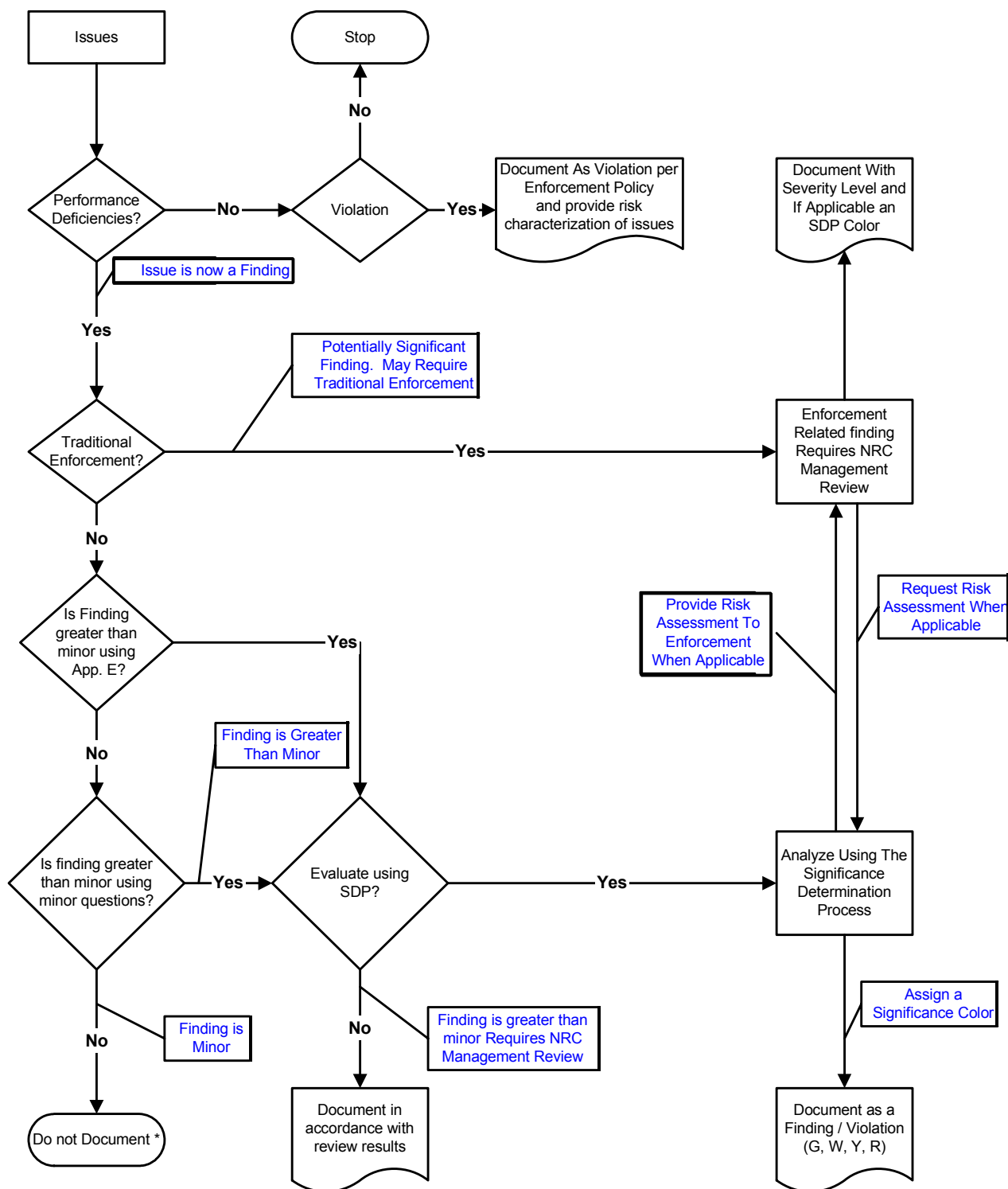


## APPENDIX B Issue Screening

Use Figure 1 and the questions listed below to determine if a finding has sufficient significance to warrant further analysis or documentation.

Figure 1



\* see exception in  
Section 05.03

Page intentionally left blank

## **Section 1. Performance Deficiency Question**

An issue must be a “performance deficiency” before it can be considered a finding.

Did the licensee fail to meet a requirement or a standard, where the cause was reasonably within the licensee’s ability to foresee and correct and which should have been prevented? A performance deficiency can exist if a licensee fails to meet a self-imposed standard or a standard required by regulation.

## **Section 2. Traditional Enforcement Questions**

- (1) Does the issue have actual safety consequence (e.g., overexposure, actual radiation release greater than 10 CFR Part 20 limits)?
- (2) Does the issue have the potential for impacting the NRC’s ability to perform its regulatory function? For example, a failure to provide complete and accurate information or failure to receive NRC approval for a change in licensee activity, or failure to notify NRC of changes in licensee activities, or failure to perform 10 CFR 50.59 analyses etc. (see Enforcement Policy IV.A.3).
- (3) Are there any willful aspects of the violation?

**Section 3. Minor Questions** (A finding should be compared to Appendix E examples to determine if it **is similar to** a minor example. If not, then answer the following questions to determine if the finding is more than minor.)

- (1) Could the finding be reasonably viewed as a precursor to a significant event?
- (2) If left uncorrected would the finding become a more significant safety concern?
- (3) Does the finding relate to a performance indicator (PI) that would have caused the PI to exceed a threshold?
- (4) Is the finding associated with one of the cornerstone attributes listed at the end of this attachment and does the finding affect the associated cornerstone objective?
- (5) Does the finding relate to any of the following maintenance risk assessment and risk management issues?
  - (a) Licensee risk assessment failed to consider risk significant SSCs and support systems (included in Table 2 of the plant specific Phase 2 SDP risk-informed inspection notebook) that were unavailable during the maintenance.
  - (b) Licensee risk assessment failed to consider unavailable SSCs such as Residual Heat Removal Systems (PWR and BWR) that prevent or mitigate Interfacing System LOCAs.

- (c) Licensee risk assessment failed to consider SSCs that prevent containment failure such as containment isolation valves (BWR & PWR), BWR drywell/containment spray/containment flooding systems, and PWR containment sprays and fan coolers.
- (d) Licensee risk assessment failed to consider unusual external conditions that are present or imminent (e.g, severe weather, offsite power instability).
- (e) Licensee risk assessment failed to consider maintenance activities that could increase the likelihood of initiating events such as work in the electrical switchyard (increasing the likelihood of a loss of offsite power) and RPS testing (increasing the likelihood of a reactor trip).
- (f) Licensee risk assessment failed to consider the uncompensated removal or impairment of plant internal **and/or external** flood barriers.
- (g) Licensee risk assessment failed to account for any unavailability of a single train of a system (primary or back-up) that provides a shutdown key safety function.
- (h) Licensee's risk assessment has known errors or incorrect assumptions that has the potential to change the outcome of the assessment.
- (i) Licensee failed to implement any prescribed significant compensatory measures or failed to effectively manage those measures.

#### **Section 4. SDP Questions**

##### **REACTOR SAFETY**

###### **CORNERSTONES — Initiating Events, Mitigating Systems, & Barrier Integrity**

- (1) Is the finding associated with an increase in the likelihood of an initiating event?
- (2) Is the finding associated with the operability, availability, reliability, or function of a system or train in a mitigating system?
- (3) Is the finding associated with the integrity of fuel cladding, the reactor coolant system, reactor containment, control room envelope, auxiliary building (PWR), or standby gas treatment system (BWR)?
- (4) Is the finding associated with degraded conditions that could concurrently influence any mitigation equipment and an initiating event?
- (5) Is the finding associated with or involve impairment or degradation of a fire protection feature?

- (6) Is the finding associated with the spent fuel pool cooling system radiological barrier?
- (7) Is the finding associated with inadequate 10 CFR 50.65 (a)(4) risk assessment (quantitative only) and/or risk management?

Emergency Planning:

- (1) Is the finding associated with a failure to meet or implement a regulatory requirement?
- (2) Is the finding associated with a drill or exercise critique problem?
- (3) Is the finding associated with an actual event implementation problem?

Operator Requalification:

- (1) Is the finding related to licensee's grading of exams?
- (2) Is the finding related to written exams?
- (3) Is the finding related to an individual operating test?
- (4) Is the finding related to simulator fidelity?
- (5) Is the finding related to simulator scenario quality?
- (6) Is the finding related to scenario security?
- (7) Is the finding related to crew performance?
- (8) Is the finding related to operator pass/fail rate?
- (9) Is the finding related to operator license conditions?

RADIATION SAFETY

CORNERSTONE — Occupational Radiation Safety (ALARA):

- (1) Does the occurrence involve a failure to maintain or implement, to the extent practical, procedures or engineering controls, needed to achieve occupational doses that are ALARA<sup>1</sup>, and that resulted in unplanned, unintended occupational collective dose for a work activity?

- <sup>1</sup> (2) Does the occurrence involve an individual worker(s) unplanned, unintended dose(s) that resulted from actions or conditions contrary to licensee procedures, radiation work permit, technical specifications or NRC regulations?
- (3) Does the occurrence involve an individual worker(s) unplanned, unintended dose(s) or potential of such a dose (resulting from actions or conditions contrary to licensee procedures, radiation work permit, technical specifications or NRC regulations) which could have been significantly greater as a result of a single minor, reasonable alteration of the circumstances?
- (4) Does the occurrence involve conditions contrary to licensee procedures, technical specifications or NRC regulations which impact radiation monitors, instrumentation and/or personnel dosimetry, related to measuring worker dose?

#### CORNERSTONE — Public Radiation Safety

- (1) Does the finding involve an occurrence in the licensee's radiological effluent monitoring program that is contrary to NRC regulations or the licensee's TS, Offsite Dose Calculation Manual (ODCM), or procedures?
- (2) Does the finding involve an occurrence in the licensee's radiological environmental monitoring program that is contrary to NRC regulations or the licensee's TS, ODCM, or procedures?
- (3) Does the finding involve an occurrence in the licensee's radioactive material control program that is contrary to NRC regulations or the licensee's procedures?
- (4) Does the finding involve an occurrence in the licensee's radioactive material transportation program that is contrary to NRC or Department of Transportation (DOT) regulations or licensee procedures?

#### SAFEGUARDS

##### CORNERSTONE — Physical Protection

- (1) Is the finding associated with or involve a failure to meet the requirements of 10 CFR 73.55 (b)-(h), or associated plans, procedures, orders, or rules?
- (2) Is the finding associated with or impact any key attribute of the Security cornerstone to meet its intended function whether in performance, design or implementation?

---

<sup>1</sup> "Yes" answer to this question does not necessarily indicate a violation of the requirement in 10 CFR Part 20.1101 (b). Compliance will be judged on whether the licensee has incorporated measures to track and, if necessary, to reduce exposures (e.g., whether the findings indicate an ALARA program breakdown).

## CORNERSTONE OBJECTIVES AND ATTRIBUTES

(related to Section 3, Minor Questions)

### Cornerstone: REACTOR SAFETY / Initiating Events

Objective: To limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations.

Attributes:

Examples:

Design Control:  
Protection Against  
External Factors:

Initial Design and Plant Modifications

Configuration Control:  
Equipment Performance:

Flood Hazard, Fire, Loss of Heat Sink, Toxic Hazard,  
Switchyard Activities, Grid Stability  
Shutdown Equipment Lineup, Operating Equipment Lineup,  
Availability, Reliability, Maintenance; Barrier Integrity  
(SGTR, ISLOCA, LOCA (S,M,L)), Refueling/Fuel Handling  
Equipment

Procedure Quality:

Procedure Adequacy

Human Performance:

Human Error

### Cornerstone: REACTOR SAFETY / Mitigating Systems

Objective: To ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage).

Attributes:

Examples:

Design Control:  
Protection Against  
External Factors:

Initial Design and Plant Modifications

Configuration Control:  
Equipment Performance:  
Procedure Quality:

Flood Hazard, Fire, Loss of Heat Sink, Toxic Hazard,  
Seismic

Shutdown Equipment Lineup, Operating Equipment Lineup,  
Availability, Reliability

Operating (Post Event) Procedure (AOPs, SOPs, EOPs);  
Maintenance and Testing (Pre-event) Procedures

Human Performance:

Human Error (Post Event), Human Error (Pre-event)

## **Cornerstone: REACTOR SAFETY / Barrier Integrity**

Objective: To provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radio nuclide releases caused by accidents or events.

Attributes:  
(Maintain Functionality of Fuel Cladding)

Design Control:	Physics Testing; Core Design Analysis (Thermal Limits, Core Operating Limit Report, Reload Analysis, 10 CFR50.46)
Configuration Control:	Reactivity Control (Control Rod Position, Reactor Manipulation, Reactor Control Systems); Primary Chemistry Control; Core Configuration (Loading)
Cladding Performance:	Loose Parts (Common Cause Issues); RCS Activity Level
Procedure Quality:	Procedures which could impact cladding
Human Performance:	Procedure Adherence (FME, Core Loading, Physics Testing, Vessel; Assembly, Chemistry, Reactor Manipulation); FME Loose Parts, Common Cause Issues

Attributes:  
(Maintain functionality of RCS)

Examples:

Design Control:	Plant Modifications
Configuration Control:	System Alignment; Primary Secondary Chemistry
RCS Equipment and Barrier Performance:	RCS Leakage; Active Components of Boundary (Valves, Seals); ISI Results
Procedure Quality:	Routine OPS/Maintenance procedures; EOPs and related Normal Procedures invoked by EOPs
Human Performance:	Routine OPS/Maintenance Performance; Post Accident or Event Performance

Attributes:  
(Maintain Functionality of Containment)

Examples:

Design Control:	Plant Modifications; Structural Integrity; Operational Capability
Configuration Control:	Containment Boundary Preserved; Containment Design Parameters Maintained
SSC and Barrier Performance:	S/G Tube Integrity, ISLOCA Prevention; Containment Isolation SSC Reliability /Availability, Risk Important Systems Function
Procedure Quality:	Emergency Operating Procedures; Risk Important Procedures (OPS, Maintenance, Surveillance)



Human Performance: Post Accident or Event Performance; Routine OPS/Maintenance Performance

Attributes: Examples:  
(Maintain Radiological Barrier Functionality of Control Room and Auxiliary Building - PWR, and Standby Gas Trains - BWR only)

Design Control: Plant Modifications; Structural Integrity  
Configuration Control: Building Boundaries Preserved  
SSC and Barrier Performance: Door, Dampers, Fans, Seals, Instrumentation  
Procedure Quality: EOPs, Abnormal and Routine Operating Procedures, Surveillance Instructions, Maintenance Procedures  
Human Performance: Post Accident or Event performance; Routine OPS/Maintenance Performance

Attributes: Examples:  
(Maintain Functionality of Spent Fuel Pool Cooling System)

Design Control: Plant Modifications; Structural Integrity  
Configuration Control: System Alignment  
SSC Performance: Pumps, Valves, Instrumentation  
Procedure Quality: EOPs, Abnormal and Routine Operating Procedures, Surveillance Instructions, Maintenance Procedures  
Human Performance: Post Accident or Event Performance; Routine OPS/Maintenance Performance

### **Cornerstone: REACTOR SAFETY / Emergency Preparedness**

Objective: To ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency.

Attributes: Examples:

ERO Readiness: Duty Roster; ERO Augmentation System; ERO Augmentation Testing; Training  
Facilities and Equipment: ANS Testing; Maintenance Surveillance and Testing of Facilities, Equipment and Communications Systems; Availability of ANS, Use in Drills and Exercises.  
Procedure Quality: EAL Changes, Plan Changes; Use in Drills and Exercises  
RO Performance: Program Elements Meet 50.47(b) Planning Standards, Actual Event Response; Training, Drills, Exercises  
Offsite EP: FEMA Evaluation

**Cornerstone: RADIATION SAFETY / Occupational Radiation Safety**

Objective: To ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation.

Attributes:

Examples:

Plant Facilities/Equipment  
and Instrumentation:

Plant Equipment, ARM Cals & Availability,  
Source Term Control; Procedures (Radiation and  
Maintenance)

Program & Process:

Procedures (HPT, Rad Worker, ALARA);  
Exposure/Contamination Control and Monitoring  
(Monitoring and RP Controls); ALARA Planning  
(Management Goals, Measures - Projected Dose)

Human Performance:

Training (Contractor HPT Quals, Radiation Worker  
Training, Proficiency)

**Cornerstone: RADIATION SAFETY / Public Radiation Safety**

Objective: To ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation.

Attributes:

Examples:

Plant Facilities/Equipment  
and Instrumentation:

Process Radiation Monitors (RMS)  
(Modifications, Calibrations, Reliability, Availability),  
REMP Equipment, Meteorology Equipment,  
Transportation Packaging; Procedures  
(Design/Modifications, Equipment Calculations,  
Transportation Packages, Counting Labs)

Program & Process:

Procedures; (Process RMS & REMP, Effluent  
Measurement OC, Transportation Program, Material  
Release, Meteorological Program, Dose Estimates);  
Exposure and Radioactivity Material Monitoring and  
Control (Projected Offsite Dose, Abnormal Release,  
DOT Package Radiation Limits, Measured Dose)

Human Performance:

Training (Technician Qualifications, Radiation &  
Chemical Technician Performance.

## **Cornerstone: SAFEGUARDS /Security**

Objective: To provide assurance that the licensee's security system and material control and accountability program use a defense-in-depth approach and can protect against (1) the design basis threat of radiological sabotage from external and internal threats, and (2) the theft or loss of radiological materials

### Attributes:

Physical Protection System:

Access Authorization System:

Access Control System:

Response to Contingency Events:

### Examples:

Protected Areas (Barriers and Alarms, Assessment); Vital Areas (Barriers and Alarms, Assessment)

Personnel Screening; Behavior Observations; Fitness for Duty

Search; Identification

Protective Strategy; Implementation of Protective Strategy

# ATTACHMENT 1

## Revision History for APPENDIX B to IMC 0612 - Issue Screening

Commitment Tracking Number	Issue Date	Description of Change	Training Needed	Training Completion Date	Comment Resolution Accession Number
N/A	11/01/2006	Revision history reviewed for the last four years.	NO	N/A	N/A
N/A	04/29/2002 CN 02-021	Appendix B was removed as an attachment to IMC-0612 and was issued as stand alone document.	NO	N/A	N/A
N/A	05/19/2005 CN 05-014	Revised to add Question No. 5 to Minor Questions in Section 3 and Question No. 6 to the SDP Questions in Section 4 to reflect the new maintenance risk assessment and risk management SDP, IMC 0609, Appendix K, "Maintenance Rule Risk Assessment and Risk Management."	NO	N/A	N/A
N/A	09/30/2005 CN 05-028	Revised to clarify the definition of a performance deficiency and a functionality of the control room. Also, the auxiliary building attribute was added to the cornerstone and objective section.	NO	N/A	N/A

N/A	11/02/06 CN 06-033	Revised definition of performance deficiency to bring the definition in alignment with the basis for performance deficiency as described in ROP basis document, IMC-0308 attachment 3, "Significance Determination Process Basis Document."	YES	09/06/2006	ML 063000483
N/A	09/20/07 CN 07-029	Revised flow chart and Section 3 guidance to address feedback forms. Corrected formatting error on page B-7.	NO	N/A	N/A