency or chemical emergency from chemicals related to the processing of licensed materials."

This objective is supported by a performance expectation to "Demonstrate that reasonable assurance exists that the licensee can effectively implement its Emergency Plan to adequately protect public health and safety in the event of a radiological emergency."

To meet the Cornerstone Objective and Performance Expectation, the staff of the U.S. Nuclear Regulatory Commission (NRC) assesses licensee performance in this cornerstone by considering the significance of inspection findings. The fuel cycle significance determination process (FCSDP) provides a method to place inspection findings in context for risk-significance. **Error! Bookmark not defined.***. This information is used to determine the level of NRC engagement in accordance with the Action Matrix (found in IMC RFCOP Fuel Cycle Facility Assessment Program).

IMC RFCOP- SDP, Attachment 1, contains criteria for determining which inspection issues the staff should evaluate through the EP FCSDP. The FCSDP is structured such that any finding that enters the EP FCSDP will be at least green Use of color code without defining. The EP FCSDP is designed such that the significance of a finding reflects the potential impact on the public health and safety should an accident occur.

The EP FCSDP methodology recognizes failures in the identified risk significant elements as more significant than failures in other program elements. It also recognizes that certain risk elements are not applicable to certain fuel cycle facilities because of the lower risk these facilities present to the public. 10 CFR Parts 40, 70, and 76 codify EP planning standards in 10 CFR 40.31(j), 70.22(i), and 76.91, respectively. The more risk significant elements of EP align with a subset of the elements implemented through the Emergency Plan and implementing procedures. The FCSDP logic identifies the loss of program function required by certain planning elements as more significant than noncompliance with others. Functional failure of the more risk significant planning elements results in greater significance than the loss of function of the other planning elements.

2.0 DEFINITIONS

The following terms are essential to implementing this appendix.

Note: Defined terms (listed in alphabetical order) are capitalized throughout the text of this appendix.

a. CRITIQUE: For the purposes of this FCSDP, all formal or documented assessments of an actual event, drill, or exercise .

b. CRITIQUE PROBLEM: Indicates that a CRITIQUE did not identify a drill or exercise WEAKNESS. A finding in this area means that licensee evaluators failed to identify a WEAKNESS in a drill or exercise.

c. DEGRADATION OF THE RISK-SIGNIFICANT PLANNING ELEMENT FUNCTION: PLANNING ELEMENTS are not adequate or are noncompliant, but the function of the RSPE, although degraded, is still met. It may be that (1) certain Plan commitments are not met, (2) the Plan is less than adequate, (3) implementing procedures are not effective, or (4) the program design is not fully adequate; however, if the PLANNING ELEMENT is implemented as designed, it would meet the intended function of the RSPE. DEGRADATION OF THE RSPE FUNCTION has been incorporated into the EP FCSDP to allow an intermediate level of significance (i.e., a white Use of color code without defining finding rather than yellow Use of color code without defining) to be determined, where appropriate. Attachment 1 to this Appendix (Later) presents examples of DEGRADATION OF THE RSPE FUNCTION for each RSPE.

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

e. FAILURE TO IMPLEMENT: FAILURE TO COMPLY with REGULATORY REQUIREMENTS during an actual event in which the failure precluded effective implementation of PROGRAM ELEMENTS. Most likely, the failure is a result of a performance problem. In this case, the PROGRAM ELEMENT is adequate as designed and, if implemented as designed, the program would meet the PE FUNCTION. However, a FAILURE TO IMPLEMENT is not always a result of a performance problem and may, in fact, reveal that a PROGRAM ELEMENT is not adequate. In this case, inspection is appropriate to determine whether there is a LOSS OF PE FUNCTION. Resulting issues would be assessed for significance in accordance with the criteria for a LOSS OF PE FUNCTION.

f. FULL-SCALE DRILL OR EXERCISE: An event which tests major portions of the emergency response program including the integrated response capability of onsite response teams and interaction with offsite response teams (fire, medical) when participating. A FULL-SCALE DRILL OR EXERCISE is normally the NRC evaluated biennial exercise, but could be a full scale drill evaluated by licensee to develop and maintain key skills, test changes in response, or to demonstrate corrective actions to prior problems.

g. LOSS OF PLANNING ELEMENT FUNCTION: PROGRAM ELEMENTS are not adequate, not compliant with the PEs of ~~10 CFR~~ 10 CFR 40.31(j), 70.22(i), and

76.91, or otherwise not functional to such an extent that the function of the PE is not available for emergency response. It may be that the Plan commitments are not met or are inadequate, implementing procedures are inadequate, program design is inadequate, training is inadequate, etc. The result is that if the suspect PROGRAM ELEMENT was not implemented as designed, or personnel are not capable of implementing the PROGRAM ELEMENT, the PE FUNCTION would not be met.

h. PLANNING ELEMENT (PE): Any of the emergency preparedness planning items listed in 10 CFR Part 40.31(j), 10 CFR 70.22(i), and 10 CFR 76.91 including the risk-significant planning elements.

i. PLANNING ELEMENT FUNCTION: Defined for each PE, the function does not restate the regulations, but rather identifies the significant function of the PE. All regulations must be complied with, but a LOSS OF PE FUNCTION may have greater significance than a failure to meet other REGULATORY REQUIREMENTS.

j. PROGRAM ELEMENT: Items that comprise the implementation aspects of a planning element function. These items correspond to the criteria (e.g., contained in NUREG-1520, “Standard Review Plan for Review of a License Application for a Fuel Cycle Facility,” (limited to facilities licensed under 10 CFR 70), Regulatory Guide (RG) 3.67, “Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities,” dated January 1992, or the licensee’s Emergency Plan) that provides specific acceptable methods for complying with the PLANNING ELEMENTS of 10 CFR 40.31(j), 70.22(i), and 76.91. Note that the failure of a single PROGRAM ELEMENT does not always constitute a LOSS OF PLANNING ELEMENT FUNCTION.

k. REGULATORY REQUIREMENT: As used in this appendix, any EP-related requirement, including the PLANNING ELEMENTS of 10 CFR 40.31(j), 70.22(i), and 76.91, the Emergency Plan, Commission Orders, and other commitments.

l. RISK-SIGNIFICANT PLANNING ELEMENT (RSPE): Any of the following PLANNING ELEMENTS which relate to classification of the event, notification of local response organizations, assessment of the offsite consequences, and off site protective action recommendations (where necessary) [10 CFR 40.31(j)(3)(iii), (vi), (viii), and (ix); 10 CFR 70.22(i)(3)(iii), (vi), (viii), and (ix); 10 CFR 76.91(c), (f), (h), and (i)].

m. WEAKNESS: As applied to emergency preparedness, a WEAKNESS is a level of performance demonstrated during a drill or exercise that could have precluded effective implementation of the Emergency Plan in the event of an actual emergency.

3.0 GENERAL GUIDANCE

The inspector should have already completed the requirements of Attachment 1, "FCSDP Determination of Finding of Greater than Minor Significance," before entering this Appendix.

The inspector should enter and complete Sheet 1, "Emergency Preparedness SDP Phase 1 and 2" to document the significance process assumptions that were made in this assessment.

A determination must be made if the deficient Program Element is a RISK-SIGNIFICANT PLANNING ELEMENT. Reference the following table to determine if a RSPE is involved:

	RSPE	Part 40	Part 70	Part 76
Responsibilities		40.31(j)(3)(vii)	70.22(i)(3)(vii)	76.91(g)
Classification of Accidents	X	40.31(j)(3)(iii)	70.22(i)(3)(iii)	76.91(c)
Notification and Coordination	X	40.31(j)(3)(viii)	70.22(i)(3)(viii)	76.91(h)
Mitigation of Consequences		40.31(j)(3)(v)	70.22(i)(3)(v)	76.91(e)
Assessment	X	40.31(j)(3)(vi)	70.22(i)(3)(vi)	76.91(f)
Protective Action Recommendations	X	40.31(j)(3)(ix)	70.22(i)(3)(ix)	76.91(i)
Mitigation of Consequences – Protection of Workers		40.31(j)(3)(v)	70.22(i)(3)(v)	76.91(e)
Medical Services		40.31(j)(3)(viii)	70.22(i)(3)(viii)	76.91(h)
Safe Shutdown		40.31(j)(3)(xi)	70.22(i)(3)(xi)	76.91(k)
Drills and Exercises		40.31(j)(3)(xii)	70.22(i)(3)(xii)	76.91(l)
Training		40.31(j)(3)(x)	70.22(i)(3)(x)	76.91(j)
Plan Development and Maintenance		40.31(j)(3)(vii)	70.22(i)(3)(vii)	76.91(g)

The EP FCSDP has two distinct branches for “Failure to Comply” (Sheet 2) and “Failure to Implement” (Sheet 3). Findings should be assessed through both paths, where applicable, and the more significant finding issued. Additionally, some findings have multiple contributing issues, and the significance of each issue should be assessed. Parallel issues (i.e., more than one issue associated with a given finding), shall be noted in the inspection report, but only the most significant finding is issued.

Attachment 1 to this Appendix (LATER) has specific examples that can be used to guide the inspector in evaluating the finding.

END

Sheet 1,Emergency Preparedness SDP Phase 1 and 2
Sheet 2, Failure to Comply
Sheet 3, Failure to Implement
Attachment 1 (Later)

Emergency Preparedness SDP Phase 1 and 2
Sheet 1

The Finding is a:

A. ☐ Failure to Implement during an actual event (requires both Sheet 2 and 3 to be completed)

Classification of Event:

☐ Alert

☐ Site Area Emergency

Is the Planning Element a Risk Significant Planning Element?

☐ Yes

☐ No

B. ☐ Failure To Comply (Perform only Sheet 2 if no actual event was involved)

Is the Planning Element a Risk Significant Planning Element?

☐ Yes

☐ No

Is the Planning Element:

☐ Failed?

☐ Degraded?

C. Significance Determination

From the flowcharts the significance color is: Use of color code without defining

Fail to Implement:

☐ Green ☐ White ☐ Yellow

Fail to Comply

☐ Green ☐ White ☐ Yellow

If both Sheets were evaluated, Indicate the higher level of significance:

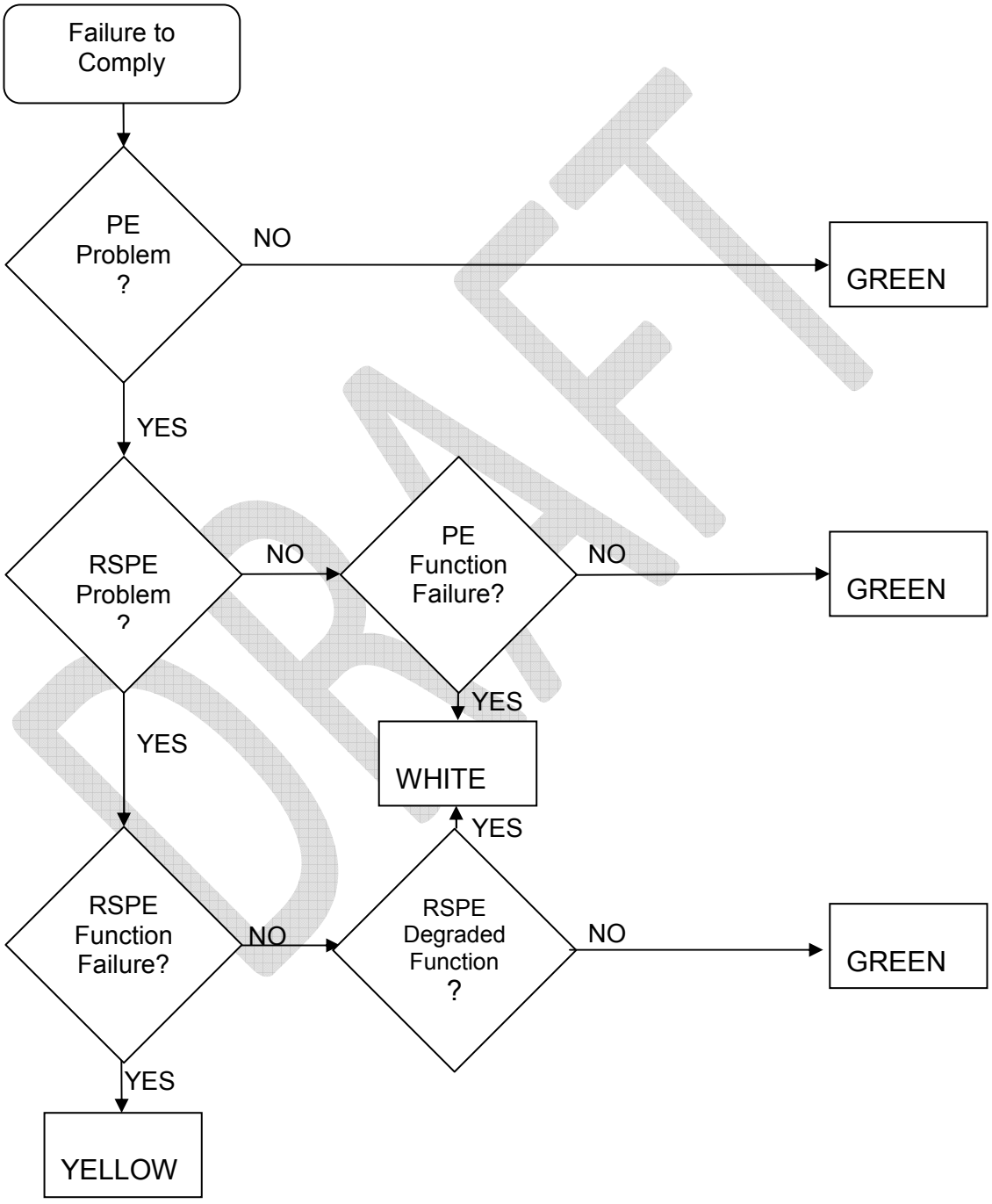
☐ Green ☐ White ☐ Yellow

Emergency Preparedness Significance Determination Process

Sheet 2

Failure to Comply

Use of color code without defining



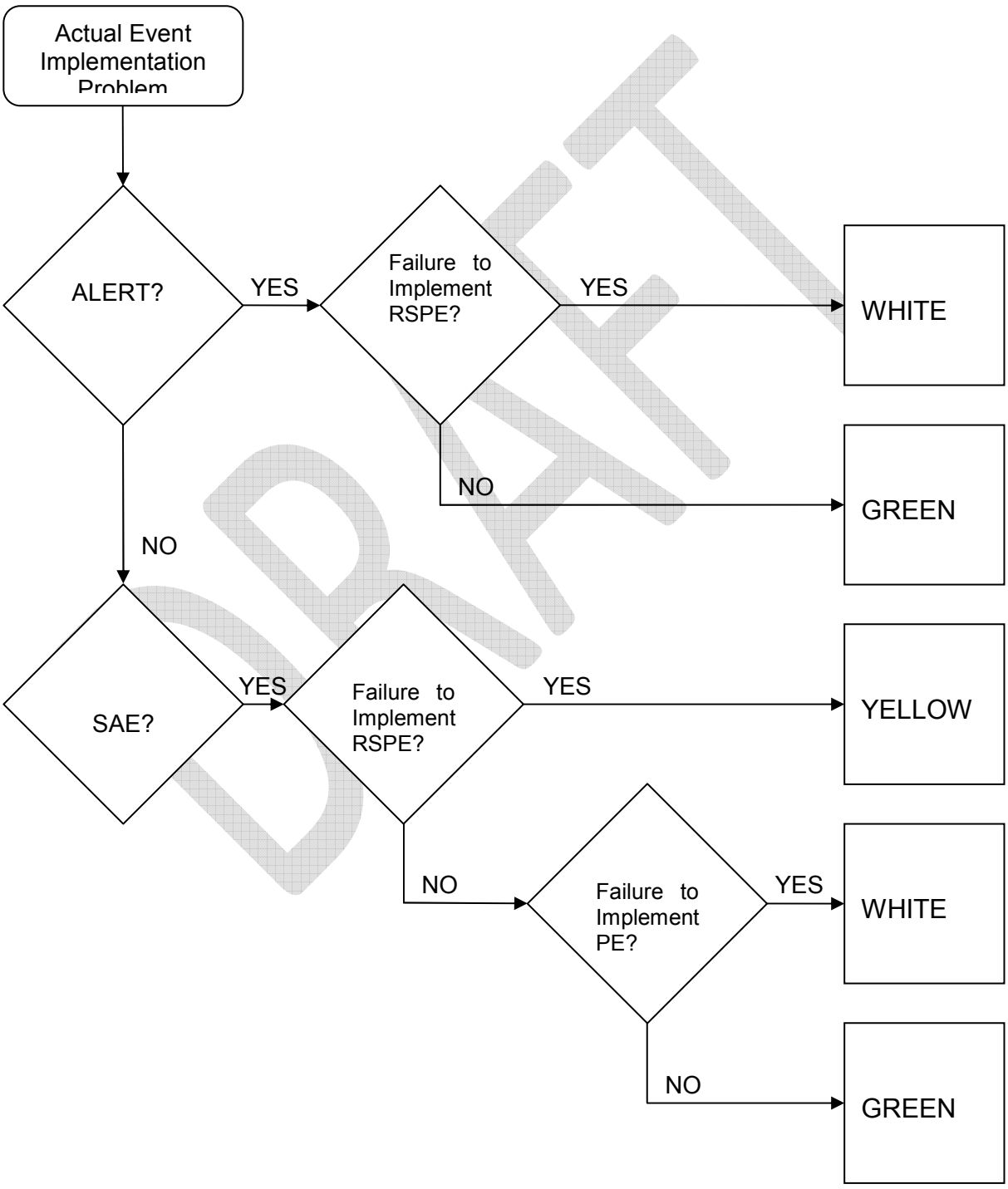
NOTE: PE/RSPE Function Failure is equivalent to LOSS OF PE/RSPE FUNCTION

Emergency Preparedness Significance Determination Process

Sheet 3

Failure To Implement

Use of color code without defining



Attachment 1
(LATER)