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U S Nuclear Regulatory Commission
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Washington, DC 20555

Prairie Island Nuclear Generating Plant
Dockets 50-282 and 50-306
License Nos. DPR-42 and DPR-60

Prairie Island Emergency Plan Implementing Procedures (EPIP)

Furnished with this letter are the recent changes to the Prairie Island Nuclear Generating Plant EPIP F3 and F8. Enclosure 1 provides a brief summary of the changes associated with these revisions. These changes have been reviewed and do not decrease the effectiveness of the Emergency Plan and these procedures.

This submittal includes the following documents:

INDEX:
EPIP Table of Contents
Emergency Operations Facility(EOF) EPIP Table of Contents

REVISIONS

F3-2	Classifications of Emergencies	Rev. 35
F8-6	Radiological Monitoring & Control at the EOF	Rev. 7

ADDITIONS:
None

DELETIONS:
None

TEMPORARY CHANGE DELETIONS:
None

INSTRUCTIONS:
Instructions for updating the manual are included.

A045

Summary of Commitments
This letter contains no new commitments and no revisions to existing commitments.

As per 10 CFR 50.4, two copies have also been provided to the NRC Region III Office and one to the NRC Resident Inspector. If you have any questions, please contact Steve Skoyen at 651-388-1121 Extension 4156.

Joseph M. Solymossy
Site Vice President, Prairie Island Nuclear Generating Plant

CC Steve Orth, USNRC, Region III (2 copies)
NRC Resident Inspector- Prairie Island Nuclear Generating Plant
(w/o attachment)

Attachments: Enclosure 1- Summary of Changes
EPIP F3-2 Rev. 35
EPIP F8-6 Rev. 7

Enclosure 1

Summary of Changes

(1 page to follow)

Summary of F3-2 EAL Changes

EAL Reference Number	Description of differences between F3-2 Rev. 34 and F3-2 Rev. 35
2E	**Changes:** 1. Plant Indications: Corrected the spelling of radiation.
5C	**Changes:** 1. Plant Indications: Changed the phrase "inadequate subcooling" to "inadequate subcooling margin".
8D	**Changes:** 1. Corrected the definition of TEDE by adding the word "Effective".
8G	**Changes:** 1. Added "Unexpected radiation level >1000mR/hr" as an OR indication. 2. Removed the words "in the Auxiliary Building" from "Widespread unexpected contamination" indication. 3. Changed the contamination limits from ">1,000,000 dpm/cm^2 beta-gamma or >50,000 dpm/cm^2 alpha activity" to ">10,000 dpm/cm^2 beta-gamma or >500 dpm/cm^2 alpha activity".

Summary of F8-6 Changes (Rev. 6 to Rev.7)

- Section 4.2.7- Change in grammar
- Figure 1- Access Control for Radioactive Materials at the EOF
  The locations of the Step-Off-Pads were slightly changed in this figure so they would be located outside of the frisker location.

Mfst Num: 2004 - 0229 Date : 03/26/04
FROM : Bruce Loesch/Mary Gadient Loc : Prairie Island
TO : UNDERWOOD, BETTY J
Copy Num: 515 Holder : US NRC DOC CONTROL DESK
SUBJECT : Revisions to CONTROLLED DOCUMENTS

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Procedure #	Rev	Title

Revisions:
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F8-6	7	RADIOLOGICAL MONITORING & CONTROL AT THE

UPDATING INSTRUCTIONS

Place this material in your Prairie Island Controlled Manual or File. Remove revised or cancelled material and recycle it. Sign and date this letter in the space provided below within ten working days and return to Bruce Loesch or Mary Gadient, Prairie Island Nuclear Plant, 1717 Wakonade Drive E., Welch, MN 55089.
Contact Bruce Loesch (ext 4664) or Mary Gadient (ext 4478) if you have any questions.

Received the material stated above and complied with the updating instructions

_____ Date _____

PRAIRIE ISLAND NUCLEAR GENERATING PLANT	Title: EOF Emerg Plan Implementing Procedures TOC Effective Date : 03/26/04 NOTE: This set may contain a partial distribution of this Document Type. Please refer to the CHAMPS Module for specific Copy Holder Contents.
Approved By: Mary Gadient BPA Designee	

Document #	Title	Rev
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F8-5	OFFSITE DOSE ASSESSMENT & PROTECTIVE ACTION RECOMMENDATIONS	8
F8-6	RADIOLOGICAL MONITORING & CONTROL AT THE EOF	7
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F8	RADIOLOGICAL MONITORING AND CONTROL AT THE EOF	NUMBER: F8-6
		REV: 7

REFERENCE USE

- *Procedure segments may be performed from memory.*
- *Use the procedure to verify segments are complete.*
- *Mark off steps within segment before continuing.*
- *Procedure should be available at the work location.*

O.C. REVIEW DATE:	OWNER:	EFFECTIVE DATE
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F8	RADIOLOGICAL MONITORING AND CONTROL AT THE EOF	NUMBER: F8-6
		REV: 7

1.0 PURPOSE

The purpose of this procedure is to provide guidance for the radiological protection of personnel responding to the EOF. Protective guidelines for EOF personnel and control of radioactive materials are discussed in this procedure.

2.0 APPLICABILITY

This procedure is applicable to all EOF personnel responding in support of a declared emergency at Prairie Island Nuclear Generating Plant.

3.0 PRECAUTIONS

3.1 The dose guidelines for EOF personnel are as per F3-12, and no one may exceed 5000 mRem TEDE per year, per 10CFR20.

3.2 Monitoring of the EOF for direct radiation, contamination levels, airborne iodine and airborne particulate radioactivity **SHALL** be performed to ensure the habitability of the EOF.

3.3 Protective actions for individuals located in the EOF **SHALL** be taken at the prescribed levels of direct radiation, contamination, or airborne radioactivity.

4.0 RESPONSIBILITIES

4.1 The Emergency Manager has the overall responsibility for the radiological protection of the EOF personnel.

4.2 The RPSS has the following responsibilities:

4.2.1 Verify and supervise the records of exposure control.

4.2.2 Determine when individual exposure controls should be implemented.

4.2.3 Assign and direct qualified personnel for dose assessment.

4.2.4 Provide the Security Force with a list of individuals who may leave the EOF with dosimetry (field survey teams, etc.).

4.2.5 Control radioactive materials and limit contamination at the EOF.

4.2.6 Initiate radiological surveys of the EOF to determine habitability and control contamination areas. Provide routine status reports of the EOF atmosphere to the EM.

4.2.7 Remind personnel on a periodic basis, as required by measured dose rates, to read their dosimeters.

4.2.8 Inform the EM when the EOF exposure levels are above administrative guidelines.

4.3 The EOF Coordinator has the responsibility to ensure personnel have been assigned to maintain EOF Entry Log, issue and collect dosimetry, and assist in establishing a radiological control point for access to the EOF as necessary.

4.4 The EOF Entrance Security Watchperson has the following responsibilities:

4.4.1 Initiate the EOF Entry Log in accordance with F8-2.

4.4.2 Issue and collect dosimetry, and record dosimeter readings upon issue and collection.

4.4.3 Notify the Security Coordinator in the event of lost, damaged, or off-scale dosimeter readings.

4.5 The Radiation Protection Specialists (RPS) have the following responsibilities:

4.5.1 Establish radioactive material control measures as specified in this procedure.

4.5.2 Control access and monitor frisking of potentially contaminated personnel to EOF as appropriate.

4.5.3 Direct personnel decontamination measures in accordance with F3-19, Personnel and Equipment Monitoring and Decontamination.

4.5.4 Control receipt and transport of samples within the EOF.

4.5.5 Complete surveys within the EOF as requested by the RPSS.

4.5.6 Direct EOF facility decontamination activities as required.

5.0 DISCUSSION

EOF personnel should be issued a TLD and a self-reading dosimeter upon entering the EOF. When permanently leaving the EOF, or upon completion of assigned duties, personnel should surrender the TLD and self-reading dosimeter to the EOF Entrance Security Watchperson.

At the discretion of the EOF Coordinator, personnel may be allowed to exit the EOF other than through a potentially contaminated access control area. Prior to exiting however, all personnel must follow security procedures for leaving the EOF.

During special emergency conditions, normal exposure practices may have to be waived to protect equipment and/or life.

6.0 PREREQUISITES

Prairie Island Staff has declared an Emergency Classification of an Alert, Site Area, or General Emergency.

7.0 PROCEDURE

7.1 Radiological Access Control into the EOF for potentially contaminated personnel or radioactive materials **SHALL** be initiated when any of the following conditions have occurred:

7.1.1 Emergency response personnel which may have been exposed to a plume or radioactive materials require access to the EOF.

7.1.2 A release of radioactive materials has occurred and samples from the Offsite Survey Teams are being returned to the EOF for analysis.

7.1.3 Radioactive samples have been sent from the plant to the EOF for analysis.

7.1.4 Contaminated personnel have been transported to the EOF for decontamination.

7.2 Establish Radiological Access Control for personnel as follows:

7.2.1 The EOF Coordinator should direct set up of radiological access control at the rear EOF access control area in accordance with Figure 1, Access Control for Radioactive Materials at the EOF.

7.2.2 Security should ensure that the airlock door and all other doors to the EOF are CLOSED.

7.2.3 The RPS should establish a barrier rope for contamination control and radiological screening (see Figure 1). This will establish an EOF radiological access holding area.

7.2.4 The RPS should set up a Step-off-Pad and friskers (see Figure 1).

7.2.5 Security should direct personnel entering the EOF to pass through the control point, using the frisker to detect possible contamination. Ensure RPS is available when potentially contaminated personnel enter the EOF.

7.2.6 Personnel which have been screened and are not contaminated should be allowed access to the EOF. Personnel not involved with EOF activities (e.g. evacuated plant personnel) should be instructed to assemble in the unoccupied classrooms until they are released from site.

7.2.7 Contaminated personnel should be instructed to assemble in the EOF radiological access holding area.

7.2.8 The RPS should direct personnel decontamination in accordance with F3-19, Personnel and Equipment Monitoring and Decontamination.

NOTE:	**The decontamination shower drains to a 1000 gallon liquid waste holding tank that is equipped with a high level alarm. The alarm indicator is located on the South wall of the decon shower. The RPS should notify the RPSS when the high level alarm comes in. There is a 4" withdrawal pipe outside the receiving area door for pumping out the tank.**

7.2.9 After decontamination, personnel should be checked at the control point and allowed access to the EOF.

7.3 Establish Radiological Access Control for Radioactive Materials as follows:

7.3.1 The RPS should establish barriers and Step-off-Pads as specified in Figure 1, Access Control for Radioactive Materials at the EOF.

7.3.2 Security should ensure all samples are held in the access holding area until checked and released by the RPS.

7.3.3 The RPS assigned to the EOF Count Room should ensure that, prior to transporting samples to the EOF Count Room, all samples have dose rates checked, are bagged or rebagged as necessary, before passing through clean area.

7.3.4 If necessary, samples should be rebagged and stored in the shielded sample storage area.

7.4 Specific Radiation Exposure Controls

The RPSS should implement specific exposure controls if personnel exposures in the range of 10 mRem are expected at the EOF. The following actions are then necessary.

7.4.1 An RPS should have temporary personnel complete NRC-4 and NRC-5 forms.

7.4.2 If the site computer is available, the individuals' personal and exposure data should be added to the computer exposure system as per the Radiation Protection Manual.

7.4.3 If the computer is not available, the individuals' data should be added to the Emergency Weekly Exposure Record, PINGP 755.

7.4.4 Obtain current administrative dose guidelines and yearly doses from plant records for personnel who have a current plant TLD issued.

7.4.5 At the end of each shift, the RPS should record the exposures from the EOF Entry Log, and enter in the computer as per the Radiation Protection Manual; or if the computer is not available, add the exposure to the Emergency Weekly Exposure Record, PINGP 755.

7.4.6 The RPSS should track exposures received, and limit each individual's exposure in accordance with 10CFR20 NRC limits in RPIP-1110, Administrative Dose Controls, unless the Emergency Manager authorizes higher exposure.

7.5 Protective Guidelines for EOF Personnel

7.5.1 EPA 400 Guidelines for Recommended Protective Action to limit total exposure to personnel are:

Projected TEDE Dose Limit (mrem)	Activity	Condition
5,000	All	Lower dose not practical
10,000	Protecting valuable property	Lower dose not practical
25,000	Life saving or protection of large populations	Lower dose not practical
>25,000	Life saving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved.

NOTE:

1. **Based on EPA 400-R-92-001, May 1992**
2. **TEDE = Total Effective Dose Equivalent**
3. **These are doses to nonpregnant adults from external exposure and intake during an emergency.**
4. **Workers should limit dose to the lens of the eye to 3 times the listed values and doses to extremities and any other organ to 10 times the doses listed above.**

7.5.2 The following guidance may be used, at the discretion of the Emergency Manager, for determining protective actions at the EOF:

External (DDE) Exposure Rates (mRem/hr)	Protective Action	Comments
greater than 1	Evacuate non-EOF areas of the Training Building and personnel who are not part of the emergency response organization.	
greater than 15	Consider evacuation of declared pregnant women and non-essential personnel	
greater than 100	Consider activation of the Backup EOF. Execute exposure authorization for those personnel approaching administrative limits and deemed by the Emergency Manager as vital to the emergency response effort. Evacuate all others.	**CAUTION**: Consider only if levels are expected to be sustained for a significant period of time and would cause excessive exposure to emergency personnel or levels are such that they seriously reduce the effectiveness of the emergency organization.
greater than 1000	Evacuation to the Backup EOF is recommended.	

DDE = Deep Dose Equivalent - external dose rate in mrem/hr.

Smearable Surface Contamination Levels (cpm/100 cm2)	Protective Action	Comments
greater than 100	Evacuate non-EOF areas of the Training Building and personnel who are not part of the emergency response organization. Control eating, drinking and smoking.	
greater than 500	Consider use of protective clothing, evacuate non-essential personnel.	Operation may continue as long as restrictions on personnel movements to limit the spread of contamination do not become limiting to operations.
greater than 5000	Ensure use of protective clothing.	

Airborne Radioactive Levels	Protective Action	Comments
CAM - Particulate		
1. $1X10^{-9}$ uCi/cc 2. > $1X10^{-9}$ uCi/cc, but < $1X10^{-6}$ uCi/cc	No protective action necessary. Consider evacuation of unnecessary personnel and establish a program of regular portable air samples and counting to determine the DAC.	
a. If portable air sample results > .3 DAC		
	Evacuate non-EOF areas of the Training Building and personnel who are not part of the emergency response organization.	This measure is to ensure that classrooms and other non-EOF areas do not contain personnel being trained, i.e., badging classes, visitors, consultants, etc.
b. If portable air sample results > 1 DAC		
	Consider evacuation of unnecessary personnel and limit exposures to less than 40 DAC-hours per week, if possible.	Prolonged exposure to excessive airborne levels without protection that would lead to a exposure of 5000 mrem Committed Effected Dose Equivalent in one year should be avoided.
c. If portable air sample results > 10 DAC		
	Evacuate all personnel not deemed by the Emergency Manager as vital to the emergency response effort. Consider relocation of the EOF to the Backup EOF.	**CAUTION:** Consider evacuation only if levels are expected to be sustained for a significant period of time and would cause excessive exposure to emergency personnel or levels are such that they seriously reduce the effectiveness of the emergency organization.
3. > $1X10^{-6}$ uCi/cc	Evacuation to the Backup EOF is recommended.	

Airborne Radioactive Levels	Protective Action	Comments
CAM - Iodine		
1. If CAM alarms for iodine (2 X 10^{-9} uCi/cc)	Establish a program of regular portable air samples and counting to determine the DAC.	Prolonged exposure to excessive airborne levels without protection that would lead to an exposure of 5000 mrem Committed Effective Dose Equivalent in one year should be avoided.
2. If portable air sample results > 1 DAC	Consider evacuation of unnecessary personnel and limit exposures to less than 40 DAC-hrs per week, if possible.	
3. If portable air sample results > 10 DAC	Consider evacuation to the Backup EOF.	**CAUTION:** Consider evacuation only if levels are expected to be sustained for a significant period of time and would cause excessive exposure to emergency personnel or levels are such that they seriously reduce the effectiveness of the emergency organization.

NOTE:	**The RPSS should recommend the use of potassium iodide pills (thyroid blocking agent) if the projected thyroid exposure approaches 25 REM. See F3-18, Thyroid Iodine Blocking Agent (Potassium Iodide), for determining projected thyroid exposures.**

7.5.3 Generally, operational limits are flexible considering the "stay time" in the radiation area. A Total Effective Dose Equivalent (TEDE) in excess of 5000 mRem in one year should be avoided. Consideration to the exposure of key individuals should be used to determine the advisability of long term operation of the EOF in any area greater than 100 mR/hr.

NOTE:	**Radiation levels are probably from the plume. Consideration should be given to a potential wind shift and/or decrease of rad levels prior to ordering an evacuation.**

The time to reach yearly limit at various radiation levels is:

Radiation Level	Number of 12 Hour Shifts
5 mR/hr	80
10 mR/hr	40
25 mR/hr	16
50 mR/hr	8
100 mR/hr	4

7.5.4 When the decision to evacuate the EOF is made, refer to F8-11, Transfer to the Backup EOF, for specific guidance.

F8	RADIOLOGICAL MONITORING AND CONTROL AT THE EOF	NUMBER: F8-6
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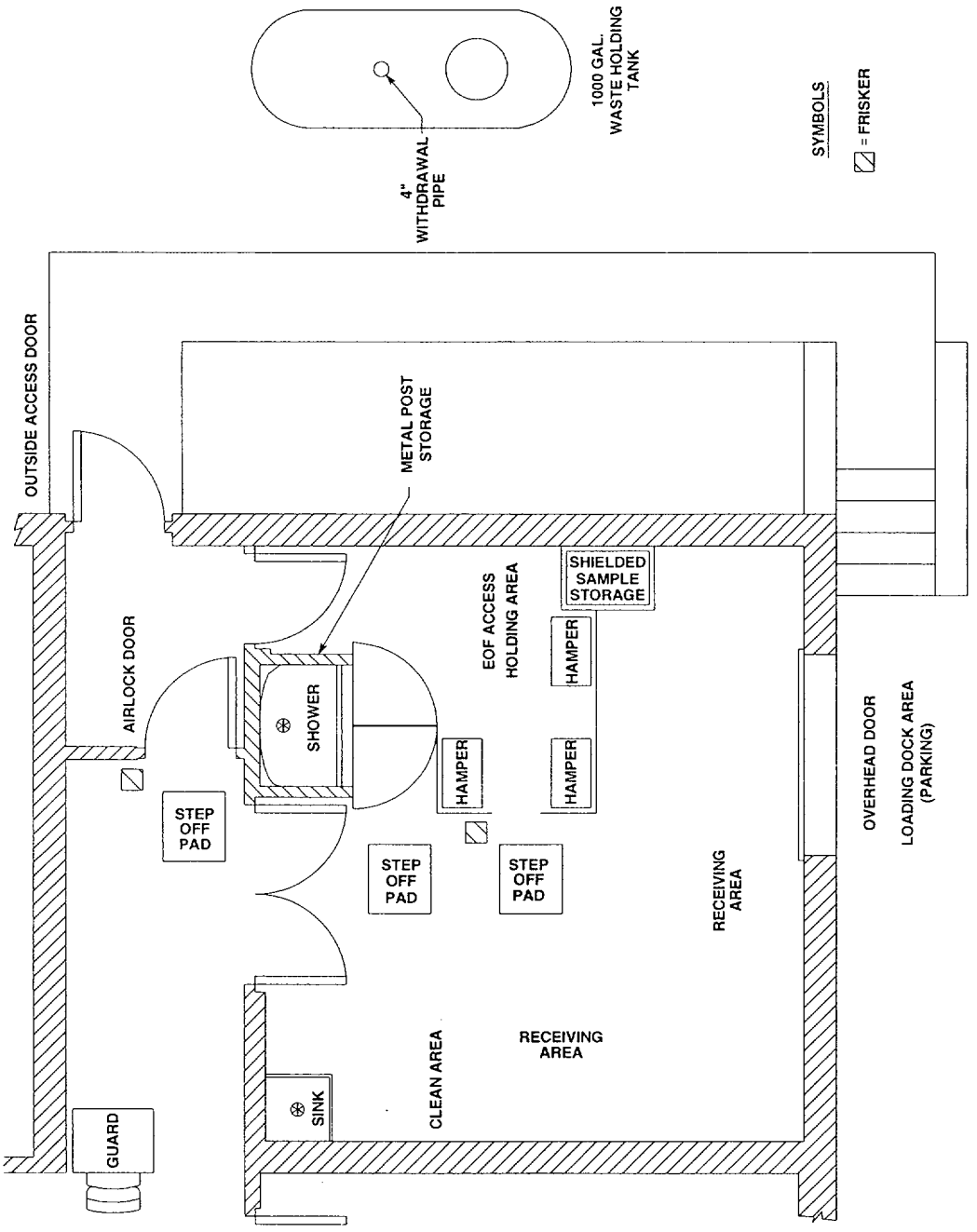
Figure 1 Access Control for Radioactive Materials at the EOF



Mfst Num: 2004 - 0271 Date : 04/09/04
FROM : Bruce Loesch/Mary Gadient Loc : Prairie Island
TO : **SCHOEN, BETH A**
Copy Num: 515 Holder : US NRC DOC CONTROL DESK
SUBJECT : Revisions to CONTROLLED DOCUMENTS

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Procedure #	Rev	Title

Revisions:
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F3-2	35	CLASSIFICATIONS OF EMERGENCIES

UPDATING INSTRUCTIONS

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Approved By: Mary Gadient BBA Designee	

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F3	CLASSIFICATIONS OF EMERGENCIES	NUMBER: F3-2 REV: 35

REFERENCE USE

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1.0 PURPOSE

The purpose of this procedure is to specify the Emergency Action Levels that indicate an emergency condition exists and to properly classify the emergency into one (1) of the four (4) graded levels of emergency classifications. This procedure partially satisfies the requirement of 10CFR50.47 concerning the existence of an emergency classification and action level scheme.

2.0 APPLICABILITY

This instruction **SHALL** apply to all Shift Managers (SM), Shift Supervisors (SS), Control Room Operators (CRO), Emergency Directors (ED) and Emergency Managers (EM).

3.0 PRECAUTIONS

3.1 This procedure **SHALL** be entered whenever there is indication of an Emergency Action Level being exceeded.

3.2 Attempt to verify the indications by checking secondary or coincident indicators.

3.3 An emergency classification should be made based on current plant conditions described in Attachment 1 of this procedure.

3.4 These emergency classifications do not apply to offsite transportation incidents that do NOT affect safe operation of the plant. Currently, the Radiation Protection group is responsible for offsite transportation incident assessment involving plant related shipments.

3.5 Continuously monitor the Control Room instrumentation, radiation monitors, or any other developments which would be indicative of further system degradation. Be prepared to escalate to a more severe emergency classification.

4.0 RESPONSIBILITIES

4.1 Duty Shift Manager has the responsibility to authorize the initial emergency classification.

4.2 Shift Supervisor of the unaffected unit has the responsibility to assist the Shift Manager as necessary including authorization of an emergency classification.

4.3 Shift Supervisor of the affected unit has the responsibility to direct activities related to the operation of the affected unit.

4.4 Emergency Director has the responsibility to authorize an emergency classification whenever an Alert, Site Area, or General Emergency is declared and the EOF is not activated.

4.5 If the EOF is activated and fully functional, the Emergency Manager has the responsibility to authorize an emergency classification.

4.6 Control Room Operators and affected unit Shift Supervisor have the responsibility to assist the Shift Manager or unaffected unit Shift Supervisor in the identification and verification of control board indications.

5.0 DISCUSSION

5.1 Definitions

5.1.1 Notification of Unusual Event – events that are in progress or have occurred which indicate a potential degradation of the level of safety of the plant.

No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

5.1.2 Alert – events are in progress or have occurred which involve actual or potential substantial degradation of the level of safety of the plant. It is the lowest level of emergency classification when some necessity for emergency planning and offsite response is necessary.

Any releases expected are limited to small fractions of the EPA Protective Action Guideline exposure levels.

5.1.3 Site Area Emergency – events are in progress or have occurred which involve actual or likely major failure of plant functions needed for protection of the public.

Any releases are not expected to exceed the EPA Protective Action Guideline exposure levels except near the site boundary.

5.1.4 General Emergency – events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with a potential for loss of containment integrity.

Releases during a General Emergency can be reasonably expected to exceed the EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

5.1.5 Emergency Action Levels (EAL) – specific instrument readings, surface or airborne contamination levels or radiation dose rates that designate a specific emergency class requiring emergency measures for that class.

5.1.6 Safety System(s) – refers to systems that are required to be functional during and following a design basis accident or transient to ensure the capability to shut down the reactor and maintain it in a safe condition; or the capability to prevent or mitigate the consequences of accidents, which could result in off-site exposures comparable to the guidelines of 10CFR100; or the integrity of the Reactor Coolant System pressure boundary. The structures and components of a Safety System are "Safety Related SSC."

5.2 Emergency Action Levels (EALs)

Attached to this procedure is a Summary of Emergency Action Levels, Attachment 1. This summary identifies the four emergency classifications, the initiating condition(s), emergency action levels for each classification, and, where applicable, specific instruments and indications to be used to detect and classify an emergency.

The emergency action levels for each classification and the instrument readings and indications listed do not reflect a complete list of instrumentation that will show abnormal indications but does list those key parameters useful in classifying the event.

The Summary of Emergency Action Levels lists are based on the initiating conditions as required by Appendix 1 of NUREG-0654, accidents analyzed in the Prairie Island USAR, and the NRC Branch Position on Acceptable Deviations From NUREG-0654/ FEMA-REP-1, July 11, 1994.

5.3 The Emergency Classification/Declaration/Implementation Process

There are three distinct phases to consider: Classification, Declaration and Implementation.

5.3.1 **Classification:** The act of assessing the EALs to determine the appropriate classification for which the ongoing events are categorized.

Classification is expected to be made promptly following indication that the conditions have reached an emergency threshold in accordance with the EAL scheme. Promptly is a period not to exceed 15 minutes.

5.3.2 **Declaration:** The act of formally declaring the classification based on the assessment of EALs.

This is the point at which the classification time is set and the 10CFR50, App. E 15-minute offsite notification clock starts.

5.3.3 **Implementation:** The act of making the notification and/or augmentation of the emergency organizations.

5.3.4 Classification Timeliness:

Guidance for classification timeliness is provided in NRC Branch Position on Timeliness of Classification of Emergency Conditions, EPPOS No. 2 and the NRC endorsed Regulatory Assessment Performance Indicator Guideline, NEI 99-02. The guidance is summarized as follows:

Classification is expected to be made promptly following indications that conditions have reached an emergency threshold in accordance with the EAL scheme. Promptly is a period not to exceed 15 minutes. This 15-minute criterion is a reasonable period of time for assessing and classifying emergencies.

5.3.5 Ideally, the Emergency Notification Report Form (PINGP 577) should be filled out to near completion while the classification phase is being conducted. Once the declaration is made by the SM/ED/EM, the 15-minute offsite notification time starts. The SM/ED/EM should review the contents of the Emergency Notification Report Form (PINGP 577) to ensure its completeness, verify the correct declaration time and then sign the form which gives permission to the Shift Emergency Communicator (or Offsite Communicator in EOF) to implement the E-Plan notifications.

5.3.6 Per 10CFR50.72 (a)(3) NRC notification is required immediately after the notification of the state and local agencies (which is completed within about 15 minutes) and not later than one hour after the emergency declaration.

5.4 Technical Specification Required Shutdown NUEs

5.4.1 In some cases, exceeding Technical Specification limits (e.g., RCS leakage, reactor coolant activity, etc.) is considered to be precursors to more serious events and warrant declaration of an NUE.

5.4.2 In other cases, exceeding Technical Specification limits for the period designated in the T.S. ACTIONS Table is an analyzed condition of the plant and does not, by itself, represent an emergency. These events are reportable in accordance with 10 CFR 50.72 as a non-emergencies.

However, if the plant is not brought to the required operating mode within the allowable Technical Specifications action statement time limit T.S. ACTIONS Table COMPLETION Time, then a declaration of an Unusual Event should be declared.

5.4.3 With regard to Emergency Plan classifications, Operations should handle a Technical Specification required shutdown in the following manner:

A. The conditions of the plant should come first. That is, if the condition warrants initiating power reduction immediately, do so. The E-Plan classification can appropriately follow.

B. Following the initiation of the reduction in power or temperature, the classification phase of the E-Plan is started. Review of the EALs should be done to assess for proper classification. Once the Shift Manager has determined the appropriate classification for the event, the Shift Manager should declare the classification and note the time of declaration (this begins the 15-minute offsite notification clock).

C. Once the declaration is made, the Shift Manager should review the contents of the Emergency Notification Report Form (PINGP 577) to ensure its completeness, verify the correct declaration time and then sign the form which gives permission to the Shift Emergency Communicator to implement the E-Plan notifications.

5.5 Rapidly Escalating then De-escalating Events

In the case of an event that rapidly escalates then de-escalates or begins at a higher emergency class then rapidly de-escalates, the initial emergency classification should be based on current plant conditions.

It may be discovered that a condition existed which met the emergency plan criteria but no emergency was declared and the basis for the emergency class no longer exists at the time of this discovery. This may be due to a rapidly concluded event or an oversight in the emergency classification made during the event or it may be determined during a post-event review. The NRC staff does not consider actual declaration of the emergency class to be necessary in these circumstances; an ENS notification (or an ENS update if the previously reported event was misclassified) within one hour of the discovery of the undeclared (or misclassified) event provides an acceptable alternative.

The NRC should be informed of the current emergency classification and the highest emergency classification reached during the course of the event during the initial NRC notification via the ENS phone. The Shift Manager should ensure that this notification be performed by an appropriate individual other than the SEC using PINGP Form 666, Event Notification Worksheet.

To avoid possible confusion, other offsite authorities will be informed of the current classification during the initial notification and then given the full description of the highest emergency classification reached during the first update on the follow-up notification. In those cases where no classification is declared, then 5AWI 3.6.4, Notifications Regarding Plant Media Sensitive Events or Conditions, should be utilized to make proper calls to the state and local government organizations regarding the rapidly escalating and de-escalating event.

5.6 The Emergency Action Level Reference Manual Number

Prairie Island Nuclear Generating Plant has prepared a written manual (EAL Reference Manual) to provide general information about Emergency Action Levels to offsite authorities who are involved in nuclear plant emergency planning. This manual provides a description with text and drawings of the various conditions that might cause the Prairie Island Nuclear Generating Plant to classify an event. By understanding what a particular condition or event means, emergency workers at the various offsite agencies should develop a clear idea of what is occurring at the plant during the emergency.

Each initiating condition in this procedure is followed by a cross reference number that corresponds to the appropriate classification condition in the EAL Reference Manual. When the Emergency Notification Report Form (PINGP 577) is completed, the initiating condition statement and the EAL Reference Manual cross reference number should be included on the form by using the label from "Emergency Initiating Conditions Labels – PINGP 1189" or writing this information as it appears in the shaded box on the appropriate page in the Summary of Emergency Action Levels.

6.0 PREREQUISITES

An off-normal condition corresponding to one of the initiating events described in Attachment 1 of this procedure is occurring or has occurred.

F3	CLASSIFICATIONS OF EMERGENCIES	NUMBER: F3-2
		REV: 35

7.0 PROCEDURE

7.1 Any significant event that may be classified as an emergency condition **SHALL** be reported to the Shift Supervisor, Shift Manager and/or Emergency Director immediately.

NOTE:	**It is an expectation that the emergency declaration will be made promptly (within 15 minutes) upon reaching the EAL threshold.**

NOTE:	**Expectations for use of "SS, SM or ED Opinion" EAL statements:** **"SS, SM or ED Opinion" means that the decision maker is to ensure the declaration is made when conditions meet the EAL initiating condition statement. The "opinion" is NOT a reason to dismiss any valid conditions that meet an EAL threshold value. Judgment is to be used for any condition not explicitly detailed as a set of EAL threshold values, which is a potential degradation in the level of safety of the plant. Classification of an emergency is not to be delayed pending an extended evaluation of possibilities and probabilities.**

7.2 Attempt to verify the initial indication by comparing the indication to redundant instrument channels or to other related parameters, visual observations, and field reports as applicable.

7.3 The Shift Manager, unaffected unit Shift Supervisor or Emergency Director **SHALL** assess the situation and determine the emergency classification, using the guidelines of Attachment 1.

7.4 In those cases when an event rapidly escalates, then de-escalates or begins at a higher classification, then rapidly de-escalates, the initial emergency classification should be based on <u>current</u> plant conditions.

7.4.1 Inform the NRC of the current emergency classification and the highest emergency classification reached during the course of the event during the initial NRC ENS notification.

7.4.2 It may be discovered that a condition existed which met the emergency plan criteria but no emergency was declared and the basis for the emergency class no longer exists at the time of this discovery. This may be due to a rapidly concluded event or an oversight in the emergency classification made during the event or it may be determined during a post-event review. The NRC staff does not consider actual declaration of the emergency class to be necessary in these circumstances; an ENS notification (or an ENS update if the previously reported event was misclassified) within one hour of the discovery of the undeclared (or misclassified) event provides an acceptable alternative.

7.4.3 In those cases where no classification is declared, then 5AWI 3.6.4, Notifications Regarding Plant Media Sensitive Events or Conditions, should be utilized to make proper calls to state and local government organizations regarding the event.

7.5 The Shift Supervisor of the affected unit should take immediate actions, using applicable plant operating procedures to return the plant to normal (or Mode 5, Cold Shutdown, if determined to be necessary).

7.6 IF the EOF is not activated, THEN the Shift Manager or Emergency Director **SHALL** declare the appropriate emergency classification and perform actions as specified in the appropriate responsibility procedure applicable to emergency classification:

7.6.1 For a Notification of Unusual Event, proceed to F3-3.

7.6.2 For an Alert, Site or General Emergency, proceed to F3-4.

IF the EOF is activated, THEN contact the Emergency Manager for consultation on whether or not to change the emergency classification. The Emergency Director is responsible to formulate the new classification while the Emergency Manager is responsible to authorize the reclassification.

7.7 Continue to assess and watch for changing parameters or visual indication of further system degradation and be prepared to escalate to a more severe emergency classification as indicated by the Emergency Action Levels in Attachment 1.

7.8 As plant conditions stabilize during a Notification of an Unusual Event (NUE) or Alert, consider terminating the event classification.

7.8.1 For the NUE and Alert classifications, the event may be terminated once the following criteria are met:

A. The plant is in stable condition with at least one fission product barrier intact, and

B. Radioactive gaseous and liquid effluent are being controlled within the following limits:

1. Gaseous effluent release rates (or resulting dose rates) are within plant limits as defined in Section 3.1 of H4, Offsite Dose Calculation Manual (ODCM), and

2. Liquid effluent release rates (or resulting concentrations) are within the plant limits as defined in "Old 10CFR20 Appendix B in Table II, Column 2 (April 1992)" located in H4, ODCM, Table 4.3 and

C. The potential for future degradation of plant conditions is small.

7.8.2 Termination of an NUE classification may be performed by the Shift Manager. Review of 5AWI 1.13.0, Plant Event Investigation and Recovery, should be completed to determine if this procedure needs to be implemented and the Plant Manager informed of the review.

7.8.3 Termination of an Alert classification may be performed by the Emergency Director when the EOF is not activated. Once the EOF is fully functional, the Emergency Manager **SHALL** terminate the Alert classification when the conditions are met for termination.

7.8.4 Termination of an Alert classification includes the dismissal of the site Emergency Response Organization. Any necessary in-plant or on-site follow-up activities should be coordinated and managed by the normal plant site organization. In some cases, conditions may require the establishment of a Recovery Organization in which case the Emergency Director and Emergency Manager should make this determination based on the extent of damage or other considerations. In this case 5AWI 1.13.0 should be reviewed and implemented as determined appropriate.

7.9 As plant conditions stabilize during a Site Area or General Emergency, consider transition to the Recovery phase.

NOTE:	**IF the Site Area Emergency event does not require significant repairs or analysis beyond the capabilities of the normal plant site organization and the conditions of 7.8.1. A, B, & C are met, THEN the Site Area Emergency may be terminated without a transition to Recovery. However review and implementation of 5AWI 1.13.0 should be completed as appropriate.**

7.9.1 Transition to Recovery should be directed by the Emergency Manager with coordinated recovery planning by the site Emergency Response Organization.

7.9.2 See F3–30, "Recovery", for instruction on transition to Recovery.

7.9.3 Review and implementation of 5AWI 1.13.0 should be completed as appropriate.

F3	CLASSIFICATION OF EMERGENCIES ATTACHMENT 1	NUMBER: F3-2
		REV: 35

SUMMARY

OF

EMERGENCY ACTION LEVELS

NOTE:	Definition of logic symbols: AND symbol =  OR symbol = 

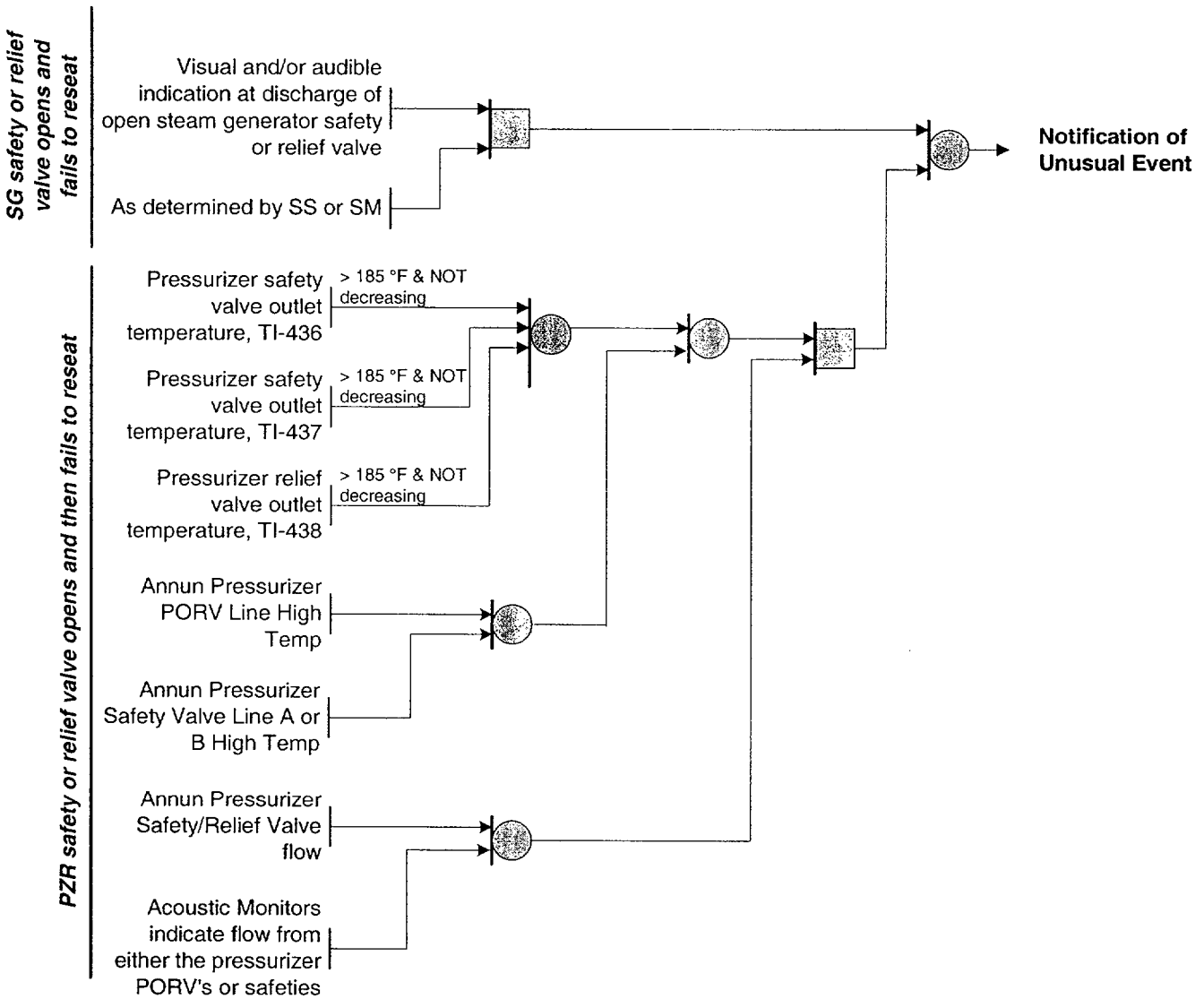
F3	CLASSIFICATION OF EMERGENCIES ATTACHMENT 1	NUMBER: F3-2
		REV: 35

INITIATING CONDITION INDEX

Condition 1 : Safety System Functions

Failure of a safety or relief valve in a safety related system to close following reduction of applicable pressure.

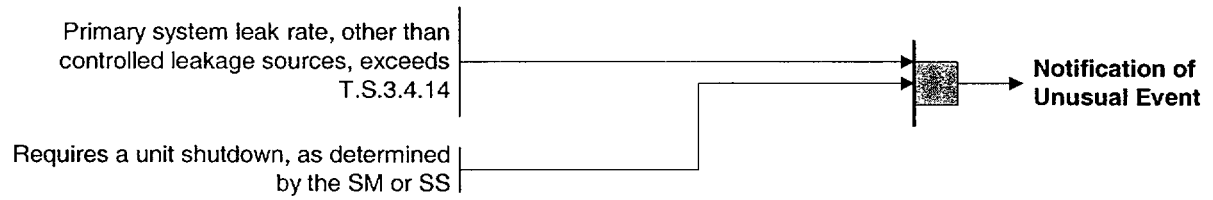
(EAL Ref Manual 1B)



Condition 2: Abnormal Primary Leak

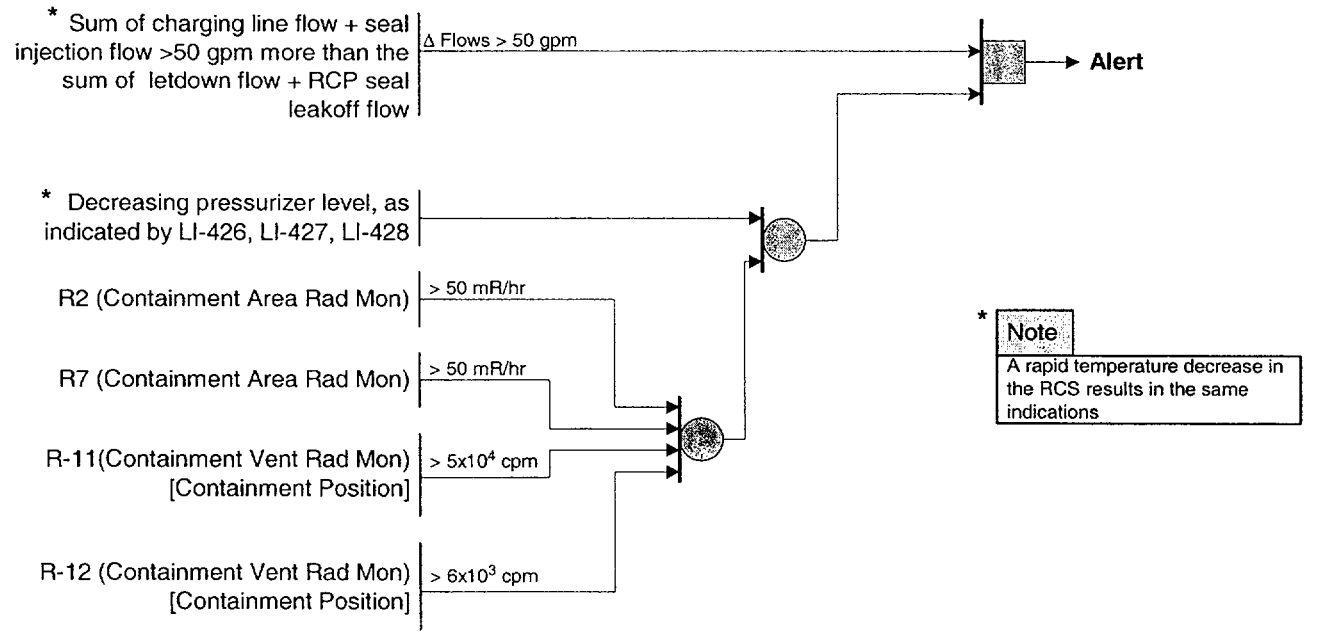
Primary system leak rate from unidentified or uncontrolled sources exceeding Technical Specifications.

(EAL Ref Manual 2A)



Primary coolant leak rate greater than 50 gpm.

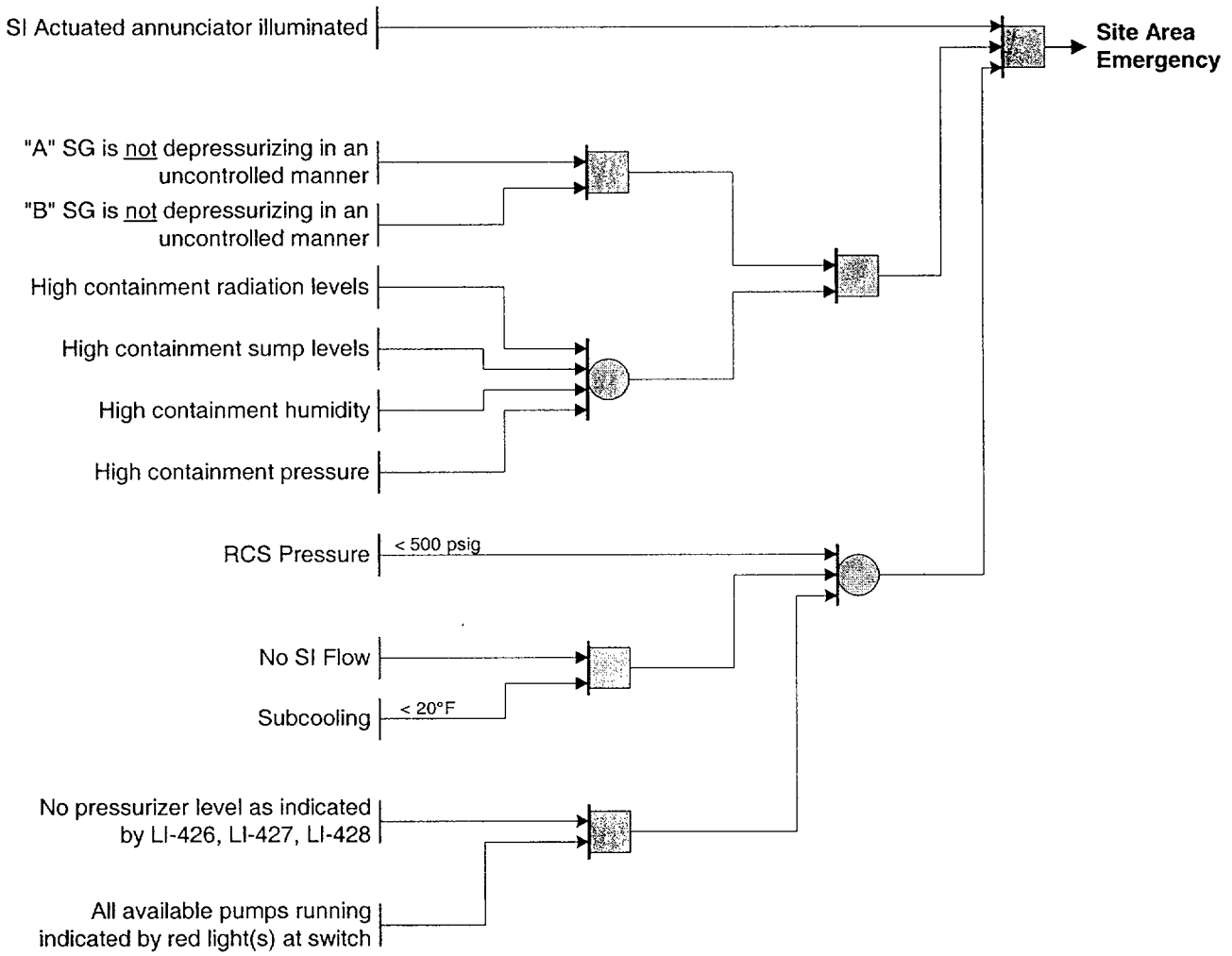
(EAL Ref Manual 2B)



Condition 2: Abnormal Primary Leak

LOCA with leak rate in excess of available pump capacity (Charging, SI, & RHR). (Small LOCA with failure of SI or Large LOCA greater than SI flow.)

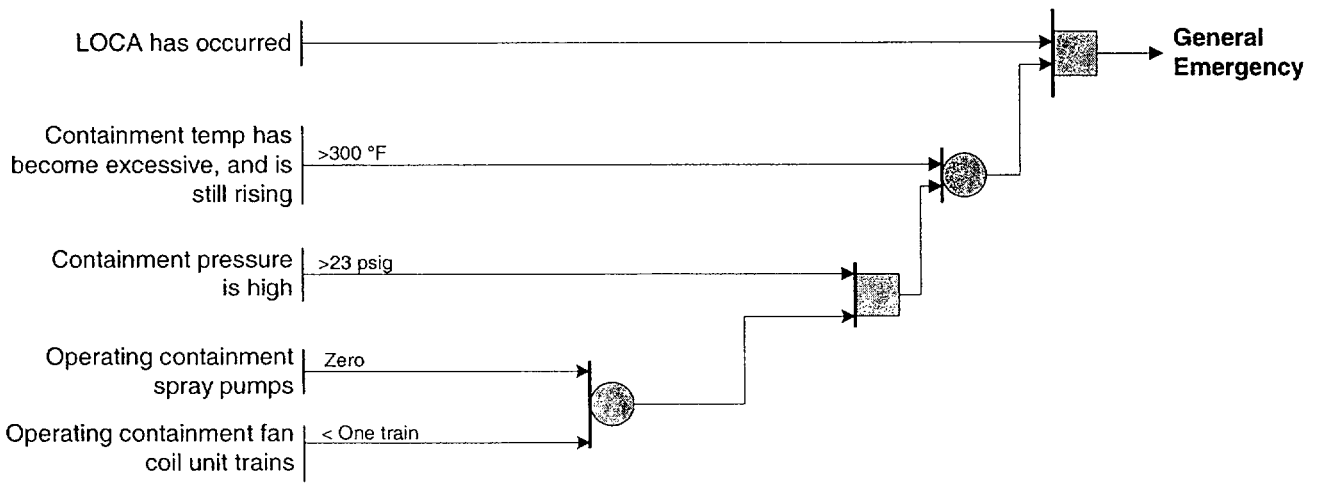
(EAL Ref Manual 2C)



Condition 2: Abnormal Primary Leak

Small LOCA and initially successful ECCS. Subsequent failure of containment heat removal systems over several hours could lead to core melt and likely failure of containment.

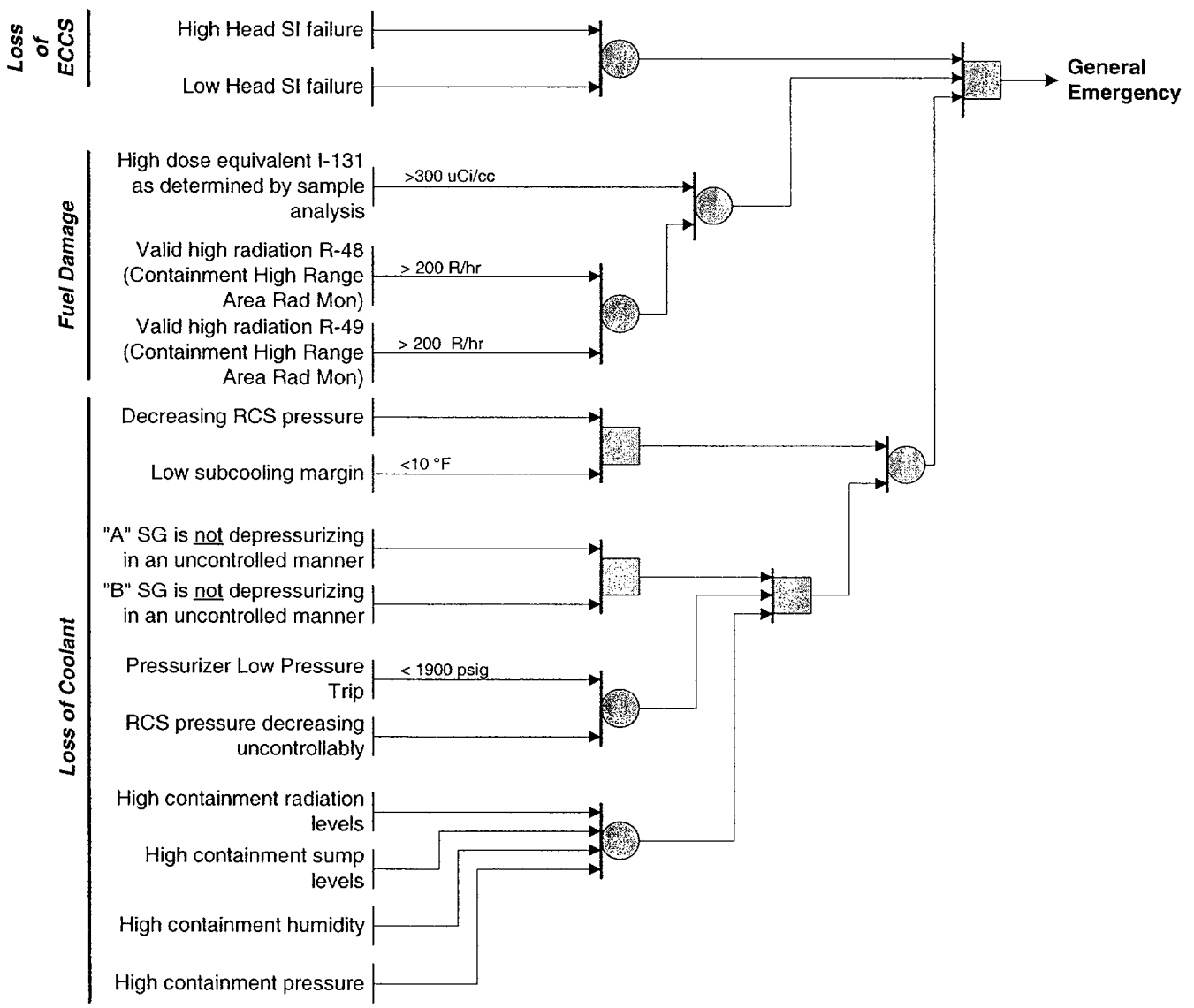
(EAL Ref Manual 2D)



Condition 2: Abnormal Primary Leak

Small and large LOCA's with failure of ECCS to perform leading to severe core degradation or melt in from minutes to hours. Ultimate failure of containment likely for melt sequences.

(EAL Ref Manual 2E)



Condition 3 : Abnormal Coolant Temperature/Pressure

DELETED

Deleted based on NRC Branch Position On Acceptable Deviations From Appendix 1 to NUREG-0654/FEMA-REP-1, July 11, 1994.

Condition 4 : Abnormal Primary / Secondary Leak

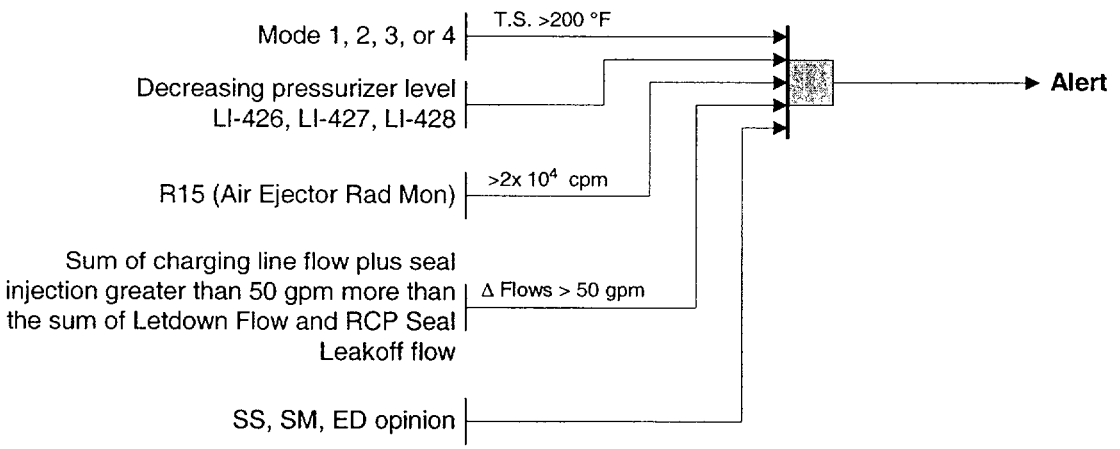
Primary /Secondary leak rate exceeding Technical Specifications.

(EAL Ref Manual 4A)

SG primary to secondary leakage exceeds T.S.3.4.14 limits — > 150 GPD through any 1 SG → **Notification of Unusual Event**

Primary /Secondary leak rate greater than 50 gpm.

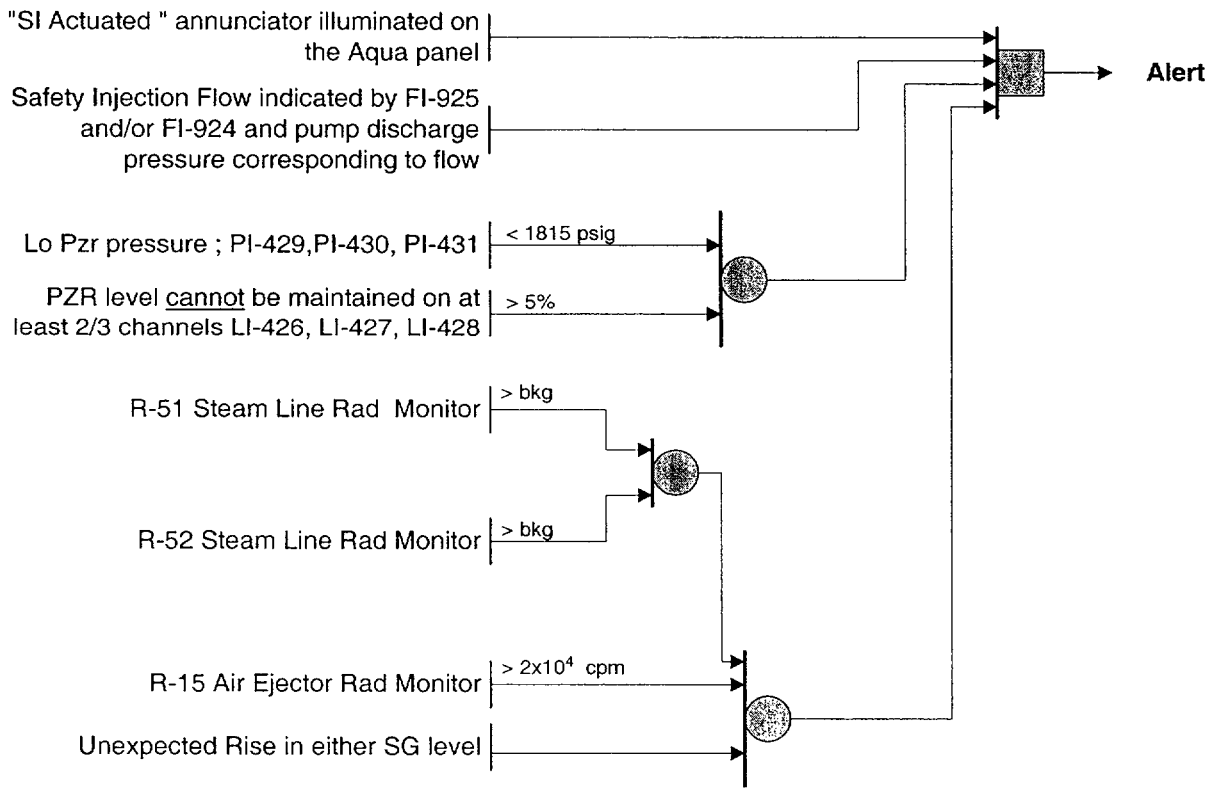
(EAL Ref Manual 4B)



Condition 4 : Abnormal Primary /Secondary Leak

Failure of steam generator tube(s) resulting in ECCS actuation.

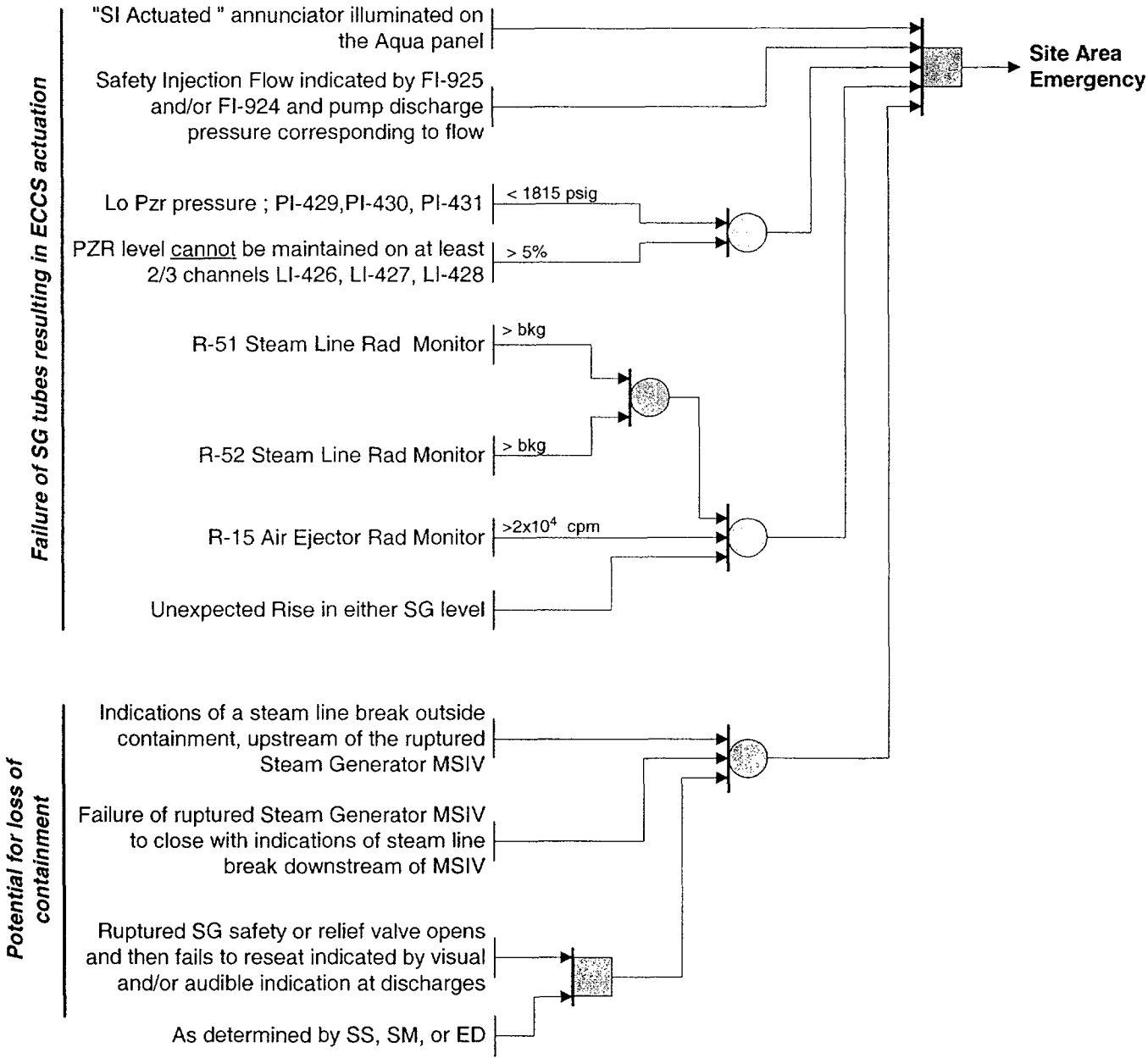
(EAL Ref Manual 4C)



Condition 4 : Abnormal Primary /Secondary Leak

Failure of steam generator tube(s) resulting in ECCS actuation and high potential for loss of containment.

(EAL Ref Manual 4D)

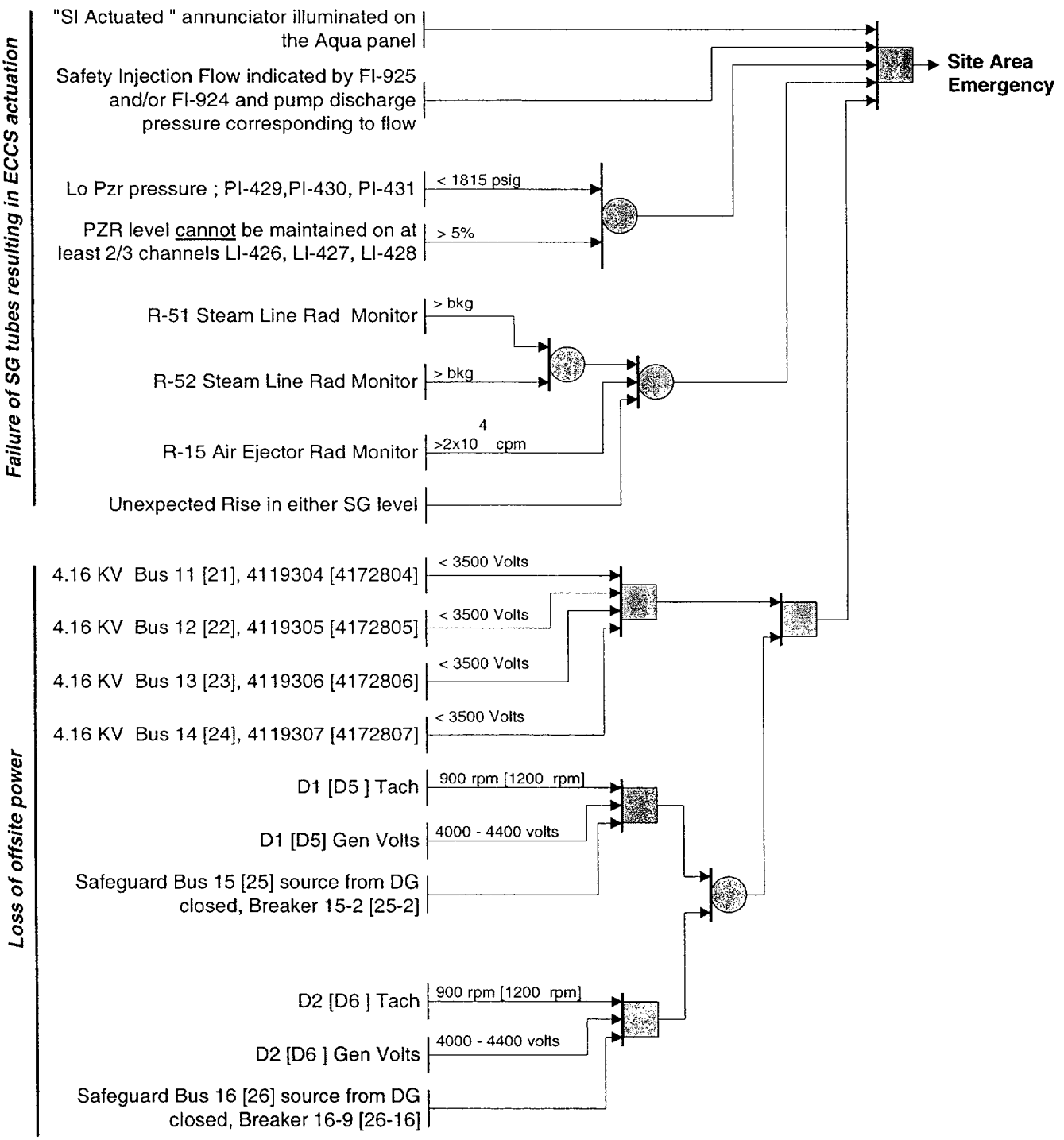


Note:	If steam break is outside containment with SG tube rupture and fuel failure, this may be a General Emergency. See Condition # 6, Case 2.

Condition 4 : Abnormal Primary /Secondary Leak

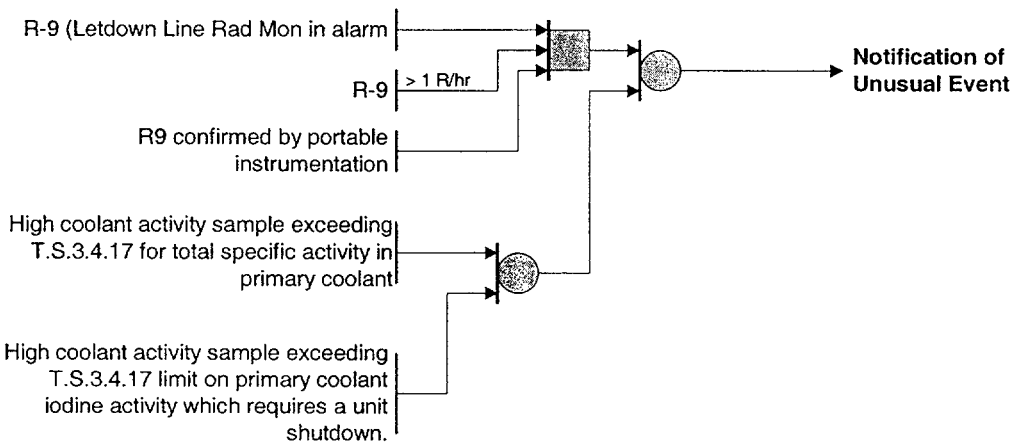
Failure of steam generator tube(s) resulting in ECCS actuation and loss of offsite power.

(EAL Ref Manual 4E)

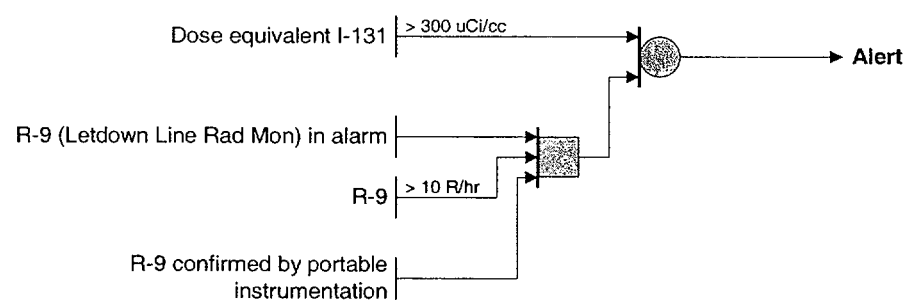


Condition 5 : Core Fuel Damage

Fuel Damage Indication (EAL Ref Manual 5A)



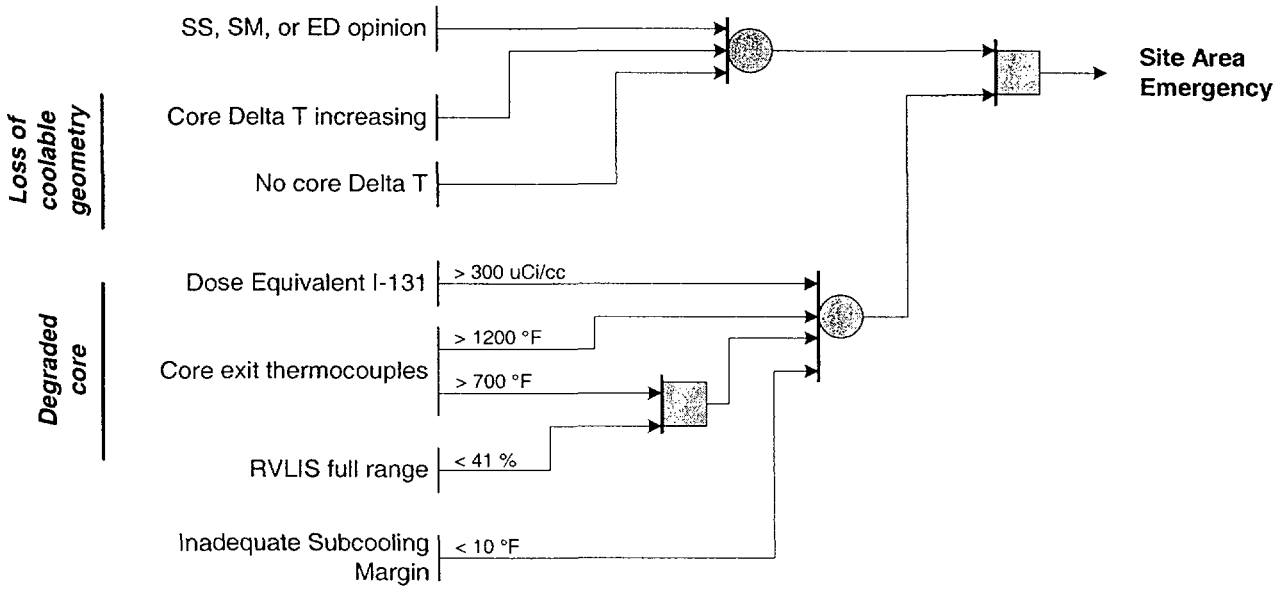
Severe Loss of fuel cladding (EAL Ref Manual 5B)



Condition 5 : Core Fuel Damage

Degraded core with possible loss of coolable geometry

(EAL Ref Manual 5C)



Condition 6 : Loss of 2 of 3 Fission Product Barriers

Loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier. (EAL Ref Manual 6)

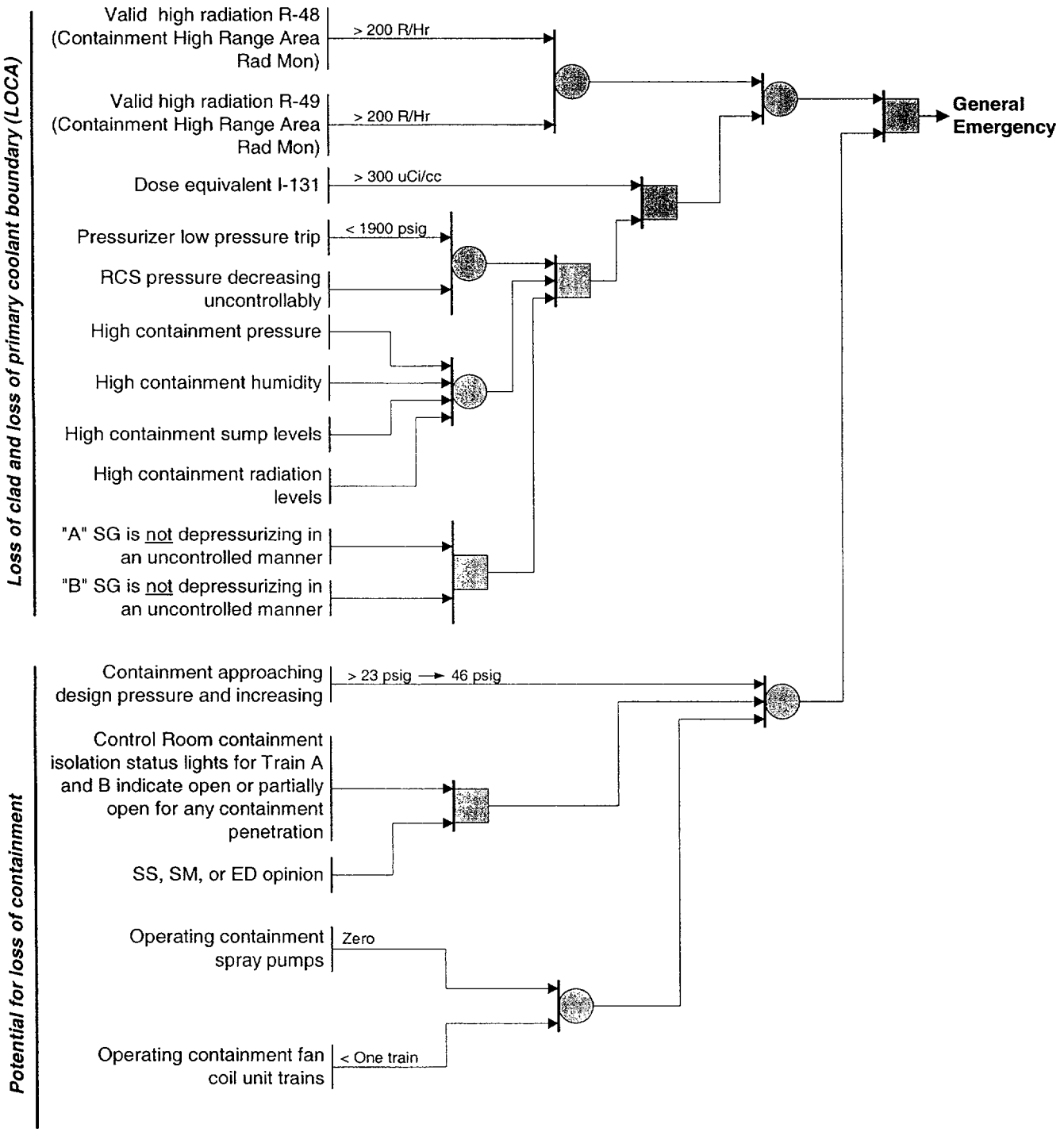
GENERAL EMERGENCY

NOTES:	**1. Three permutations exist for loss of 2 of 3 fission product barriers with a potential loss of 3rd barrier;** **A. Failure of cladding and primary coolant boundary with potential loss of containment.** **B. Failure of cladding and containment with potential loss of primary coolant boundary.** **C. Failure of containment and primary coolant boundary with potential loss of cladding.** **These 3 permutations are represented in the following 5 cases, each with its own set of EAL's:**

Condition 6: Loss of 2 of 3 Fission Product Barriers

Case 1: Loss of clad, loss of primary coolant boundary (LOCA), and high potential for loss of containment.

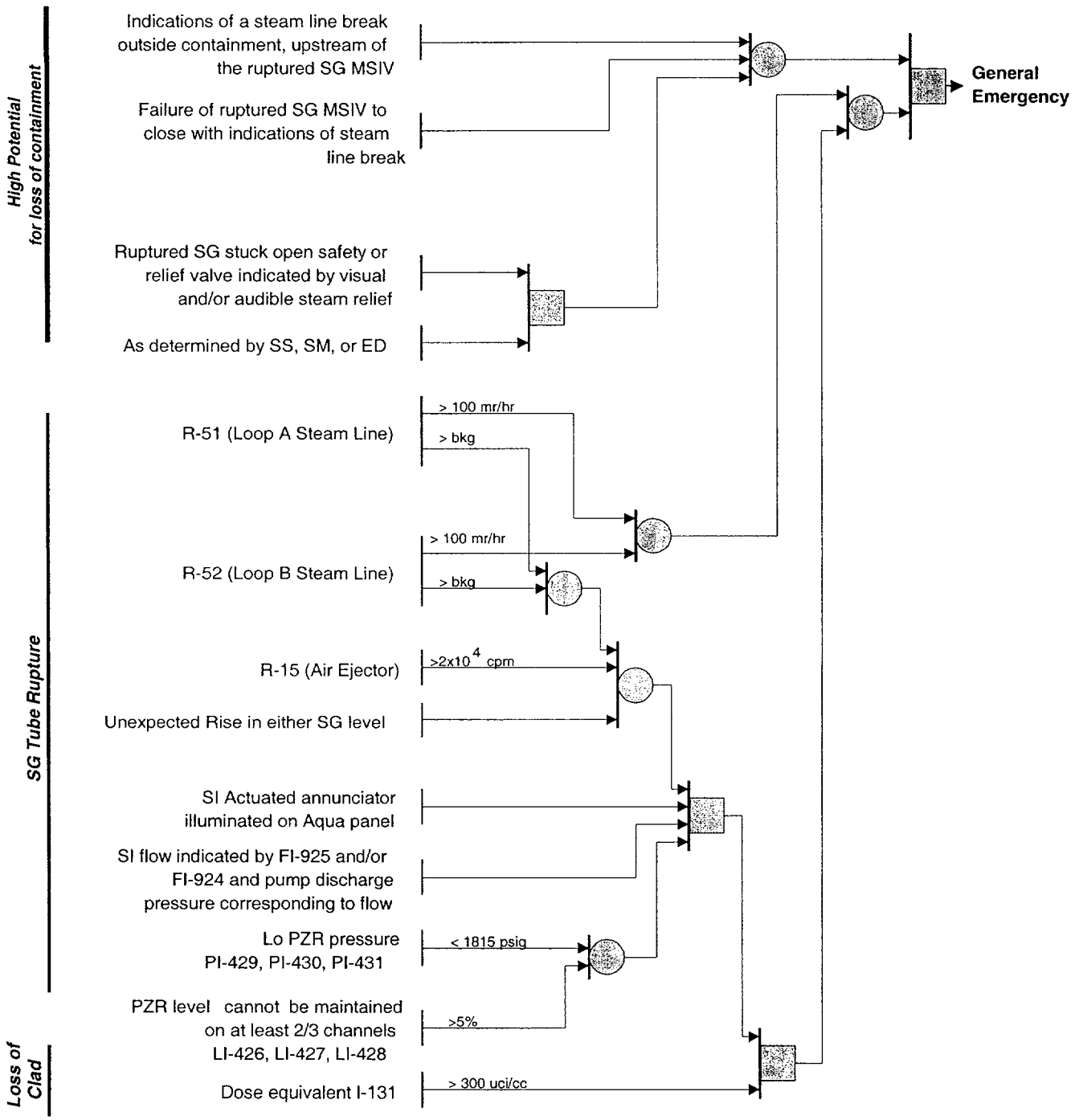
(EAL Ref Manual 6)



Condition 6: Loss of 2 of 3 Fission Product Barriers

Case 2: Loss of clad, SG tube rupture and high potential for loss of containment

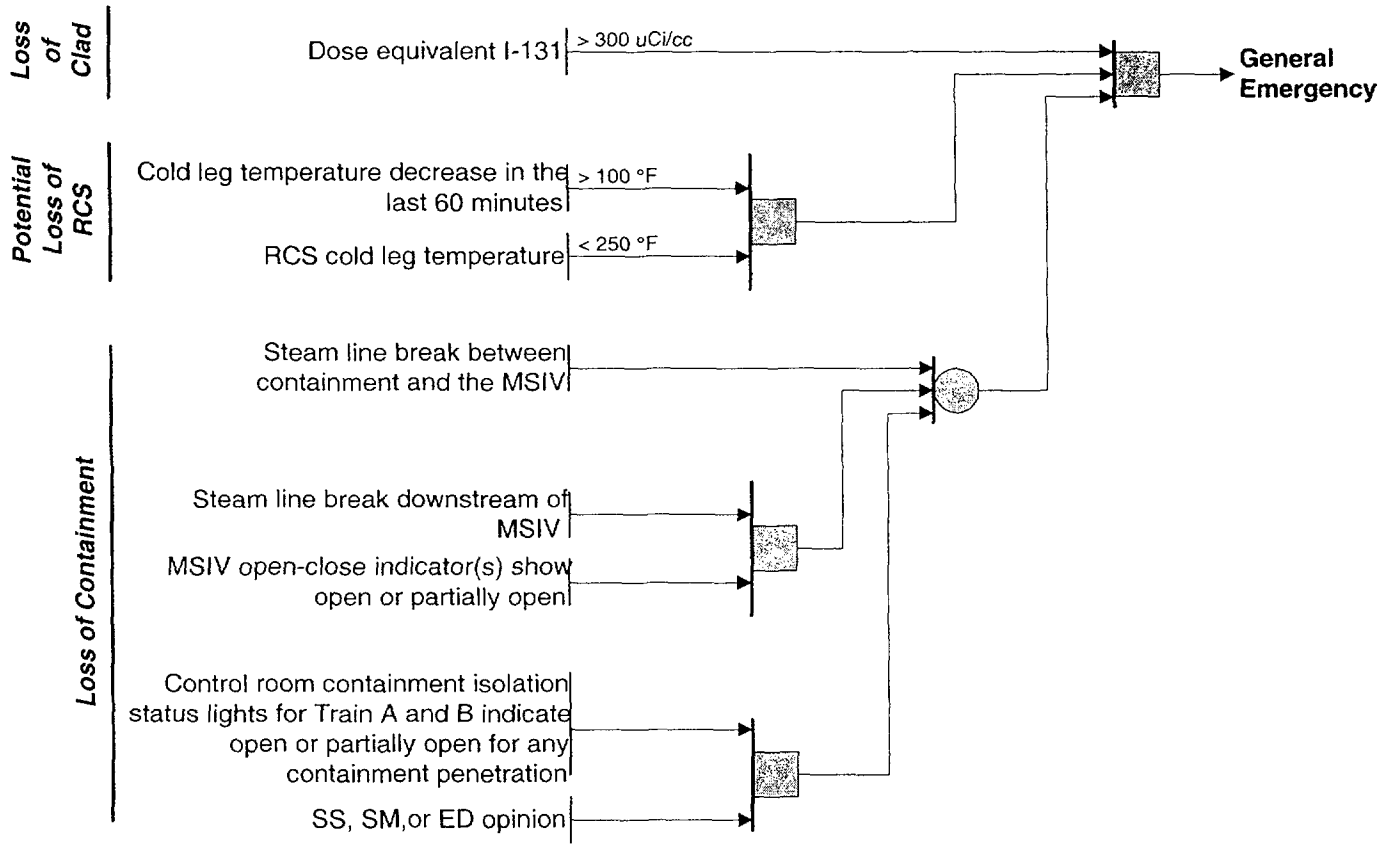
(EAL Ref Manual 6)



Condition 6: Loss of 2 of 3 Fission Product Barriers

Case 3 : Loss of clad, containment failure, and a high potential for loss of the RCS boundary.

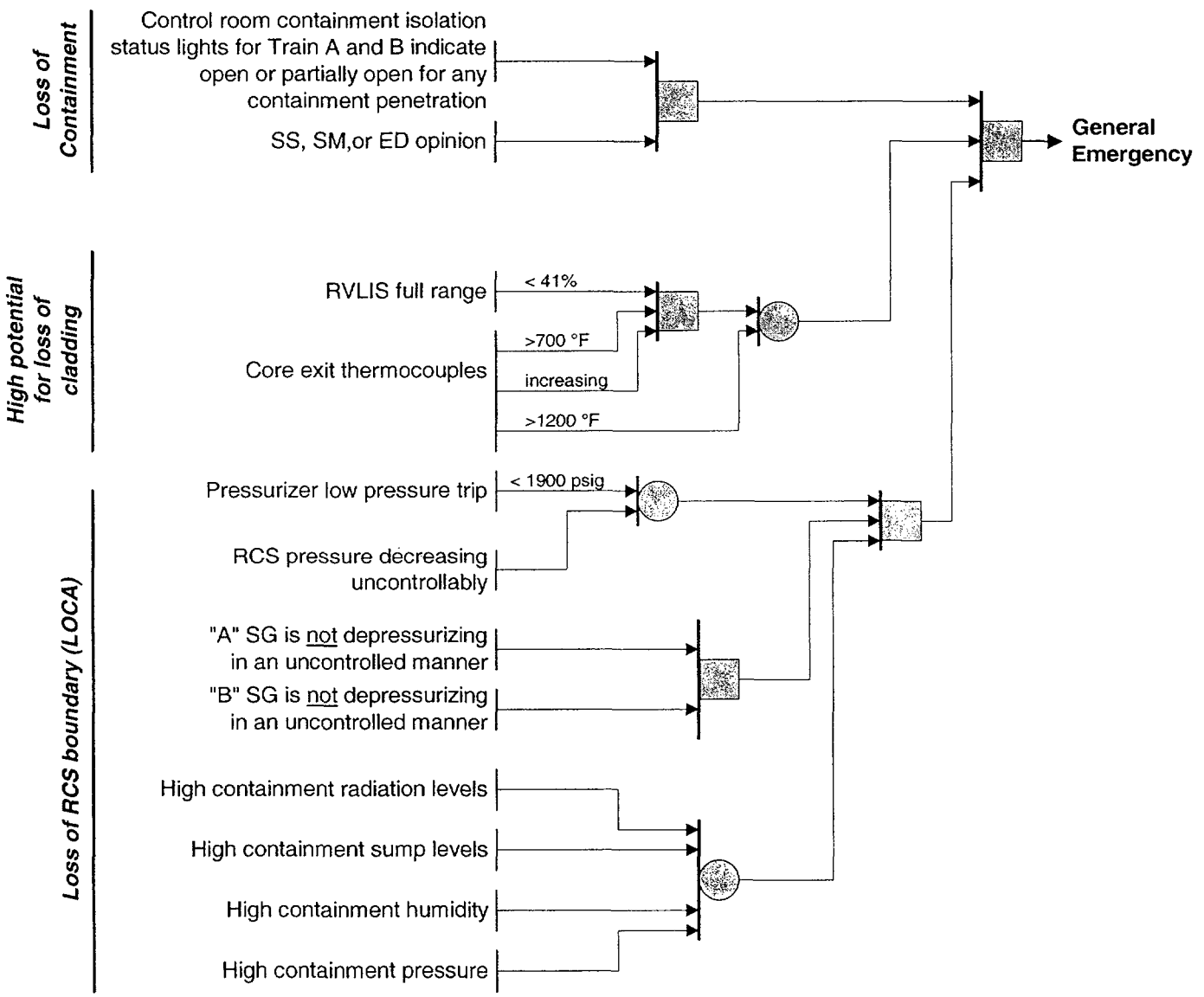
(EAL Ref Manual 6)



Condition 6: Loss of 2 of 3 Fission Product Barriers

Case 4 : Loss of RCS boundary (LOCA), loss of containment, and high potential for loss of cladding

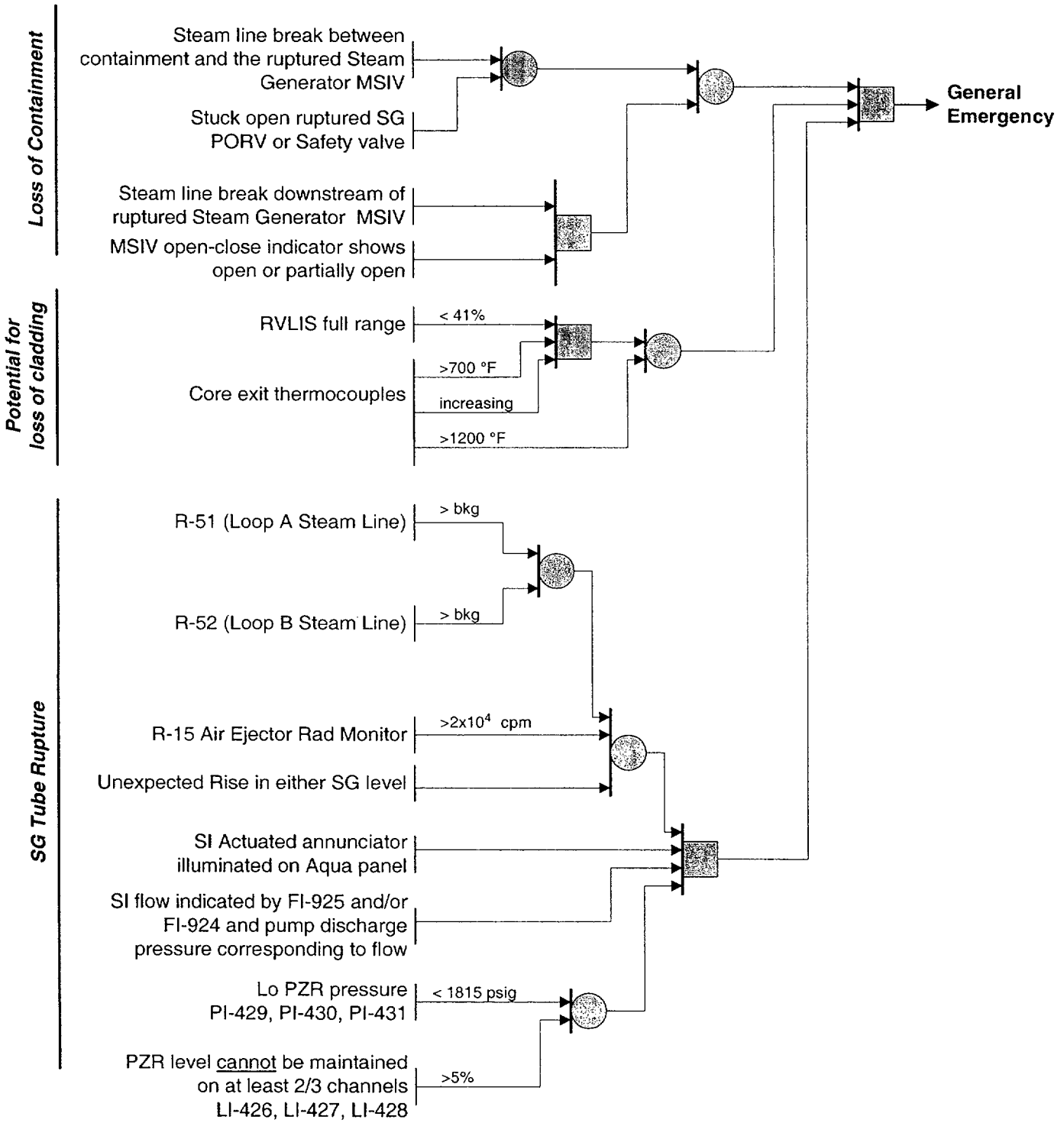
(EAL Ref Manual 6)



Condition 6: Loss of 2 of 3 Fission Product Barriers

Case 5 : Loss of RCS Boundary (SG Tube Rupture), loss of containment, and high potential for loss of cladding.

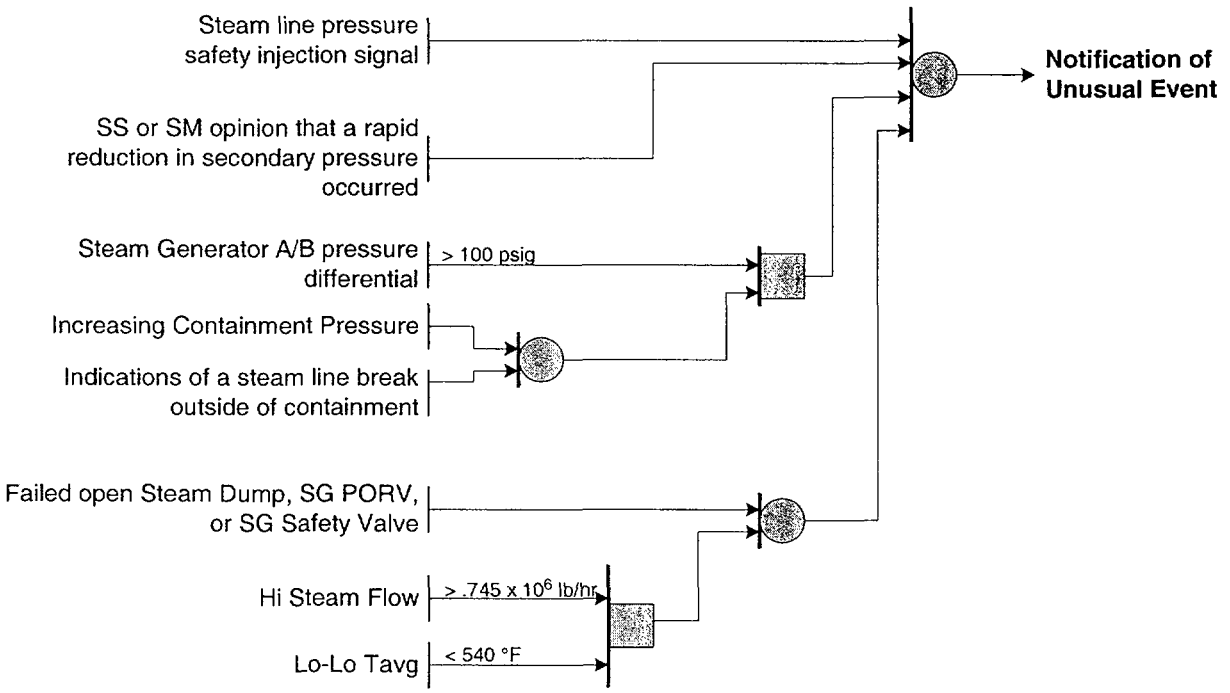
(EAL Ref Manual 6)



Condition 7 : Secondary Coolant Anomaly

Rapid depressurization of secondary side.

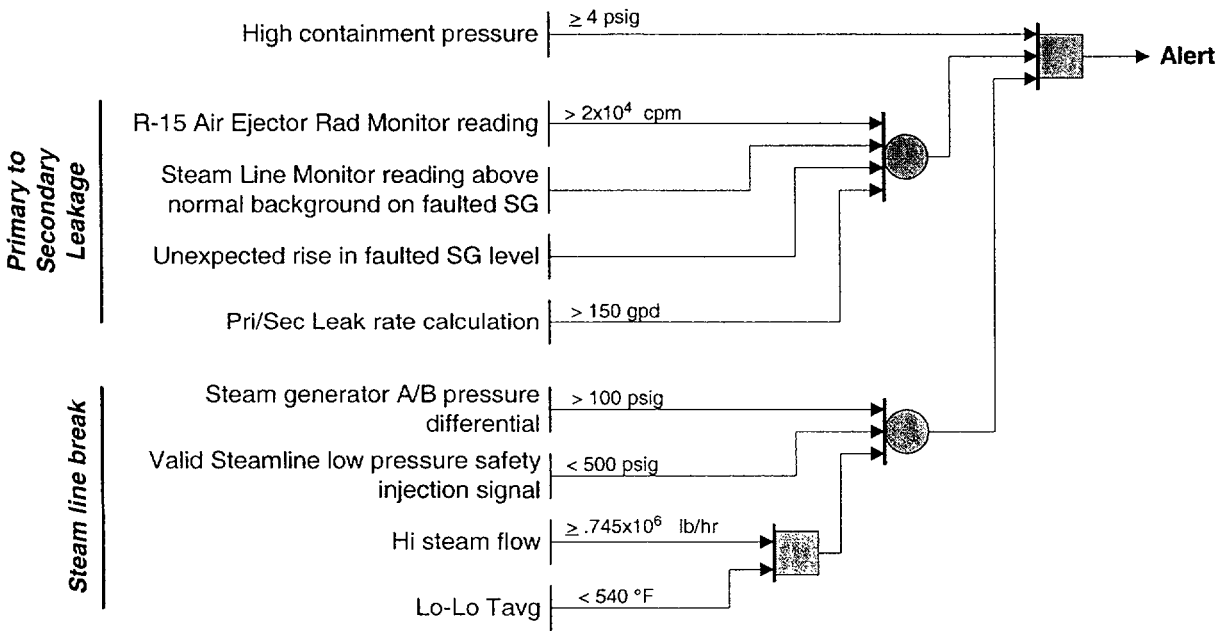
(EAL Ref Manual 7A)



Condition 7 : Secondary Coolant Anomaly

Steam line break inside containment with significant (greater than 150 gpd) primary to secondary leak rate.

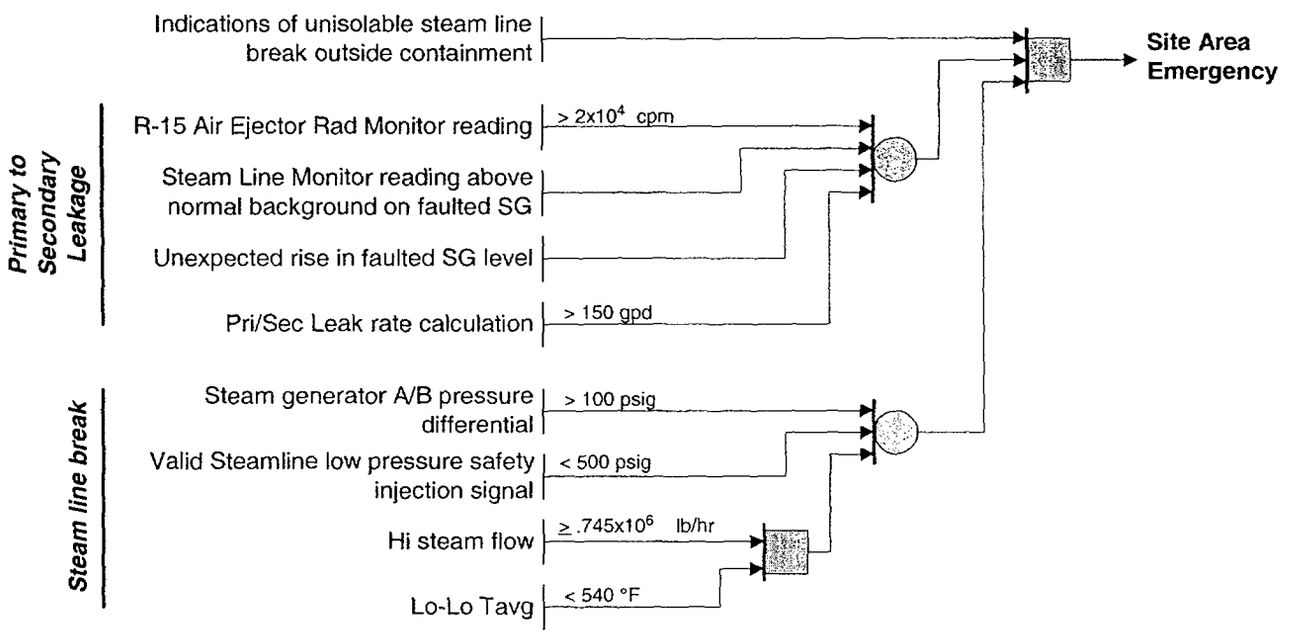
(EAL Ref Manual 7B)



Condition 7 : Secondary Coolant Anomaly

Unisolable steam line break outside containment with significant (greater than 150 gpd) primary to secondary leak rate.

(EAL Ref Manual 7C)

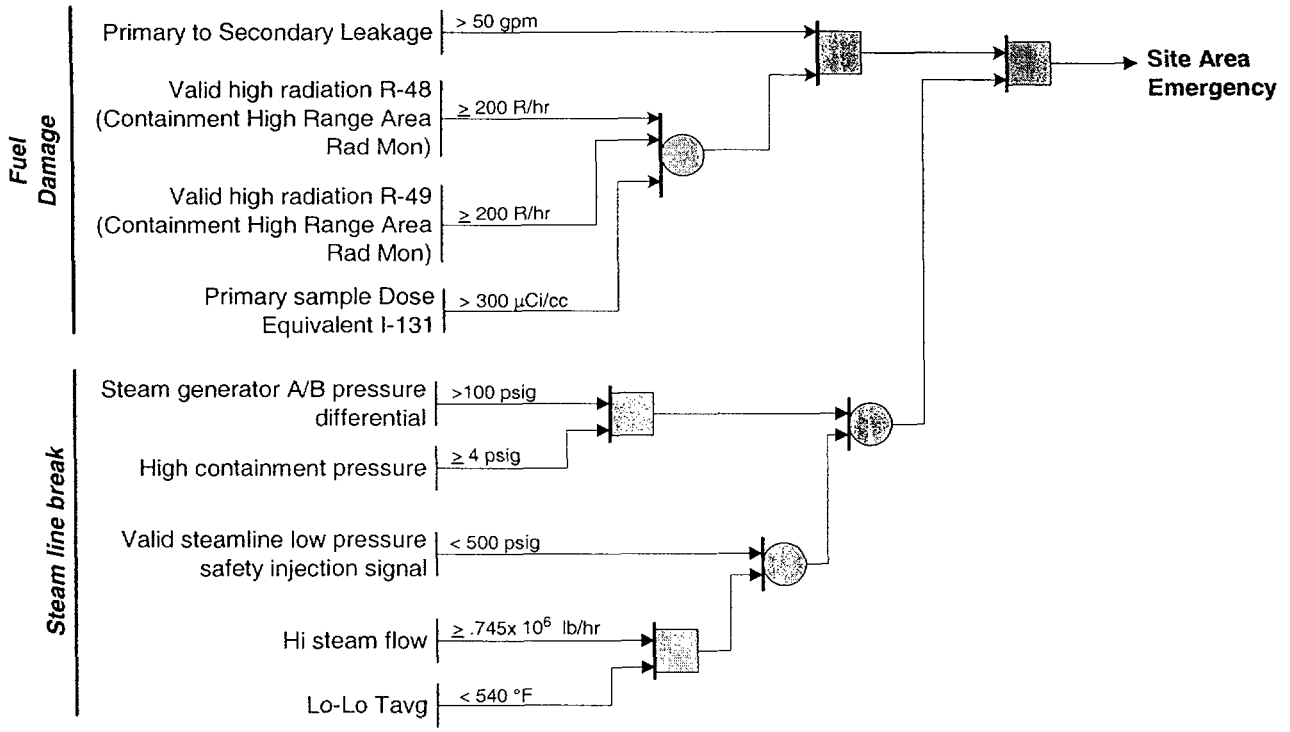


Condition 7 : Secondary Coolant Anomaly

Steam Line break in containment with greater than 50 gpm primary to secondary leakage and indication of fuel damage.

(EAL Ref Manual 7D)

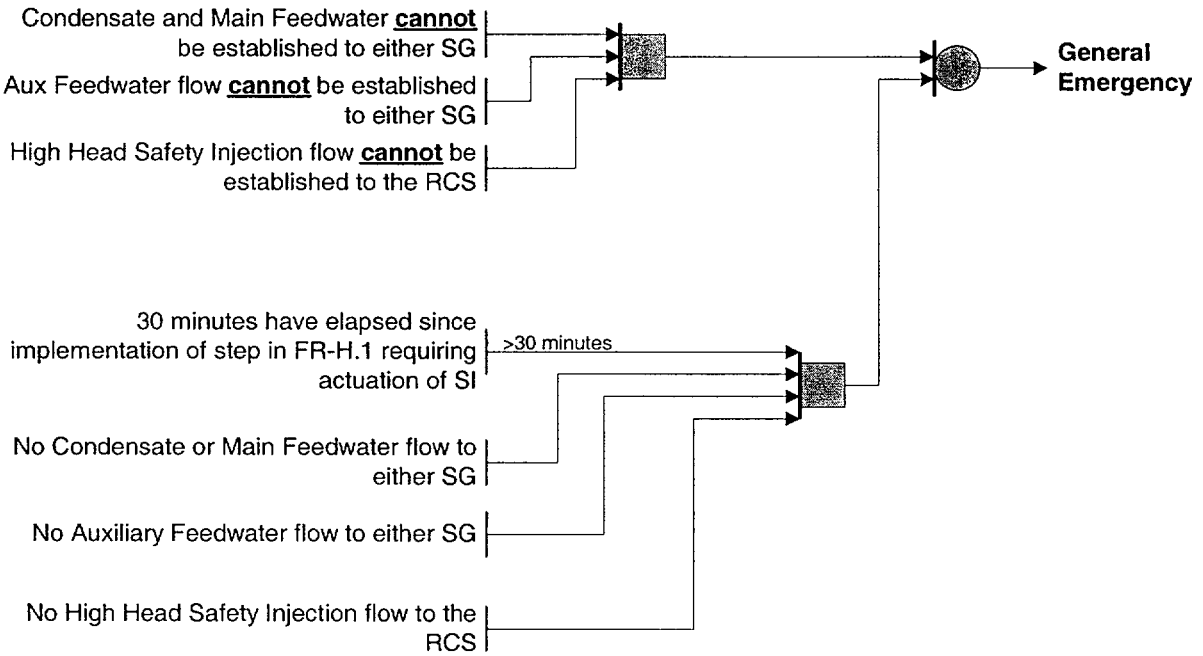
Note:	If steam line break is outside containment with SG tube rupture and fuel failure, this may be a General Emergency . See condition # 6, case 2



Condition 7 : Secondary Coolant Anomaly

Transient initiated by loss of feedwater and condensate systems (principal heat removal system) followed by failure of emergency feedwater system for extended period. Core melting possible in several hours. Ultimate failure of containment likely if core melts.

(EAL Ref Manual 7E)

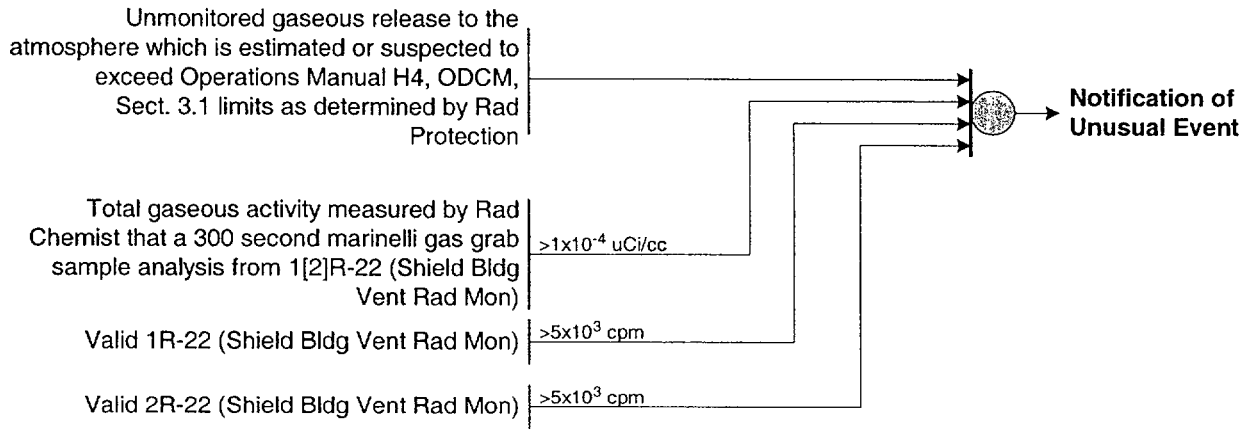


Note:	"Cannot be established" means that procedural guidance for establishing condition will not be successful based on knowledge of system/component condition/availability.

Condition 8 : Radiological Effluents

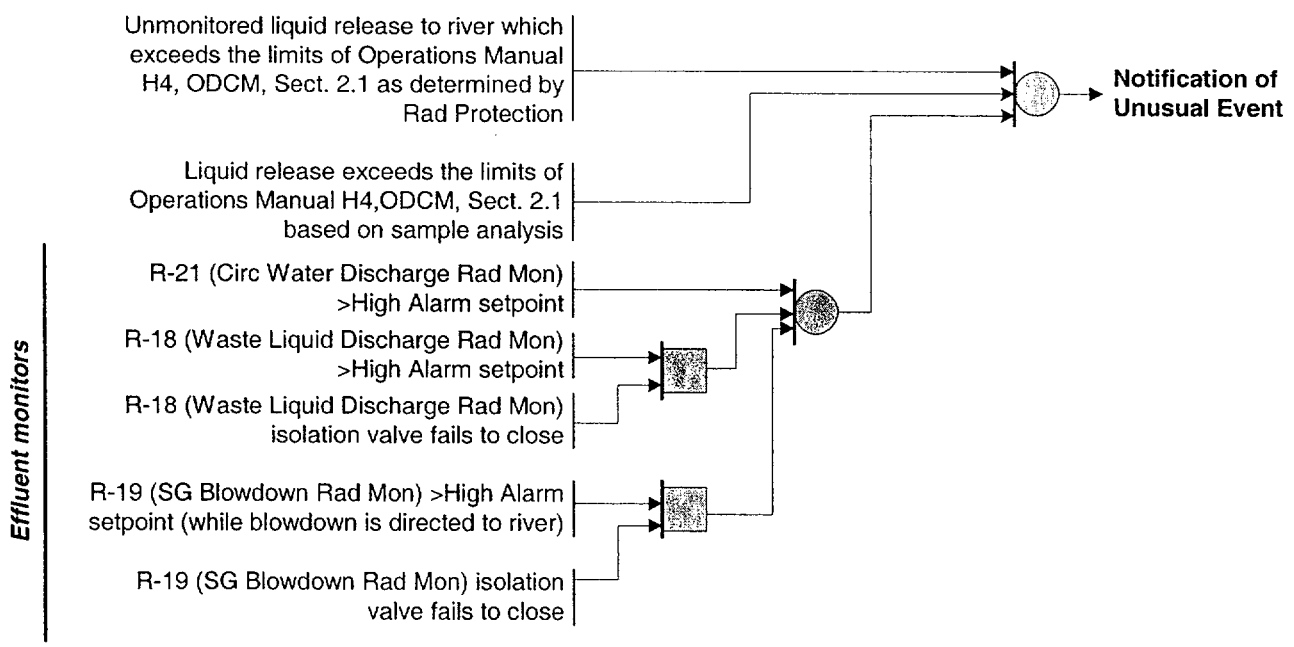
Airborne Radiological effluent Technical Specifications exceeded

(EAL Ref Manual 8A)



Liquid Radiological effluent Technical Specification limits exceeded.

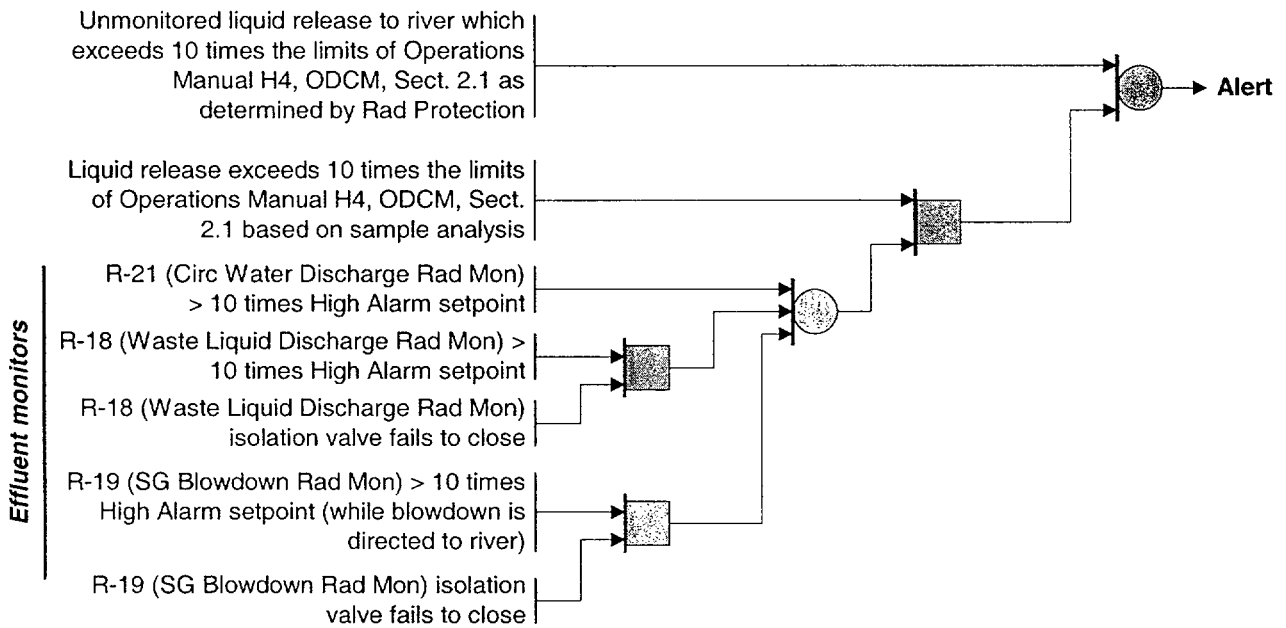
(EAL Ref Manual 8B)



Condition 8 : Radiological Effluents

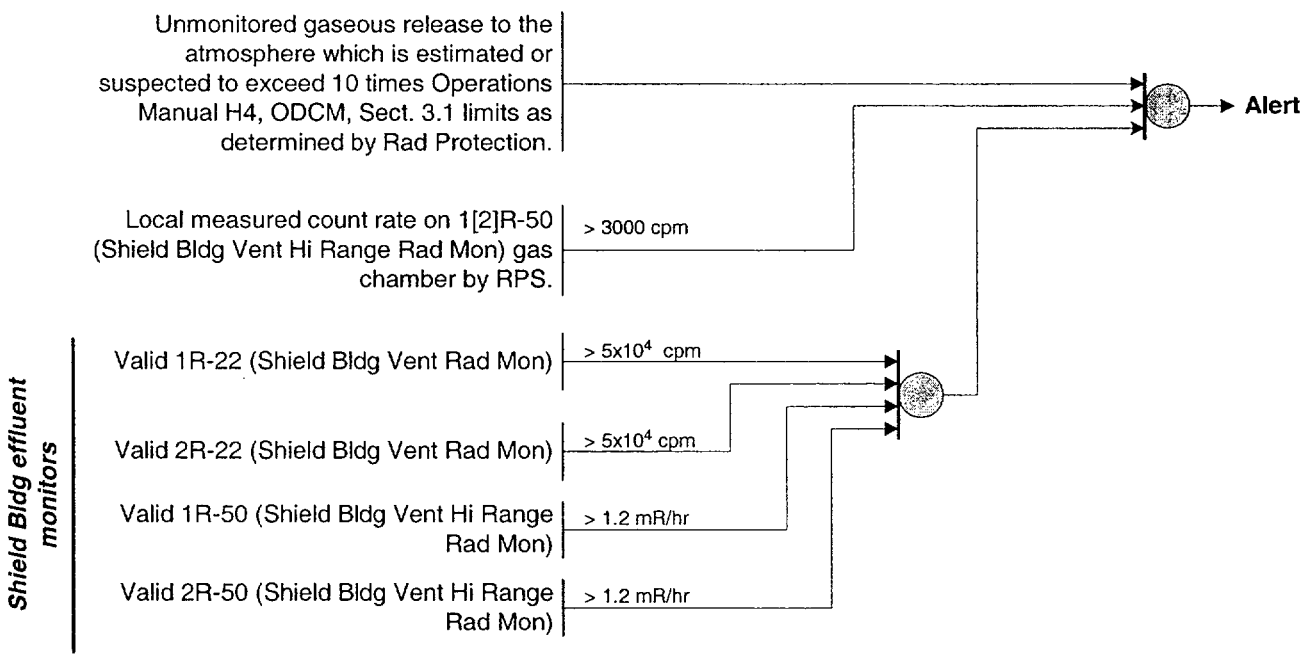
Liquid Radiological effluent greater than ten times Technical Specification limits.

(EAL Ref Manual 8C)



Airborne Radiological effluents greater than ten times Technical Specification instantaneous limits (an instantaneous rate which, if continued for over two hours, would result in about 1 mrem TEDE at the site boundary under average met conditions. TEDE = Total Effective Dose Equivalent).

(EAL Ref Manual 8D)



Condition 8 : Radiological Effluents

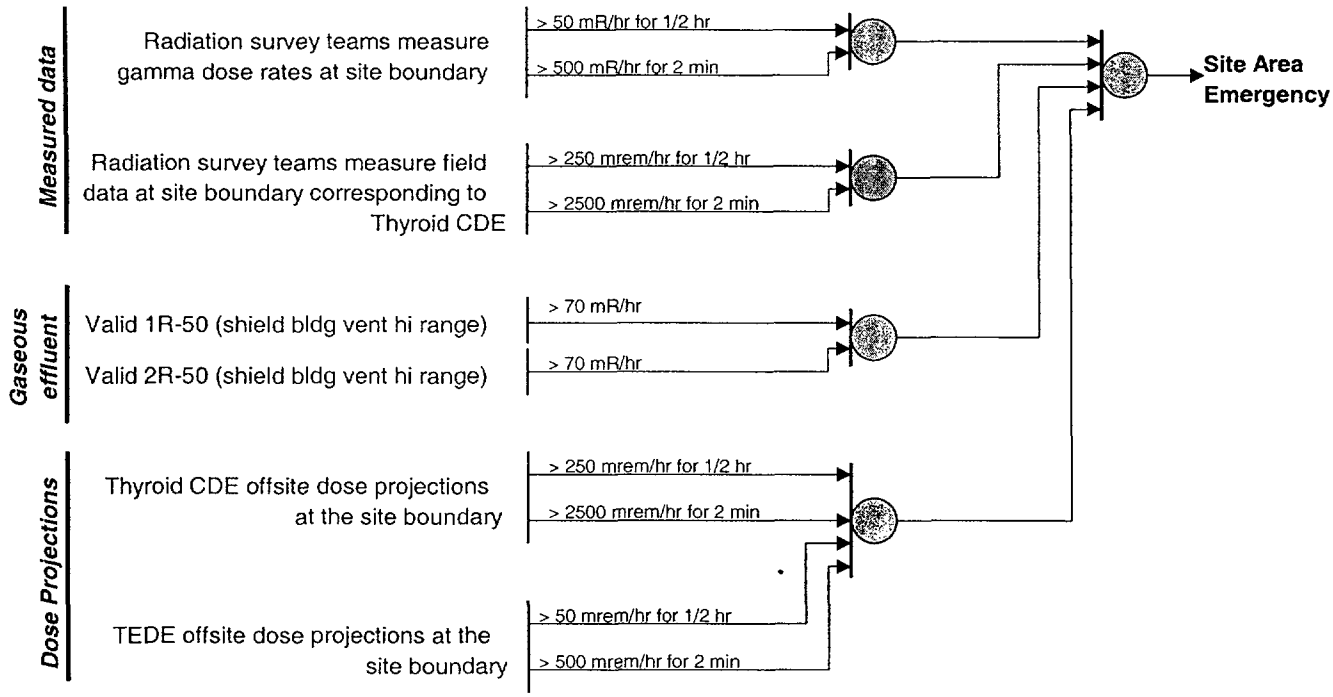
Airborne Effluent monitors detect levels corresponding to greater than:

1. **50 mrem/hr TEDE for one-half hour, or**
2. **250 mrem/hr Thyroid CDE for one-half hour, or**
3. **500 mrem/hr TEDE for two minutes, or**
4. **2500 mrem/hr Thyroid CDE for two minutes**

at the site boundary for adverse meteorology.

TEDE = Total Effective Dose Equivalent.
CDE = Committed Dose Equivalent.

(EAL Ref Manual 8E)



Condition 8 : Radiological Effluents

Effluent monitors detect levels corresponding to:

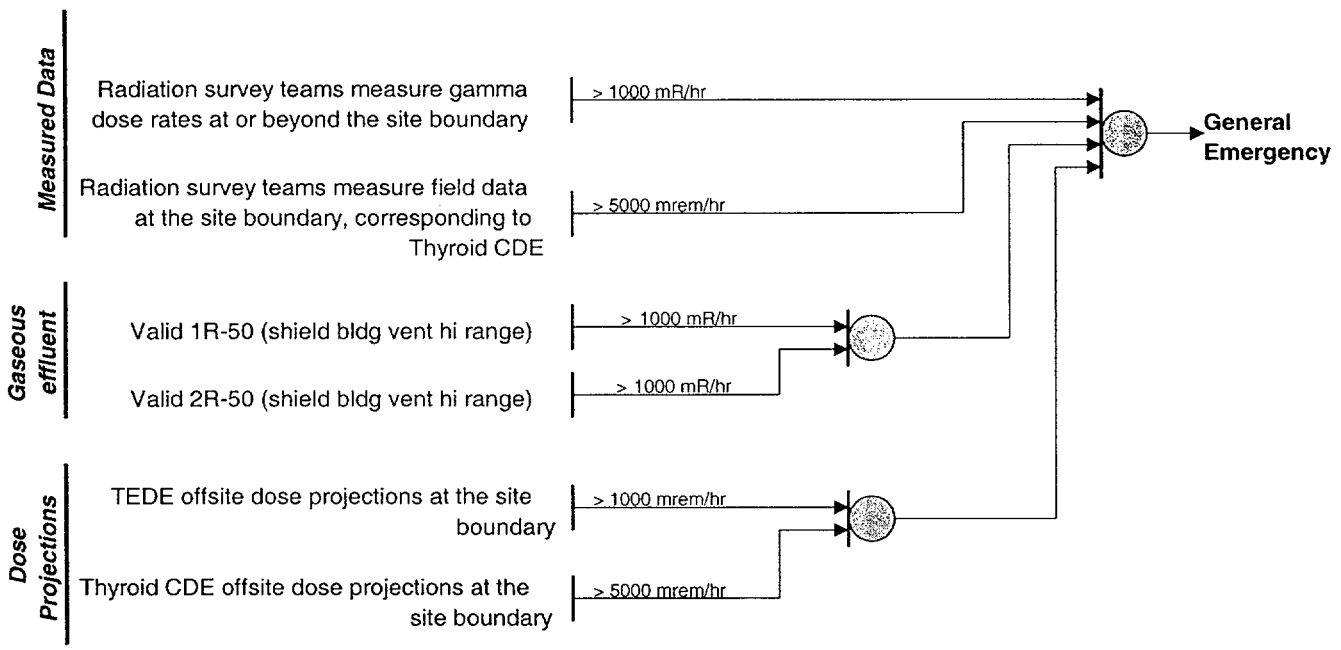
1. 1 rem/hr TEDE, or

2. 5 rem/hr Thyroid CDE

at the site boundary under actual meteorological conditions.

TEDE = Total Effective Dose Equivalent.
CDE = Committed Dose Equivalent.

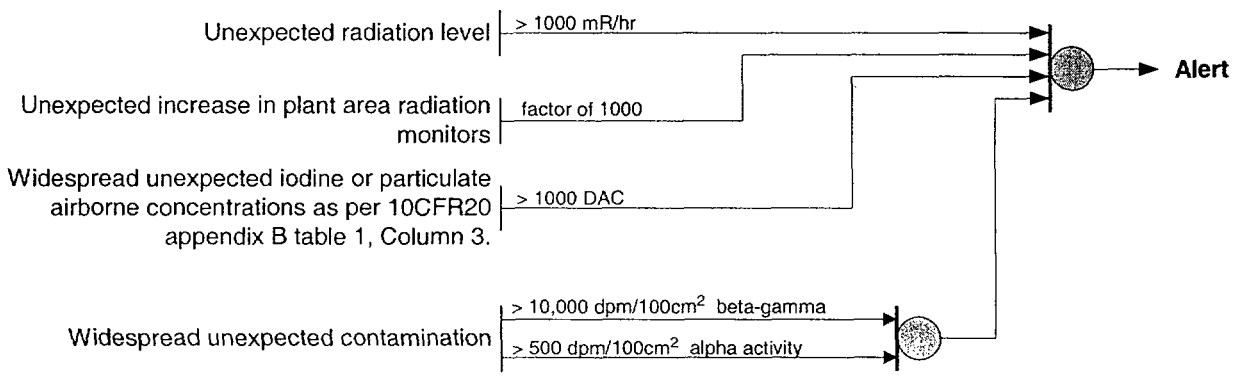
(EAL Ref Manual 8F)



Condition 8 : Radiological Effluents

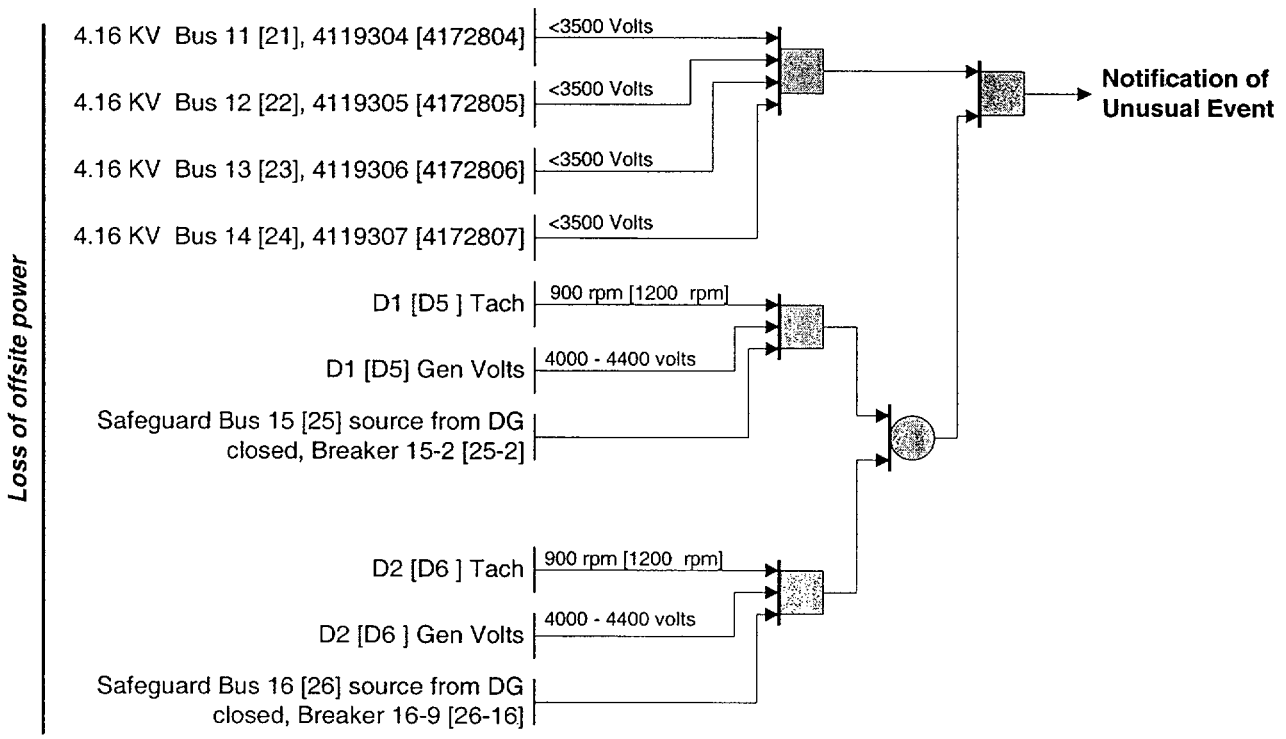
Radiation levels or airborne contamination which indicate a severe degradation in the control of radioactive materials (e.g., increase of factor of 1000 in direct radiation readings within facility).

(EAL Ref Manual 8G)



Condition 9 : Major Electrical Failures

Loss of Offsite Power (EAL Ref Manual 9A)

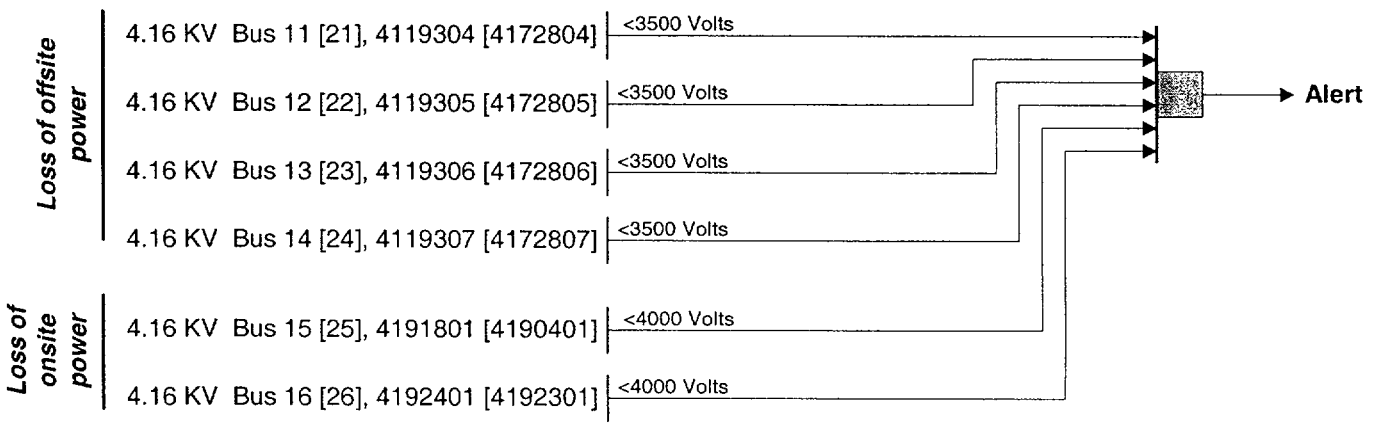


Loss of onsite AC power capability (EAL Ref Manual 9B)

Condition 9 : Major Electrical Failures

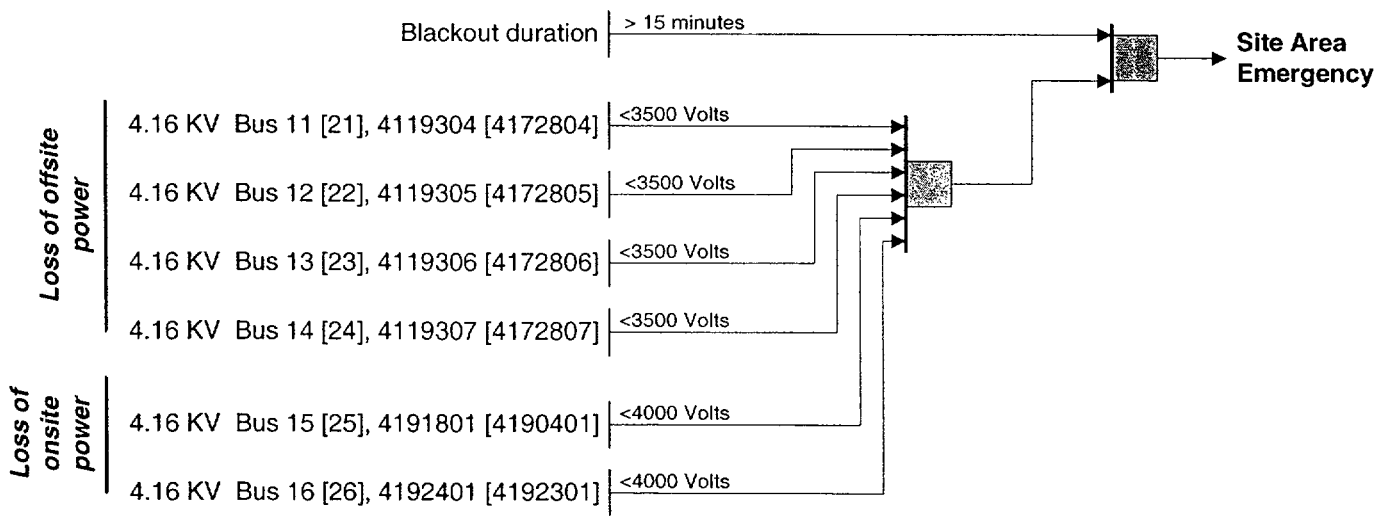
Loss of offsite power and loss of all onsite AC power (See Site Area Emergency for extended loss).

(EAL Ref Manual 9C)



Loss of offsite power and loss of onsite AC power for more than 15 minutes.

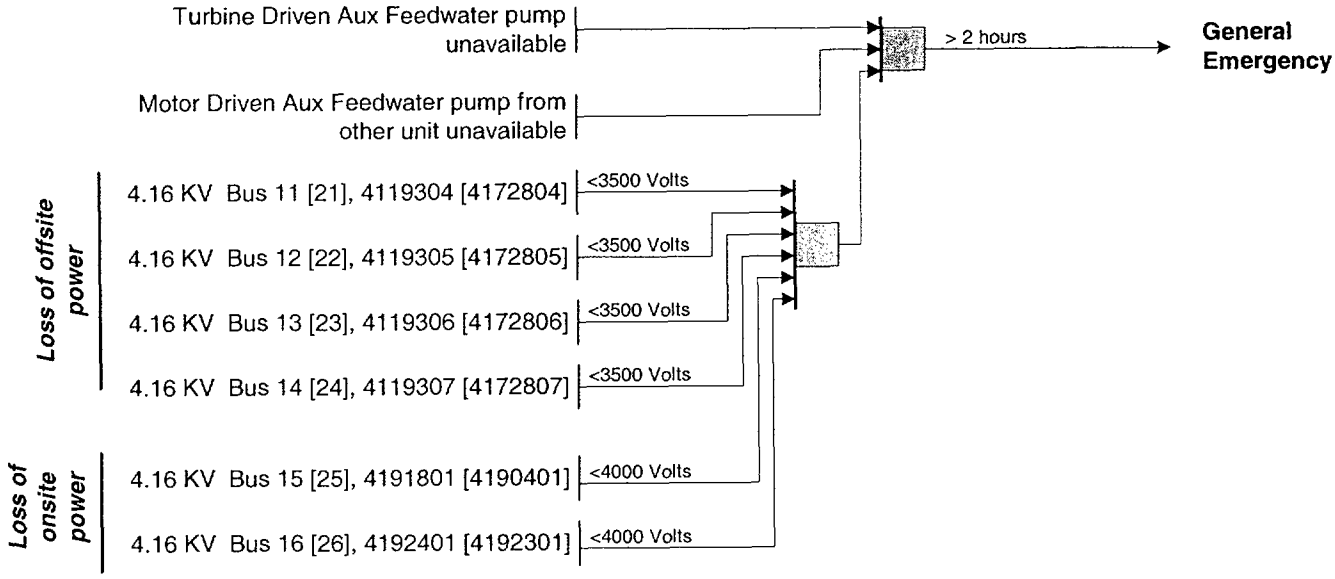
(EAL Ref Manual 9D)



Condition 9 : Major Electrical Failures

Failure of offsite and onsite power along with total loss of emergency feedwater makeup capability for greater than 2 hours. This would lead to eventual core melt and likely failure of containment.

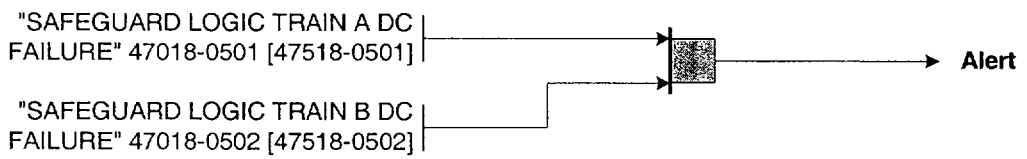
(EAL Ref Manual 9E)



Condition 9 : Major Electrical Failures

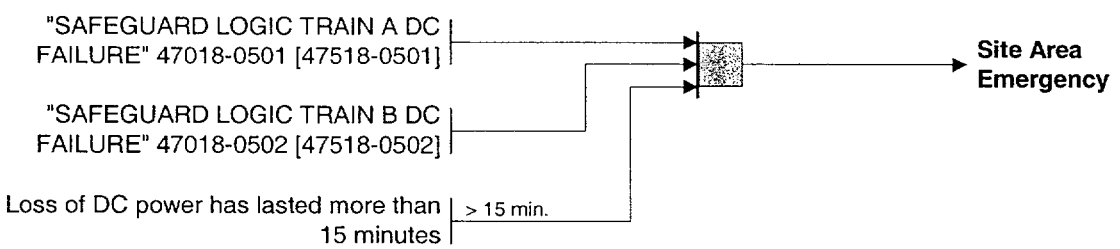
Loss of all onsite DC power (see Site Area Emergency for extended loss).

(EAL Ref Manual 9F)



Loss of all vital onsite DC power for more than 15 minutes

(EAL Ref Manual 9G)



Condition 10 : Control Room Evacuations

Evacuation of the Control Room anticipated or required with control of shutdown systems established from Hot Shutdown Panels and local stations.

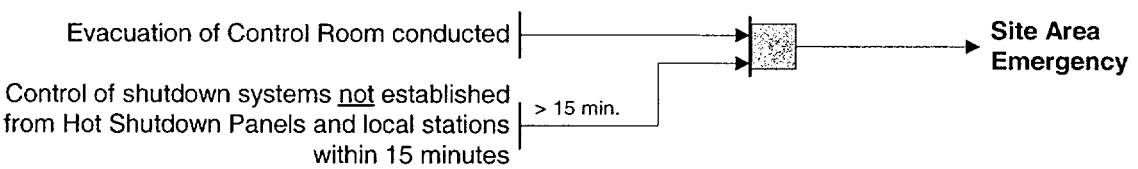
(EAL Ref Manual 10A)

SS,SM, or ED determines evacuation of Control Room is anticipated or required with control of shutdown systems established from Hot Shutdown Panels and local stations → **Alert**

Note: If reason for evacuation is fire in Control Room or Relay Room, see initiating condition 11C, "Fire compromising the functions of safety systems" for possible reclassification.

Evacuation of the Control Room and control of shutdown systems <u>not</u> established from Hot Shutdown Panels and local stations within 15 minutes.

(EAL Ref Manual 10B)

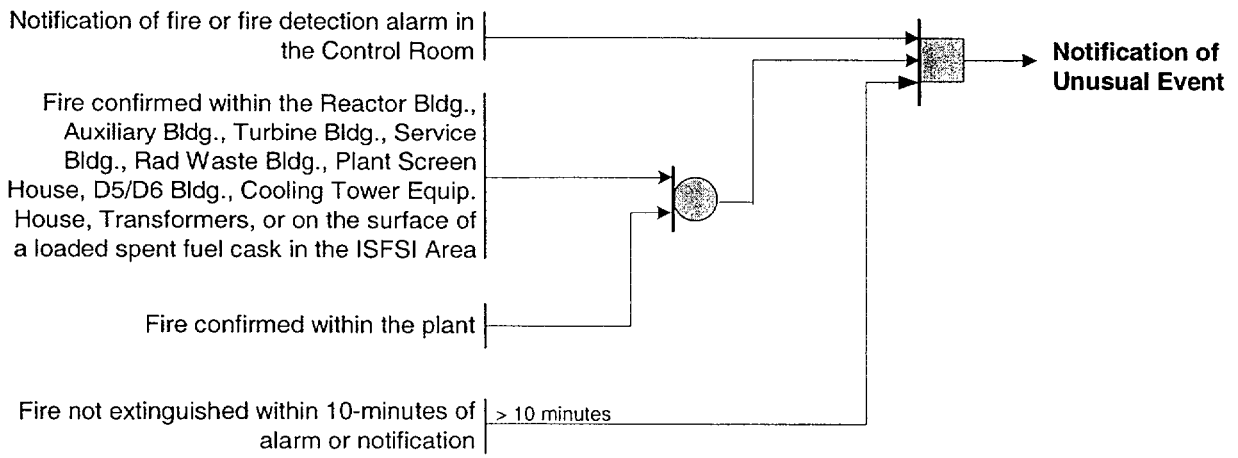


Condition 11 : Fires

Fire within the plant or ISFSI lasting more than 10 minutes.

(EAL Ref Manual 11A)

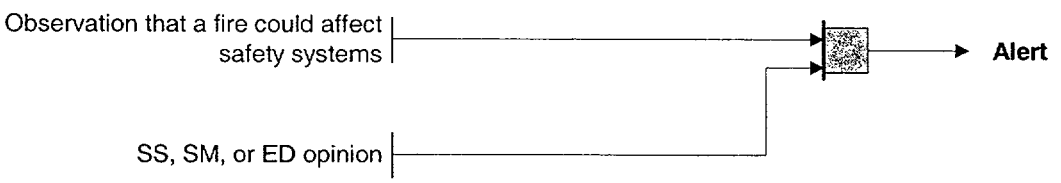
Note: FIRE: is combustion characterized by heat and light (flame). Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.



Fire potentially affecting safety systems.

(EAL Ref Manual 11B)

Note: FIRE: is combustion characterized by heat and light (flame). Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.

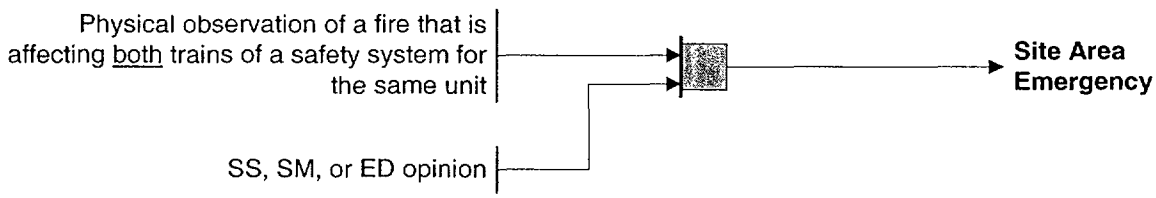


Condition 11 : Fires

Fire compromising the functions of safety systems.

(EAL Ref Manual 11C)

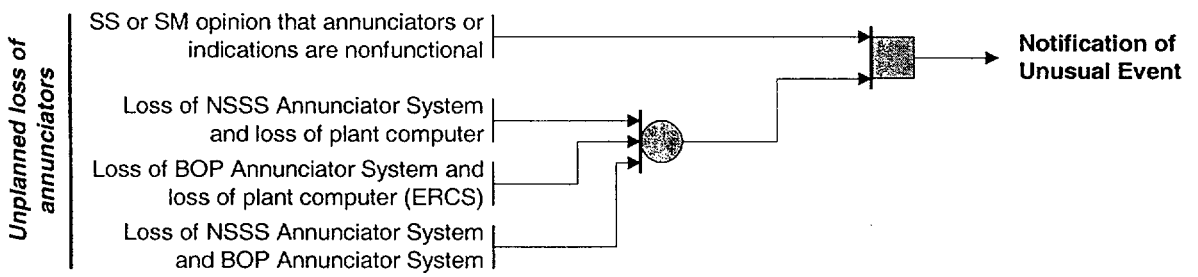
Note:	FIRE: is combustion characterized by heat and light (flame). Sources of smoke such as slipping drive belts or overheated electrical equipment do not constitute fires. Observation of flame is preferred but is NOT required if large quantities of smoke and heat are observed.



Condition 12 : Plant Shutdown Functions

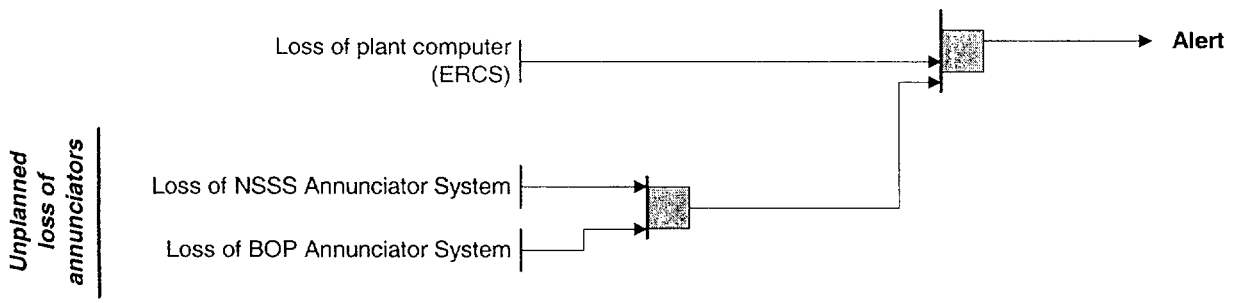
Nonfunctional indications or alarms in the Control Room requiring a plant shutdown.

(EAL Ref Manual 12B)



Most or all alarms (annunciators) lost.

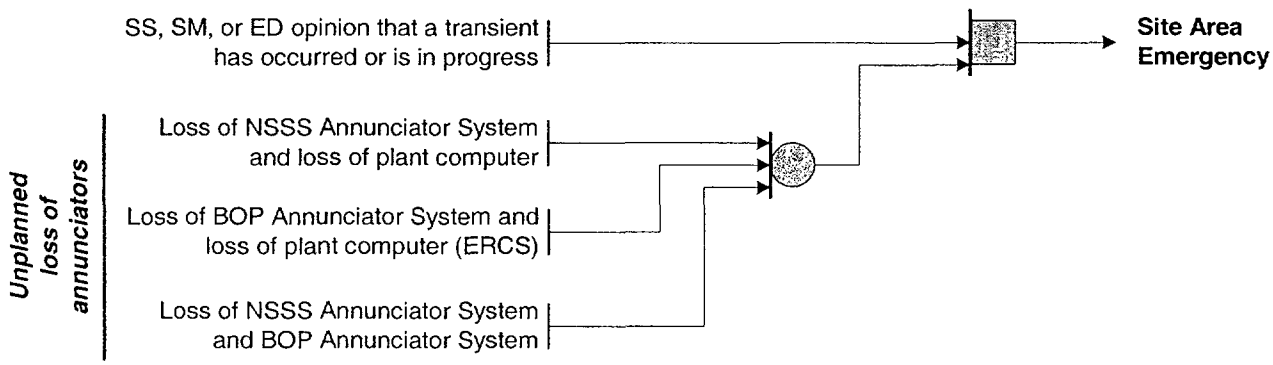
(EAL Ref Manual 12C)



Condition 12 : Plant Shutdown Functions

Most or all alarms (annunciators) lost and plant transient initiated or in progress.

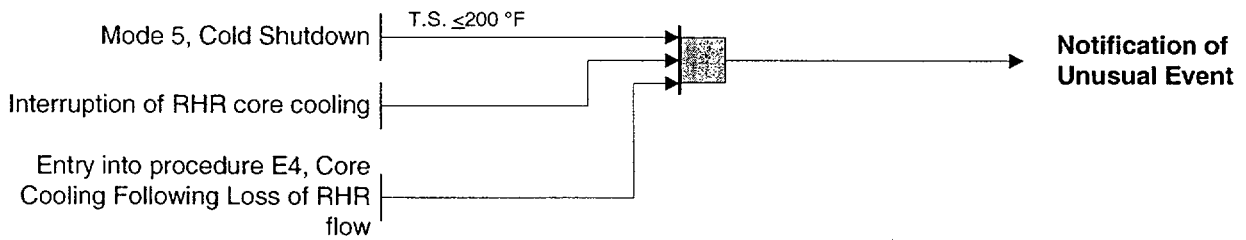
(EAL Ref Manual 12D)



Condition 12 : Plant Shutdown Functions

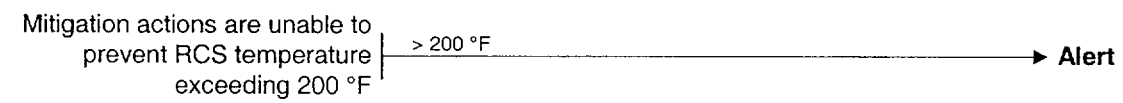
Momentary loss of core cooling needed for plant Mode 5, Cold Shutdown.

(EAL Ref Manual 12E)



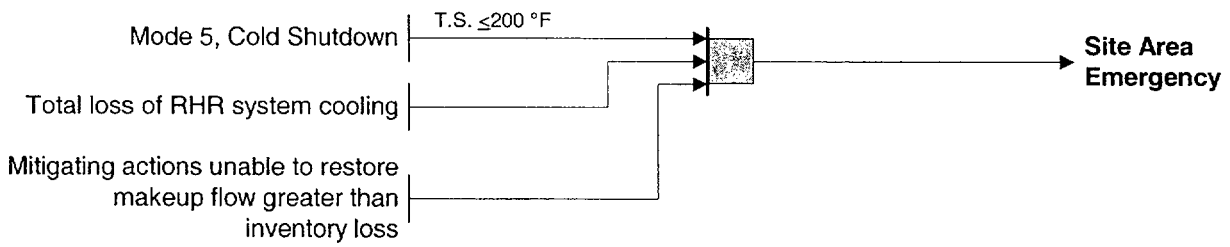
Inability to maintain plant in Mode 5, Cold Shutdown.

(EAL Ref Manual 12F)



Loss of water level that has uncovered or will uncover the fuel in the reactor vessel while at Mode 5, Cold Shutdown.

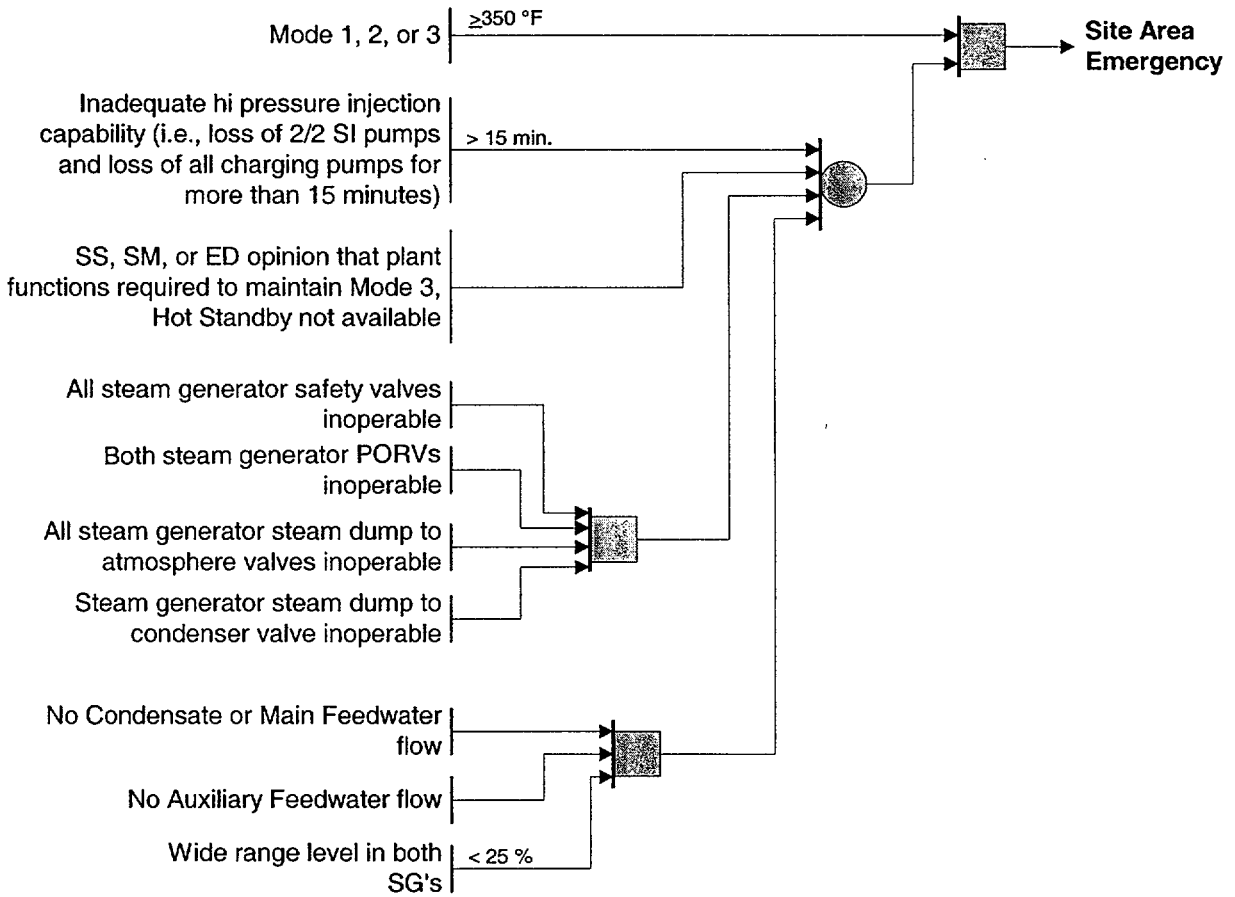
(EAL Ref Manual 12G)



Condition 12 : Plant Shutdown Functions

Complete loss of any function needed for plant Mode 3, Hot Standby.
(Also see Condition #7 for possible General if feed and bleed is initiated)

(EAL Ref Manual 12H)



Condition 12 : Plant Shutdown Functions

Turbine failure requiring a reactor / turbine trip.

(EAL Ref Manual 12I)

Reactor or turbine trip due to turbine failure → ***Notification of Unusual Event***

Turbine failure causing casing penetration.

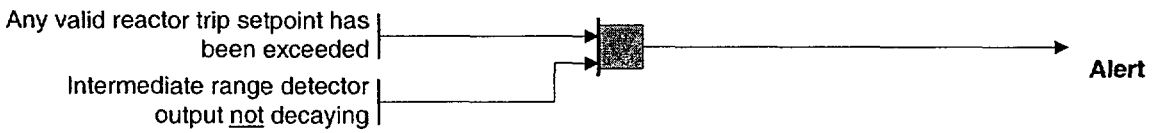
(EAL Ref Manual 12J)

As determined by visual inspection →
Reactor or turbine trip due to turbine failure → **Alert**

Condition 12 : Plant Shutdown Functions

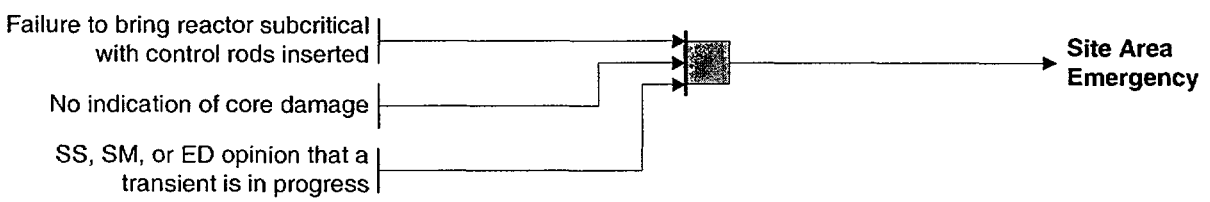
Failure of the reactor protection system to initiate and complete a trip which brings the reactor subcritical.

(EAL Ref Manual 12K)



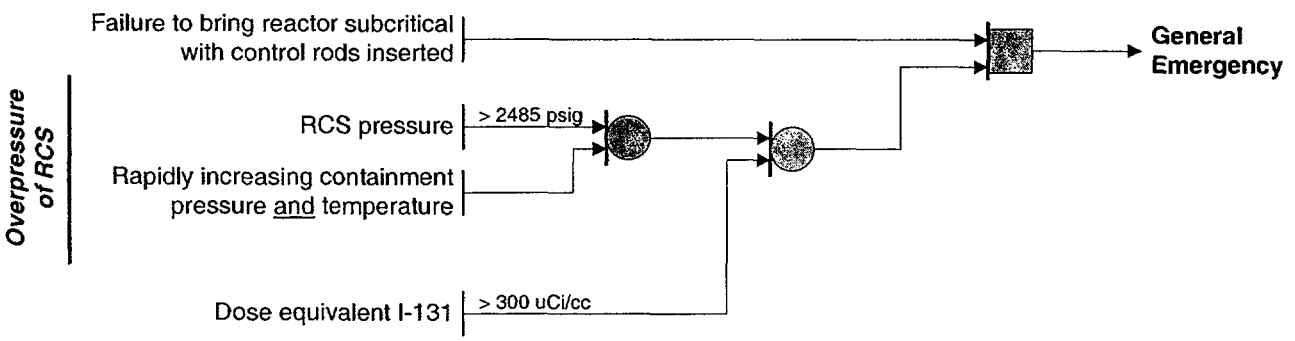
Transient requiring operation of shutdown systems with failure to trip (continued power generation but no core damage immediately evident).

(EAL Ref Manual 12L)



Transient requiring operation of shutdown systems with failure to trip which results in core damage or additional failure of core cooling and makeup systems (which could lead to core melt).

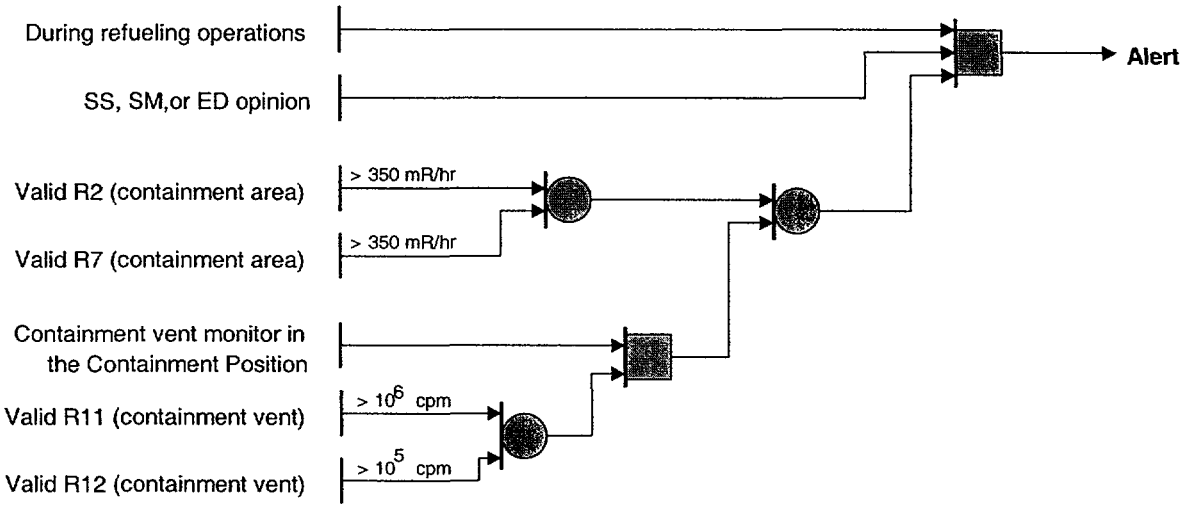
(EAL Ref Manual 12M)



Condition 13 : Fuel Handling Accidents

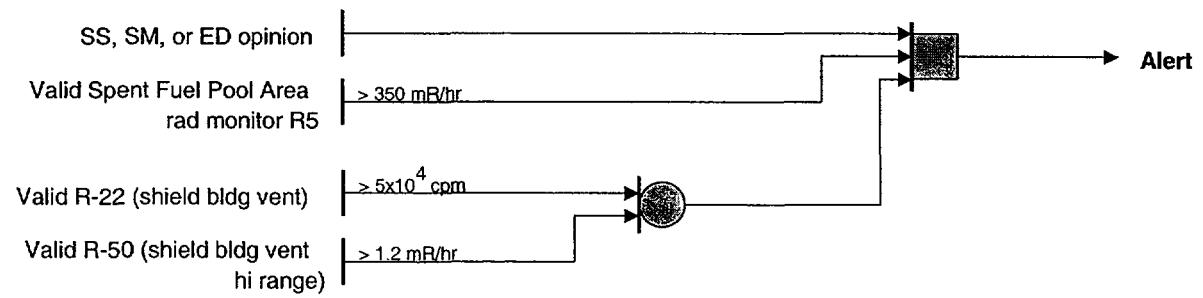
Fuel damage accident with release of radioactivity to containment.

(EAL Ref Manual 13A)



Fuel damage accident with release of radioactivity to the fuel handling building.

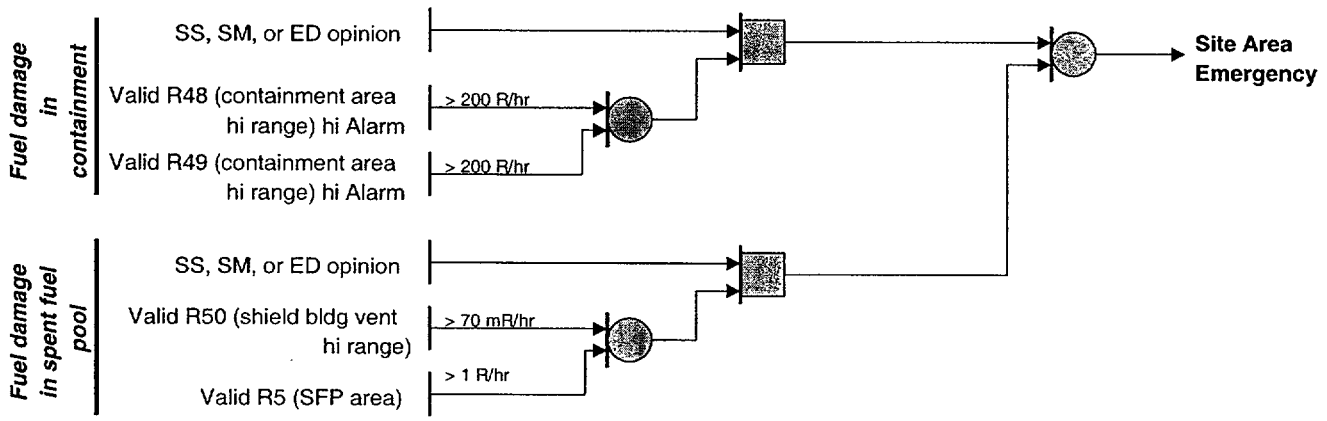
(EAL Ref Manual 13B)



Condition 13 : Fuel Handling Accidents

Major damage to spent fuel in containment or fuel handling building (e.g., large object damages fuel or water loss below fuel level.

(EAL Ref Manual 13C)



Condition 14 : Coolant Pump

DELETED

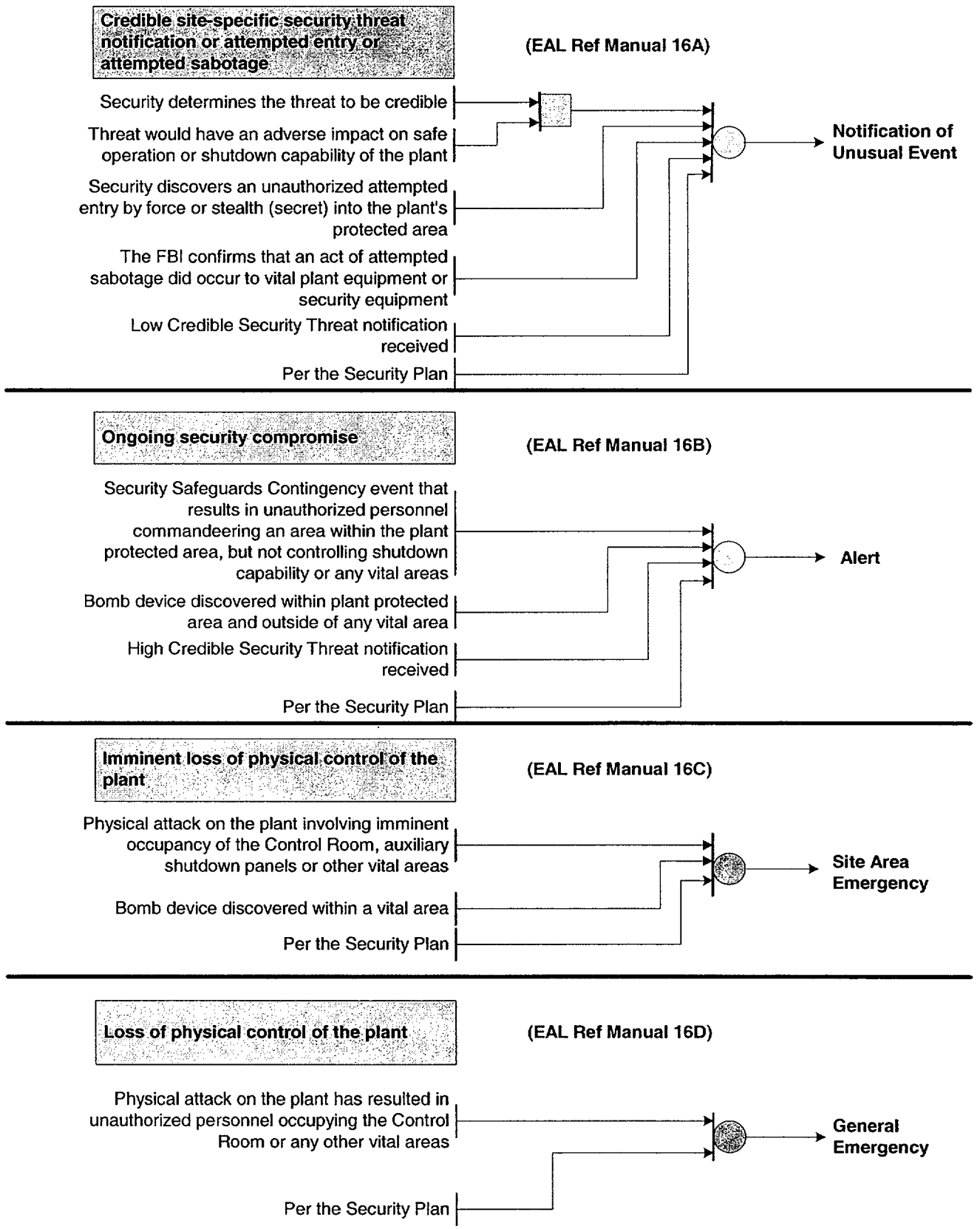
Deleted based on NRC Branch Position On Acceptable Deviation From Appendix 1 to NUREG-0654/FEMA-REP-1, July 11, 1994.

Condition 15 : Contaminated Injured Person

DELETED

Deleted based on NRC Branch Position On Acceptable Deviation From Appendix 1 to NUREG-0654/FEMA-REP-1, July 11, 1994.

Condition 16 : Security



Condition 17 : Hazards to Plant Operations

Aircraft crash onsite or unusual aircraft activity over facility.

(EAL Ref Manual 17A)

Reported to the SS or SM

Visual observation by plant personnel and/or security personnel

→ **Notification of Unusual Event**

Aircraft crash in the protected area.

(EAL Ref Manual 17B)

Visual observation by plant personnel and/or plant security personnel of an aircraft crash in the protected area → **Alert**

Aircraft crash within protected area and affecting vital structures by impact or fires with plant not in Mode 5, Cold Shutdown.

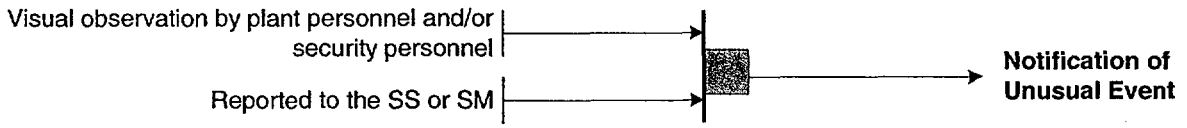
(EAL Ref Manual 17C)

Visual observation by plant personnel and/or plant security personnel of an aircraft crash within protected area and affecting vital structures by impact or fires with either unit in Mode 1, 2, 3 or 4

T.S. > 200°F → **Site Area Emergency**

Condition 17 : Hazards to Plant Operations

Near or onsite explosion **(EAL Ref Manual 17D)**



Known explosion damage to facility affecting plant operation **(EAL Ref Manual 17E)**

Condition 17 : Hazards to Plant Operations

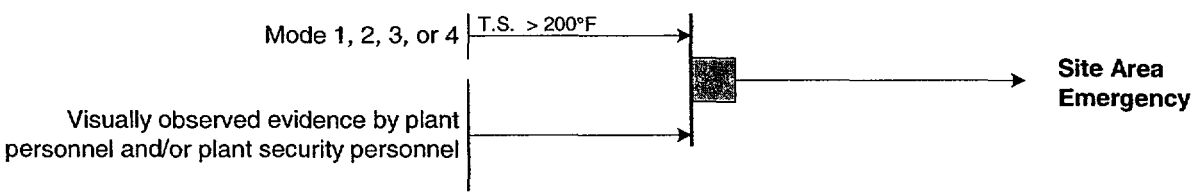
Missile impacts from whatever source on facility

(EAL Ref Manual 17F)

Visually observed evidence by plant personnel and/or plant security personnel of missile impacts on facility from whatever source → **Alert**

Severe damage to engineered safety system equipment from missiles or explosion with plant not in Mode 5, Cold Shutdown

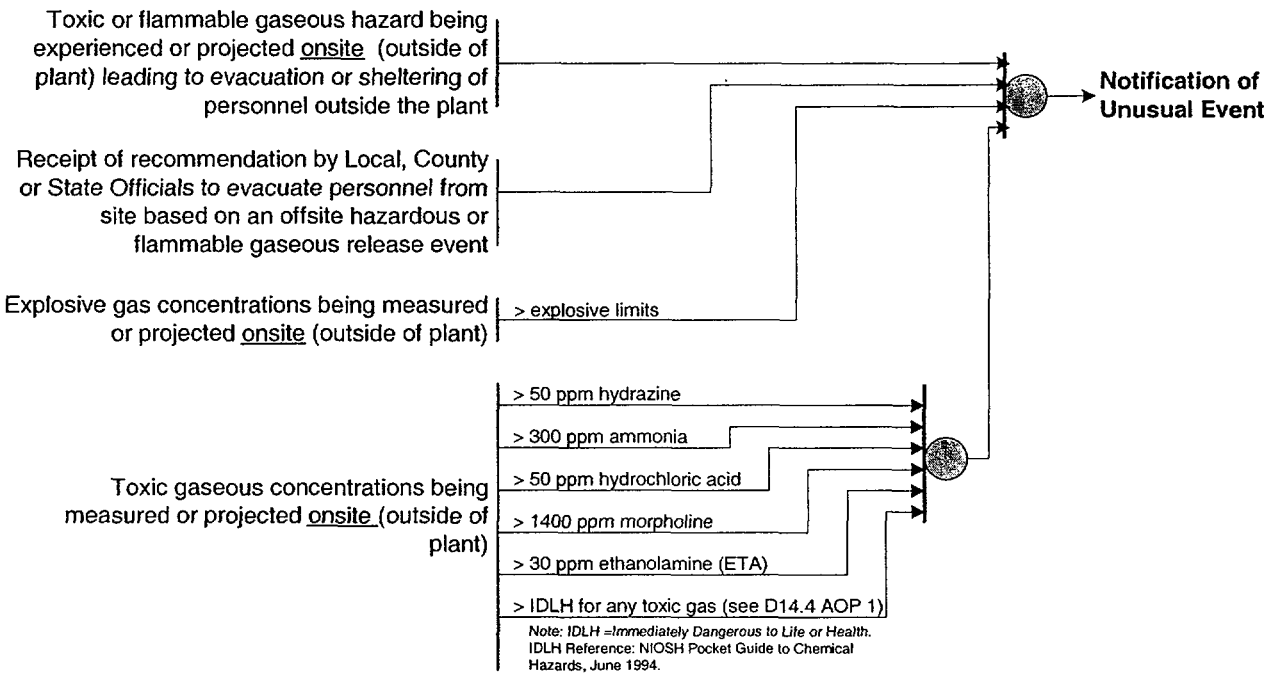
(EAL Ref Manual 17G)



Condition 17 : Hazards to Plant Operations

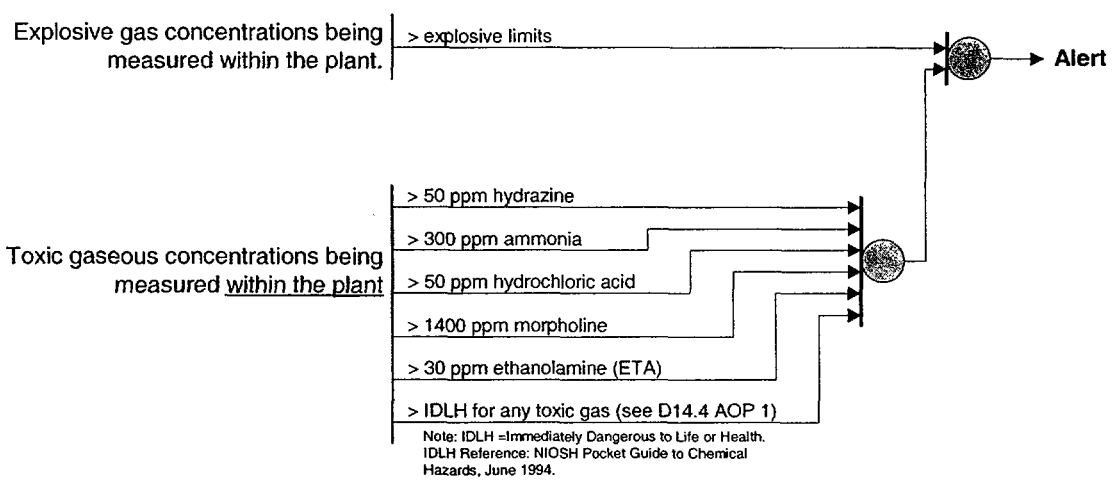
Near or onsite toxic or flammable gas release

(EAL Ref Manual 17H)



Entry into the plant environs of toxic or flammable gases

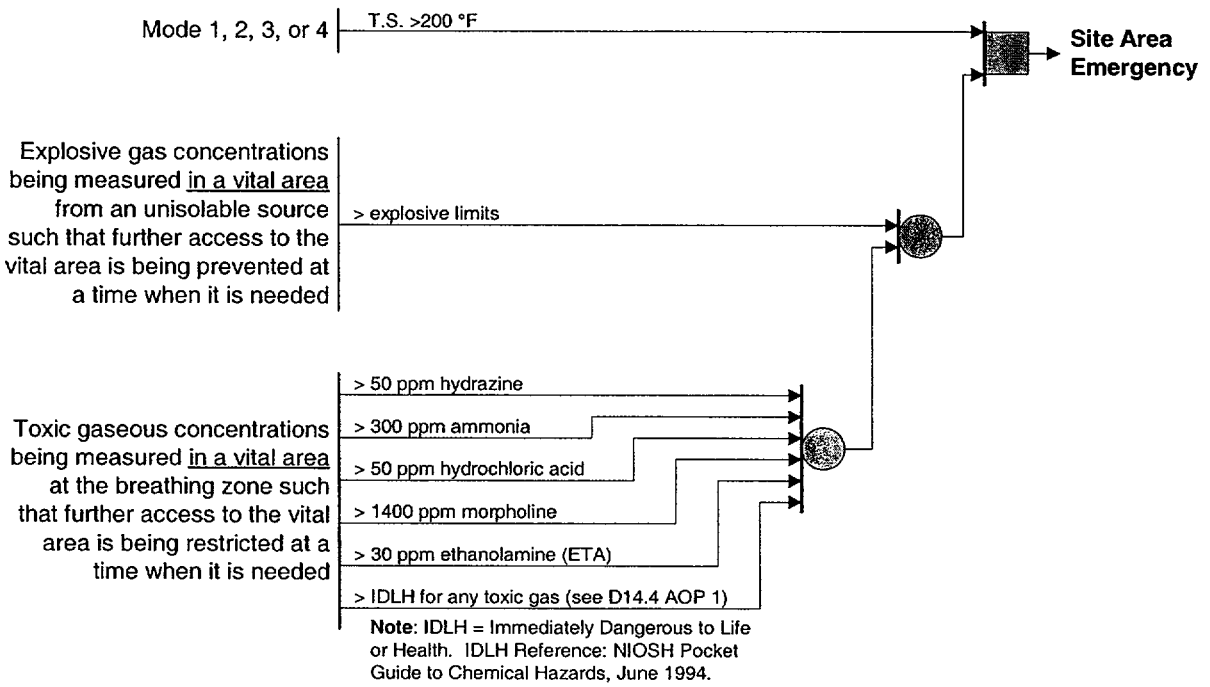
(EAL Ref Manual 17I)



Condition 17 : Hazards to Plant Operations

Entry of toxic or flammable gases into vital areas with plant not in Mode 5, Cold Shutdown.

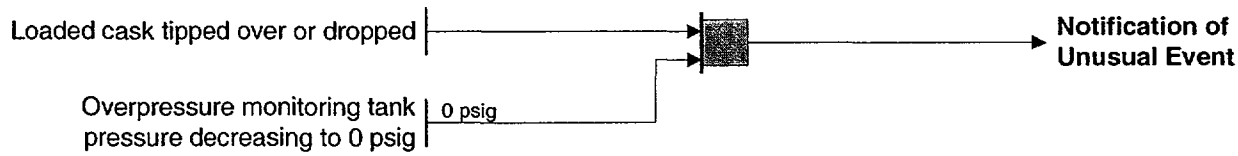
(EAL Ref Manual 17J)



Condition 18 :ISFSI Events

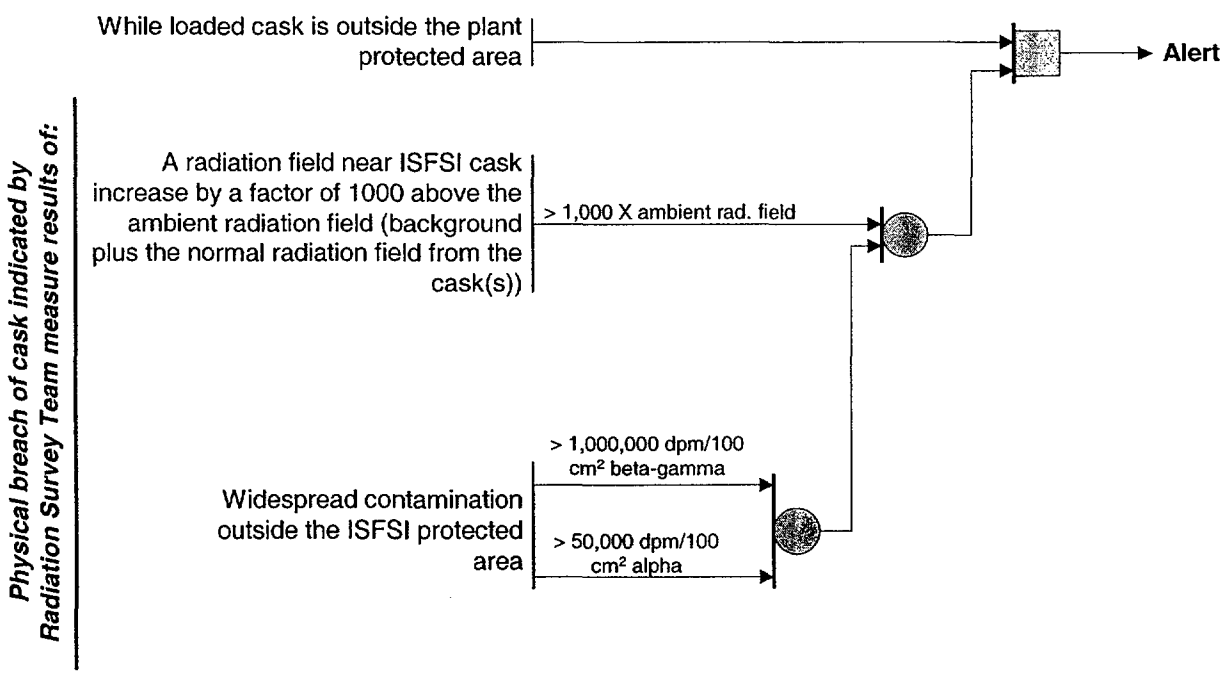
ISFSI cask tip over or drop resulting in cask seal leakage

(EAL Ref Manual 18A)



Loss of ISFSI cask/fuel containment barrier

(EAL Ref Manual 18B)



Condition 19 : Natural Events

Any earthquake **(EAL Ref Manual 19A)**

"Seismic Event" Annunciator received on the Seismograph Alarm Panel → **Notification of Unusual Event**

Earthquake greater than Operational Basis Earthquake **(EAL Ref Manual 19B)**

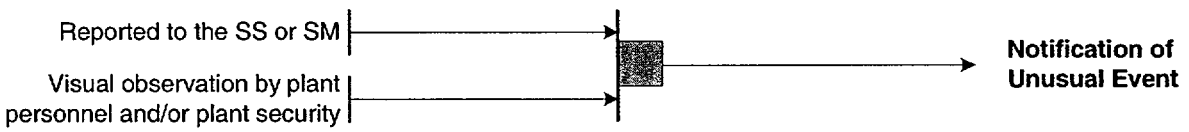
"Operational Basis Earthquake" Annunciator received on the Seismograph Alarm Panel → **Alert**

Earthquake greater than Design Basis Earthquake with plant not in Mode 5, Cold Shutdown **(EAL Ref Manual 19C)**

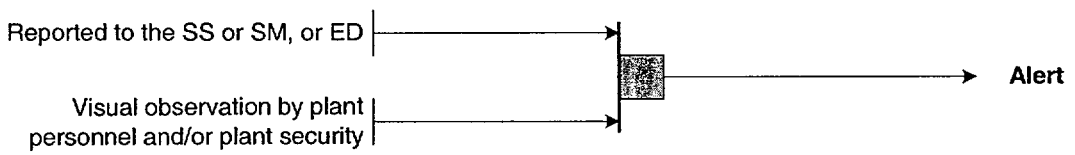
Modes 1, 2, 3, or 4 AND "Design Basis Earthquake" Annunciator received on the Seismograph Alarm Panel → **Site Area Emergency**

Condition 19 : Natural Events

Any tornado visible from site **(EAL Ref Manual 19D)**



Any tornado striking the facility **(EAL Ref Manual 19E)**



Condition 19 : Natural Events

50 Year Flood **(EAL Ref Manual 19F)**

River Intake Elevation | > 686 ft → **Notification of Unusual Event**

Flood levels approaching design levels **(EAL Ref Manual 19G)**

River Intake Elevation - (USAR 2.4.3.5) - requires both units to be shut down to Mode 2, 3, 4 or 5 | > 692 ft → **Alert**

Flood levels exceeding design levels with plant not in Mode 5, Cold Shutdown **(EAL Ref Manual 19H)**

Mode 1, 2, 3, or 4 | T.S. >200 °F

River Intake Elevation - Power operation design level (highest level transformers will function) | > 698 ft

→ **Site Area Emergency**

Condition 19 : Natural Events

Low water levels being experienced or projected beyond usual levels.

(EAL Ref Manual 19I)

River intake elevation (11/21 Cooling Water Pump - Low Water Level Trip) | < 672.5 ft → **Notification of Unusual Event**

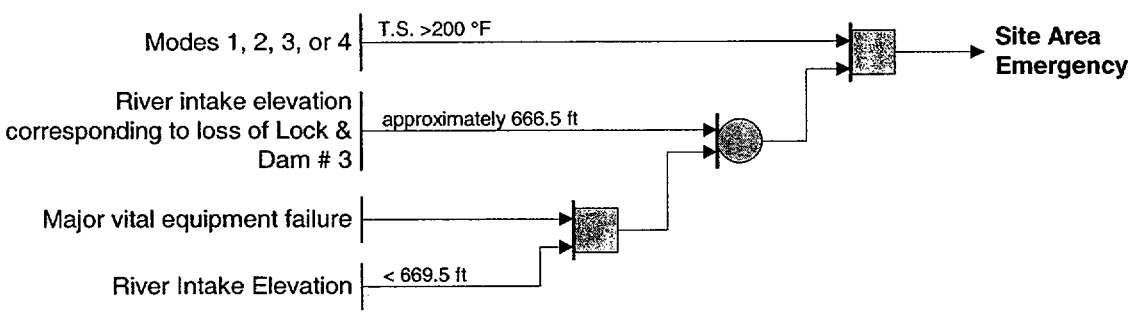
Low water levels being experienced or projected to be near design levels.

(EAL Ref Manual 19J)

River intake elevation | approximately 669.5 ft → **Alert**

With plant <u>not</u> in Mode 5, Cold Shutdown, low water levels being experienced or projected to be less than design levels, or failure of vital equipment with low water level.

(EAL Ref Manual 19K)



Condition 19 : Natural Events

Sustained winds being experienced or projected near design levels.

(EAL Ref Manual 19L)

Sustained wind speed indicated by met tower — > 90 mph → **Alert**

Sustained winds being in excess of design levels being experienced or projected with plant not in Mode 5, Cold Shutdown.

(EAL Ref Manual 19M)

Modes 1, 2, 3, or 4 — T.S. >200 °F

Sustained wind speed indicated by met tower — > 100 mph

→ **Site Area Emergency**

Any major internal or external events (e.g., fires, earthquake, substantially beyond design levels) which could or has caused massive damage to plant systems resulting or potential for resulting in large releases to the offsite environment in excess of the EPA Protective Action Guides.

(EAL Ref Manual 19N)

As determined by the SS, SM, or ED → **General Emergency**

Condition 20 : Other

Conditions that warrant increased awareness on the part of plant operation staff or state and/or local offsite authorities.

(EAL Ref Manual 20A)

SM and SS concurrence that plant conditions warrant increased awareness → **Notification of Unusual Event**

Inability to reach required shutdown within Technical Specification Limits.

(EAL Ref Manual 20B)

T.S.ACTION TABLE not met requires plant shutdown or cooldown

Reactor power reduction or cooldown requirements have been exceeded

→ **Notification of Unusual Event**

Conditions that involve other than normal controlled shutdown.

(EAL Ref Manual 20C)

Reactor power reduction or cooldown has been initiated

Emergency Safeguard Function equipment did NOT perform its function if required

Cooldown rate exceeded Tech Spec Limit

SS or SM opinion that lack of control of shutdown or cooldown warrants offsite agency notification

→ **Notification of Unusual Event**

Condition 20 : Other

Conditions that warrant activation of Technical support Center and nearsite Emergency Operation Facility

(EAL Ref Manual 20D)

SS, SM, or ED opinion → **Alert**

Other plant conditions that warrant activation of emergency operation centers and monitoring teams or a precautionary notification to the public near the site

(EAL Ref Manual 20E)

SS, SM, or ED opinion → **Site Area Emergency**

Other plant conditions exist, from whatever source, that make release of large amounts of radioactivity in a short time period possible, e.g., any core melt situation

(EAL Ref Manual 20F)

SS, SM, or ED opinion → **General Emergency**