

Insert Instructions

1. Remove pages 3.1-1 to 3.1-16 and ERPIP 3.1 Review/Approval
Insert pages 3.1-1 to 3.1-16, revision 9, and ERPIP 3.1 Review/Approval,
List of Effective pages, revision 9.
2. Remove page 3.7.1, 3.7-2.
Insert page 3.7-1, 3.7-2, revision 9, and ERPIP 3,7 Review/Approval.
3. Remove pages 4.1.21-1 to 4.1.21-4 and ERPIP 4.1.21 Review/Approval.
Insert pages 4.1.21-1 to 4.1.21-4, revision 8, change 2, and ERPIP 4.1.21
Review/Approval.
4. Remove page 4.3.1-1, 4.3.1-2.
Insert page 4.3.1-1, 4.3.1-2, revision 8, change 1
Insert ERPIP 4.3.1 Review/Approval at end of section 4.3, preceeding ERPIP
4.3.4 Review/Approval.

CALVERT CLIFFS NUCLEAR POWER PLANT
EMERGENCY RESPONSE PLAN
IMPLEMENTATION PROCEDURES

LIST OF EFFECTIVE PAGES _

<u>ERPIP PAGE</u>	<u>REV.</u>	<u>ERPIP PAGE</u>	<u>REV.</u>
4.3.1-1	6		
4.3.1-2	8 Change 1		
4.3.1-3	3		
4.3.1-4	3		
4.3.1-5	3		
4.3.1-6	3		
4.3.1-7	4		
4.3.1-8	4		
4.3.1-9	4		
4.3.1-10	8		

-NOTE-

If a LNG Notification, continue this procedure beginning with section 5.

- 4.0 Direct the following on shift personnel immediately involved to report to the Control Room as necessary:

- 1 Shift Supervisor
- 1 Senior Control Room Operator
- 3 Control Room Operators-Nuclear
- 3 Senior Plant Operators

Initials / Time

- 5.0 Continuously monitor plant conditions and periodically compare conditions to Tech. Spec. Limits, and EALs (EXHIBIT 3.1-B), until conditions are mitigated.

-NOTE-

During the first hour, follow-up comparisons should be performed every 15 minutes; afterwards, every 20 minutes. Also, perform comparisons immediately following new or higher level alarms.

- 6.0 Reclassify or terminate the emergency classifications as conditions warrant and make proper notifications per ERPIP 3.1 and/or 4.2 as appropriate.

(This page is intentionally blank)

EXHIBIT 3.1-8
EMERGENCY ACTION LEVELS (EALS)

L RADIOACTIVITY RELEASE

A. Unusual Event

1. Prior to augmentation: Any of the following valid RMS readings for longer than one hour which are greater than:

1-RE-5415: 3.9E3 cpm Unit 1 Main Vent Radio Gas
 2-RE-5414: 1.0E4 cpm Unit 2 Main Vent Radio Gas
 1-RE-5410: 2.3E4 cpm Unit 1 Waste Process Vent Radio Gas
 2-RE-5410: 2.3E4 cpm Unit 2 Waste Process Vent Radio Gas
 1-RE-5406: 2.0E5 cpm Unit 1 ECCS PP Room Vent Radio Gas
 2-RE-5406: 2.0E5 cpm Unit 2 ECCS PP Room Vent Radio Gas
 O-RE-5420: 1.4E5 cpm Fuel Handling Area Vent Radio Gas
 O-RE-5425: 3.4E4 cpm Access Control Area Vent Radio Gas

NOTE: These estimated values correspond to the technical specification limit of 0.5 mR/h at the site boundary.

OR

2. Liquid Waste Discharge Monitor

O-RI-2201 - high alarm trip fails to shut both isolation valves when monitor exceeds 10^2 cpm.

B. Alert

1. Prior to augmentation: Any of the following valid RMS readings for longer than 15 minutes and expected to continue for greater than one hour which are greater than:

1-RE-5415: 3.9E4 cpm Main Vent Radio Gas
 2-RE-5415: 1.0E5 cpm Main Vent Radio Gas
 1-RE-5410: 2.3E5 cpm Unit 1 Waste Process Vent Radio Gas
 2-RE-5410: 2.3E5 cpm Unit 2 Waste Process Vent Radio Gas
 1-RE-5406: 2.0E6 cpm Unit 1 ECCS PP Room Vent Radio Gas
 2-RE-5406: 2.0E6 cpm Unit 2 ECCS PP Room Vent Radio Gas
 O-RE-5420: 1.4E6 cpm Fuel Handling Area Vent Radio Gas
 O-RE-5425: 3.4E5 cpm Access Control Area Vent Radio Gas

NOTE: These estimated values, correspond to 10 times the technical specification limit of 5 mR/h at the site boundary.

OR

2. A calculated actual or potential dose rate at site boundary greater than or equal to 5.0 mrem/h based on actual meteorological conditions (perform calculation if Main Vent Monitor exceeds 1000 cpm).

OR

3. *Other plant conditions resulting in an actual or potential dose greater than or equal to 100 mrem W.B. or greater than or equal to 500 mrem Thyroid on-site but outside the confines of Controlled Area.

CALVERT CLIFFS NUCLEAR POWER PLANT
EMERGENCY RESPONSE PLAN
IMPLEMENTATION PROCEDURES

LIST OF EFFECTIVE PAGES _

<u>ERPIP PAGE</u>	<u>REV.</u>	<u>ERPIP PAGE</u>	<u>REV.</u>
4.1.21-1	8 Change 2		
4.1.21-2	8 Change 2		
4.1.21-3	6		
4.1.21-4	6		

EXHIBIT 3.1-B
EMERGENCY ACTION LEVELS (EALS)

II. GENERAL SAFETY

A. Unusual Event

Plant conditions that exist which in the judgement of the Shift Supervisor warrant increasing awareness on the part of the local and/or State authorities or require the plant to be placed in a lower mode of operation under TS requirements.

B. Alert

Plant conditions which in the judgement of the Shift Supervisor/SEC have substantially degraded the level of safety of the plant.

C. Site Emergency

Plant conditions which in the judgement of the Shift Supervisor/SEC have substantially degraded the level of plant safety and could result in gross plant contamination.

D. General Emergency

Plant conditions which in the judgement of the Shift Supervisor/SEC could result in imminent substantial core degradation.

III. REACTOR COOLANT SYSTEM

A. Unusual Event

1. Any of the following:

- a. Any pressure boundary leakage; or
- b. Greater than 1 gpm unidentified leakage; or
- c. Greater than 1 gpm total primary to secondary leakage thru S-G; or
- d. Greater than 10 gpm identified leakage from RCS; and
- e. The reactor is required to be placed in a lower mode of operation.

OR

2. ECCS actuation involving initiation signal which results in ECCS water being injected into the RCS. ECCS flow verified by LPSI/HPSI indication on 1/2 CO8 and 1/2 CO9.

OR

3. Any of the following:

- a. Whenever the point defined by the combination of the highest operating loop cold leg temperature and thermal power has exceeded the appropriate pressure line in TS figures 2.1-1, 2.1-2, 2.1-4; or

EXHIBIT 4.1.21-A
EMERGENCY ACCOUNTABILITY FORM

Assembly Area _____

Initials/Date _____

The following personnel have not reported to me within an estimated reasonable time.

	<u>NAME</u>	<u>*POSSIBLE LAST LOCATION</u>
1.	_____ ##	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____
11.	_____	_____
12.	_____	_____

*If Unknown, write "UK"

ACCOUNTABILITY INCOMPLETE

NOTIFIED ESTL (South Gate) _____ / _____
Assembly Area Leader Time

ACCOUNTABILITY COMPLETE

NOTIFIED ESTL (South Gate) _____ / _____
Assembly Area Leader Time

When completed, report accountability within 30 minutes to ESTL and immediately thereafter, transmit this sheet to Security (South Gate or Perimeter Control Point).

EXHIBIT 3.1-B
EMERGENCY ACTION LEVELS (EALS)

IV. FUEL

A. Unusual Event

3. Either of the following:

- a. Specific activity of the reactor coolant greater than 100 $\mu\text{Ci/cc}$, or,
 - b. Specific activity of the reactor coolant greater than 1 $\mu\text{Ci/cc}$ DOSE EQUIVALENT I-131 for more than 100 hours during one continuous time interval or exceeding the limit in TS Figure 3.4.1,
- AND
- c. The reactor is required to be placed in a lower mode of operation.

B. Alert

1. A fuel handling incident that results in the implementation of EOP-7. (Fuel Handling Incident) or,
2. RCS activity in excess of 300 $\mu\text{Ci/cc}$ equivalent I-131.

C. Site Emergency

Spent fuel damage resulting in dose greater than or equal to 500 mrem W.B. or greater than or equal to 2500 mrem Thyroid at the protected area fence.

D. General Emergency

None

V. CONTAINMENT

A. Unusual Event

Any of the following:

1. All containment penetrations required to be closed in an accident are not closed or capable of being closed by an automatic signal; or
2. The equipment hatch is not closed and sealed; or
3. Either air lock is inoperable; or
4. Containment average temperature is greater than 120° F; or
5. Containment pressure is less than -1.0 psig or greater than 1.3 psig; or
6. Containment structural integrity exceeds the acceptance criteria of TS 4.0.1.5;

4. If contractor technicians have been assigned to your assembly area, report the names to Security-South Gate of those technicians for whom you have accounted.

3.1 Reporting Directly to Designated Assembly Area.

3.1.1 When plant personnel have been instructed to report to their designated assembly area, immediately proceed to your assigned assembly area. (See Appendix A.1, Table 2 for Assembly Areas)
Designated Assembly Area: _____

Name	Time

3.1.2 Initiate personnel accountability and hold all personnel at the assembly area until directed by the SEC. Log all unaccounted personnel on the EMERGENCY ACCOUNTABILITY FORM., EXHIBIT 4.1.21-A.

-NOTE-

After being accounted for, emergency response personnel, must report to their emergency assignment location.

3.1.3 Ensure all SEC instructions are promptly relayed to the assembly area personnel.

Further Instruction (if applicable): _____

Assembly Area Personnel Briefed:

Initials	Time

3.1.4 Notify South Gate Security of the accountability results within thirty (30) minutes using the plant telephone system (ext. 4695 or ext. 4696).
ESTL Notified:

Initials	Time

-NOTE-

The ESTL will notify the SEC of these results.

CH
2

CH
1

EXHIBIT 3.1-8
EMERGENCY ACTION LEVELS (EALS)

VII SYSTEM DEGRADATION OR LOSS

A. Unusual Event

1. Any of the following:

- a. One of the two off-site circuits and one of the two diesel generators inoperable; or
- b. One of two diesels lost or one of the off-site power sources lost; or
- c. Both off-site power sources inoperable; or
- d. Both of the unit's diesel generators inoperable;

AND

- e. The unit is required to be placed in a lower mode of operation.

2. Any of the following:

- a. One ESFAS instrumentation channel inoperable as shown in TS 3.3-3; or
- b. One safety injection tank inoperable; or
- c. One ECCS subsystem inoperable with T_{avg} greater than or equal to $300^{\circ}F$; or
- d. No ECCS subsystems operable with T_{avg} less than or equal to $300^{\circ}F$; or
- e. Refueling water tank inoperable;

AND

- f. The reactor is required to be placed in a lower mode of operation.

B. Alert

- 1. Loss of all vital DC power to either Unit or,
- 2. A loss of AC power capability which results in the implementation of EOP-15 (loss of AC power emergency procedure.) or,
- 3. Observation of loss of most or all alarms (annunciators) for either Unit.

C. Site Emergency

- 1. Loss of all vital DC power to either Unit for longer than 15 minutes, or,
- 2. Loss of all AC Power to either unit for longer than 15 minutes, or

CALVERT CLIFFS NUCLEAR POWER PLANT
EMERGENCY RESPONSE PLAN
IMPLEMENTATION PROCEDURES

LIST OF EFFECTIVE PAGES _____

<u>ERPIP PAGE</u>	<u>REV.</u>
3.7-1	9
3.7-2	9

EXHIBIT 3.1-8
EMERGENCY ACTION LEVELS (EALS)

C. Site Emergency

Implementation of EOP-8 (Control Room Evacuation) but shutdown control not re-established in 15 minutes.

D. General Emergency

None

X. FIRE

A. Unusual Event

A confirmed fire in an area containing safety related equipment that is not extinguished within 10 minutes after fire fighting efforts commence.

B. Alert

A confirmed fire in an area containing safety related equipment that requires off-site fire fighting assistance to extinguish.

C. Site Emergency

Major fire that defeats redundant safety system trains or functions.

D. General Emergency

None

XI. NATURAL EVENT OR HAZARD

A. Unusual Event

None

B. Alert

Severe natural phenomena being experienced:

1. Earthquake greater than Operating Basis Earthquake levels (horizontal ground acceleration of 3 percent of gravity and vertical of 5 1/3 percent of gravity), but less than Design Basis Earthquake (horizontal ground acceleration of 15 percent of gravity and vertical of 10 percent of gravity), or,
2. Flood greater than 40 ft. Mean Sea Level but less than 45 Ft. Mean Sea Level. or,
3. Observation of any tornado striking facility, or,
4. Wind speed greater than 90 mph but less than 150 mph.

- 5.0 Notify appropriate CCNPP staff for assistance if needed per Appendix A.1, Table 1. Recall primary or alternate RPD and RAD if Radiological Event exists.

Personnel Notified:

_____/_____
Initials Time

Notify primary or alternate SEC and the Plant Superintendent (see App.A.1 for phone numbers).

Personnel Notified:

_____/_____
Initials Time

- 6.0 Implement ERPIP 4.1.2, SEC Checklist (check as appropriate):
ERPIP 4.1.2 implemented ()

_____/_____
Initials Time

- 7.0 If an uncontrolled radiation release has occurred or may occur, direct primary or alternate RPD and RAD to implement ERPIP 4.1.5 and 4.1.15 respectively.

RPD/RAD directed:

_____/_____
Initials Time

- 8.0 Continue to evaluate the situation to determine if reclassification is necessary in accordance with ERPIP 3.1, Exhibit 3.1-B EMERGENCY ACTION LEVELS.

- 9.0 Reclassify as determined by repeated assessments or terminate and contact emergency personnel to inform them of emergency termination (check as appropriate):

Reclassified to Alert ()

Site Emergency ()

General Emergency ()

Terminated ()

_____/_____
Initials Time

- 10.0 If emergency is terminated, consider recommending to offsite agencies to announce "All clear over Emergency Broadcast System."

Agencies Contacted () Yes
() No

_____/_____
Initials Time

EXHIBIT 3.1-8
EMERGENCY ACTION LEVELS (EALS)

XIII. OTHER HAZARDS

A. Unusual Event

1. Observation or notification of an unplanned release of toxic or flammable gas or liquid that may affect the safety of personnel or equipment in vital areas.
2. Observation or notification of an unplanned explosion that may affect vital areas.

B. Alert

1. A toxic or flammable gaseous or liquid release that is rendering safety-related equipment inoperable.
2. LNG ALERT PER ERPIP 3.2
3. Observation of damage to safety related structures or components by explosion.

C. Site Emergency

Either of the following:

1. Entry of toxic or flammable gases into:
 - a. Control Room; or
 - b. Cable Spreading Rooms; or
 - c. Containment; or
 - d. Switchgear Room; or
 - e. Safe Shutdown Panels; or
 - f. Emergency Diesel Generator Rooms; as detected by portable instrumentation,

AND Safety related equipment is rendered inoperable.

2. Unplanned entry of gas into facility area requires evacuation of vital areas.

D. General Emergency

None