

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 1 of 11

Effective Date:

TECHNICAL REVIEW	
Prepared and Verified by: _____	Date: _____
Validated by: _____ Emergency Planning Staff	Date: _____

PROCEDURE APPROVAL	
Approved by: _____ Manager, Emergency Planning	Date: _____
Reviewed by: _____ Operations Committee Chairman	Date: _____
Reviewed by: _____ Manager, Regulatory Affairs	Date: _____
Approved by: _____ DAEC Plant Manager	Date: _____
Authorized by: _____ Vice President, Nuclear	Date: _____

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 2 of 11

Table of Contents

	<u>Page</u>
1.0 PURPOSE	3
2.0 EMERGENCY CLASSIFICATION SYSTEM	3
2.1 NOTIFICATION OF UNUSUAL EVENT	4
2.2 ALERT	4
2.3 SITE AREA EMERGENCY	4
2.4 GENERAL EMERGENCY	4
3.0 EMERGENCY ACTION LEVEL INITIATING CONDITIONS	4
4.0 ATTACHMENTS	7
TABLE D-1, "IMMEDIATE ACTION TABULATION"	8

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 3 of 11

1.0 PURPOSE

- (1) This section describes the system used to classify emergency conditions. This system is consistent with that set forth in Appendix 1 of NUREG-0654 and is the system used by state and local organizations. The Emergency Action Levels established for each emergency classification are reviewed annually with offsite authorities who are responsible for implementing protective measures for the population at risk.
- (2) The NMC is assigned operational responsibility for the DAEC. However, IES maintains corporate accountability for activities at the DAEC and will participate when necessary in activities at the DAEC. The reference "IES/NMC" will be used throughout this procedure to signify this relationship. Further details regarding this relationship can be found in the "Nuclear Power Plant Operating Services Agreement" (NPPOSA) between IES and the NMC.

2.0 EMERGENCY CLASSIFICATION SYSTEM

- (1) Each emergency classification is associated with a particular set of immediate actions that are identified in EPIP Manual Appendix 1, forms EAL-01, EAL-02, EAL-03, EAL-04 AND EAL-05. Specific details regarding required actions to be taken at the DAEC for each class of emergency are specified in the EIPs. The specific instruments, parameters, and status indicators used to establish the emergency classification are specified in the Emergency Plan Implementing Procedures. If an emergency condition changes in severity, it will be reclassified and the corresponding response actions will escalate or de-escalate accordingly.
- (2) The highest emergency classification for which an Emergency Action Level (EAL) is currently met should be DECLARED. If an action level for a higher classification is exceeded but the situation is resolved prior to offsite notification, the higher classification should be REPORTED to the offsite agencies and the NRC, but SHOULD NOT be declared. The notification must indicate the CURRENT classification, the period of time that the higher classification existed and the mitigating conditions that caused the reduction in the emergency classification.

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 4 of 11

2.1 NOTIFICATION OF UNUSUAL EVENT

- (1) This class of emergency conditions includes the least severe events requiring offsite notification. This classification will be declared whenever significant events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant. In general, no releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.

2.2 ALERT

- (1) The ALERT emergency condition is the second class in increasing order of severity. This emergency classification will be declared whenever events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Limited releases of radioactivity may occur. Accidents analyzed in Chapter 15 of the Updated Final Safety Analysis Report that fit this classification include the Refueling Accident.

2.3 SITE AREA EMERGENCY

- (1) The SITE AREA EMERGENCY condition is the third class in increasing order of severity and requires immediate notification of the public. This classification will be declared whenever events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Accidents analyzed in Chapter 15 of the Updated Final Safety Analysis Report that fit this classification are Control Rod Drop, Loss of Coolant, and Main Steam Line Break. Some significant releases of radioactivity are likely with this class of emergency.

2.4 GENERAL EMERGENCY

- (1) The GENERAL EMERGENCY condition is the most severe and requires immediate notification of the public. This emergency classification will be declared whenever events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Significant releases of radioactivity are likely with this class of emergency.

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 5 of 11

3.0 EMERGENCY ACTION LEVEL (EAL) INITIATING CONDITIONS

- (1) The EAL Tables, located in the EPIP Manual Appendix 1, forms EAL-01, EAL-02, EAL-03, EAL-04 and EAL-05, identify the specific conditions and associated limits that serve as the basis for initiating the appropriate monitoring, assessment, and response actions described in this plan. As the severity of each condition increases, the event is classified (or reclassified), based upon instruments, equipment status, and parameters identified in the EAL Tables to assure that appropriate emergency response actions are being taken.

- (2) The EALs are based upon one or more of the following criteria:
 - (a) System design specifications
 - (b) Technical Specification limits
 - (c) FSAR accident analyses
 - (d) 10CFR20 and 10CFR100 requirements
 - (e) EPA 400-R-92-001 Manual of Protective Action Guides and Protective Actions for Nuclear Incidents (dated October 1991 with 2nd printing May 1992)
 - (f) NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations."
 - (g) NUREG-0654, FEMA-REP-1, Revision 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants."
 - (h) *NEI Methodology for Development of Emergency Action Levels*
NUMARC/NESP-007 NEI 99-01 Revision 4, May 1999/September 2002
 - (i) *NEI Methodology for Development of Emergency Action Levels*
NUMARC/NESP-007 NEI 97-03 August 1997

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 6 of 11

- (3) The EALs to be initiated are not necessarily based upon actual radiological exposures to the population at risk, but rather are based upon the potential exposures or specific plant conditions that may pose a threat to the population at risk.

- (4) The release rates and release rate calculations established for the EALs are based upon an assumed isotopic mix at the time of the event and are calculated using the MIDAS computer model. The source terms, release conditions, meteorological conditions, and exposure conditions are documented in NG-88-7790. Effluent release rate levels have been identified for both the SITE AREA EMERGENCY and GENERAL EMERGENCY classifications. The monitor readings established for the SITE AREA EMERGENCY are based upon adverse meteorology while those established for the GENERAL EMERGENCY are based upon normal meteorological conditions. The limiting case for releases from the Off-Gas Stack, an elevated release with the Standby Gas Treatment System (SBGT) in operation, is Deep Dose Equivalent (whole body dose) rates. All other release paths are assumed to be secured. The limiting case for release from the Turbine Building Ventilation Exhaust Stack, a mixed mode release without the benefit of treatment via SBGT, is Committed Dose Equivalent (thyroid dose) rates. Again, all other release paths are assumed to be secured. Since the projected site boundary dose rates are based upon assumed meteorological conditions, these levels will serve as a warning to calculate projected doses using actual meteorological conditions in order to properly classify the condition.

- (5) High range containment radiation monitor levels have been established for the SITE AREA and GENERAL EMERGENCY classifications. These levels are based on 10% and 20% gap release, respectively. The relationship between percentage gap release and containment monitor response values is delineated in NG-88-0966.

- (6) EALs are conservatively established for the SITE AREA EMERGENCY, and ensure that offsite support agency actions are taken in a timely manner. The EALs for the GENERAL EMERGENCY are established to provide a more realistic basis for evacuation or sheltering decisions.

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 7 of 11

4.0 ATTACHMENTS

- (1) Table D-1, "Immediate Action Tabulation"

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 8 of 11

TABLE D-1
IMMEDIATE ACTION TABULATION

NOTIFICATION OF UNUSUAL EVENT

Class Description

Unusual events are in process 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.

Purpose

The purpose of this classification is to (1) assure that the first step in any response later found to be necessary has been carried out, (2) bring the operating staff to a state of readiness, and (3) provide systematic handling of unusual events information and decision making.

IES/NMC ACTIONS

1. Inform local and State authorities and the NRC of the condition, significant actions taken or under way, and any need for assistance.
2. Augment on-shift resources if required as a precautionary measure.
3. Assess and respond.
4. Escalate to a more severe classification, if appropriate.
5. Notify key organizational personnel based upon plant conditions and the character of the event, as appropriate.
6. Establish discussions with NRC, as appropriate.
7. If the abnormal condition becomes more severe, further actions to be taken shall be as prescribed for the emergency classification assigned.

Following restoration from the abnormal conditions, the following actions will be taken:

1. Inform local and state public officials of significant actions taken or under way and any need for assistance, as appropriate.
2. Issue a news statement, as appropriate.

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 9 of 11

TABLE D-1
IMMEDIATE ACTION TABULATION

ALERT

Class Description

Events are in process or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant. Any releases are expected to be limited to small fractions of the EPA Protective Action Guide exposure levels.

Purpose

The purpose of this classification is to (1) assure that emergency personnel are ready, available to respond if the situation becomes more serious, or to perform confirmatory radiation monitoring if required, and (2) provide offsite authorities current information.

IES/NMC ACTIONS

1. Promptly inform local and State authorities and the NRC of the condition, status, and reason for emergency as soon as discovered.
2. Augment resources and activate the onsite Technical Support Center and onsite Operational Support Center. Bring Emergency Operations Facility, Joint Public Information Center, and other key personnel to standby status or activation.
3. Assess and respond.
4. Determine need to dispatch onsite and offsite monitoring teams and associated communications.
5. Provide periodic plant status updates to offsite authorities.
6. Provide periodic meteorological assessments to offsite authorities and, if any releases are occurring, dose estimates for actual releases.
7. Escalate to a more severe classification, if appropriate.
8. Establish followup discussions with the NRC.
9. Issue news statements, as appropriate.
10. If the plant condition becomes more severe, further actions to be taken shall be as prescribed for the emergency classification assigned.

Following restoration of the plant to a stable, safe shutdown condition, the following actions will be taken:

1. Inform local and state authorities of close out or reduction of emergency class.
2. Issue a summary news statement, as appropriate.

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 10 of 11

TABLE D-1
IMMEDIATE ACTION TABULATION

SITE AREA EMERGENCY

Class Description

Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases which occur are not expected to exceed the EPA Protective Action Guide exposure levels except near the site boundary.

Purpose

The purpose of this classification is to (1) assure that response centers are staffed, (2) assure that monitoring teams are dispatched, (3) assure that personnel required for evacuation of near-site areas are at duty stations if the situation becomes more serious, (4) provide consultation with offsite authorities, and (5) provide updates for the public through offsite authorities.

IES/NMC ACTIONS

1. Promptly inform local and state authorities and the NRC of the condition, status, and reason for emergency as soon as discovered.
2. Augment resources by activating the Technical Support Center, Operational Support Center, and the Emergency Operations Facility and the Joint Public Information Center.
3. Assess and respond.
4. Dispatch onsite and offsite monitoring teams and associated communications.
5. Dedicate an individual for plant status updates to offsite authorities and periodic press briefings.
6. Make senior technical and management staff onsite available for consultation with the NRC and the State who will contact the DOE and FEMA on a periodic basis.
7. Provide meteorological information and dose estimates to offsite authorities for actual releases.
8. Provide release and dose projections based on available plant conditions and foreseeable contingencies.
9. Initiate communications with industry liaison groups (i.e., INPO) to apprise them of the emergency situation.
10. Prepare to conduct press briefings and issue news statements.
11. Escalate to GENERAL EMERGENCY class, if appropriate.
12. Inform local and state authorities of the closeout or reduction of the emergency class.

DAEC EMERGENCY PLAN	SECTION 'D'
EMERGENCY CLASSIFICATION SYSTEM	Rev. 22 Page 11 of 11

TABLE D-1
IMMEDIATE ACTION TABULATION

GENERAL EMERGENCY

Class Description

Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases can be reasonably expected to exceed EPA Protective Action Guide exposure levels offsite for more than the immediate site area.

Purpose

The purpose of this classification is to (1) initiate predetermined protective actions for the public, (2) provide continuous assessment of plant information and radiological monitoring measurements taken by licensee and offsite organizations, (3) initiate additional measures as indicated by actual or potential releases, (4) provide consultation with offsite authorities and (5) provide updates for the public through offsite authorities.

IES/NMC ACTIONS

1. Promptly inform local and state authorities and the NRC of the condition, status, and reason for emergency as soon as discovered.
2. Augment resources by activating the Technical Support Center, Operational Support Center, Emergency Operations Facility, and the Joint Public Information Center.
3. Assess and respond.
4. Dispatch onsite and offsite monitoring teams and associated communications.
5. Dedicate an individual for plant status updates to offsite authorities and periodic press briefings.

6. Maintain communications with the NRC. Make senior technical and management staff onsite available for consultation with the NRC and the State on a periodic basis.
7. Provide meteorological information and dose estimates of actual releases to offsite authorities.
8. Provide release and dose projections based on available plant conditions and foreseeable contingencies.
9. Maintain communications with industry liaison groups to ensure they are fully apprised of the status of the event and the potential ramifications.
10. Conduct periodic press briefings and issue news statements to ensure the public is apprised of the status of the event and the actions being taken to minimize its effect upon the public and the environment.
11. Evaluate the resources and capabilities of the overall emergency response organizations and restructuring, as appropriate, to assist in determining, tracking, and assessing the environmental consequences of the event.
12. Achieve stable plant conditions.
13. Investigate the consequences of the accident.

As conditions warrant, the emergency classification will be downgraded and actions specified for the appropriate classification will be continued. Following restoration of the plant to a stable and safe shutdown condition, the following actions shall be taken:

1. Inform local and state authorities of closeout or downgrading of the emergency classification.
2. Issue summary news statement, as appropriate.