Attachment A

Revision to Section 5.0

Seabrook Station Radiological Emergency Plan

Figure 5.6 presents the critical safety functions in descending order of importance as one reads down the figure. If more than one classification is reached, the emergency will be classified according to the most severe.

5.5 Miscellaneous Station Conditions

The capability also exists for the classification of emergencies based on conditions that do not challenge a Critical Safety Function. Based on the guidance of Appendix 1 of NUREG-0654/FEMA-REP-1, miscellaneous emergency conditions (e.g., fire, electrical, security, natural events) have been evaluated, initiating conditions identified and Emergency Action Levels developed. The specific miscellaneous initiating conditions are indicated on Figure 5.6.

In some cases a combination of miscellaneous conditions or a complication of a miscellaneous condition with a critical safety function are an indication that an emergency classification has been reached. These combinations and complications are also on Figure 5.6.

5.6 Classification of Emergencies

Insert "A"

Classification of an emergency at Seabrook Station is made based on one or more of the conditions listed in Figure 5.6. Specific EAL's (color status trees, meter indications, alarms, or limits) for initiating conditions are provided in an emergency response procedure and in operator training. In all cases, if several emergency classifications are indicated, the most severe emergency classification will be made whether based upon status trees or miscellaneous initiating conditions.

5.7 Sample Classifications

To ensure understanding of the emergency classification system, the following sample classifications are presented. These examples explain the process by which the operators would come to the decision to classify an emergency.

EXAMPLE 1 - Condition - Critical Safety Function Core Cooling (Figure 5.2) indicates orange.

First locate C, Core Cooling under the Critical Safety Function column on the left of Figure 5.6. Then moving to the right, find C Orange under the appropriate emergency class, Site Area Emergency.

EXAMPLE 2 - Condition - Critical Safety Functions, Heat Sink (Figure 5.3) indicates red, and Core Cooling (Figure 5.2) indicates orange.

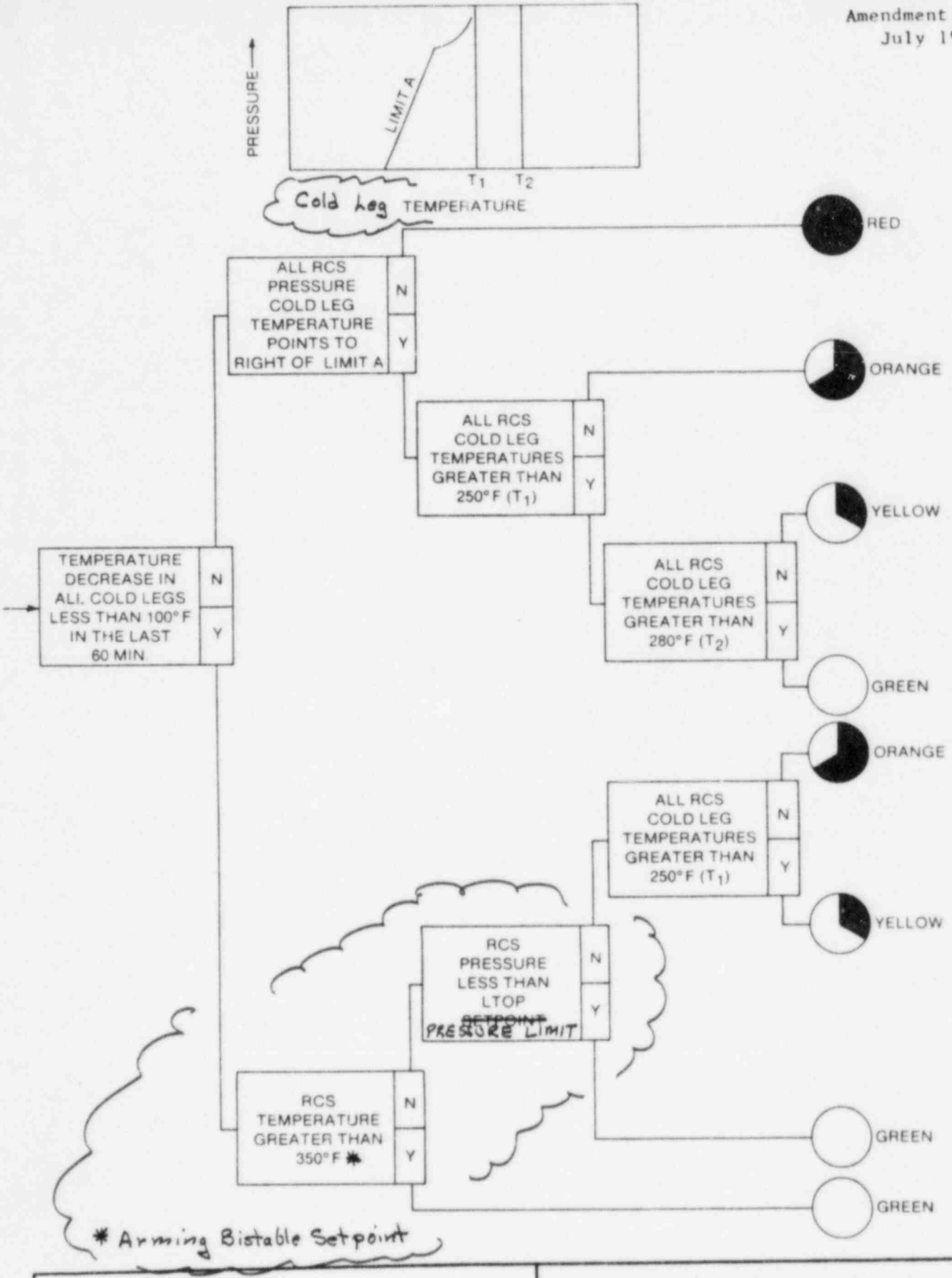
Combinations of separate Critical Safety Function indicators sometimes warrant a higher level emergency classification. First locate C, Core Cooling under the Critical Safety Function column on Figure 5.6. Moving to the right, find C Orange (Site Area Emergency), then C Orange plus H Red (General Emergency). Then locate H, Heat Sink. Moving to the right, find H Red (Site Area Emergency). Using the most severe classification, select General Emergency.

55

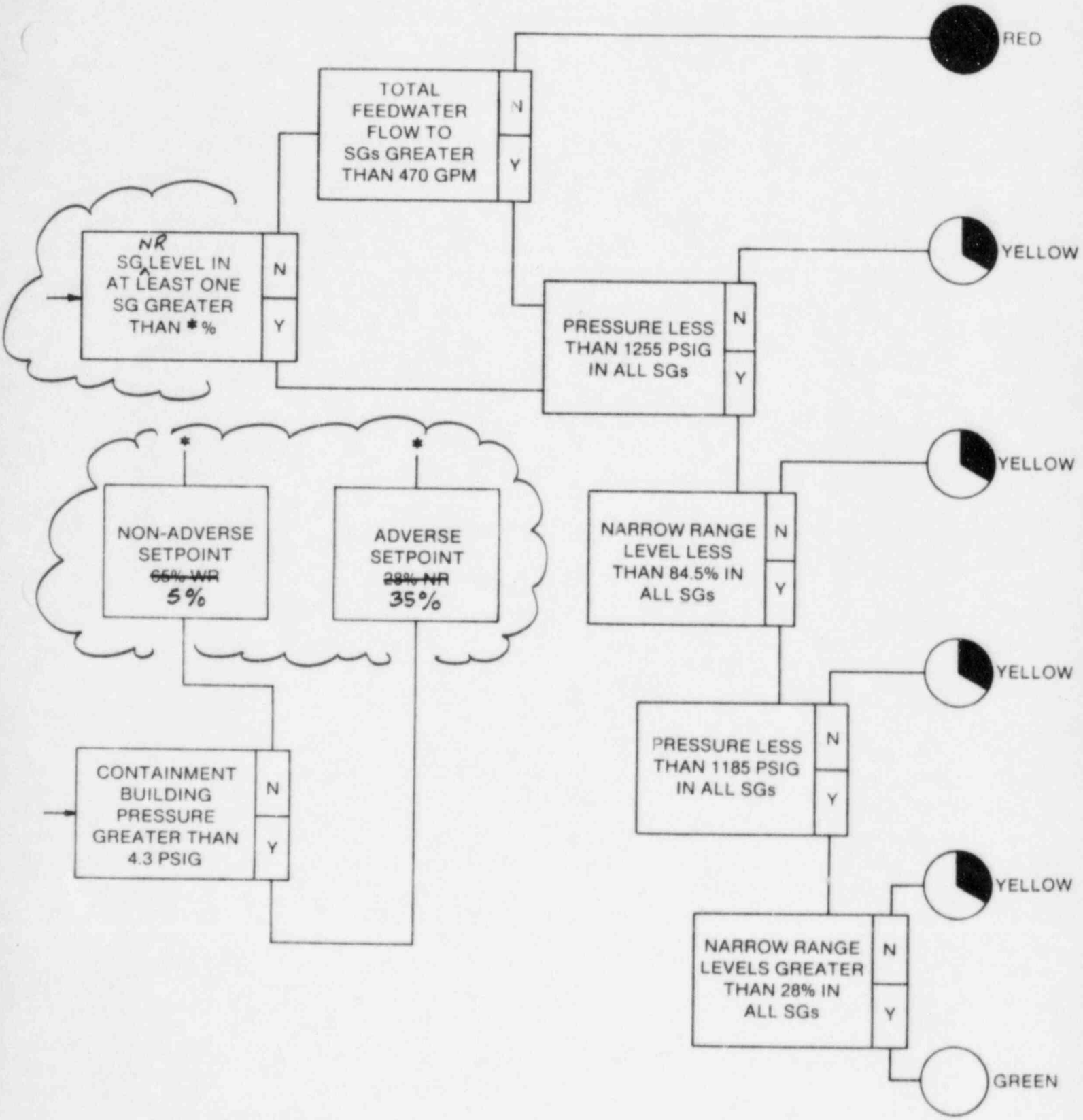
Insert "A"

onto p. 5-3

The specific emergency response procedure is ER-1.1 "Classification of Emergencies". This procedure contains the specific EAL's that serve as the basis for an emergency condition classification into one of the four emergency categories. This includes specific definitions of the events (i.e. natural phenomena, man-made occurrences, security threats and discretionary items) under category 18 of Figure 5.6.



PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE SEABROOK STATION - UNITS 1 & 2 FINAL SAFETY ANALYSIS REPORT RADIOLOGICAL EMERGENCY PLAN	STATUS TREE FOR CRITICAL SAFETY FUNCTION NUMBER P - RCS INTEGRITY FIGURE 5.4



PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE SEABROOK STATION - UNITS 1 & 2 FINAL SAFETY ANALYSIS REPORT RADIOLOGICAL EMERGENCY PLAN	STATUS TREE FOR CRITICAL SAFETY FUNCTION NUMBER H - HEAT SINK FIGURE 5.3

EMERGENCY CLASSIFICATION FLOW CHART

Name ______________
Time ______________
Date ______________

CRITICAL SAFETY FUNCTIONS	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
S Subcriticality		S orange	S red	
C Core Cooling	C yellow	C yellow AND Z yellow	C orange	C red C orange AND Z red C orange AND H red
H Heat Sink	H yellow (Except FR-H.5)		H red	H red AND 6a. Emergency power NOT restored to at least one train of operable ~~safeguards~~ equipment within 15 minutes.
P RCS Integrity	P yellow	P orange	P red	
Z Containment integrity	Z yellow	Z yellow AND ~~20~~ 20a. Failure to Isolate Containment	Z red Z orange	Z red AND 6a. Emergency power NOT restored to at least one train of operable ~~safeguards~~ equipment within 15 minutes. (safety related) Z red AND 20. Failure to Isolate Containment Z orange AND 6a. Emergency power NOT restored to at least one train of operable ~~safeguards~~ equipment within 15 minutes.

MISCELLANEOUS EMERGENCY CONDITIONS

CONDITION	UNUSUAL EVENT	ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
6. Electrical Failures	6a. Bus E5 AND E6 cannot be powered from an offsite source. 6b. No emergency diesel generator can power operable required ~~safeguards~~ safety related equipment.	6c. Loss of both trains of emergency AC power WITHOUT power restored to one train of operable ~~safeguards~~ safety related equipment, ~~within 15 minutes.~~ 6d. Simultaneous loss of vital DC busses 11A,11B,11C, & 11D for less than 15 minutes. 6a. Bus E5 AND E6 cannot be powered from an offsite source. AND 7a. Primary to seconday leakage greater than 500 gal per day or steam generator specific activity greater than 0.1 µCi/cc dose equivalent I-131	6a. Emergency power NOT restored to at least one train of operable ~~safeguards~~ safety related equipment within 15 minutes. 6f. Simultaneous loss of vital DC busses 11A,11B,11C & 11D for more than 15 minutes. 6a. Bus E5 AND E6 cannot be powered from an offsite source. AND 7b. Indication of a steam generator tube rupture by emergency procedure E-3	6a. Emergency power NOT restored to at least one train of operable ~~safeguards~~ safety related equipment within 15 minutes. AND 6f Simultaneous loss of vital DC busses 11A,11B,11C & 11D for more than 15 minutes.
7. Steam Generator Tube Leakage/Rupture		7b. Indication of a steam generator tube rupture by emergency procedure E-3.	7b. Indication of a steam generator tube rupture. by emergency procedure E-3 AND ~~8a~~ 8b. ~~Fuel cladding failure indicated by the~~ Reactor coolant gross activity ~~(letdown) monitor reading~~ ≥ 600 µCi/cc not due to power transient iodine.	
8. Fuel Failure Indications	8a. Reactor coolant gross activity >60 µCi/cc not due	~~8a~~ 8b. ~~Fuel cladding failure indicated by the~~ Reactor coolant gross activity (letdown) monitor reading ≥ 600 µCi/cc not due to power transient iodine.	~~8b~~ 8c. ~~Fuel cladding failure with an RCS release to containment indicated by the~~ Containment post-LOCA monitor reading ~~2500R/hr~~ ≥ 2.5E3 R/hr ~~greater than or equal to~~	8d. Containment post-loca monitors reading ≥ 2.5 E 4 R/hr.

12a. Site boundary HP whole body dose rate ≥ 6E-2 m R/hr

to power transient iodine.

Event	Unusual Event	Alert	Site Area	Gen. Emergency
9. Loss of Monitoring Capability	9a. Loss of VAS AND hardwired alarm system. 9b. Failure of qualified RDMS panel (CP-180)	9c. VAS AND hardwired alarm system not functional for greater than 2 hours with stable plant conditions.	9d. Loss of VAS AND hardwired alarm system with an unanticipated transient in progress.	
10. Loss of all Communication Capability	10. Loss of all control room communication			
11. Shutdown Technical Specifications Surpassed	11. Initiation of shutdown to the cold condition as required by technical specifications.			
12. High Radiation	12a.	12b. Site boundary HP41 whole body dose rate ≥ 6E-1 mR/hr or unexplained increase in one or more area radiation monitors by 1000.	12c. Site boundary HP41 whole body dose rate ≥ 5E+1 mR/hr or thyroid dose rate ≥ 250 mR/hr.	12d. Site boundary HP41 whole body dose rate ≥ 1E+3 mR/hr or thyroid dose rate ≥ 5000 mR/hr.
13. Fuel Handling Accident		13a. Fuel damage accident with release of radioactivity	13b. Dropping heavy object onto irradiated fuel or loss of water in spent fuel pool or reactor cavity with irradiated fuel present.	
14. Abnormal Reactor Trip or Safety Injection	14a. Reactor trip response (ES-0.1) WITHOUT return to normal plant procedures. 14b. SI termination (ES-1.1) WITHOUT return to normal plant procedures.			
15. Loss of primary or secondary Coolant inside or outside of containment.		15a. Faulted Steam Generator Isolation (E-2) OR Reactor Coolant Leak rate >50 gpm	15b. Loss of Reactor OR Secondary Coolant (E-1).	15c. Loss of emergency coolant recirculation (ECA-1.1) or LOCA outside containment (ECA-1.2) with fuel damage imminent.
16. Fire	16a. Fire in protected area > 10 minutes WITH no impact on safety related equipment	16b. Fire potentially affecting safety related systems.	16c. Fire affecting one train of safety related equipment.	16d. Fire affecting both trains of safety related equipment.
17. Control Room Evacuation		17a. With safe shutdown capability established.	17b. With safe shutdown capability NOT established within 15 minutes.	
18. Other Natural or Man-Made Hazards Affecting plant Operation	18a. Hazards experienced or projected NOT affecting safety systems.	18b. Hazards experienced or projected which affect a safety system OR have affected a non-safety system.	18c. Hazards experienced or projected which compromise safety functions.	18d. Hazards experienced or projected which result in the loss of physical control of the facility.
19. Emergency Transport of Contaminated and Injured Person to Local Support Hospital	19a. Emergency transport of contaminated and injured person to local Support Hospital.			
20. Failure to Isolate Containment	20a. Failure to Isolate Containment.			

FOR THE BELOW LISTED EVENT	IMPLEMENT EMERGENCY PLAN PROCEDURE NO.
UNUSUAL EVENT	ER-1.2
ALERT	ER-1.3
SITE AREA	ER-1.4
GEN. EMERGENCY	ER-1.5

OPTIONAL NOTES: ______

SIGNED: ______

Form ER-1.1A
REV.01

TI
APERTURE
CARD

Also Available On
Aperture Card

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
SEABROOK STATION - UNITS 1 & 2
FINAL SAFETY ANALYSIS REPORT
RADIOLOGICAL EMERGENCY PLAN

EMERGENCY CLASSIFICATION
FLOW CHART

8603110042-01

FIGURE 5.6

Attachment B

Additional Clarification

1. NUREG-0654, Appendix 1, pg. 1-5, Example 1(ECCS initiated and discharged to Vessel)

   Item 14b of the Seabrook Station classification system requires the operator to verify that any ECCS activation event is not inadvertent. Verified and validated emergency response procedures E.O. and ES-1.1 provide positive assurance that any such actuation has not been initiated due to an actual condition. If such actuation is in response to an actual event or, if conditions allowing termination cannot be achieved, then the declaration of an Unusual Event is required by procedure ER-1.1.

2. NUREG-0654, Appendix 1, pg. 1-13, Example 1 (Known LOCA greater than makeup pump capacity)

   Item 15b of the Seabrook Station classification system conservatively satisfies a loss of coolant greater than makeup pump capacity. If leakage is greater than the capacity of one of two available makeup pumps, the operator is directed to trip the plant and initiate safety injection. These actions will result in entry into Procedure E-1, which constitutes a Site Area Emergency.

3. NUREG-0654, Appendix 1, pg. 1-18, Example PWR Sequences

   We have reviewed these examples against the events incorporated as General Emergencies in the Seabrook Station classification system and have concluded that the desire of early identification of these types of conditions is met with our classification system.