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Nuclear

10CFR50, Appendix E

June 8, 2001

Docket Nos. 50-352
50-353

License Nos. NPF-39
NPF-85

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: Limerick Generating Station, Units 1 & 2
Emergency Response Procedure Revisions

Dear Sir/Madam:

Enclosed is the following procedure revision to the Emergency Response Procedures (ERPs) for Limerick Generating Station, Units 1 and 2. This procedure is required to be submitted within thirty (30) days of its revision in accordance with 10CFR50, Appendix E, and 10CFR50.4.

- ERP-101, Revision 12, "Classification of Emergencies"

Also, enclosed is a copy of a computer generated report index identifying the latest revisions of the LGS ERPs.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,



James A. Hutton
Director - Licensing
Mid-Atlantic Regional Operating Group

Attachments

cc: H. J. Miller, Administrator, Region I, USNRC (2 copies)
A. L. Burritt, USNRC Senior Resident Inspector, LGS

A045

ATTACHMENT 1

LIMERICK GENERATING STATION, UNITS 1 & 2

**Docket Nos. 50-352
50-353**

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NPF-85**

EMERGENCY RESPONSE PROCEDURE

**ERP-101, "Classification of Emergencies"
Revision 12**

Effective 6/12/01

PECO ENERGY COMPANY
LIMERICK GENERATING STATION
EMERGENCY RESPONSE PROCEDURE

ERP-101 CLASSIFICATION OF EMERGENCIES

1.0 RESPONSIBILITIES

1.1 Shift Manager
OR designated alternate implement procedure as Emergency Director
until relieved.

1.2 Plant Manager
OR designated alternate:

1.2.1 Relieves acting Emergency Director.

1.2.2 Assumes role of Emergency Director.

1.2.3 Implements procedure.

2.0 INITIAL ACTIONS

NOTE: THE JUDGEMENT OF THE EMERGENCY DIRECTOR
OR EMERGENCY RESPONSE MANAGER
TAKES PRECEDENCE OVER GUIDANCE IN THE PROCEDURE.

2.1 Emergency Director shall:

2.1.1 Select categories appropriate for station events
OR conditions.

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	(Tech Spec, Loss of Decay Heat Removal, Loss of Assessment/Communications)	
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	(Security, Fire/Explosion/Toxic/Flammable Gases, Man-Made, Natural Events)	
9.0	Other	29
	(General Conditions, Emergency Director Judgement)	

NOTE: IDENTIFICATION AND CLASSIFICATION OF EMERGENCIES SHOULD BE ACCOMPLISHED WITHIN 15 MINUTES AFTER THE APPLICABLE EMERGENCY ACTION LEVELS (EALs) ARE MET.

- 2.1.2 Review Emergency Action Level (EALs) for categories selected.
- 2.1.3 IF event trigger is known to be spurious,
THEN do not classify event i.e., false high reading, false chlorine monitor readings, etc.
- 2.1.4 Classify event based on selected categories
AND most severe EALs.
- 2.1.5 IF the event(s)
OR condition(s) classifies as an emergency,
THEN implement ERP-200, Emergency Director (ED) Response.

3.0 CONTINUING ACTIONS

- 3.1 IF Unusual Event classification is determined,
THEN provide NRC a written summary within 24 hours of Close-out.
- 3.2 Periodically evaluate event classification against existing plant conditions (EALs).
- 3.3 If a higher Emergency Classification is reached,
THEN re-enter ERP-200,
AND direct notifications per ERP-110.

NOTE: ADDITIONAL EVENTS WHICH DO NOT CHANGE THE EMERGENCY CLASSIFICATION ARE COMMUNICATED TO GOVERNMENTAL AGENCIES PER NORMAL EVENT CHRONOLOGY COMMUNICATIONS.

NOTE: IT IS PREFERABLE TO OBTAIN EMERGENCY RESPONSE MANAGER CONCURRENCE PRIOR TO DE-ESCALATION.

- 3.4 Escalate\de-escalate emergency classification as needed.
- 3.5 WHEN the emergency has been controlled,
AND plant is in a safe shutdown condition,
THEN:
 - 3.5.1 Determine whether recovery phase is justifiable:
 - 3.5.1.1 Evaluate plant operating conditions.
 - 3.5.1.2 Evaluate radiological conditions.
 - 3.5.1.3 The ED shall enter the recovery phase with concurrence from the Emergency Response Manager and with consideration of recommendations from Federal and State authorities per ERP-C-1900, Recovery Phase Implementation.

- 3.6 Provide NRC a written summary within eight hours of closeout
OR de-escalation per ERP-106, Written Summary Notification.

4.0 FINAL CONDITIONS

- 4.1 Emergency conditions have been terminated
AND affected unit has been placed in a safe condition.
- 4.2 ERP-C-1900, Recovery Phase Implementation has been implemented.

5.0 ATTACHMENTS AND APPENDICES

- 5.1 Table 1.0, Reactor Fuel
- 5.2 Table 2.0, Reactor Pressure Vessel
- 5.3 Table 3.0, Fission Product Barrier
- 5.4 Table 4.0, Secondary Containment Bypass
- 5.5 Table 5.0, Radioactivity Release
- 5.6 Table 6.0, Loss of Power
- 5.7 Table 7.0, Internal Events
- 5.8 Table 8.0, External Events
- 5.9 Table 9.0, Other

.0 SUPPORTING INFORMATION

6.1 Purpose

- 6.1.1 Provide guidelines for classifying an event or condition into one of four emergency classifications described in Emergency Plan.

6.2 Criteria For Use

- 6.2.1 Implement whenever conditions meet OR exceed Emergency Action Levels (EALs) listed in ERP-101 Classification Tables.

NOTE:	ISSUANCE OF A PAR REQUIRES A GENERAL EMERGENCY CLASSIFICATION AND CONVERSELY A GENERAL EMERGENCY CLASSIFICATION REQUIRES THE ISSUANCE OF A PAR.
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- 6.2.2 PAR information in the tables, is expected to be used when an event rapidly progresses to a General Emergency or when the PAR is based only on plant conditions. Dose Assessment based PAR information may be obtained from ERP-300, TSC/MCR Dose Assessment Team, or the Dose Assessment Team Leader. In either case, the most conservative PAR available is to be used.
- 6.2.3 Whenever the Emergency Operations Facility (EOF) is activated and the Emergency Response Manager (ERM) is in charge, then determine Protective Action Recommendation (PAR) in conjunction with the Emergency Response Manager.

6.3 Special Equipment

- 6.3.1 None

6.4 References

- 6.4.1 Limerick Generating Station Emergency Plan
- 6.4.2 NUREG 0654, Rev. 2 Criteria for Preparations and Evaluation of Radiological Emergency Response Plans in Support of Nuclear Power Plants
- 6.4.3 ERP-110, Emergency Notification
- 6.4.4 ERP-106, Written Summary Notification
- 6.4.5 ERP-200, Emergency Director (ED) Response
- 6.4.6 ERP-300, TSC/MCR Dose Assessment Team
- 6.4.7 ERP-C-1200, Emergency Response Manager
- 6.4.8 ERP-C-1900, Recovery Phase Implementation

- 6.4.9 LGS - Technical Specifications
- 6.4.10 T-101, Reactor Pressure Vessel Control
- 6.4.11 T-102, Containment Control
- 6.4.12 T-104, Radioactivity Release Control
- 6.4.13 Offsite Dose Calculation Manual
- 6.4.14 US NRC Response Technical Manual, April 1991, Section I
(General Emergency Protective Action Recommendations)
- 6.4.15 10CFR20 Standards for Protection Against Radiation
- 6.4.16 EPA-400-R-92-001 Oct. 1991, Manual of Protective Action
Guides and Protective Actions for Nuclear Incidents
- 6.4.17 NUREG-0818 Emergency Action Levels for Light Water
Reactors (1981 - Draft)
- 6.4.18 NUMARC/NESP-007, Methodology for Development of Emergency
Action Levels

6.5 Commitment Annotation

- 6.5.1 Action Item Q0003158 (Boundary Degradation/LOCA EAL Set
for General Emergency Classification,
Appendix ERP-101-11)
- 6.5.2 OEAP A0370948 AE02 (Radioactive Effluent Release EAL Set,
Appendix ERP-101-6)
- 6.5.3 A/R A0843199 Eval. 67 (Boundary Degradation/LOCA EAL set,
Appendix ERP-101-11)
- 6.5.4 PEP Issue I0002326 Eval 15 (Radioactive Effluent Release
EAL set, Appendix ERP-101-6)

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<u>OPCON (MODE)</u>	<u>MODE SWITCH POSITION</u>
1	Run
2	Startup
3	Shutdown (hot)
4	Shutdown (cold)
5	Refueling
D	Defueled

1.0 Reactor Fuel

1.1 Coolant Activity

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	IC Fuel Clad Degradation 1.1.1.a Applicable Opcons: ALL Reactor Coolant activity > $4 \mu\text{Ci/gm}$ Dose Equivalent Iodine 131 1.1.1.b Applicable Opcons: 1, 2, 3 SJAЕ Radiation (Offgas Monitor) > $2.1 \times 10^4 \text{ mR/hr}$
ALERT	None
SITE AREA EMERGENCY	None
GENERAL EMERGENCY	None

1.0 Reactor Fuel

1.2 Irradiated Fuel or New Fuel

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Unexpected Increase in Plant Radiation or Airborne Concentration.</p> <p>1.2.1.a Applicable Opcons: ALL Uncontrolled water level decrease in the spent fuel pool with all irradiated fuel assemblies remaining covered by water</p> <p>1.2.1.b Applicable Opcons: ALL Unexpected Fuel Pool Storage low level alarm AND Visual observation of an uncontrolled water level decrease below the fuel pool skimmer surge tank inlet</p>
ALERT	<p>IC Major Damage to Irradiated Fuel, or Loss of Water Level that Has or Will Result in the Uncovering of Irradiated Fuel Outside the Reactor Vessel</p> <p>1.2.2.a Applicable Opcons: ALL Unplanned general area radiation > 500 mR/hr on the refuel floor (Table 1-1)</p> <p>1.2.2.b Applicable Opcons: ALL Report of visual observation of irradiated fuel uncovered</p> <p>1.2.2.c Applicable Opcons: ALL Water Level < 22 feet above RPV flange for the Reactor Refueling Cavity that will result in Irradiated Fuel uncovering</p> <p>1.2.2.d Applicable Opcons: ALL Water Level < 22 feet above seated Irradiated Fuel for the Spent Fuel Pool that will result in Irradiated Fuel uncovering</p>
SITE AREA EMERGENCY	None
GENERAL EMERGENCY	None

Table 1-1 Refuel Floor ARMs

RIS29-M1-1(2)K600, Drywell Head Laydown
 RIS30-M1-1(2)K600, Dryer/Seperator Area
 RIS31-M1-1(2)K600, Spent Fuel Pool
 RIS32-M1-1(2)K600, New Fuel Storage Vault
 RIS33-M1-1(2)K600, Pool Plug Laydown

2.0 Reactor Pressure Vessel

2.1 Reactor Water Level

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	IC Reactor Coolant System Leakage 2.1.1 Applicable Opcons: 1, 2, 3, 4 The following conditions exist: Unidentified Primary System Leakage > 10 gpm into the Drywell <u>OR</u> Identified Primary System Leakage > 25 gpm into the Drywell
ALERT	None
SITE AREA EMERGENCY	IC Loss of Water Level in the Reactor Vessel That Has or Will Uncover fuel in the Reactor Vessel 2.1.3 Applicable Opcons: 4, 5 RPV level < -161 "
GENERAL EMERGENCY	None

2.0 Reactor Pressure Vessel

2.2 Reactor Power

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<i>None</i>
ALERT	<p>IC Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Scram Once a Reactor Protection System Setpoint Has Been Exceeded and Manual Scram Was Successful</p> <p>2.2.2 Applicable Opcons: 1, 2 Automatic RPS SCRAM should occur due to RPS Setpoint being exceeded <u>AND</u> Failure of Automatic RPS SCRAM to make Reactor shutdown</p>
SITE AREA EMERGENCY	<p>IC Failure of Reactor Protection System Instrumentation to Complete or Initiate an Automatic Reactor Scram Once a Reactor Protection System Setpoint Has Been Exceeded and Manual Scram Was NOT Successful</p> <p>2.2.3 Applicable Opcons: 1, 2 RPS SCRAM should occur due to RPS Setpoint being exceeded <u>AND</u> Failure of Automatic RPS, ARI <u>AND</u> Manual SCRAM to reduce reactor power < 4%</p>
GENERAL EMERGENCY	<p>IC Failure of the Reactor Protection System to Complete an Automatic Scram and Manual Scram was NOT Successful and There is Indication of an Extreme Challenge to the Ability to Cool the Core</p> <p>2.2.4 Applicable Opcons: 1, 2 RPS SCRAM should occur due to RPS Setpoint being exceeded <u>AND</u> Failure of Automatic RPS, ARI <u>AND</u> Manual SCRAM to reduce reactor power < 4% <u>AND</u> Suppression Pool Temperature is on the "UNSAFE" side of the Heat Capacity Temperature Limit (HCTL) curve (T-102, SP/T-1) <u>OR</u> RPV level <-186 "</p> <p style="text-align: center;">***PAR***</p> <p>Evacuate out to 5 mile radius, shelter remaining areas of EPZ.</p>

3.0 Fission Product Barrier Table

3.1 Initiating Condition Matrix

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	3.1.1 Applicable Opcons: 1, 2, 3 ANY Loss <u>OR</u> ANY Potential Loss of Primary Containment
ALERT	3.1.2 Applicable Opcons: 1, 2, 3 ANY Loss <u>OR</u> ANY Potential Loss of EITHER Fuel Clad <u>OR</u> RCS
SITE AREA EMERGENCY	3.1.3 Applicable Opcons: 1, 2, 3 Loss of BOTH Fuel Clad <u>AND</u> RCS <u>OR</u> Potential Loss of BOTH Fuel Clad <u>AND</u> RCS <u>OR</u> Potential Loss of EITHER Fuel Clad <u>OR</u> RCS, <u>AND</u> Loss of ANY Additional Barrier
GENERAL EMERGENCY	3.1.4 Applicable Opcons: 1, 2, 3 Loss of ANY Two Barriers <u>AND</u> Potential Loss of Third Barrier (See Fission Product Barrier Table 3.2 for exception based on extremely Hi Containment Radiation Levels.) ***PAR*** Evacuate out to 5 mile radius, shelter remaining areas of EPZ. 3.1.5 Applicable Opcons: 1, 2, 3 Loss of ALL Three Barriers ***PAR*** Evacuate out to 10 mile radius.

NOTES:

1. If a "Loss" condition is satisfied, the "Potential Loss" category can be considered satisfied. This is accounted for in the matrix contained in the Fission Product Barrier Table 3.2 used to determine the proper classification based on Fission Product Barrier status.
2. For all conditions listed in Fission Product Barrier Table 3.2, the barrier failure column is only satisfied if it fails when called upon to mitigate an accident. For example, failure of both containment isolation valves to isolate with a downstream pathway to the environment is only a concern during an accident. If this condition exists during normal power operations, it will be an active Technical Specification Action Statement. However, during accident conditions, this will represent a breach of containment.

3.2 Fission Product Barrier Status Table

Barrier Parameter	Fuel Clad		Reactor Coolant System		Primary Containment	
	Loss	Potential Loss	Loss	Potential Loss	Loss	Potential Loss
Reactor Coolant Activity	Reactor Coolant activity > 300 $\mu\text{Ci/gm}$ Dose Equivalent Iodine 131	N/A	N/A	N/A	N/A	N/A
RPV Level	RPV level < -186 "	RPV level < -161 "	RPV level < -161 "	N/A	N/A	Procedure T-111 or T-117 direct entry into SAMP-1 and SAMP-2.
RPV Level Unknown	N/A	N/A	N/A	RPV level cannot be determined	N/A	Procedure T-116 directs entry into SAMP-1 and SAMP-2.
RCS Leak Rate	N/A	N/A	N/A	RCS leakage > 50 gpm	N/A	N/A
Drywell Pressure	N/A	N/A	Drywell Pressure > 1.68 psig AND Indication of a leak inside drywell	N/A	Rapid, unexplained decrease in Drywell Pressure following initial increase OR Drywell pressure response not consistent with LOCA conditions	Drywell Pressure > 44 psig and increasing OR Drywell Hydrogen > 6% AND Drywell Oxygen > 5%
Drywell Radiation	Drywell Rad Monitor reading > 4x10⁴ R/hr	N/A	Drywell Rad Monitor reading > 15 R/hr	N/A	N/A	Drywell Rad Monitor reading > 3x10⁵ R/hr

3.2 Fission Product Barrier Status Table

Barrier Parameter	Fuel Clad		Reactor Coolant System		Primary Containment	
	Loss	Potential Loss	Loss	Potential Loss	Loss	Potential Loss
Containment Isolation	N/A	N/A	N/A	Unisolable primary system leakage outside drywell as indicated by T-103, Max Safe Operating Temperature is exceeded in ONE area requiring a SCRAM OR Unisolable primary system leakage outside drywell as indicated by T-103, Max Safe Operating Radiation is exceeded in ONE area requiring a SCRAM	Failure of both valves in any one line to close AND downstream pathway to the environment exists OR Intentional venting per T-200 OR T-228 is required OR Unisolable primary system leakage outside drywell as indicated by T-103, Max Safe Operating Temperature is exceeded in ONE area requiring a SCRAM OR Unisolable primary system leakage outside drywell as indicated by a T-103, Max Safe Operating Radiation is exceeded in ONE area requiring a SCRAM	N/A
Emergency Director Judgement	Any condition in the judgement of the Emergency Director that indicates Loss or Potential Loss of the FUEL CLAD barrier		Any condition in the judgement of the Emergency Director that indicates Loss or Potential Loss of the RCS barrier		Any condition in the judgement of the Emergency Director that indicates Loss or Potential Loss of the Primary Containment barrier	

In the table below, circle all of the appropriate X's in each applicable row for each Loss or Potential Loss of Fission Product Barrier as determined by the table above.

Classify the event as identified in the table heading if all X's in a column under that heading are circled.

Fission Product Barrier Status	Unusual Event	ALERT				SITE AREA EMERGENCY								GENERAL EMERGENCY			
Fuel Clad - Loss			X			X		X		X				X	X		X
Fuel Clad - Potential Loss				X			X			X		X				X	
Reactor Coolant System - Loss					X	X			X				X	X	X		
Reactor Coolant System-Potential Loss						X	X	X					X				X
Primary Containment - Loss	X									X	X	X	X	X		X	X
Primary Containment - Potential Loss		X													X		
														PAR (2)	PAR (1)	PAR (1)	PAR (1)

****PAR****

PAR (1) Evacuate out to 5 mile radius, shelter remaining areas of EPZ.

PAR (2) Evacuate out to 10 mile radius.

4.0 Secondary Containment Bypass

4.1 Main Steam Line

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	IC Fuel Clad Degradation 4.1.1 Applicable Opcons: 1, 2, 3 Main Steam Line HiHi Radiation (3xNFPB)
ALERT	IC RCS Leak Rate 4.1.2 Applicable Opcons: 1, 2, 3 Indication of a Main Steam Line Break: Hi Steam Flow Annunciator <u>AND</u> Hi Steam Tunnel Temperature Annunciator <u>OR</u> Direct report of steam release
SITE AREA EMERGENCY	None
GENERAL EMERGENCY	None

5.0 Radioactivity Release

5.1 Effluent Release and Dose

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Any Unplanned Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds Two Times the Radiological Technical Specifications for 60 Minutes or Longer</p> <p>5.1.1.a Applicable Opcons: ALL</p> <p>A valid reading on one or more of the following radiation monitors that exceeds TWO TIMES the HiHi alarm setpoint value for > 60 minutes:</p> <p>North Stack, South Stack, Radwaste Discharge, Service Water, RHRSW AND Calculated maximum offsite dose rate using computer dose model exceeds 0.114 mRem/hr TPARD OR 0.342 mRem/hr child thyroid CDE based on a 60 minute average</p> <p>Note: If the required dose projections cannot be completed within the 60 minute period, then the declaration must be made based on the valid sustained monitor reading.</p> <p>5.1.1.b Applicable Opcons: ALL</p> <p>Confirmed sample analyses for gaseous or liquid releases indicates concentrations or release rates exceeding TWO TIMES Tech Specs (ODCM 3.2.2 and 3.2.3) for > 60 minutes</p>
ALERT	<p>IC Any Unplanned Release of Gaseous or Liquid Radioactivity to the Environment that Exceeds 200 Times Radiological Technical Specifications for 15 Minutes or Longer</p> <p>5.1.2.a Applicable Opcons: ALL</p> <p>A valid reading on one or more of the following radiation monitors that exceeds TWO HUNDRED TIMES the HiHi alarm setpoint value for > 15 minutes:</p> <p>North Stack, South Stack, Radwaste Discharge, Service Water, RHRSW AND Calculated maximum offsite dose rate exceeds 11.4 mRem/hr TPARD OR 34.2 mRem/hr child thyroid CDE based on a 15 minute average</p> <p>Note: If the required dose projections cannot be completed within the 15 minute period, then the declaration must be made based on the valid sustained monitor reading.</p> <p>5.1.2.b Applicable Opcons: ALL</p> <p>Confirmed sample analyses for gaseous or liquid releases indicates concentrations or release rates exceeding TWO HUNDRED TIMES Tech Specs (ODCM 3.2.2 and 3.2.3) for > 15 minutes</p>

<p>SITE AREA EMERGENCY</p>	<p>IC Boundary Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity Exceeds 100 mR Whole Body or 500 mR Child Thyroid for the Actual or Projected Duration of the Release</p> <p>5.1.3 Applicable Opcons: ALL</p> <p>A valid reading on one or more of the following radiation monitors that exceeds or is expected to exceed the value shown for > 15 minutes AND Dose Projections are not available:</p> <table> <tr> <td>North Stack</td><td>4.16E+6 μCi/second</td></tr> <tr> <td>South Stack</td><td>2.25E-3 μCi/cc</td></tr> </table> <p>Note: If the required dose projections cannot be completed within the 15 minute period, then the declaration must be made based on the valid sustained monitor reading.</p> <p><u>OR</u> Projected offsite dose using computer dose model exceeds 100 mRem TPARD OR 500 mRem child thyroid CDE</p> <p><u>OR</u> Analysis of Field Survey results indicate site boundary whole body dose rate exceeds 100 mRem/hr expected to continue for more than one hour, <u>OR</u> Analysis of Field Survey results indicate child thyroid dose commitment of 500 mRem for one hour of inhalation</p>	North Stack	4.16E+6 μ Ci/second	South Stack	2.25E-3 μ Ci/cc
North Stack	4.16E+6 μ Ci/second				
South Stack	2.25E-3 μ Ci/cc				
<p>GENERAL EMERGENCY</p>	<p>IC Boundary Dose Resulting from an Actual or Imminent Release of Gaseous Radioactivity that Exceeds 1000 mR Whole Body or 5000 mR Child Thyroid for the Actual or Projected Duration of the Release Using Actual Meteorology</p> <p>5.1.4 Applicable Opcons: ALL</p> <p>A valid reading on one or more of the following radiation monitors that exceeds or is expected to exceed the value shown for > 15 minutes AND Dose Projections are not available:</p> <table> <tr> <td>North Stack</td><td>4.16E+7 μCi/second</td></tr> <tr> <td>South Stack</td><td>2.25E-2 μCi/cc</td></tr> </table> <p>Note: If the required dose projections cannot be completed within the 15 minute period, then the declaration must be made based on the valid sustained monitor reading.</p> <p><u>OR</u> Projected offsite dose using computer dose model exceeds 1000 mRem TPARD OR 5000 mRem child thyroid CDE</p> <p><u>OR</u> Analysis of Field Survey results indicate site boundary whole body dose rate exceeds 1000 mRem/hr expected to continue for more than one hour, <u>OR</u> Analysis of Field Survey results indicate child thyroid dose commitment of 5000 mRem for one hour of inhalation</p> <p style="text-align: center;">***PAR***</p> <p>Evacuate out to 5 mile radius, shelter remaining areas of EPZ.</p>	North Stack	4.16E+7 μ Ci/second	South Stack	2.25E-2 μ Ci/cc
North Stack	4.16E+7 μ Ci/second				
South Stack	2.25E-2 μ Ci/cc				

NOTE: CDE = Committed Dose Equivalent, TPARD = Total Protective Action Recommendation Dose

5.0 Radioactivity Release

5.2 In-Plant Radiation

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Unexpected Increase in Plant Radiation or Airborne Concentration</p> <p>5.2.1 Applicable Opcons: ALL</p> <p>Valid Direct Area Radiation Monitor readings increase by a factor of 1000 over normal* levels</p> <p>* Normal levels can be considered as the highest reading in the past twenty-four hours excluding the current peak value.</p>
ALERT	<p>IC Release of Radioactive Material or Increases in Radiation Levels Within the Facility That Impedes Operation of Systems Required to Maintain Safe Operations or to Establish or Maintain Cold Shutdown</p> <p>5.2.2.a Applicable Opcons: ALL</p> <p>Valid radiation level readings > 5000 mR/hr in areas requiring infrequent access to maintain plant safety functions as identified in procedure SE-1, SE-6, or FSSG.</p> <p><u>AND</u></p> <p>Access is required for safe plant operation, but is impeded, due to radiation dose rates</p> <p>5.2.2.b Applicable Opcons: ALL</p> <p>Valid Control Room <u>OR</u> Central Alarm Station radiation reading > 15 mR/hr</p>
SITE AREA EMERGENCY	None
GENERAL EMERGENCY	None

6.0 Loss of Power

6.1 Loss of AC or DC Power

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Loss of All Offsite Power to Essential Busses for Greater Than 15 Minutes</p> <p>6.1.1.a Applicable Opcons: ALL</p> <p>The following conditions exist:</p> <p>Loss of Power to 101 and 201 Safeguard Transformers for >15 minutes</p> <p><u>AND</u></p> <p>At least Two Diesel Generators are supplying power to their respective 4 KV emergency busses</p> <p>IC Unplanned Loss of Required DC Power During Cold Shutdown or Refueling Mode for Greater than 15 Minutes</p> <p>6.1.1.b Applicable Opcons: 4, 5</p> <p>The following conditions exist:</p> <p>Unplanned Loss of ALL safety related DC Power indicated by < 105 VDC bus voltage indications for DC Panels 1(2)FA, B, C, D</p> <p><u>AND</u></p> <p>Failure to restore power to at least one required DC bus within 15 minutes from the time of the loss</p>
ALERT	<p>IC AC power capability to essential busses reduced to a single power source for greater than 15 minutes such that any additional single failure would result in station blackout</p> <p>6.1.2.a Applicable Opcons: 1, 2, 3</p> <p>The following conditions exist:</p> <p>Loss of Power to 101 and 201 Safeguard Transformers for >15 minutes</p> <p><u>AND</u></p> <p>Only One 4 KV emergency bus powered from a Single Onsite Power Source due to the Loss of: Three of Four Division Diesel Generators, D/G Output Breakers, or 4 KV Emergency Busses as indicated by bus voltage</p> <p>IC Loss of All Offsite Power and Loss of All Onsite AC Power to Essential Busses During Cold Shutdown Or Refueling Mode</p> <p>6.1.2.b Applicable Opcons: 4, 5, D</p> <p>The following conditions exist:</p> <p>Loss of Power to 101 and 201 Safeguard Transformers</p> <p><u>AND</u></p> <p>Failure to restore power to at least One 4 KV emergency bus within 15 minutes from the time of loss of both offsite and onsite AC power</p>

<p>SITE AREA EMERGENCY</p>	<p>IC Loss of All Offsite Power and Loss of All Onsite AC Power to Essential Busses</p> <p>6.1.3.a Applicable Opcons: 1, 2, 3 The following conditions exist: Loss of Power to 101 and 201 Safeguard Transformers <u>AND</u> Failure to restore power to at least One 4 KV emergency bus within 15 minutes from the time of loss of both offsite and onsite AC</p> <p>IC Loss of All Vital DC Power</p> <p>6.1.3.b Applicable Opcons: 1, 2, 3 Loss of ALL Safety Related DC Power indicated by < 105 VDC on DC Panels 1(2)FA, B, C, D for > 15 minutes</p>
<p>GENERAL EMERGENCY</p>	<p>IC Prolonged Loss of All Offsite Power and Prolonged Loss of All Onsite AC Power</p> <p>6.1.4 Applicable Opcons: 1, 2, 3 Prolonged loss of all offsite and onsite AC power as indicated by: Loss of Power to 101 and 201 Safeguard Transformers <u>AND</u> Failure of ALL Emergency Diesel Generators to supply power to 4 KV emergency busses <u>AND</u> At least one of the following conditions exist:</p> <ul style="list-style-type: none"> • Restoration of at least One emergency bus within 2 hours is NOT likely <p><u>OR</u></p> <ul style="list-style-type: none"> • Reactor Water Level cannot be maintained > -161 " <p><u>OR</u></p> <ul style="list-style-type: none"> • Suppression Pool temperature is on the "UNSAFE" side of the Heat Capacity Temperature Limit (HCTL) curve (T-102, SP/T-1) <p>***PAR***</p> <p>Evacuate out to 5 mile radius, shelter remaining areas of EPZ.</p>

7.0 Internal Events

7.1 Technical Specification & Control Room Evacuation

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Inability to Reach Required Shutdown Mode Within Technical Specification Limits</p> <p>7.1.1 Applicable Opcons: 1, 2, 3 Inability to reach required shutdown mode within Tech. Spec. LCO required action completion time.</p>
ALERT	<p>IC Control Room Evacuation Has Been Initiated</p> <p>7.1.2 Applicable Opcons: ALL Entry into SE-1 or SE-6 procedure for Control Room evacuation</p>
SITE AREA EMERGENCY	<p>IC Control Room Evacuation Has Been Initiated and Plant Control Cannot Be Established</p> <p>7.1.3 Applicable Opcons: ALL The following conditions exist: Control room evacuation has been initiated AND Control of the plant cannot be established per SE-1 or SE-6 within 15 minutes</p>
GENERAL EMERGENCY	None

7.0 Internal Events

7.2 Loss of Decay Heat Removal Capability

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<i>None</i>
ALERT	<p>IC Inability to Maintain Plant in Cold Shutdown</p> <p>7.2.2 Applicable Opcons: 4, 5</p> <p>The following conditions exist:</p> <p>Unplanned Loss of <u>ALL</u> Tech Spec required systems available to provide Decay Heat Removal functions</p> <p><u>AND</u></p> <p>Uncontrolled Temperature increase that either:</p> <ul style="list-style-type: none"> Exceeds 200 °F (Excluding a <15 minute rise >200° F with a heat removal function restored) <u>OR</u> Results in temperature rise approaching 200 °F (with <u>NO</u> heat removal function restored)
SITE AREA EMERGENCY	<p>IC Complete Loss of Function Needed to Achieve or Maintain Hot Shutdown</p> <p>7.2.3 Applicable Opcons: 1, 2, 3</p> <p>Loss of SUPPRESSION POOL heat sink capabilities as evidenced by T-102 SP/T legs directing a T-112 Emergency Blowdown</p>
GENERAL EMERGENCY	<i>None</i>

7.0 Internal Events

7.3 Loss of Assessment / Communication Capability

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Unplanned Loss of Most or All Safety System Annunciation or Indication in The Control Room for Greater Than 15 Minutes</p> <p>7.3.1.a Applicable Opcons: 1, 2, 3</p> <p>Unplanned loss of most or all safety system annunciators (Table 7-1) <u>OR</u> indicators (Table 7-2) for > 15 minutes requiring increased surveillance to safely operate the unit(s).</p> <p>IC Unplanned Loss of All Onsite or Offsite Communications Capabilities</p> <p>7.3.1.b Applicable Opcons: ALL</p> <p>Loss of ALL Onsite communications (Table 7-3) affecting the ability to perform routine operations <u>OR</u> Loss of ALL Offsite communications (Table 7-3)</p>
ALERT	<p>IC Unplanned Loss of Most or All Safety System Annunciation or Indication In Control Room With Either (1) a Significant Transient in Progress, or (2) Compensatory Non-Alarming Indicators are Unavailable</p> <p>7.3.2 Applicable Opcons: 1, 2, 3</p> <p>Unplanned loss of most or all safety system annunciators (Table 7-1) <u>OR</u> indicators (Table 7-2) for > 15 minutes requiring increased surveillance to safely operate the unit(s) <u>AND EITHER</u> A significant plant transient is in progress (Table 7-4) <u>OR</u> the plant monitoring system (PMS) is unavailable.</p>
SITE AREA EMERGENCY	<p>IC Inability to Monitor a Significant Transient in Progress</p> <p>7.3.3 Applicable Opcons: 1, 2, 3</p> <p>Loss of safety system annunciators (Table 7-1) <u>AND</u> indicators (Table 7-2) <u>AND</u> PMS <u>AND</u> a significant plant transient is in progress. (Table 7-4)</p>
GENERAL EMERGENCY	None

Table 7-1 Safety System Annunciators

ECCS

Containment Isolation

Reactor Trip

Process Radiation Monitoring

Table 7-2 Safety Function Indicators

Reactor Power

Decay Heat Removal

Containment Safety Functions

Table 7-3 Communications

	Onsite	Offsite
Site Phones (Dimension 2000)	X	X
PRELUDE System	X	X
Plant Public Address	X	
Station Radio	X	
NRC (FTS-2000)		X
PA State Police Radio		X
County Police Radio		X
Load Dispatcher Radio		X
PECO Dial Network		X

Table 7-4 Significant Plant Transients

SCRAM

Recirc Runbacks > 25% thermal power

Sustained power oscillations 25% peak to peak

Stuck open relief valve(s)

ECCS injection

8.0 External Events

8.1 Security Threats

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Confirmed Security Event Which Indicates a Potential Degradation in the Level of Safety of the Plant</p> <p>8.1.1 Applicable Opcons: ALL Credible sabotage or bomb threat within the Protected Area <u>OR</u> Credible intrusion and attack threat to the Protected Area <u>OR</u> Attempted intrusion and attack to the Protected Area <u>OR</u> Attempted sabotage discovered within the Protected Area <u>OR</u> Hostage/Extortion situation that threatens normal plant operations</p>
ALERT	<p>IC Security Event in a Plant Protected Area</p> <p>8.1.2 Applicable Opcons: ALL Intrusion into plant protected area by a hostile force <u>OR</u> Confirmed bomb, sabotage or sabotage device discovered in the Protected Area</p>
SITE AREA EMERGENCY	<p>IC Security Event in a Plant Vital Area</p> <p>8.1.3 Applicable Opcons: ALL Intrusion into plant Vital area by a hostile force <u>OR</u> Confirmed bomb, sabotage or sabotage device discovered in a Vital Area</p>
GENERAL EMERGENCY	<p>IC Security Event Resulting in Loss of Ability to Reach and Maintain Cold Shutdown</p> <p>8.1.4 Applicable Opcons: ALL Loss of physical control of the control room due to security event <u>OR</u> Loss of physical control of the remote shutdown capability due to security event ***PAR*** Evacuate out to 5 mile radius, shelter remaining areas of EPZ.</p>

8.0 External Events

8.2 Fire / Explosion and Toxic / Flammable Gases

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Fire Within Protected Area Boundary Not Extinguished Within 15 Minutes of Detection</p> <p>8.2.1.a Applicable Opcons: ALL Fire within Plant Vital Structures (Table 8-1) which is not extinguished within 15 minutes of control room notification or verification of a control room alarm</p> <p>IC Release of Toxic or Flammable Gasses Deemed Detrimental to Safe Operation of the Plant</p> <p>8.2.1.b Applicable Opcons: ALL Report or detection of toxic or flammable gases that could enter within the site area boundary in amounts that can affect normal operation of the plant OR Report by Local, County or State Officials for potential evacuation of site - personnel based on offsite event</p> <p>IC Natural and Destructive Phenomena Affecting the Protected Area</p> <p>8.2.1.c Applicable Opcons: ALL Report by plant personnel of an unanticipated explosion within protected area boundary resulting in visible damage to permanent structure or equipment</p>
ALERT	<p>IC Fire or Explosion Affecting the Operability of Plant Safety Systems Required to Establish or Maintain Safe Shutdown</p> <p>8.2.2.a Applicable Opcons: ALL The following conditions exist: Fire or explosion which potentially makes inoperable: <i>Two or More</i> subsystems of a Safe Shutdown System (Table 8-2) OR <i>Two or More</i> Safe Shutdown Systems OR Plant Vital Structures containing Safe Shutdown Equipment AND Safe Shutdown System or Plant Vital Structure is required for the present Operational Condition</p>

ALERT	<p>IC Release of Toxic or Flammable Gases Within a Facility Structure Which Jeopardizes Operation of Systems Required to Maintain Safe Operations or to Establish or Maintain Cold Shutdown</p> <p>8.2.2.b Applicable Opcons: ALL</p> <p>Report or detection of toxic gases within Plant Vital Structures (Table 8-1) in concentrations that will be life threatening to plant personnel</p> <p>OR</p> <p>Report or detection of flammable gases within Plant Vital Structures (Table 8-1) in concentrations affecting the safe operation of the plant</p>
SITE AREA EMERGENCY	<i>None</i>
GENERAL EMERGENCY	<i>None</i>

Table 8-1 Plant Vital Structures

Reactor Enclosure
Control Enclosure
Turbine Enclosure
Diesel Generator Enclosure
Spray Pond Pump House/Spray Network

Table 8-2 Safe Shutdown Systems

Diesel Generators	4KV Safeguard Buses	ADS
HPCI	RCIC	RHR (All Modes)
Core Spray	RHR Service Water	ESW
SGTS	RERS	CAC
PCIS	Control Room Ventilation	

8.0 External Events

8.3 Man-Made Events

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Destructive Phenomena Affecting the Protected Area</p> <p>8.3.1.a Applicable Opcons: ALL Vehicle crash within protected area boundary that may potentially damage plant structures containing functions and systems required for safe shutdown of the plant.</p> <p>8.3.1.b Applicable Opcons: ALL Report of turbine failure resulting in casing penetration or damage to turbine or generator seals.</p>
ALERT	<p>IC Destructive Phenomena Affecting the Plant Vital Area</p> <p>8.3.2 Applicable Opcons: ALL Vehicle crash affecting Plant Vital Structures (Table 8-1)</p> <p>OR Turbine failure generated missiles result in any visible structural damage to or penetration of any Plant Vital Structures (Table 8-1)</p>
SITE AREA EMERGENCY	None
GENERAL EMERGENCY	None

Table 8-1 Plant Vital Structures

Reactor Enclosure
Control Enclosure
Turbine Enclosure
Diesel Generator Enclosure
Spray Pond Pump House/Spray Network

8.0 External Events

8.4 Natural Events

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Natural and Destructive Phenomena Affecting the Protected Area</p> <p>8.4.1.a Applicable Opcons: ALL Earthquake >.005 g as determined by procedure SE-5</p> <p>8.4.1.b Applicable Opcons: ALL Report by plant personnel of tornado striking within protected area OR Wind speeds > 75 mph as indicated on site Meteorological data for > 15 minutes</p> <p>8.4.1.c Applicable Opcons: ALL Assessment by the control room that an event has occurred. (Natural and Destructive Phenomena Affecting the Protected Area)</p>
ALERT	<p>IC Natural and Destructive Phenomena Affecting the Plant Vital Area</p> <p>8.4.2.a Applicable Opcons: ALL Earthquake >.075 g (Operating Basis Earthquake OBE) as determined by procedure SE-5</p> <p>8.4.2.b Applicable Opcons: ALL Tornado or wind speeds > 75 mph causing damage to Plant Vital Structures (Table 8-1)</p> <p>8.4.2.c Applicable Opcons: ALL Report of any visible structural damage to any Plant Vital Structure (Table 8-1)</p>
SITE AREA EMERGENCY	None
GENERAL EMERGENCY	None

Table 8-1 Plant Vital Structures

Reactor Enclosure
Control Enclosure
Turbine Enclosure
Diesel Generator Enclosure
Spray Pond Pump House/Spray Network

9.0 Other

9.1 General

CLASSIFICATION	EMERGENCY ACTION LEVEL
UNUSUAL EVENT	<p>IC Other Conditions Existing Which in the Judgement of the Emergency Director Warrant Declaration of an Unusual Event</p> <p>9.1.1 Applicable Opcons: ALL</p> <p>Other conditions exist which in the judgement of the Emergency Director indicate a potential degradation of the level of safety of the plant</p>
ALERT	<p>IC Other Conditions Existing Which in the Judgement of the Emergency Director Warrant Declaration of an Alert</p> <p>9.1.2 Applicable Opcons: ALL</p> <p>Other conditions exist which in the Judgement of the Emergency Director indicate that plant safety systems may be degraded and that increased monitoring of plant functions is warranted</p>
SITE AREA EMERGENCY	<p>IC Other Conditions Existing Which in the Judgement of the Emergency Director Warrant Declaration of Site Area Emergency</p> <p>9.1.3 Applicable Opcons: ALL</p> <p>Other conditions exist which in the Judgement of the Emergency Director indicate actual or likely major failures of plant functions needed for protection of the public</p>
GENERAL EMERGENCY	<p>IC Other Conditions Existing Which in the Judgement of the Emergency Director Warrant Declaration of General Emergency</p> <p>9.1.4 Applicable Opcons: ALL</p> <p>Other conditions exist which in the Judgement of the Emergency Director indicate: (1) actual or imminent substantial core degradation with potential for loss of containment, or (2) potential for uncontrolled radionuclide releases. These releases can reasonably be expected to exceed EPA PAG plume exposure levels outside the site boundary</p> <p style="text-align: center;">***PAR***</p> <p>Evacuate out to 5 mile radius, shelter remaining areas of EPZ.</p>

Appendix ERP-101-13
 TERMS AND DEFINITIONS

EMERGENCY ACTION LEVEL (EAL)	Plant parameters or other condition which if met or exceeded the emergency classification level and requires a declaration of emergency.	UNUSUAL EVENT	Events in progress or have occurred, that indicate a potential degradation of the level of safety of the plant. No releases of radioactive material requiring off-site response or monitoring are expected unless further degradation of safety systems occurs.
OPERABLE	System, subsystem, train, component, or device, and all auxiliaries required for their operation, is capable of performing its specified function in the intended manner.		
PROTECTIVE ACTION RECOMMENDATIONS (PAR)	Recommendation made to the state action to be taken to avoid or reduce projected dose to the public.	ALERT	Events in progress or have occurred that involve actual or potential substantial degradation of the level of safety of the plant. Any releases of radioactive material are expected to be limited to small fractions of the Environmental Protective Agency (EPA) Protective Action Guidelines (PAG) exposure levels.
PROJECTED DOSE	An estimate of radiation dose which affected individuals could potentially receive if protective actions are not taken.		
TPARD	Total Protective Action Recommendation Dose. (TPARD = External Dose & Internal Dose & Dose Due to 4-Day Shine)		
CDE	Committed Dose Equivalent. (CDE = internal Organ Dose from Ingestion)		
CEDE	Committed Effective Dose Equivalent. (CEDE = Internal Whole Body Dose from Ingestion)		
TEDE	Total Effective Dose Equivalent. (TEDE = Deep Dose Equivalent & CEDE Dose)		
PROTECTIVE ACTION GUIDE (PAG)	Action guidelines based on projections for the total integrated dose a member of the public would receive for the duration of the emergency.	SITE AREA EMERGENCY	Events in progress or which have occurred that involve actual or likely major failures of plant functions needed for protection of the public. Any releases of radioactive material are not expected to exceed EPA PAG exposure levels except near site boundary.
SABOTAGE	An act conducted by a person or persons with the intent of damaging or impairing the operation of the plant.		
SECURITY COMPROMISE	A security threat as illustrated by attempted entry or sabotage with the intent to gain physical control of the plant.	GENERAL EMERGENCY	Events in progress or which have occurred that involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity. Releases of radioactive material can be reasonably expected to exceed EPA PAG exposure levels off-site for more than the immediate site area.

ATTACHMENT 2

LIMERICK GENERATING STATION, UNITS 1 & 2

**Docket Nos. 50-352
50-353**

**License Nos. NPF-39
NPF-85**

EMERGENCY RESPONSE PROCEDURES

REPORT INDEX

LIMERICK GENERATING STATION

PROCEDURE INDEX REPORT:

FAC	DOC TYPE	PROC TYPE	PROCEDURE NUMBER	CURR REV NBR	TITLE	EFFECTIVE DATE	RESP GROUP	SYSTEM NBR
LG	PROC	ERP	ERP-C-1000	0005	EMERGENCY OPERATIONS FACILITY (EOF) ACTIVATION/DEACTIVATION	04/21/99		
LG	PROC	ERP	ERP-C-1000-1	0003	EOF ACTIVATION CHECKLIST	03/30/01		
LG	PROC	ERP	ERP-C-1000-2	0003	EOF DEACTIVATION CHECKLIST	04/21/99		
LG	PROC	ERP	ERP-C-1000-3	0000	EOF BUSINESS HOURS FIRST RESPONDER CHECKLIST	04/21/99		
LG	PROC	ERP	ERP-C-1000-4	0000	EOF AFTER HOURS FIRST RESPONDER CHECKLIST	04/21/99		
LG	PROC	ERP	ERP-C-1100	0003	EOF STAFF AUGMENTATION INCORPORATED INTO ERP-C-1250	09/14/94		
LG	PROC	ERP	ERP-C-1200	0010	EMERGENCY RESPONSE MANAGER	03/30/01	LWE	
LG	PROC	ERP	ERP-C-1200-1	0000	EMERGENCY RESPONSE MANAGER TURNOVER/BRIEFING FORM	09/14/94		
LG	PROC	ERP	ERP-C-1200-2	0000	PROTECTIVE ACTION RECOMMENDATION WORKSHEET CANCELLED	10/24/95		
LG	PROC	ERP	ERP-C-1200-3	0000	ERM PAR DELIVERY CHECKLIST	04/03/00		
LG	PROC	ERP	ERP-C-1200-4	0000	MINIMUM STAFFING POSITIONS NECESSARY TO ACTIVATE THE EOF	03/30/01		
LG	PROC	ERP	ERP-C-1210	0002	ASSISTANT EMERGENCY RESPONSE MANAGER (AERM) CANCELLED	10/24/95		
LG	PROC	ERP	ERP-C-1250	0003	EMERGENCY PREPAREDNESS COORDINATOR/EOF	11/02/98		
LG	PROC	ERP	ERP-C-1250-1	0000	EMERGENCY POWER INSTRUCTIONS	09/14/94		
LG	PROC	ERP	ERP-C-1250-2	0002	EMERGENCY PREPAREDNESS COORDINATOR INSTRUCTIONS FOR ASPEN BACKUP NOTIFICATION SYSTEM	05/11/01		
LG	PROC	ERP	ERP-C-1250-3	0000	EMERGENCY PREPAREDNESS COORDINATOR INSTRUCTIONS TO STOP STAFFING	09/14/94		
LG	PROC	ERP	ERP-C-1250-4	0000	EMERGENCY PREPAREDNESS COORDINATOR INSTRUCTIONS FOR SYSTEM RESET	09/14/94		
LG	PROC	ERP	ERP-C-1300	0010	EMERGENCY OPERATIONS FACILITY (EOF) DOSE ASSESSMENT TEAM LEADER	08/29/00		
LG	PROC	ERP	ERP-C-1300-1	0003	DOSE ASSESSMENT TEAM LEADER INITIAL ACTIONS	04/03/00		
LG	PROC	ERP	ERP-C-1300-2	0000	DOSE ASSESSMENT TURNOVER LIST	09/23/94		
LG	PROC	ERP	ERP-C-1300-3	0004	PROTECTIVE ACTION RECOMMENDATION WORKSHEET	03/30/01		
LG	PROC	ERP	ERP-C-1300-4	0000	OFFSITE SAMPLE ANALYSIS REQUESTS	09/23/94		
LG	PROC	ERP	ERP-C-1300-5	0001	DETERMINATION OF PROTECTIVE ACTION RECOMMENDATIONS (PARS)	11/02/98		
LG	PROC	ERP	ERP-C-1300-6	0001	DOSE ASSESSMENT GROUP INITIAL ACTIONS	04/10/98		
LG	PROC	ERP	ERP-C-1300-7	0000	OBTAINING EPDS MET/RAD DATA	03/26/97		
LG	PROC	ERP	ERP-C-1300-8	0000	USE OF MODE A/MODE B CDM	03/26/97		
LG	PROC	ERP	ERP-C-1300-9	0001	OBTAINING MET DATA FROM NATIONAL WEATHER SERVICE	09/12/97		
LG	PROC	ERP	ERP-C-1310	0003	EMERGENCY OPERATIONS FACILITY (EOF) DOSE ASSESSMENT GROUP CANCELLED	03/26/97		
LG	PROC	ERP	ERP-C-1310-1	0000	DOSE ASSESSMENT GROUP LEADER INITIAL ACTIONS CANCELLED	03/26/97		
LG	PROC	ERP	ERP-C-1310-2	0000	OBTAINING MET DATA FROM NATIONAL WEATHER SERVICE CANCELLED	03/26/97		
LG	PROC	ERP	ERP-C-1310-3	0000	OBTAINING EPDS MET/RAD DATA CANCELLED	03/26/97		
LG	PROC	ERP	ERP-C-1310-4	0000	USE OF MODE A / MODE B OF CDM CANCELLED	03/26/97		
LG	PROC	ERP	ERP-C-1320	0007	EMERGENCY OPERATIONS FACILITY (EOF) FIELD SURVEY GROUP LEADER	08/29/00		
LG	PROC	ERP	ERP-C-1320-1	0002	FIELD SURVEY GROUP LEADER INITIAL ACTIONS	04/10/98		
LG	PROC	ERP	ERP-C-1320-2	0001	FIELD SURVEY GROUP LEADER TURNOVER SHEET	03/26/97		
LG	PROC	ERP	ERP-C-1320-3	0002	FIELD SURVEY GROUP LEADER DATA SHEET	08/29/00		
LG	PROC	ERP	ERP-C-1400	0004	ENGINEERING SUPPORT TEAM	11/02/98		
LG	PROC	ERP	ERP-C-1400-1	0002	ENGINEERING SUPPORT TEAM CHECKLIST	11/02/98		

PROCEDURE INDEX REPORT:

FAC	DOC TYPE	PROC TYPE	PROCEDURE NUMBER	CURR REV NBR	TITLE	EFFECTIVE DATE	RESP GROUP	SYSTEM NBR
LG	PROC	ERP	ERP-C-1410	0002	CORE DAMAGE ASSESSMENT	09/09/98		
LG	PROC	ERP	ERP-C-1410-1	0000	RADIOLOGICAL DATA	09/14/94		
LG	PROC	ERP	ERP-C-1410-2	0001	HYDROGEN CONCENTRATION DATA	09/09/98		
LG	PROC	ERP	ERP-C-1410-3	0001	CONTAINMENT RADIATION MONITOR DATA	09/09/98		
LG	PROC	ERP	ERP-C-1410-4	0000	METAL WATER REACTION CANCELLED	09/09/98		
LG	PROC	ERP	ERP-C-1410-5	0002	PERCENT OF FUEL INVENTORY AIRBORNE IN THE CONTAINMENT VS. APPROXIMATE SOURCE AND DAMAGE ESTIMATE	06/01/01		
LG	PROC	ERP	ERP-C-1410-6	0001	PROCEDURES FOR ESTIMATING FUEL DAMAGE BASED ON MEASURED I-131 AND XE-133 CONCENTRATIONS	09/09/98		
LG	PROC	ERP	ERP-C-1500	0006	LOGISTIC SUPPORT TEAM	04/14/00		
LG	PROC	ERP	ERP-C-1500-1	0001	MESSAGE AND INFORMATION INSTRUCTIONS	10/24/95		
LG	PROC	ERP	ERP-C-1500-2	0001	HELICOPTER LANDING INFORMATION	10/24/95		
LG	PROC	ERP	ERP-C-1900	0004	RECOVERY PHASE IMPLEMENTATION	11/02/98		
LG	PROC	ERP	ERP-C-1900-1	0000	RECOVERY PHASE IMPLEMENTATION FLOW CHART	06/28/93		
LG	PROC	ERP	ERP-C-1900-2	0002	PEACH BOTTOM ATOMIC POWER STATION RECOVERY ACCEPTANCE CHECKLIST	04/02/98		
LG	PROC	ERP	ERP-C-1900-3	0002	LIMERICK GENERATING STATION RECOVERY ACCEPTANCE CHECKLIST	04/02/98		
LG	PROC	ERP	ERP-C-1900-4	0002	RECOVERY PLAN OUTLINE	04/02/98		
LG	PROC	ERP	ERP-C-1900-5	0002	ASSESSMENT CONSIDERATIONS	12/28/99		
LG	PROC	ERP	ERP-101	0012	CLASSIFICATION OF EMERGENCIES	06/12/01	LWE	
LG	PROC	ERP	ERP-101 BASES	0001	LGS EAL TECHNICAL BASIS MANUAL	03/30/01		
LG	PROC	ERP	ERP-106	0003	WRITTEN SUMMARY NOTIFICATION	11/22/95	LWE	
LG	PROC	ERP	ERP-110	0033	EMERGENCY NOTIFICATION	06/12/01	LWE	
LG	PROC	ERP	ERP-120	0006	STATION EVACUATIONS	11/14/97	LWE	
LG	PROC	ERP	ERP-140	0009	STAFFING AUGMENTATION	02/03/98	LWE	
LG	PROC	ERP	ERP-200	0014	EMERGENCY DIRECTOR (ED) RESPONSE	03/27/01	LWE	
LG	PROC	ERP	ERP-200-1 APP	0011	EMERGENCY NOTIFICATION MESSAGE FORM	03/27/01	LWE	
LG	PROC	ERP	ERP-200-2 APP	0000	DOSE ASSESSMENT DATA SHEET	06/20/00		
LG	PROC	ERP	ERP-230	0014	OPERATIONS SUPPORT CENTER (OSC) DIRECTOR	04/14/00	LWE	
LG	PROC	ERP	ERP-230 APPENDIX 1	0000	OSC - EMERGENCY COMMUNICATIONS EQUIPMENT CHECK LIST	04/14/00		
LG	PROC	ERP	ERP-230 APPENDIX 2	0000	OSC DIRECTOR ACTIVATION CHECK-OFF LIST	04/14/00		
LG	PROC	ERP	ERP-230 APPENDIX 3	0000	OPERATIONS SUPPORT CENTER FACILITY ACCOUNTABILITY LOG	04/14/00		
LG	PROC	ERP	ERP-230 APPENDIX 4	0000	OSC DIRECTOR ACTIVATION	04/14/00		
LG	PROC	ERP	ERP-300	0022	TSC/MCR DOSE ASSESSMENT TEAM	04/03/00	LWE	
LG	PROC	ERP	ERP-300 APPENDIX 1	0000	DOSE ASSESSMENT TEAM ACTIVATION	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 2	0000	DOSE ASSESSMENT TEAM CHECK-OFF LIST	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 3	0001	TURNOVER OF DOSE ASSESSMENT RESPONSIBILITIES	06/19/00		
LG	PROC	ERP	ERP-300 APPENDIX 4	0000	DOSE ASSESSMENT DATA SHEET	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 5	0000	USE OF MESOREM, JR, AUTO MODE A	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 6	0000	OBTAINING RADIOLOGICAL DATA	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 7	0000	OBTAINING MET DATA FROM PLANT MONITORING SYSTEM (PMS)	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 8	0000	OBTAINING METEOROLOGICAL DATA FROM NATIONAL WEATHER SERVICE	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 9	0001	PROTECTIVE ACTION WORKSHEET	06/19/00		
LG	PROC	ERP	ERP-300 APPENDIX 10	0000	USE OF NORTH STACK DOSE RATE TO ESTIMATE RELEASE SOURCE TERM	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 11	0000	OPERATION OF IBM PS/2 MODEL L40SX	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 12	0000	LIMERICK LIQUID RELEASE DOSE CALCULATIONS	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 13	0000	DOSE ASSESSMENT SELF-CHECK	04/03/00		
LG	PROC	ERP	ERP-300 APPENDIX 14	0000	STABILITY CLASS DETERMINATION	04/03/00		
LG	PROC	ERP	ERP-316	0000	OPERATION OF THE DOSE ASSESSMENT COMPUTER (CM-4)	06/20/00		
LG	PROC	ERP	ERP-326	0000	SHIFT DOSE ASSESSMENT PERSONNEL (SDAP)	06/20/00		

LIMERICK GENERATING STATION

PROCEDURE INDEX REPORT:

FAC	DOC TYPE	PROC TYPE	PROCEDURE NUMBER	CURR REV NBR	TITLE	EFFECTIVE DATE	RESP GROUP	SYSTEM NBR
LG	PROC	ERP	ERP-330	0000	USE OF NORTH STACK-DOSE RATE TO ESTIMATE RELEASE SOURCE TERM CANCELLED INCORPORATED INTO ERP-300 APP.10	11/14/94	LWE	
LG	PROC	ERP	ERP-340	0008	FIELD SURVEY GROUP	06/20/00	LWE	
LG	PROC	ERP	ERP-350	0003	RADIOACTIVE LIQUID RELEASE CANCELLED	11/10/94	LWE	
LG	PROC	ERP	ERP-360	0003	ADJUSTMENT OF WIDE RANGE GAS MONITOR CONVERSION FACTORS	10/18/99	LWE	
LG	PROC	ERP	ERP-370	0001	USE OF RMMS FOR DOSE ASSESSMENT CANCELLED	11/10/94	LWE	
LG	PROC	ERP	ERP-400	0012	CHEMISTRY SAMPLING AND ANALYSIS TEAM	09/28/98	LWE	
LG	PROC	ERP	ERP-410	0002	SAMPLE PREPARATION AND HANDLING OF HIGHLY RADIOACTIVE LIQUID SAMPLES	09/28/98	LWE	
LG	PROC	ERP	ERP-420	0002	SAMPLE PREPARATION AND HANDLING OF HIGHLY RADIOACTIVE PARTICULATE FILTERS AND IODINE CARTRIDGES	09/28/98	LWE	
LG	PROC	ERP	ERP-430	0002	SAMPLE PREPARATION AND HANDLING OF HIGHLY RADIOACTIVE GAS SAMPLES	09/28/98	LWE	
LG	PROC	ERP	ERP-440	0002	OFF-SITE ANALYSIS OF HIGH ACTIVITY SAMPLES	03/29/95	LWE	
LG	PROC	ERP	ERP-500	0016	SECURITY TEAM	04/14/00	LWE	
LG	PROC	ERP	ERP-500 APPENDIX 1	0000	SECURITY TEAM ACTIVATION	04/14/00		
LG	PROC	ERP	ERP-500 APPENDIX 2	0000	SECURITY TEAM STAFFING GUIDELINES	04/14/00		
LG	PROC	ERP	ERP-500 APPENDIX 3	0000	STAFFING FOR SITE EVACUATION	04/14/00		
LG	PROC	ERP	ERP-500 APPENDIX 4	0000	SECURITY EVACUATION GUIDANCE	04/14/00		
LG	PROC	ERP	ERP-500 APPENDIX 5	0000	SECURITY TEAM LEADER CHECK-OFF LIST	04/14/00		
LG	PROC	ERP	ERP-500 APPENDIX 6	0000	EMERGENCY ASSEMBLY AREAS	04/14/00		
LG	PROC	ERP	ERP-500 APPENDIX 7	0000	FACILITY ACCOUNTABILITY LOG TECHNICAL SUPPORT CENTER	04/14/00		
LG	PROC	ERP	ERP-600	0012	HEALTH PHYSICS TEAM	05/19/98	LWE	
LG	PROC	ERP	ERP-620	0002	PLANT SURVEY GROUP CANCELLED - NO REPLACEMENT	05/02/95	LWE	
LG	PROC	ERP	ERP-630	0003	VEHICLE AND EVACUEE CONTROL GROUP	03/29/95	LWE	
LG	PROC	ERP	ERP-640	0008	EMERGENCY RESPONSE FACILITY HABITABILITY	04/17/99	LWE	
LG	PROC	ERP	ERP-650	0010	ENTRY FOR EMERGENCY REPAIR AND OPERATIONS	06/20/00	LWE	
LG	PROC	ERP	ERP-660	0006	DISTRIBUTION OF THYROID BLOCKING TABLETS	04/17/99	LWE	
LG	PROC	ERP	ERP-700	0016	TECHNICAL SUPPORT TEAM	02/15/01	LWE	
LG	PROC	ERP	ERP-800	0020	MAINTENANCE TEAM	12/15/00	LWE	
LG	PROC	ERP	ERP-800 APPENDIX 1	0000	TASK BRIEFING/DEBRIEFING SHEET	04/14/00		
LG	PROC	ERP	ERP-800 APPENDIX 2	0000	MAINTENANCE TEAM ACTIVATION	04/14/00		
LG	PROC	ERP	ERP-800 APPENDIX 3	0001	TECHNICAL SUPPORT CENTER ACTIVATION	12/15/00		
LG	PROC	ERP	ERP-800 APPENDIX 4	0001	OFFSITE SIRENS ACTIVATION (REF. 6.5.1)	12/15/00		

** END OF REPORT **

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FILE STATISTICS - CA-EASYTRIEVE PLUS 6.2 9904- 6/08/01- 7.52-JSN01701

TCDDRWNG	149,800	INPUT	VSAM	UNDEF	4089	18432
DRWNG1	0	INPUT	VSAM	UNDEF	4089	18432
TCDFCTMT	0	INPUT	VSAM	UNDEF	4089	18432
TCDACTNR	0	INPUT	VSAM	UNDEF	4089	18432
TCDALPHA	0	INPUT	VSAM	UNDEF	4089	4096
PARMFL	18	INPUT	SAM	FIX BLK	80	80
DDIDFL	14	INPUT	SAM	FIX BLK	80	80
MACROFL	759	INPUT	SAM	FIX BLK	80	12960
EZTR002	0	OUTPUT	VFM	FIX BLK	1	N/A
EZTR003	0	OUTPUT	VFM	FIX BLK	593	N/A
EZTR004	138	INPUT	VFM	FIX BLK	365	N/A
EZTR005	0	OUTPUT	VFM	FIX BLK	332	N/A
EZTR006	0	OUTPUT	VFM	FIX BLK	250	N/A