

I. PURPOSE

The purpose of this procedure is to provide a means of classifying an event at CNS into one of four emergency classifications as described in the CNS Emergency Plan.

II. DISCUSSION

A. Introduction To Modular Concept.

1. Basic module.

- a. Four classes of Emergency Action Levels have been established. The classes are:

- 1) NOTIFICATION OF UNUSUAL EVENT.
- 2) ALERT.
- 3) SITE AREA EMERGENCY.
- 4) GENERAL EMERGENCY.

- b. The rationale for these classes is to provide early and prompt notification of minor events (the BASIC MODULE EVENTS) which could lead to more serious consequences or which might be indicative of more serious conditions which are not yet fully realized. A system of modules has been provided to ensure more effective response preparation for more serious indicators.

- c. There are four basic modules which depict the four major types of events:

- 1) Radiological.
- 2) Operational.
- 3) Fire-Natural-Security.
- 4) Miscellaneous.

- d. The basic modules are subdivided into 13 submodules that are abnormal conditions considered to be those initiating events upon which all emergencies categorized within the Emergency Action Levels are based.

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- e. Prompt recognition of the occurrence of one or more of these initiating events of the Basic Module may prevent the situation from progressing to either a NOTIFICATION OF UNUSUAL EVENT category or an Action Level of greater severity.
- f. The 13 submodule events are:
- 1) Release of radiological liquid or gaseous effluent in excess of the Technical Specification limits or abnormal radiation levels.
 - 2) Indications leading to or actual loss of fission product barrier.
 - 3) Steam line break or main steam safety or relief valve failure.
 - 4) Primary reactor coolant leak.
 - 5) Loss of power or alarms.
 - 6) Other limiting conditions for operations.
 - 7) Reactor protection system failure.
 - 8) Fuel handling accident.
 - 9) Control Room evacuation.
 - 10) Fire.
 - 11) Security threat.
 - 12) Natural phenomena.
 - 13) Other hazards.
- g. As can be seen from Attachment "A", an emergency (initiating condition) may progress to a particular Emergency Action Level as a result of a combination of one or more of the submodule events. In most instances, these elements of the submodule will advance to the category of a NOTIFICATION OF UNUSUAL EVENT and, with continued degradation, could escalate to the more severe classes of ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY.
- h. The question may arise as to what is meant by a modularized system of the Emergency Action Levels. As shown in Attachment "A", each of the four classes of the Emergency Action Levels is indicative of nine or more sets of initiating conditions.

The events within each class are either identical to or are slight modifications of those that exist in Chapter 4 of the CNS Emergency Plan. What the modularized system denotes is a graphic reproduction of Tables 4.1-1 through 4.1-4, in an easy-to-read and understand, readily available flow chart format. This modular format yields three important advantages:

- 1) It affords prompt recognition of the severity of emergency conditions and assists in the timely classification of those conditions into one of the four Emergency Action Levels.
 - 2) Prompt recognition leads to prompt action in terms of initial notification, activation of on-site emergency response facilities, and off-site agency response.
 - 3) It enables the reactor operations personnel to effectively move through the emergency procedures and into the EPIPs.
- i. The utilization of the modular approach in assessing a radiological accident, affords greater probability of responding to a potentially hazardous occurrence in a more timely manner, and time is a critical factor in dealing with all emergency situations.

III. REFERENCE MATERIAL

- A. Cooper Nuclear Station Emergency Plan.
- B. NUREG-0654, Revision 1.

IV. PREREQUISITES

- A. An Emergency Operation Procedure has been initiated.
- B. An unusual occurrence has taken place at or near the site.

V. LIMITATIONS

- A. The steps required by this procedure are in addition to the steps required to maintain or restore the station to a safe condition.
- B. If conflicts in personnel assignments or sequence of actions arise, first priority will be given to maintaining or restoring the station to a safe condition.

VI. PRECAUTIONS

- A. None.

VII. EQUIPMENT

- A. None.

VIII. PROCEDURE

A. Classification.

1. The Shift Supervisor/Emergency Director selects affected submodules on Classification Checklist (Attachment "B") related to station events or conditions and records the date and time of initial classification.
2. For all submodules selected on Attachment "B"; the Shift Supervisor/-Emergency Director is to refer to the Classification Guide (Attachment "C") and review initiating conditions for emergency classification.
3. The Shift Supervisor/Emergency Director records the emergency classification.
4. The Accident Classification Flow Chart (Attachment "A") is a tool designed to assist selecting the appropriate portion of the Classification Guide (Attachment "C"). The Accident Classification Guide Flow Chart indicates graphically, for certain combinations of station conditions, which basic module in the guide contains the initiative conditions, EALs, and classification levels.
 - a. In the Submodule column are listed 13 abnormal conditions that are considered to be those initiating events upon which all emergencies are based. By following a vertical path down this column to the applicable condition and then horizontally across the sheet to the actual event, the Shift Supervisor/ Emergency Director can promptly recognize an emergency classification.
5. The Shift Supervisor/Emergency Director initiates the appropriate EPIP as follows:
 - a. NOTIFICATION OF UNUSUAL EVENT - EPIP 5.7.2.
 - b. ALERT - EPIP 5.7.3.
 - c. SITE AREA EMERGENCY - EPIP 5.7.4.
 - d. GENERAL EMERGENCY - EPIP 5.7.5.

B. Reclassification.

1. An emergency may escalate to a higher classification as station conditions worsen or additional abnormal station conditions arise. This could also happen as a result of a combination of two or more of the submodule events.
2. An emergency may be initially classified at one level and, upon further investigation or after corrective actions, may be de-escalated/reclassified to a less severe class of emergency.

3. Compare station conditions against the Emergency Action Levels in Attachment "C" and as conditions change re-evaluate the classification as in Section A; reclassify the event as necessary.
4. Record all emergency classifications and date/time on Attachment "B".

IX. ATTACHMENTS

- A. Attachment "A", Accident Classification Guide Flow Chart.
- B. Attachment "B", Classification Checklist.
- C. Attachment "C", Classification Guide.

BASIC MODULE

GENERAL EMERGENCY

RADIOLOGICAL

ENDING
DOSE
IN
M/S/HR
TIME
AT THE

1.5

GASEOUS EFFLUENTS CORRESPONDING
TO MEASURED OR CALCULATED DOSE
RATES OF 1 R/HR ABOVE BODY OR
4 R/HR THYROID AT THE 0.1 MUM
EXCLUSION AREA DEAI BOUNDARY

DO
IS
ADJ
RY

OPERATIONAL

2.6

LOSS OF 2 OF 3 FISSION PRODUCT
BARRIERS WITH POTENTIAL LOSS OF
THE THIRD BARRIER

3.4

SMALL OR LARGE BREAK LOCA'S
ACCOMPANIED BY FAILURE OF ECCS
TO PERFORM LEADING TO SEVERE
DEGRADATION OR MELT WITHIN MINUTES
TO HOURS. BREACH OF CONTAINMENT LIKELY

3.5

4.5

SMALL OR LARGE BREAK LOCA OCCURS
AND CONTAINMENT PERFORMANCE IS
UNSUCCESSFUL AFFECTING LONGER
TERM SUCCESS OF ECCS EFFORTS COULD
LEAD TO CORE DEGRADATION OR
MELT IN SEVERAL HOURS WITHOUT
BENEFIT OF CONTAINMENT BOUNDARY

5.8

FAILURE OF OFFSITE AND ONSITE POWER
WITH LOSS OF EMERGENCY COOLING
CAPABILITIES FOR AN EXTENDED PERIOD

FIRE-NATURAL- SECURITY

POWER FOR

IT TRANSIENT

ON NEEDED

7.3

TRANSIENT PLUS FAILURE OF REQUISITE
CORE SHUTDOWN SYSTEM (E.G. SCRAM)
COULD RESULT IN CORE MELTDOWN AFTER
SEVERAL HOURS WITH SUBSEQUENT
CONTAINMENT FAILURE LIKELY

9.3

12.4

ANY MAJOR INTERNAL OR EXTERNAL EVENTS
E.G. FIRES, EARTHQUAKES SUBSTANTIALLY
BEYOND DESIGN BASIS WHICH COULD CAUSE
MASSIVE COMMON DAMAGE TO PLANT SYSTEMS

11.4

LOSS OF PHYSICAL CONTROL OF THE
FACILITY

13.7

ANY OTHER PLANT CONDITIONS EXIST
FROM WHATEVER SOURCE THAT MAKE
RELEASE OF LARGE AMOUNTS OF RADIOACTIVITY
IN A SHORT TIME PERIOD POSSIBLE
E.G. SHUTDOWN OCCURS, BUT REQUISITE
DECAY HEAT REMOVAL SYSTEMS (DHR)
OR NON-SAFETY SYSTEMS HEAT REMOVAL
MEANS ARE RENDERED UNAVAILABLE. CORE
MELT COULD OCCUR IN ABOUT 10 HOURS
WITH SUBSEQUENT CONTAINMENT BREACH
LIKELY

MISCELLANEOUS

NEED
E THE
IN

ION

ACCIDENT CLASSIFICATION GUIDE FLOWCHART

EPIC 5-7.1
ATTACHMENT A

COOPER NUCLEAR STATION OPERATIONS MANUAL

ATTACHMENT "B"

EMERGENCY PLAN IMPLEMENTING PROCEDURE

5.7.1

CNS EMERGENCY PLAN IMPLEMENTATION

CLASSIFICATION CHECKLIST

SUBMODULE	INITIAL CLASSIFICATION DATE/TIME	SUBSEQUENT CLASSIFICATION DATE/TIME	SUBSEQUENT CLASSIFICATION DATE/TIME	SUBSEQUENT CLASSIFICATION DATE/TIME	REFER TO ATTACHMENT "C" PAGE(S)
1. Release of radiological liquid or gaseous effluent in excess of Technical Specification limits or abnormal radiation levels.	_____	_____	_____	_____	1, 2
2. Indications leading to or actual loss of a fission product barrier.	_____	_____	_____	_____	2, 3, 4
3. Steam line break or safety or relief valve failure.	_____	_____	_____	_____	4, 5
4. Primary reactor coolant leak.	_____	_____	_____	_____	6, 7, 8
5. Loss of power or alarms.	_____	_____	_____	_____	8, 9
6. Other limiting conditions for operation.	_____	_____	_____	_____	10, 11
7. Reactor protection system failure.	_____	_____	_____	_____	11
8. Fuel handling accident.	_____	_____	_____	_____	12
9. Control Room evacuation.	_____	_____	_____	_____	12, 13
10. Fire.	_____	_____	_____	_____	13
11. Security threat.	_____	_____	_____	_____	13
12. Natural phenomena.	_____	_____	_____	_____	14
13. Other hazards.	_____	_____	_____	_____	15, 16

CLASSIFICATION GUIDE

SUBMODULE	INITIATING CONDITIONS	EMERGENCY ACTION LEVELS	EMERGENCY CLASS
1. Release of radiological liquid or gaseous effluent in excess of Technical Specification limits.	1.1 Radiological effluent Technical Specification limits exceeded.	1.1.1 Based on 10CFR20 Appendix B, Table II, Column 2, monitored by: a) Liquids: liquid effluent monitor. b) Airborne effluents: ERP monitor, Reactor Building vent monitor, Turbine Building vent monitor, Augmented Radwaste Building vent monitor.	NOTIFICATION OF UNUSUAL EVENT
1.2	High radiation levels or high airborne contamination which indicates a severe degradation in the control of radioactive materials (sudden increase by a factor of 1000 over normal radiation readings).	1.2.1 Corresponding levels and alarms on: a) Area radiation monitoring system. b) Building ventilation monitors. c) Continuous air monitors. d) Effluent monitors.	ALERT
1.3	Radiological effluents exceed 10 times Technical Specification instantaneous limits, which, if continued over 2 hours, would result in about 1mR at the site boundary under annual average meteorological conditions.	1.3.1 Determined by Reactor, Turbine, Radwaste, and AOC Buildings, Elevated Release Point radiation monitor readings, and Control Room calibration curves to determine release rates.	ALERT
1.4	Effluent monitors detect levels corresponding to greater than 50 mrem/hour whole for 1/2 hour or greater than 500 mrem/hour whole body for 2 minutes (or five times these levels to the thyroid) at the site boundary dose rates are projected based on station releases or are measured in the environs. EPA PAGs are projected to be implemented outside the site boundary.	1.4.1 Determined by Reactor, Turbine, Radwaste, and AOC Buildings, Elevated Release Point radiation monitor readings, and Control Room calibration curves to determine to determine release rates.	SITE AREA EMERGENCY

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
1. (Continued)	1.5 Effluent monitors detect levels corresponding to 1 rem/hour whole body (or 5 rem/hour thyroid) at the site boundary under actual meteorological conditions. These dose rates are projected based on other parameters (e.g. radiation levels in containment with leak rate appropriate for existing containment pressure with some confirmation from effluent monitors) or are measured in the environs.	1.5.1 Determined by Reactor, Turbine, Rad-waste, and AOG Buildings, Elevated Release Point radiation monitor readings, and Control Room calibration curves to determine release rates. Dose rate projections per EPIP 5.7.17 or measured dose rates by field monitoring teams.	GENERAL EMERGENCY
2. Indications leading to or actual loss of a fission product barrier.	2.1 Fuel damage indications.	2.1.1 High off-gas at steam jet air ejector monitors in excess of 5 x 10 (5) uCi/sec. or an increase of 10 (5) uCi/sec within a 30-minute period. Determined by observing Panel 9-10 monitors RMP-RM-150A & B, Panel 9-2 recorder and annunciators on Panel 9-4, and through use of calibration curves posted in Control Room.	NOTIFICATION OF UNUSUAL EVENT
	2.2 Abnormal coolant parameters exceeding Technical Specification limits. a) Coolant temperature. b) Coolant pressure. c) Fuel temperature.	2.1.2 Coolant sample activity exceeds 3.1 uCi/gm dose equivalent 1-131. 2.2.1 a) Determined by core thermal analysis. b) Reactor vessel dome pressure shall not exceed 1337 psig at any time when irradiated fuel is present in the vessel or 75 psig any time when operating the RHR pumps in the shutdown cooling mode. Indicated on Panel 9-5 RFC-P1-90A, B, C, or RFC-LR/PR-97 or 98.	NOTIFICATION OF UNUSUAL EVENT

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SUBMODULE	INITIATING CONDITIONS	EMERGENCY ACTION LEVELS	EMERGENCY CLASS
2. (Continued)	2.3 Severe loss of fuel cladding.	2.3.1 High off-gas at steam jet air ejector monitors, greater than 5 Ci/sec RMP-RM-150A & B on Control Room Panel 9-2.	ALERT
	2.4 Loss of coolant flow which has led to fuel failure.	2.3.2 Primary coolant sample indicates activity levels exceeding 310 uCi/gm, not including iodine spiking.	
		2.4.1 Observation of core flow instrumentation on Control Room Panel 9-4 or 9-5.	ALERT
		2.4.2 High off-gas at steam jet air ejector monitors in excess of 5 x 10 (5) uCi/sec or an increase of 10 (5) uCi/sec within a 30-minute period. Determined by observing Panel 9-10 SJAЕ monitors RMP-RM-150A & B, Panel 9-2 recorders and annunciators on Panel 9-4, and through use of calibration curves posted in Control Room.	
		2.4.3 Coolant sample activity exceeds equilibrium value of 3.1 uCi/gm dose equivalent 1-131.	
2.5 Degraded core with possible loss of coolable geometry.	2.5.1 Evidenced by low flow and high core differential pressure indication on Control Room panel 9-5.		SITE AREA EMERGENCY
		2.5.2 Inability to insert in-core detectors.	
2.6 Loss of two of three fission product barriers with a potential loss of third barrier (e.g. loss of coolant boundary, cladding failure, and a high potential for breach of containment).	2.6.1 Any two with potential for third: a) Fuel cladding. 1) High off-gas at steam jet air ejector monitors in excess of 5 Ci/sec. Determined by observing Panel 9-10 monitors RMP-RM-150A & B. 2) Coolant sample activity exceeds 3.1 uCi/gm of dose equivalent 1-131 per LOD 3.6.B.		GENERAL

CLASSIFICATION GUIDE

<u>SUEMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
2. (Continued)	2.6 (Continued)	2.6.1 b) Primary coolant boundary. 1) High drywell pressure. 2) Low vessel level. 3) ECCS initiation. 4) Reactor scram. 5) Containment activity, sump level humidity, and temperature increasing. c) Containment integrity. 1) Inability to isolate primary containment. 2) Suppression pool water volume cannot be maintained between 87,650 cu ft and 91,000 cu ft or temperature cannot be maintained below 90°F or 95°F for periods not to exceed 45 days wherever river water temperature is such that 90°F cannot be maintained. Temperature and volume displayed on CR-VBD-J. 3) Unable to maintain drywell to suppression chamber differential pressure. 4) Loss of containment structural integrity. 5) Containment pressure exceeding design.	
3. Steam line break or safety or relief valve failure.	3.1 Failure of a safety or relief valve in a safety-related system to close following a reduction of applicable pressure.	3.1.1 Failure of blue Indicating lights (Panel 9-3) to illuminate after safety relief valve(s) closes and suppression chamber temperature continues to increase as noted on Control Room Panel 9-21 recorder, ADS-IR-166.	NOTIFICATION OF UNUSUAL EVENT
	3.2 Main steam line break in primary containment with MSIV or other valve malfunction causing leakage to secondary containment.	3.2.1 Indication may include: a) High drywell pressure. b) Low vessel level. c) ECCS initiation. d) Reactor scram. e) High Reactor Building activity. (ARMs, CAMs, or ventilation monitors).	ALERT

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
3. (Continued)	3.2 (Continued)	3.2.1 f) Containment sump level, humidity, and temperature increases. g) Failure to isolate containment. 1) Observe containment isolation mimic on Control Room Panel 9-3.	
	3.3 Main steam line break outside containment without isolation.	3.3.1 Indications may include: a) Low vessel level. b) ECCS initiation. c) Reactor scram. d) Failure of NSIVs to isolate as evidenced by mimic display on Control Room Panel 9-3. e) High Reactor/Turbine Building activity levels (ARMS, CAMs, or building ventilation). f) High temperature alarms on area temperature monitoring system. g) Steam line high flow indication.	SITE AREA EMERGENCY
	3.4 Small or large break LOCAs, accompanied by failure of ECCS to perform, leading to severe core degradation or melt in from minutes to hours. Breach of containment likely.	3.4.1 Indications are: a) High drywell pressure. b) Low vessel level. c) Lack of ECCS initiation. d) Containment activity, sump level humidity, and temperature increase. e) Reactor scram. f) Area temperature monitor increases. g) High off-gas at steam jet air ejector monitors greater than 5 Ci/sec. h) Primary coolant sample indicates activity levels exceeding 310 uCi/gm. i) Containment unisolable. j) Suppression pool water volume cannot be maintained between 87,650 cu ft and 91,000 cu ft or temperature cannot be maintained below 90°F or 95°F for periods not to exceed 45 days whenever river water temperature is such that 90°F cannot be maintained. Temperature and volume displayed on CR-VBD-J. k) Containment pressure exceeding design.	GENERAL EMERGENCY

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<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
3. (Continued)	3.5 Small or large break LOCA occurs and containment performance is unsuccessful, affecting longer term success of the ECCS. Could lead to core degradation or melt in several hours without benefit of containment boundary.	3.5.1 Indications are: a) High drywell pressure. b) Low vessel level. c) Lack of EEC initiation. d) Containment activity, sump level, humidity, and temperature increase. e) Reactor scram. f) Area temperature monitor increases. g) High off-gas at steam jet air ejector monitors greater than 5 Ci/gm. h) Primary coolant sample indicates activity levels exceeding 310 uCi/gm. i) Containment unisolable. j) Suppression pool water volume cannot be maintained between 87,650 cu ft and 91,000 cu ft or temperature cannot be maintained below 90°F or 95°F for periods not to exceed 45 days whenever river water temperature is such that 90°F cannot be maintained. Temperature and volume displayed on CR-VBD-J. k) Containment pressure exceeding design.	GENERAL EMERGENCY
4. Primary leak.	4.1 Primary leak rate Technical Specification exceeded.	4.1.1 Limit of 5 gpm unidentified flow, 25 gpm identified flow with no capability to isolate and shut down required. Indicated by drywell floor and equipment sump integrator located on Control Room Panel 9-19 and annunciated on Panel 9-4.	NOTIFICATION OF UNUSUAL EVENT
	4.2 Primary leak rate Technical Specification exceeded.	4.2.1 Unidentified leak greater than 50 gpm as indicated by drywell floor and equipment sump integrators located on Control Room Panel 9-19 and annunciated on Panel 9-4.	ALERT

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<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
4. (Continued)			
	4.3 Known loss of coolant accident greater than make-up capacity.	4.3.1 Observation of ECCS initiation and Control Room or local rack indication of failure to maintain vessel level above -145.5".	SITE AREA
	4.4 Small or large break LOCAs, accompanied by failure of ECCS to perform, leading to severe core degradation or melt in from minutes to hours. Breach of containment likely.	4.4.1 Indications are: a) High drywell pressure. b) Low vessel level. c) Lack of ECCS initiation. d) Containment activity, sump level humidity, and temperature increase. e) Reactor scram. f) Area temperature monitor increases. g) High off-gas at steam jet air ejector monitors greater than 5 Ci/sec. h) Primary coolant sample indicates activity levels exceeding 310 uCi/gm. i) Containment unisolable. j) Suppression pool water volume cannot be maintained between 87,650 cu ft and 91,000 cu ft or temperature cannot be maintained below 90°F or 95°F for periods not to exceed 45 days whenever river water temperature is such that 90°F cannot be maintained. Temperature displayed on CR-VBD-J; level displayed on Panels 9-3 and 9-4. k) Containment pressure exceeding design.	GENERAL EMERGENCY
	4.5 Small or large break LOCA occurs and containment performance is unsuccessful, affecting longer term success of the ECCS. Could lead to core degradation or melt in several hours without benefit of containment boundary.	4.5.1 Indications are: a) High drywell pressure. b) Low vessel level. c) Lack of EEC initiation. d) Containment activity, sump level, humidity, and temperature increase. e) Reactor scram. f) Area temperature monitor increases. g) High off-gas at steam jet air ejector monitors greater than 5 Ci/gm. h) Primary coolant sample indicates activity levels exceeding 310 uCi/gm 1-131.	GENERAL EMERGENCY

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<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
4. (Continued)	4.5 (Continued)	4.5.1 i) Containment unisolable. j) Suppression pool water volume cannot be maintained between 87,650 cu ft and 91,000 cu ft or temperature cannot be maintained below 90°F or 95°F for periods not to exceed 45 days whenever river water temperature is such that 90°F cannot be maintained. Temperature and volume displayed on CR-VBD-J. k) Containment pressure exceeding design.	GENERAL EMERGENCY
5. Loss of power or alarms.	5.1 Loss of all off-site power or loss of all on-site AC power capability.	5.1.1 Indications: a) Loss of normal Control Room lighting. b) Startup transformer under-voltage. c) Emergency transformer under-voltage. d) Associated alarms on Control Room VBD-A, VBD-B, VBD-C, generator trip, or scram. e) Both diesels inoperative, may annunciate on Control Room VBD-C.	NOTIFICATION OF UNUSUAL EVENT
	5.2 Loss of off-site power and loss of all on-site AC power for a period of less than 15 minutes.	5.2.1 Indications: a) Loss of station AC lighting. b) Generator trip. c) Reactor scram. d) Failure of startup station transformer. e) Both diesels inoperative. f) Subsequent failure of all AC powered equipment.	ALERT
	5.3 Loss of all on-site DC power for less than 15 minutes.	5.3.1 Indications: a) Reactor scram. b) Loss of Control Room indicating lights on 4160 and 480 equipment. c) Loss of annunciators. d) Loss of control power.	ALERT

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<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
5. (Continued)			
	5.4 Most or all alarms (annunciators) non-functional and reactor is not shut down.	5.4.1 Control Room observation.	ALERT
	5.5 Loss of off-site power and loss of on-site AC power for more than 15 minutes.	5.5.1 Evidenced by: a) Loss of station AC lighting. b) Generator trip. c) Reactor scram. d) Failure of station startup transformer. e) Failure of station service transformer. f) Failure of both diesel generators to start. g) Subsequent failure of all AC powered equipment. h) Inability to recover within 15 minutes.	SITE AREA EMERGENCY
	5.6 Loss of all vital on-site DC power for more than 15 minutes.	5.6.1 Indications: a) Reactor scram. b) Loss of voltage and amperage indication on Control Room Panel VBD-C. c) Loss of Control Room indicating lights on 4160 and 480 equipment. d) Loss of annunciators. e) Loss of equipment control power. f) Inability to recover within 15 minutes.	SITE AREA EMERGENCY
	5.7 Most or all alarms (annunciators) lost and station transient initiated or in progress.	5.7.1 As observed by Control Room Operators.	SITE AREA EMERGENCY
	5.8 Failure of off-site and on-site power with loss of emergency cooling capabilities for an extended period.	5.8.1 As observed by Control Room Operators.	GENERAL EMERGENCY

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<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
6. Other limiting condition for operation.	6.1 Any Technical Specification LCOs resulting in immediate shutdown. Indications or alarms on process or effluent parameter not functional in Control Room to an extent requiring station shutdown or other significant loss of assessment or communications capability.	6.1.1 As detailed in Technical Specification LCOs.	NOTIFICATION OF UNUSUAL EVENT
		6.1.2 All meteorological instrumentation inoperative.	
		6.1.3 Inability to compute Core Thermal Limits.	
	6.2 Loss of primary containment integrity to the extent requiring shutdown by Technical Specifications.	6.2.1 Suppression pool water volume cannot be maintained between 87,650 cu ft and 91,000 cu ft, or temperature cannot be maintained below 90°F or 95°F for periods not to exceed 45 days whenever river water temperature is such that 90°F cannot be maintained. Temperature and volume displayed on Control Room VBD-J.	NOTIFICATION OF UNUSUAL EVENT
		6.2.2 Unable to maintain drywell to suppression chamber differential pressure. Instrument indication on Control Room VBD-J.	
		6.2.3 Loss of containment structural integrity.	
	6.3 Loss of engineered safety feature to the extent requiring shutdown by Technical Specifications.	6.3.1 LCOs for engineered safety features exceeded.	NOTIFICATION OF UNUSUAL EVENT
		6.3.2 LCOs for fire protection system exceeded.	
	6.4 Emergency Core Cooling System (ECCS) initiated and discharged to vessel.	6.4.1 Manual or automatic activation involving a valid indication of a safety problem with an emergency core cooling parameter not being maintained.	NOTIFICATION OF UNUSUAL EVENT
		6.4.1 Manual or automatic activation involving a valid indication of a safety problem with an emergency core cooling parameter not being maintained.	
	6.5 Any serious radiological exposure of plant personnel or the transportation to off-site facilities of contaminated injured personnel.	6.5.1 As situations occur.	NOTIFICATION OF UNUSUAL EVENT
		6.5.1 As situations occur.	

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
6. (Continued)	6.6 Complete loss of any function needed for plant cold shutdown.	6.6.1 Inability to condense steam (loss of condenser, circulating water).	ALERT
		6.6.2 Loss of RCIC.	
		6.6.3 Unable to place RHR in shutdown cooling mode.	
7. Reactor protection system failure.	6.7 Complete loss of any function needed for plant hot shutdown.	6.7.1 Inability to control recirculating water pumps or control rods and loss of heat sink (i.e. RHR steam condensing water).	SITE AREA
	7.1 Failure of the reactor protection system to initiate and complete a scram, which brings the reactor subcritical.	7.1.1 Indication of reactor scram Panel 9-5 without corresponding: a) Valid scram signal and computer printout indicates not all rods scrammed. b) Computer printout indicates not all rods full in. c) Nuclear instruments do not register expected decreases in power level.	ALERT
	7.2 Transient requiring operation of shutdown systems with failure to scram (continued power generation with no core damage immediately evident).	7.2.1 Any Control Room Panel 9-5 RED annunciator indicating a full scram signal without full in rod indication on Panel 9-5 full core display.	SITE AREA EMERGENCY
		7.2.2 No decrease in reactor power level. 7.2.3 No increase observed on steam jet air ejector monitors, RMP-RM-150A & B. Coolant sample activity does not exceed equilibrium value of 3.1 uCi/gm.	
	7.3 Transient plus failure of requisite core shutdown system (e.g., scram). Could result in core melt down after several hours with subsequent containment failure likely.	7.3.1 Any Control Room Panel 9-5 RED annunciator, without scram indication on Panel 9-5 full core display or no decrease in reactor power level. a) Subsequent increase to greater than 5 Ci/sec. activity at steam jet air ejectors. b) Primary coolant activity exceeds 310 uCi/gm I-131.	GENERAL EMERGENCY

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
8. Fuel handling accident.	8.1 Fuel handling accident on refueling floor.	8.1.1 Refueling floor area radiation monitor alarms on Control Room Panel 9-3.	ALERT
		8.1.2 Refueling floor continuous air monitors in alarm.	
		8.1.3 Reactor Building ventilation monitors in alarm.	
		8.1.4 Initiation of standby gas treatment system.	
		8.1.5 Verbal reports from personnel on refueling floor.	
	8.2 Major damage to spent fuel on refueling floor.	8.2.1 Verbal reports or annunciation of: a) Refueling floor area radiation monitor. b) Refueling floor continuous air monitor. c) Reactor Building ventilation exhaust monitor. d) Low spent fuel pool water level (Control Room Panel 9-4).	SITE AREA EMERGENCY
8.2.2 Initiation of: a) Reactor Building isolation standby gas treatment.			
9. Control Room evacuation.	9.1 Evacuation of Control Room required or anticipated with control of shutdown systems established from local stations.	9.1.1 As deemed necessary by the Emergency Director or Shift Supervisor.	ALERT
	9.2 Evacuation of Control Room accompanied by the inability to locally control shutdown systems within 15 minutes.	9.2.1 Control Room evacuation accompanied by lack of access to local shutdown system controls.	SITE AREA EMERGENCY

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVEL'S</u>	<u>EMERGENCY CLASS</u>
9. (Continued)	9.3 Any major internal or external events (e.g., fires, earthquakes, substantially beyond design basis) which could cause massive common damage to plant systems.	9.3.1 Situation evident.	GENERAL EMERGENCY
10. Fire.	10.1 Fire at the plant exceeding short-term capabilities of immediate on-site fire fighting teams.	10.1.1 As determined by the Shift Fire Brigade Leader.	NOTIFICATION OF UNUSUAL EVENT
	10.2 Serious fire with potential to cause degradation of plant safety systems.	10.2.1 Fire Protection System alarm and visual confirmation: a) ECCS compartments. b) Cable Spreading Room. c) Diesel Generator Room. d) Verbal reports.	ALERT
	10.3 Fire compromising the function of safety systems.	10.3.1 Inability to initiate a safety system due to fire when a safety system is needed to maintain the station in a safe condition. Equipment failure or inaccessibility.	SITE AREA EMERGENCY
11. Security threat.	11.1 Security threat, attempted entry, or attempted sabotage.	11.1.1 As observed or reported by: a) Security Force. b) CAS. c) SAS.	NOTIFICATION OF UNUSUAL EVENT
	11.2 On-going security compromise.	11.2.1 As observed or reported by: a) Security Force. b) CAS. c) SAS.	ALERT
	11.3 Imminent loss of physical control of the station.	11.3.1 As observed or reported by: a) Security Force. b) CAS. c) SAS.	SITE AREA EMERGENCY
	11.4 Loss of physical control of the facility.	11.4.1 As observed or reported by: a) Security Force. b) CAS. c) SAS. d) Other station personnel.	GENERAL EMERGENCY

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
12. Natural phenomena.	12.1 Natural phenomenon being experienced or projected beyond usual levels. a) Any earthquake. b) 50-year flood. c) Tornado on-site.	12.1.1 Ground motion greater than .01 g as indicated by Control Room Seismic Monitoring Panel.	NOTIFICATION OF UNUSUAL EVENT.
		12.1.2 River level greater than 897'.	
		12.1.3 As reported or observed.	
	12.2 Severe natural phenomenon being experienced or projected, such as: a) Earthquake exceeding Operating Basis Earthquake levels. b) Tornado striking facility. or c) Winds near design level. d) Flood.	12.2.1 Ground acceleration detected in excess of 0.10 g horizontal on Control Room Seismic alarm.	ALERT
		12.2.2 As reported or observed.	
		12.2.3 Winds approaching 100 mph horizontal velocity detected.	
		12.2.4 Water above 903' level.	
	12.3 Severe natural phenomenon being experienced or projected with plant not in cold shutdown, such as: a) Earthquake causing facility damage and core or safety system damage. b) Sustained winds or tornado causing significant damage to vital facilities/structures. c) Flood waters affecting equipment needed for shutdown.	12.3.1 Ground in excess of 0.1 g horizontal on Control Room Seismic alarm and if there is safety system damaged.	SITE AREA EMERGENCY
		12.3.2 Anemometers detect sustained winds in excess of 100 mph.	
		12.3.3 Damage to plant safety equipment.	
	12.4 Any major internal or external events (e.g. fires, earthquakes, substantially beyond design basis) which could cause massive common damage to plant systems.	12.4.1 Situation evident.	GENERAL EMERGENCY

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
13. Other hazards.	<p>13.1 Other hazards experienced or projected:</p> <ul style="list-style-type: none"> a) Aircraft crash on-site. b) On-site explosion. c) On-site or near-site related accidents that could result in the release of toxic material or spills of flammable materials. d) Train derailment on-site that may affect plant safety. e) Turbine component failure causing rapid plant S/D. <p>13.2 Other plant conditions exist that warrant increased awareness on the part of state/local off-site authorities.</p> <p>13.3 Other hazards being experienced or projected, such as:</p> <ul style="list-style-type: none"> a) Aircraft crash on facility. b) Missile impact on facility. c) Explosion damage affecting plant operation. d) Entry into facility environs of uncontrolled toxic or flammable gas. or e) Turbine failure causing casing penetration and resultant radiological effluent releases exceeding 10 times Technical Specifications instantaneous limits. <p>(Some effect on facility experienced or anticipated.)</p> <p>13.4 Other plant conditions exist warranting precautionary activation of the TSC and other key emergency personnel as well as EOF placed on a standby status.</p>	<p>13.1.1 As visually observed by or reported to CNS personnel.</p> <p>13.2.1 As situations occur.</p> <p>13.3.1 As reported by or to station personnel.</p> <p>13.4.1 As deemed necessary by the Emergency Director or Shift Supervisor.</p>	<p>NOTIFICATION OF UNUSUAL EVENT</p> <p>NOTIFICATION OF UNUSUAL EVENT</p> <p>ALERT</p> <p>ALERT</p>

CLASSIFICATION GUIDE

<u>SUBMODULE</u>	<u>INITIATING CONDITIONS</u>	<u>EMERGENCY ACTION LEVELS</u>	<u>EMERGENCY CLASS</u>
13. (Continued)			
	13.5 Other hazards being experienced or projected with reactor not in cold shutdown, such as: a) Aircraft crash affecting vital structures by impact or fire. b) Severe damage to safe shutdown equipment from missiles or explosion. c) Entry of uncontrolled flammable gas into vital areas; entry of uncontrolled toxic gases into vital areas where lack of access to the area constitutes a safety problem.	13.5.1 As observed by or reported to station personnel.	SITE AREA
	13.6 Other plant conditions exist warranting activation of emergency centers and monitoring teams or issuance of a precautionary notification to the public near the site.	13.6.1 As deemed necessary by the Emergency Director or Shift Supervisor.	SITE AREA
	13.7 Any other plant condition exists from whatever source that makes release of large amounts of radioactivity in a short time period possible, e.g. shutdown occurs, but requisite decay heat removal systems (RHR) or non-safety systems heat removal means are rendered unavailable. Core melt could occur in about 10 hours with subsequent containment breach likely.	13.7.1 a) All rods scrammed. b) S/D Margin is achieved. c) Inability to condense steam (i.e. loss of condenser, circulating water). d) Loss of RCIC. e) Unable to place RHR in shutdown cooling mode. f) High off-gas at steam jet air ejectors greater than 5 Ci/sec. g) Primary coolant sample indicates activity levels greater than 310 uCi/gm I-131.	GENERAL EMERGENCY

I. PURPOSE

- A. The purpose of this procedure is to provide a series of implementing actions to be taken upon declaration of a NOTIFICATION OF UNUSUAL EVENT.
- B. This procedure directs personnel to the use of some additional procedures to adequately respond to those conditions classified as a NOTIFICATION OF UNUSUAL EVENT.

II. DISCUSSION

- A. A NOTIFICATION OF UNUSUAL EVENT is defined as any station-related event which indicates a potential degradation of station safety margins, but which is not likely to affect on-site personnel or the public or result in radioactive releases requiring off-site monitoring. NOTIFICATION OF UNUSUAL EVENT conditions will not have caused serious damage to the station and may not require a change in operation status.
- B. In a NOTIFICATION OF UNUSUAL EVENT time is available to take precautionary and constructive steps to prevent a more serious event and/or to mitigate any consequences that may occur.
- C. The basic shift complement is able to deal with NOTIFICATION OF UNUSUAL EVENT conditions. Additional station personnel will be notified and will respond at the discretion of the Emergency Director.
- D. Appropriate notification of off-site authorities is made.

III. REFERENCE MATERIAL

- A. CNS Emergency Plan.
- B. NUREG 0654, Rev. 1.

IV. PREREQUISITES

- A. NOTIFICATION OF UNUSUAL EVENT has been declared in accordance with the provisions of EPIP 5.7.1, Emergency Classification.

V. LIMITATIONS

- A. None.

VI. PRECAUTIONS

- A. None.

VII. EQUIPMENT

A. None.

VIII. PROCEDURE

A. Immediate Actions.

1. The Shift Supervisor assumes the function of the Emergency Director.
2. The Shift Supervisor implements EPIP 5.7.6, Notification.
3. The Station Superintendent provides necessary direction to the Shift Supervisor or assumes command as the Emergency Director.

B. Subsequent Actions.

The Emergency Director performs the following:

1. Implement additional EPIPs according to the situation that resulted in the emergency being classified as a NOTIFICATION OF UNUSUAL EVENT and complete the checklist as indicated in Attachment "A", NOTIFICATION OF UNUSUAL EVENT Implementing Procedure Checklist.
2. Determine the need for any additional personnel and direct the Operations Communicator to call in additional personnel as needed by contacting the appropriate Department Supervisors.
3. Re-evaluate the emergency classification as conditions change by using EPIP 5.7.1.
4. Upon termination of the NOTIFICATION OF UNUSUAL EVENT close out with verbal summary to off-site authorities, followed by written summary within 24 hours.

IX. ATTACHMENTS

A. Attachment "A", NOTIFICATION OF UNUSUAL EVENT Implementing Procedures Checklist.

NOTIFICATION OF UNUSUAL EVENT IMPLEMENTING PROCEDURE CHECKLIST

PROCEDURE NUMBER	PROCEDURE	REQUIRED		COMPLETED	
		YES	AS REQUIRED	DATE	TIME
EPIP 5.7.1	Emergency Classification	X	/		/
EPIP 5.7.6	Notification	X	/		/
EPIP 5.7.12	Emergency Radiation Exposure Control		/		/
EPIP 5.7.13	Personnel Monitoring And Decontamination		/		/
EPIP 5.7.15	Rescue And Re-Entry		/		/
EPIP 5.7.18	Off-Site And Site Boundary Monitoring		/		/
EPIP 5.7.19	On-Site Radiological Monitoring		/		/
EPIP 5.7.24	Medical		/		/

[illegible]

I. PURPOSE

- A. To outline the actions required of station personnel, visitors, and contractors when an ALERT condition is declared.
- B. This procedure directs personnel to the use of some additional procedures to adequately respond to those conditions classified as an ALERT.

II. DISCUSSION

- A. An ALERT condition is defined as any condition that involves an actual or potential substantial degradation of the safety level of the station. At this classification level, small releases of radioactivity may occur. Although the releases might exceed CNS Technical Specifications, EPA Protective Action Guidelines are not expected to be implemented. Station Operator modification of station operating status is a probable corrective action if such modification has not already been accomplished by automatic protection systems.
- B. The decision to make a immediate initial ALERT declaration rests with the Emergency Director, who, in turn, directs the Operations Communicator to perform the necessary notifications. Off-site notification assures that emergency personnel are readily available to respond if the situation becomes more serious.
- C. In an ALERT condition the TSC, the Mechanical/Maintenance OSC, the Instrument and Control/Electrical OSC, and the Chemistry and Health Physics OSC will be activated. In addition, the EOF and key emergency personnel may be placed on standby status.

III. REFERENCE MATERIAL

- A. CNS Emergency Plan.
- B. NUREG 0654, Revision 1.

IV. PREREQUISITES

- A. An ALERT has been declared in accordance with the provisions of procedure EPIP 5.7.1, Emergency Classification.

V. LIMITATIONS

- A. None.

VI. PRECAUTIONS

A. None.

VII. EQUIPMENT

A. None.

VIII. PROCEDURE

A. Immediate Actions.

1. The Shift Supervisor assumes the function of the Emergency Director.
2. The Shift Supervisor implements EPIP 5.7.6, Notification.
3. The Station Superintendent relieves the Shift Supervisor as the Emergency Director as soon as possible.
4. The Shift Supervisor directs the Control Room Operator to activate the alarm for 10 seconds and make the following announcement:
"ALERT, ALERT!! There is (what) in/at (where). Emergency personnel report to assigned stations. All other personnel, contractors, and visitors report to the CNS Security Building. All personnel stay clear of the affected area."
 - a. Repeat the alarm and announcement.
 - b. Sound the emergency alarm for 1 minute.

B. Subsequent Actions.

1. The Emergency Director performs the following:
 - a. Implements EPIP 5.7.7, Activation Of TSC.
 - b. Places the EOF on standby and implements EPIP 5.7.9, Activation Of EOF (optional).
 - c. Determines the need for any additional personnel and directs the Operations Communicator to call in additional personnel as needed by contacting the appropriate Department Supervisors, who are listed in the Emergency Telephone Directory.
 - d. Implements additional EPIPs as required and completes the checklist as indicated in Attachment "A", ALERT Implementing Procedure Checklist.
 - e. Re-evaluates the emergency classification as conditions change by using EPIP 5.7.1 and provides corresponding information to the on-site Emergency Response Facilities and appropriate governmental agencies.

- f. Closes out or recommends reduction in emergency classification by verbal summary to off-site authorities followed by a written summary within 8 hours of close-out or classification reduction.

2. OSC Activation.

- a. The Maintenance and OSC Coordinator and Chemistry and Health Physics Coordinator will implement EPIP 5.7.8, Activation Of OSCs.

IX. ATTACHMENTS

- A. Attachment "A", Alert Implementing Procedure Checklist.

ALERT IMPLEMENTING PROCEDURE CHECKLIST

PROCEDURE NUMBER	PROCEDURE	REQUIRED		COMPLETED	
		YES	AS REQUIRED	DATE	TIME
EPIP 5.7.1	Emergency Classifications	X	/	/	/
EPIP 5.7.6	Notification	X	/	/	/
EPIP 5.7.7	Activation Of TSC	X	/	/	/
EPIP 5.7.8	Activation Of OSCs	X	/	/	/
EPIP 5.7.9	Activation Of EOF	/	/	/	/
EPIP 5.7.10	Personnel Assembly And Accountability	X	/	/	/
EPIP 5.7.12	Emergency Radiation Exposure Control	/	/	/	/
EPIP 5.7.13	Personnel Monitoring And Decontamination	/	/	/	/
EPIP 5.7.15	Rescue And Re-Entry	/	/	/	/
EPIP 5.7.16	Release Rate Determination	/	/	/	/
EPIP 5.7.17	Dose Assessment	/	/	/	/
EPIP 5.7.18	Off-Site And Site Boundary Monitoring	/	/	/	/
EPIP 5.7.19	On-Site Radiological Monitoring	/	/	/	/
EPIP 5.7.20	Protective Action Guides	/	/	/	/
EPIP 5.7.23	Media	/	/	/	/
EPIP 5.7.24	Medical	/	/	/	/

REMARKS:

I. PURPOSE

- A. This procedure describes the activation and subsequent operation of the three Operations Support Centers (OSCs) in the event of an ALERT, SITE AREA EMERGENCY, or GENERAL EMERGENCY.
- B. The topics addressed are:
 - 1. Functions of the OSCs and their interface with other on-site emergency response facilities.
 - 2. Activation criteria, including and checklists of required actions to be performed.

II. DISCUSSION

A. Functions Of OSCs.

1. Chemistry and Health Physics OSC.

- a. The Chemistry and Health Physics (C & HP) OSC is the staging area for all Chemistry and Health Physics personnel who may be required to provide chemistry and radiation protection assistance.
- b. This OSC also serves as a center where the initial accountability check of all on-duty Chemistry/Health Physics personnel is performed.
- c. Emergency monitoring teams are organized from this point and other radiological or chemical assignments are made here at the direction of the Chemistry/Health Physics Coordinator.
- d. The Chemistry and Health Physics OSC is located on the 918' elevation of the Office Building in the Health Physics Office area.

2. Mechanical Maintenance OSC.

- a. The Mechanical Maintenance OSC serves as a staging area for all Mechanical Maintenance personnel (whose services may be required during the emergency) and from which these personnel are dispatched.
- b. This OSC also serves as the assembly area for the initial accountability check of all on-duty mechanical maintenance personnel.

- c. The Mechanical Maintenance OSC is located on the 903' elevation of the Machine Shop.
3. I & C/Electrical OSC.
- a. This OSC serves as the staging area for all Electricians and I & C Technicians (whose services may be required during the emergency) and from which these personnel are dispatched.
 - b. The Electrical Shop is the center where initial accountability of all on-duty Electricians and I & C Technicians personnel is performed.
 - c. The I & C/Electrical OSC is located on the 932'6" elevation of the Turbine Building in the Electrical Shop.
- B. Staffing Of OSCs.
- 1. The Chemistry and Health Physics OSC is staffed with the following:
 - a. Chemistry and Health Physics OSC Supervisor (Health Physicist - ALERT only).
 - b. Health Physics Technicians as required.
 - c. Chemist (OSC Supervisor - SITE AREA AND GENERAL EMERGENCY only).
 - d. Chemistry Technicians as required.
 - 2. The Mechanical Maintenance OSC is staffed with the following:
 - a. Mechanical Maintenance OSC Supervisor (Mechanical Supervisor).
 - b. Mechanical personnel as required.
 - 3. The I & C/Electrical OSC is staffed with the following:
 - a. I & C/Electrical OSC Supervisor (I & C Supervisor).
 - b. Electrical Foreman.
 - c. Electricians as required.
 - d. I & C Technicians as required.
 - 4. If activation of the OSCs is required during other than normal working hours, additional personnel are summoned through call lists and directed to assemble in these facilities for assignments. Telephone numbers for emergency response personnel are contained in the Emergency Telephone Directory.

III. REFERENCE MATERIAL

- A. CNS Emergency Plan.
- B. NUREG 0654, Revision 1.

IV. PREREQUISITES

- A. An ALERT or higher level emergency has been declared in accordance with EPIP 5.7.1, Emergency Classification, and actions specified in EPIP 5.7.3, EPIP 5.7.4, or EPIP 5.7.5 are being implemented.

V. LIMITATIONS

- A. Since no habitability criteria are established for the OSCs, evacuation of OSC personnel may be required as dictated by radiological emergency conditions.

VI. PRECAUTIONS

- A. If the Area Alarm Monitor and/or the Continuous Air Monitor alarms, an area habitability survey should be conducted. The results of this survey should be transmitted to the Chemistry and Health Physics Coordinator who will determine the need to evacuate OSC personnel to the Security Building Auditorium.

VII. EQUIPMENT

- A. Communications.
 - 1. A list of communications equipment located in the OSCs and instructions for its use are detailed in EPIP 5.7.22, Communications.
- B. Emergency Equipment.
 - 1. A list of emergency equipment located in the OSCs and instructions for maintaining the readiness of the equipment are detailed in EPIP 5.7.21, Emergency Equipment Inventory.

VIII. PROCEDURE

- A. Activation Of OSCs.
 - 1. OSC personnel shall report to respective centers and proceed with check-off lists as follows:
 - a. Chemistry and Health Physics OSC.
 - 1) Chemistry and Health Physics OSC Supervisor - Attachment "A".
 - a) For a SITE AREA EMERGENCY or GENERAL EMERGENCY the Chemist will perform this check-off.

b. Mechanical Maintenance OSC.

1) Mechanical Maintenance OSC Supervisor - Attachment "B".

c. I & C/Electrical OSC.

1) I & C/Electrical OSC Supervisor - Attachment "C".

2. The appropriate OSC Coordinator shall report the status of the OSCs to the Emergency Director.

IX. ATTACHMENTS

A. Attachment "A", Chemistry and Health Physics OSC Supervisor Checklist.

B. Attachment "B", Mechanical Maintenance OSC Supervisor Checklist.

C. Attachment "C", I & C/Electrical OSC Supervisor Checklist.

CHEMISTRY AND HEALTH PHYSICS OSC SUPERVISOR CHECKLIST

<u>ACTION ITEMS</u>	<u>TIME/INITIALS</u>
1. Ensure all communications devices operate in the Chemistry and Health Physics OSC.	____/____
a. Telephone(s): ____.	
b. Gaitronics: ____.	
c. Bonephone: ____.	
2. Complete the personnel accountability group checklist and report results to the Chemistry/Health Physics Coordinator in the TSC.	____/____
3. Dispatch all visitors, contractors, and non-essential personnel to the Security Building Auditorium.	____/____
4. Activate the Continuous Air Monitor.	____/____
5. Ensure that all Chemistry and Health Physics equipment is in a state of readiness.	____/____
6. Check emergency kit located in the Chemistry and Health Physics OSC and ensure equipment is complete (Inventory List).	____/____
7. Check roster list for survey teams assignments.	____/____
8. Check personnel decontamination facilities and equipment.	____/____
9. Check on any chemistry and radiochemistry problems.	____/____
10. Check to ensure Chemistry and Health Physics OSC support is available to perform survey or other assessment functions and notify Chemistry/Health Physics OSC Coordinator in TSC when complete.	____/____

MECHANICAL MAINTENANCE OSC SUPERVISOR CHECKLIST

ACTION ITEMSTIME/INITIALS

1. Ensure all communication devices operate in the Mechanical Maintenance OSC.
 - a. Telephone(s): _____.
 - b. Gaitronics: _____.
 - c. Bonephone: _____.

Inform the Maintenance and OSC Coordinator in the TSC of any problems.
2. Dispatch all visitors, contractors, and non-essential personnel to the Security Building Auditorium.
3. Complete the personnel accountability group checklist and report results to the Maintenance and OSC Coordinator in the TSC.

Note: Request permission from the Maintenance and OSC Coordinator to retrieve personnel in work areas.

4. Activate continuous air monitor, check area radiation monitor while performing habitability survey of the Mechanical Maintenance OSC, and inform the Chemistry and Health Physics Coordinator in the TSC of the results.
5. Ensure that all emergency equipment and personnel are in a state of readiness.

- a. Maintenance Emergency Response Equipment.

- 1) Ensure Emergency Rescue Equipment Inventory is available per EPIP 5.7.15, Attachment "B".
- 2) Ensure Emergency Equipment Inventory is available per EPIP 5.7.21, Attachment "C".
- 3) Check equipment operability (battery checks).

- b. Health Physics Emergency Response Equipment.

MECHANICAL MAINTENANCE OSC SUPERVISOR CHECKLIST

ACTION ITEMSTIME/INITIALS

- 1) Ensure Emergency Equipment Inventory is available per EPIP 5.7.15, Attachment "A".
- 2) Check equipment operability.
 - a) Battery Checks: _____.
 - b) Zero Dosimeters: _____.
 - c) SCBA's Full: _____.
6. Report OSC readiness to the Maintenance and OSC Coordinator in the TSC.
7. Maintain an OSC Supervisor's Log.

_____/____

_____/____

_____/____

I & C/ELECTRICAL OSC SUPERVISOR CHECKLIST

ACTION ITEMSTIME/INITIALS

1. Ensure all communication devices operate in the I & C/
Electrical OSC.
 - a. Telephone(s): _____.
 - b. Gaitronics(s): _____.
 - c. Bonephone: _____.

Inform the Maintenance and OSC Coordinator in the TSC
of any problems.
2. Dispatch all visitors, contractors, and non-essential
personnel to the Security Building Auditorium.
3. Complete the personnel accountability group checklist
and report results to the Maintenance and OSC
Coordinator.
4. Activate continuous air monitor and check area radia-
tion monitor while performing habitability survey of
the I & C/Electrical OSC. Inform the Chemistry and
Health Physics Coordinator in the TSC of the results.
5. Ensure that all emergency equipment and personnel
are in a state of readiness.
 - a. I & C/Electrical Emergency Response Equipment.
 - 1) Ensure Emergency Equipment Inventory is
available per EPIP 5.7.21, Attachment "C".
 - 2) Check equipment operability (battery checks).
 - b. Health Physics Emergency Response Equipment
Inventory.
 - 1) Ensure Emergency Equipment Inventory is
available per EPIP 5.7.15, Attachment "A".
 - 2) Check equipment operability.
 - a) Battery Checks: _____.

I & C/ELECTRICAL OSC SUPERVISOR CHECKLIST

ACTION ITEMSTIME/INITIALS

- b) Zero Dosimeters: _____.
- c) SCBA's Full: _____.
6. Report OSC readiness to the Maintenance and OSC Coordinator.
7. Maintain an OSC Supervisor's Log.

_____/_____
_____/_____

I. PURPOSE

The purpose of this procedure is to provide policy guidance, address required authorization, and set forth maximum criteria for emergency radiation exposure control in the event emergency workers are required to exceed established quarterly or annual exposure limits.

II. DISCUSSION

Under emergency conditions it may become necessary for emergency workers to receive exposures in excess of occupational limits established by 10CFR20. Emergency dose exposure limits are defined for three categories (life-saving actions, corrective or protective actions, and sampling under emergency conditions). These exposure limits are contained in Attachment "A".

The Emergency Director or his designee has the authority to authorize exposures in excess of occupational limits. These exposures are only justifiable if it is determined that benefits are being achieved, the doses are commensurate with the significance of the objective, and every reasonable effort is being made to maintain emergency workers doses As Low As Reasonably Achievable (ALARA).

III. REFERENCES

- A. CNS Emergency Plan.
- B. NUREG 0654, Revision 1.
- C. Emergency Exposure Limits, NUREG 0737, November, 1980.
- D. NCRP Report 39, 1971; Basic Radiation Protection Criteria.
- E. ICRP Report 59; Permissible Dose For Internal Radiation Working Breathing Rate.
- F. EPA Protective Action Guides, June 1980.

IV. PREREQUISITES

- A. The Emergency Director may authorize emergency exposures under the following conditions:
 - 1. Life-saving actions.
 - a. Removal and/or rescue of injured personnel.

2. Corrective or protective actions.
 - a. Providing first aid.
 - b. Providing ambulance service.
 - c. Providing medical treatment service.
 - d. Performing personnel decontamination.
 - e. Undertaking corrective action on station equipment and systems.
3. Sampling under emergency conditions.
 - a. Collection of in-plant airborne and liquid samples.
 - b. Use of the post-accident sampling system.

Note: The above are examples and not an absolute list; the existing situation may dictate additional conditions under which exceeding 10CFR20 limits may be warranted.

V. LIMITATIONS

- A. Emergency Exposure Limits are contained in Attachment "A".
- B. Personnel authorized to receive emergency exposures should meet the following criteria:
 1. Personnel conducting corrective or protective actions or life-saving actions who may receive a whole body dose in excess of 12 rem/year should be selected on a voluntary basis.
 2. Rescue personnel shall be familiar with the hazards of any exposure received under emergency conditions.
 3. Women of child bearing age shall not take part in these actions.
 4. Personnel should not have received previous emergency exposures. Emergency exposures should be limited to once in a lifetime.
 5. Exposures greater than 10CFR20 limits are voluntary.

VI. PRECAUTIONS

- A. Protective clothing and/or respirators should be used as appropriate.
- B. Potassium Iodide (KI) tablets, if necessary, should be administered in accordance with EPIP 5.7.14, Stable Iodine Thyroid Blocking.
- C. Administrative methods to minimize personnel exposure (such as ALARA) should remain in force to the extent consistent with timely rescue, corrective, and protective actions.

D. Personnel shall wear dosimeters appropriate for measurement of anticipated exposure levels. These shall include:

1. The most appropriate direct reading pencil dosimeter for whole body exposure:
 - a. Low range direct reading dosimeter (0 to 200 mR).
 - b. Medium range direct reading dosimeter (0 to 10 R).
 - c. High range direct reading dosimeter (0 to 200 R).
2. TLD dosimeter to permanently record whole body exposures.
3. Extremity monitoring, if the anticipated extremity exposure is greater than three times the projected whole body exposure.

VII. EQUIPMENT

A. None.

VIII. PROCEDURE

A. Emergency Radiation Exposure Control.

1. The Emergency Director or his designee has the authority to authorize whole body doses in excess of 3 rem but not greater than 75 rem.
2. Personnel exposure control.
 - a. Individuals shall not enter any area where dose rates are unknown or unmeasurable with instruments immediately available.
 - 1) If possible, the following survey instruments should be used:
 - a) High range portable survey instrument (0 to 1000 R/hr); this should be the instrument of choice.
 - b) Low range portable survey instrument (0 to 5 R/hr).
 - 2) Meter use:
 - a) Prior to entering any radiation area allow time for the meter to warm up.
 - b) Check meter response with a check source.
 - c) Enter suspected radiation areas with the meter set on the high scale and the switch down as necessary.

3. The Chemistry and Health Physics Coordinator shall:

- a. Obtain initial estimates of the radiation dose of exposed personnel as quickly as possible.
- b. Immediately report to the NRC exposures in excess of 10CFR20, Occupational Limits, (Attachment "B") per 10CFR20.403 and 10CFR20.405.
- c. Update existing Special Work Permits as station conditions change and information becomes available.

IX. ATTACHMENTS

- A. Attachment "A", Emergency Exposure Limits.
- B. Attachment "B", Maximum Permissible Dose Equivalent For Occupational Exposure.

EMERGENCY EXPOSURE LIMITS

	<u>SAMPLING UNDER ACCIDENT CONDITIONS</u>	<u>CORRECTIVE OR PROTECTIVE ACTIONS</u>	<u>LIFE-SAVING ACTIONS</u>
Whole Body (rem)	5	25	75
Thyroid (rem)	15	125	No Limit*
Extremities (rem)	75	100	200

*Thyroid exposure should be minimized to the extent feasible by the use of respiratory protection and/or thyroid blocking. However, no upper limit is specified for life-saving action.

MAXIMUM PERMISSIBLE DOSE EQUIVALENT FOR OCCUPATIONAL EXPOSURE

	MILLIREMS/ <u>QUARTER</u>	MILLIREMS/ <u>YEAR</u>
Whole Body; Head And Trunk; Active Blood- Forming Organs; Lens Of Eyes; Or Gonads	3,000 ¹	12,000 ²
Hands	25,000	75,000
Forearms	10,000	30,000
Skin Of Whole Body	7,500	15,000
Other Organs, Tissues, And Organ Systems (Thyroid Included)	5,000	15,000
Fertile Women (With Respect To Fetus)	500 mR/9 months	

1. 3,000 millirem is permitted in a calendar quarter as long as the accumulative occupational dose to the whole body does not exceed 5,000 millirem X (Age - 18).
2. Accumulating occupational exposure in excess of 5,000 millirem/year is permitted providing Step 1. above is maintained.

I. PURPOSE

The purpose of this procedure is to define under what emergency conditions Potassium Iodide (KI) should be administered to station personnel and who has the authority to determine when and at what dosages KI should be administered.

II. DISCUSSION

A. Effectiveness.

KI is an effective means of blocking radioiodine from the thyroid gland. If possible, it should be administered approximately 1/2 hour to 1 day before exposure for maximum blockage. Final uptake is halved if KI is administered within 3 to 4 hours after exposure. Little benefit is gained if it is administered 10 to 12 hours after exposure.

B. Dosage.

Once taken, and the concentration is verified or estimated by dose calculations, the tablets should be taken for 10 days post-exposure. Dosage is one (130 mg) tablet per day. Individuals suspected of inhalation of airborne contaminant should receive thyroid counts on a regular basis throughout the KI treatment period to verify effectiveness of treatment and to estimate dose commitment.

C. Precautions/Side Effects.

Potassium Iodide should not be used by individuals allergic to iodine. Usually side effects occur when the dose is higher than that recommended for a long period of time. Possible side effects include skin rashes, swelling of the salivary gland, and iodism (metallic taste, burning mouth and throat, sore teeth and gums, symptoms of a head cold, and sometimes stomach upset and diarrhea). If the side effects are severe or if an allergic reaction is experienced, stop taking KI and contact a doctor for further instruction.

III. REFERENCE MATERIAL

A. CNS Emergency Plan.

B. NUREG 0654, Rev 1.

C. NCRP 55, Protection Of The Thyroid Gland In The Event Of Release Of Radioiodine, National Council on Radiation Protection and Measurements, 1977.

IV. PREREQUISITES

A. Potassium Iodide is to be administered:

1. Whenever a calculated radioiodine dose of 10 rem or greater to the thyroid is likely to be received.
2. If possible, prior to undertaking a life-saving operation where high levels of radioiodine are suspected and no current air analysis is available.

V. LIMITATIONS

A. Refer to Section II. for information on effectiveness and dosage.

VI. PRECAUTIONS

A. KI should not be administered to personnel allergic to iodine.

B. KI will be administered on a voluntary basis.

VII. PROCEDURE

A. Stable Iodine Thyroid Blocking (KI).

1. The Emergency Director, acting on the recommendations of the Radiological Manager, will determine when and to whom KI may be administered.
2. The Radiological Manager, or his designee, will:
 - a. Obtain bottle(s) of 130 mg KI tablets from the Control Room TSC, EOF, AEOF, Chemistry and Health Physics, Instrument and Control/Electrical, or Mechanical/Maintenance OSC.
 - b. Dispense one tablet to each individual that has an emergency team assignment and may potentially enter a high-level airborne radioiodine environment.
 - c. Ensure that records (Attachment "A") are maintained for those individuals who received KI tablets.
3. KI tablets may be provided to non-NPPD emergency response organizations (i.e. States, NRC, FEMA, etc.) for distribution to their emergency workers. Administration of KI to non-NPPD personnel will be the responsibility of the organizations to which these personnel belong.

VIII. ATTACHMENTS

A. Attachment "A", Potassium Iodide Distribution Record.

[illegible]

I. PURPOSE

- A. The purpose of this procedure is to provide the guidance and requirements necessary to conduct efficient rescue and re-entry operations.
- B. Topics covered in this procedure are:
 - 1. Organization and operation of Rescue and Re-Entry Teams.
 - 2. Precautions observed by Rescue and Re-Entry Teams, including equipment carried during search and rescue operations.

II. DISCUSSION

- A. During a station emergency, abnormally high levels of radiation and/or radioactivity may be encountered. These levels may range from slightly above those experienced during normal station operation to life-endangering levels of several hundred Rem in a short period of time (e.g. spent fuel cask accident or loss of coolant accident). Under all emergency situations, whether it is immediate action to regain control of the emergency or for life-saving purposes, care should be taken to minimize personnel exposure from external and/or internal sources of radiation whenever practicable.
- B. Specific exposure guidelines for entry or re-entry into areas in order to remove injured persons and undertake corrective actions, are defined in Attachment "C". The Emergency Director will authorize emergency dose guidelines consistent with or more restrictive than these limits depending upon emergency conditions. Radiological concerns will be discussed with rescue teams prior to undertaking any rescue mission.

III. REFERENCE MATERIAL

- A. CNS Emergency Plan.
- B. NUREG 0654, Revision 1.
- C. 10CFR20.

IV. PREREQUISITES

- A. Personnel are known to be missing or in need of help.
- B. All Rescue and Re-Entry Team members have been briefed on the hazards of radiation exposures in excess of 25 Rem.

V. LIMITATIONS

- A. All Rescue and Re-Entry Team members will participate on a strictly voluntary basis.
- B. No team member shall receive a whole body dose greater than 75 Rem (whole body) while conducting search and rescue operations.

VI. PRECAUTIONS

- A. During any emergency involving radiological hazards, exposure to personnel should be minimized consistent with the nature of the emergency response required.
- B. The Radiological Manager will obtain approval from the Emergency Director for team members to obtain doses between 5 Rem and 75 Rem.
- C. All planned exposures in excess of CNS administrative limits or 10CFR20 limits shall be approved by the Radiological Manager and the Emergency Director prior to receiving the exposure. Radiation exposures of Rescue and Re-Entry Team members are not to exceed 75 Rem whole body under any circumstances.
- D. Referring to EPIP 5.7.14, Stable Iodine Thyroid Blocking, the Radiological Manager or Emergency Director will determine if Potassium Iodide should be administered and shall administer it if indicated to the Rescue and Re-Entry Team members in accordance with EPIP 5.7.14.
- E. Ensure that a Health Physics Technician is equipped with a high range beta-gamma dose rate meter and monitors radiation levels at all times during the search and rescue operations.

VII. EQUIPMENT

- A. The Rescue and Re-Entry Team Leader will ensure that the team is equipped with the necessary protective equipment as shown in Attachment "A", Protective Equipment.
- B. In addition to the emergency fire fighting and protective equipment, a special Rescue Tool Cabinet is maintained in the vicinity of the Machine Shop. To assure ready availability, the equipment contained in this cabinet is reserved for EMERGENCY RESCUE USE ONLY. A list of this equipment is shown in Attachment "B", Emergency Rescue Equipment.

VIII. PROCEDURE

- A. Personnel Search And/Or Rescue.
 - 1. Immediate life-saving rescue required.
 - a. Within the limits allowed by the urgency of the situation, make every reasonable effort to obtain as much of the following:

- 1) Pertinent information (i.e. what happened, what may happen, what hazards are present, what can be done, etc.).
 - 2) Available protective and monitoring equipment and possible rescue devices.
 - 3) Backup assistance from others nearby or request assistance.
- b. Evaluate available information and discuss best apparent rescue approach with the Radiological Manager prior to the rescue attempt if practicable.
 - c. If available, other personnel in the area should render assistance and monitor the time rescuer(s) is (are) in a high radiation area.
 - d. Perform rescue mission consistent with good first aid practices and as dictated by dose rates encountered and the limits discussed above.

Note: Work as quickly and safely as possible while avoiding sources of high dose rates within the rescue area, whenever practicable.
 - e. Limit exposure of rescuers in accordance with Attachment "C", Condition 3.
2. Organized search and rescue following a personnel accountability check.
 - a. Upon being notified that personnel are missing, the Security/Administration/Logistics Coordinator will page on the Galectronics to determine if missing personnel may be unharmed, but isolated in some area of the plant or plant site.
 - b. The Emergency Director will direct the Radiological Manager and the Maintenance and OSC Coordinator to assemble a Rescue and Reentry Team.
 - c. The Rescue and Re-Entry Team will quickly gather needed equipment and assemble at the designated Point of Re-Entry.
 - d. The Rescue and Re-Entry Team will conduct a search, keeping all members of the team in the same general area (i.e. frequent visual checks, each searching independently).
 - e. When a victim or victims are located, the team will notify the Technical Support Center immediately. This should be followed up with additional relevant information (i.e. nature and extent of injuries, dose rates encountered, etc.) as this information develops.

f. The exposure of rescuers shall be limited to as low as reasonably achievable and not exceed the appropriate level specified in Attachment "C".

g. Treat victims in accordance with EPIP 5.7.24, Medical.

B. Entry And/Or Re-Entry Activities.

1. Actions to correct or mitigate further station degradation.

a. The Control Room or Technical Support Center will request assistance from the Operations Support Centers or the Emergency Operations Facility by specifying:

1) The problem and its location.

2) The corrective actions to be undertaken.

b. The Entry Team will quickly gather needed equipment and assemble at the designated Point of Entry.

c. The Entry Team will preplan activities prior to entry into the problem area and should work as quickly as is consistent with safety and time constraints.

d. The Entry Team should perform only those assigned duties intended to control the emergency, but as dictated by the dose rates encountered and the appropriate emergency exposure limits specified in Attachment "C".

e. The Team will report progress and/or completion of the assigned work to the Control Room or Technical Support Center by radio, Gaitronics, or other available communications.

IX. ATTACHMENTS

A. Attachment "A", Protective Equipment.

B. Attachment "B", Emergency Rescue Equipment.

C. Attachment "C", Emergency Dose Limits.

PROTECTIVE EQUIPMENT

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>
1.	High range self-reading dosimeter.	Each	1/Member
2.	Personal TLD.	Each	1/Member
3.	Protective clothing, as required.	Each	1/Member
4.	Respiratory protection equipment, as required.	Each	1/Member
5.	Portable 2-way radio (if necessary).	Each	1/Team
6.	First-aid kit (rescue only).	Each	1/Team

EMERGENCY RESCUE EQUIPMENT

<u>ITEM</u>	<u>DESCRIPTION</u>	<u>UNIT</u>	<u>QUANTITY</u>
1.	Wrecking bars.	Each	2
2.	Bolt cutters.	Each	2
3.	Hacksaw and blades.	Each	2
4.	Ratchet-type chainfall hoist.	Each	1
5.	Cable sling, 1/2" x 3'.	Each	2
6.	Cable sling, 1/2" x 6'.	Each	2
7.	Hydraulic jack, 1 1/2 ton.	Each	1
8.	Hydraulic jack, 5 ton.	Each	1
9.	Sledge hammer, 6#.	Each	2
10.	Sledge hammer, 12#.	Each	2
11.	Porta power.	Each	1
12.	Web slings (2" - 20' long, 2" - 10' long).	Each	4
13.	Sound powered phones.	Pair	1
14.	Safety harness and line.	Each	1
15.	Fire axe.	Each	1
16.	Crow bar.	Each	1
17.	200' - 3 part block and tackle.	Each	1
18.	Battery lanterns.	Each	2

EMERGENCY DOSE LIMITS

<u>CONDITION</u>	<u>CRITERIA</u>	<u>DOSE LIMIT</u>
1	Dose limit applied to emergency response facility personnel.	5 Rem to the whole body
2	Dose limit applied to in-plant activities required to correct or mitigate further station degradation.	25 Rem to the whole body
3	Immediate evaluation and action required for saving of life. When efforts are completed, revert to limits 1 and 2 above, as appropriate.	75 Rem to the whole body

NOTE: If the limits specified in Condition 2 or 3 are involved, the following considerations should be made:

1. Female employees of child-bearing age should not be allowed to participate.
2. All practical protective measures available to limit such an exposure should be utilized.
3. Concurrence of the individual(s) involved (i.e., voluntary risk acceptance) shall be obtained.
4. The probability of success should be balanced against the exposure limit.
5. The individual's familiarity with the task to be performed should be reviewed.
6. The speed with which the individual can perform the task should be evaluated.
7. The amount of radiation the victim has already received should be estimated.

I. PURPOSE

The purpose of this procedure is to prescribe those recovery operations necessary to identify the extent of station damage and radiological contamination (if any) and return the station to an operating status in compliance with the Technical Specifications.

II. DISCUSSION

Recovery operations will normally commence once an event has been downgraded to the ALERT level or at such time that conditions are acceptable. As indicated in the CNS Emergency Plan, recovery operations will occur in two phases. Phase I activities are performed by the emergency response organization and are designed to terminate the emergency, mitigate or eliminate potential hazards to the public and station personnel, and restore the station to a safe and stable condition.

Phase II recovery operations, which are addressed in this procedure, include the longer term efforts required to return the station to a normal operating status following damage associated with a major emergency. While such damage could occur under an ALERT classification, it is anticipated that Phase II recovery operations would be only following a SITE AREA EMERGENCY or a GENERAL EMERGENCY.

III. REFERENCE MATERIAL

- A. CNS Emergency Plan.
- B. NUREG 0654, Revision 1.
- C. NUREG 0737.

IV. PREREQUISITES

- A. Radiation levels are stable or decreasing with time.
- B. Releases of radioactive materials to the environment have ceased or are controlled within permissible license limits.
- C. Fire, flooding, or similar emergency conditions no longer constitute a hazard to the station or station personnel.
- D. Measures have been successfully instituted to correct or compensate for malfunctioning equipment.

V. LIMITATIONS

- A. None.

VI. PRECAUTIONS

- A. Following any emergency involving radiological hazards, exposure to personnel should be kept as low as reasonably achievable consistent with the nature of the recovery operation required.
- B. Recovery operations commence with the station in a controlled, stable condition. No action is to be taken which might jeopardize this condition without the approval of the Recovery Director.

VII. EQUIPMENT

- A. Recovery operations will be performed using existing station equipment (which includes the post accident sampling system) to the maximum extent possible. Special and/or additional equipment will be obtained when required to complete the recovery operation in a safe and efficient manner.

VIII. PROCEDURE

- A. Determination Of Station Damage And Contamination.

1. Initial station survey.

- a. For known or suspected significant station damage, and at the discretion of the Recovery Director, survey teams will be formed consisting of Operations, Engineering, Maintenance, and Health Physics personnel.
- b. These teams, following pertinent guidance contained in EPIP 5.7.15, Rescue And Re-Entry, will perform an organized search of the station to ascertain the extent of physical damage and areas of contamination/high radiation. The results of these surveys will be used by the Recovery Director and the Radiological Controls Manager in planning the detailed surveys described below.

2. Detailed station surveys.

- a. Using the information obtained above, the Radiological Controls Manager will dispatch properly equipped Health Physics Technicians to perform detailed surveys of any areas known to contain radiological hazards. Each area shall be posted and barriers shall be erected. Station Radiological Survey Maps will be used to record the boundaries of these areas. Station Chemists may be dispatched to take and analyze a post accident sample should conditions dictate. Provisions have been made to take and analyze coolant and containment samples within 3 hours of the time a decision is made that samples are required.

- b. Under the Recovery Director, the Technical Support Manager will evaluate any physical damage found and analyze pertinent station instrumentation to ascertain what station systems/components are inoperable and, if possible, the cause. Detailed lists of this information will then be generated and made as specific as possible.

B. Repair, Modification, And Decontamination.

1. Planning.

- a. Under the direction of the Recovery Director, pertinent recovery organization members, as well as selected off-site personnel, will address the planning and coordination of the recovery effort. Such activities as the repair and maintenance of existing station system/components, modification, installation, and decontamination, as well as determining the need for portable shielding and special procedures will be discussed, prioritized, and planned.
- b. The Scheduling/Planning Manager will develop an overall schedule to guide the recovery effort.

2. Training.

- a. In consideration of the situation to be handled, special training material will be developed and training conducted for special work tasks to the maximum extent.

3. Recovery implementation.

- a. Once the plant problems are defined, the recovery plan finalized, special procedures developed, personnel trained, and the necessary equipment allocated, actual recovery operations will begin. Notwithstanding any special requirements in place at the time, wherever practicable, normal station practices will be followed concerning maintenance, repair, modification, decontamination, and personnel exposures control.
- b. During the recovery operation, the Radiological Controls Manager will periodically estimate total population exposure, in coordination with state and federal authorities.
- c. As the recovery operation proceeds, any unforeseen problems which are encountered will be evaluated and factored into the recovery plan. The schedule will then be adjusted accordingly.
- d. Upon completion of the recovery effort, Technical Specification compliance will be verified prior to recommencing normal station operations.

IX. ATTACHMENTS

- A. None.