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10CFR50, Appendix E

January 28, 2002

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Limerick Generating Station, Units 1 & 2
Facility Operating License Nos. NPF-39 and NPF-85
NRC Docket Nos. 50-352 and 50-353

ERP-660, Revision 7, "Distribution of Thyroid Blocking Tablets"
ERP-650, Revision 11, "Entry for Emergency Repair and Operations"
ERP-630, Revision 4, "Vehicle and Evacuee Control Group"
ERP-600, Revision 13, "Health Physics Team"
ERP-340, Revision 9, "Field Survey Group"
ERP-300, Revision 23, "Dose Assessment Coordinator"

Dear Sir/Madam:

Enclosed are revised Emergency Response Procedures (ERPs) for Limerick Generating Station (LGS), Units 1 and 2. These procedures are required to be submitted within thirty (30) days of their revision in accordance with 10CFR50, Appendix E, and 10CFR50.4.

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,

M. P. Gallagher
Director - Licensing & Regulatory Affairs
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

License Nos. NPF-39
NPF-85

## EMERGENCY RESPONSE PROCEDURES

ERP-660, "Distribution of Thyroid Blocking Tablets"
Revision 7

ERP-650, "Entry for Emergency Repair and Operations"
Revision 11

ERP-630, "Vehicle and Evacuee Control Group"
Revision 4

ERP-600, "Health Physics Team"
Revision 13

ERP-340, "Field Survey Group"
Revision 9

ERP-300, "Dose Assessment Coordinator"
Revision 23

EXELON NUCLEAR
LIMERICK GENERATING STATION
EMERGENCY RESPONSE PROCEDURE

# ERP-660 DISTRIBUTION OF THYROID BLOCKING TABLETS

## 1.0 RESPONSIBILITIES

1.1 Health Physics Team Leader (HPTL) determines if potassium iodide (KI) is required
AND directs administration of tablets.

1.2 Emergency Director (ED) provides concurrence of the need for issuance of KI tablets.

## 2.0 INITIAL ACTIONS

2.1 HPTL shall:

2.1.1 Continually monitor radioiodine concentrations within sampled coolant systems and air analyses to determine potential exposure pathways.

2.1.2 Determine need for administering KI by completing Appendix ERP-660-1, KI Worksheet for each individual, if the actual or potential thyroid CDE equals 25 REM (1,000 DAC-hrs).

2.1.3 Obtain ED concurrence of need for KI prior to administering.

2.1.4 Enter names of each individual on Appendix ERP-660-2
AND direct Dosimetry or designee to administer the tablets per section 2.2 of this procedure.

**NOTE**

If time considerations dictate, documentation may be completed after KI has been administered.

**NOTE**

Use of KI tablets is voluntary for each individual involved.

2.2 Dosimetry or designee shall:

2.2.1 Acquire an adequate supply of tablets from the TSC Misc. Locker #3.

> **NOTE**
>
> Prior to administering KI, ensure that tablets are not beyond expiration date.

2.2.2 Assemble personnel to be treated.

2.2.3 Discuss with personnel the possible side effects of KI
AND that taking tablets is voluntary.

2.2.3.1 Skin rashes, swelling of parotid glands (like mumps), metallic taste in mouth, burning mouth and throat, sore teeth and gums, head cold symptoms, gastric upset, and diarrhea

> **WARNING**
>
> Personnel having allergic reactions to iodine should not be administered KI unless approved by a physician.

2.2.4 Determine if any personnel are aware of an allergy to iodine.

2.2.5 IF an individual is allergic,
THEN discuss situation with HPTL.

> **NOTE**
>
> Recommended dosage is 130 mg KI (100 mg iodine) per day for a minimum of three days preferably 10 consecutive days.

2.2.6 Ensure each individual has signed copy of Appendix ERP-660-3, KI Consent Form.

2.2.7 Administer tablets to personnel who already have been exposed to radioiodine first, preferably within 2 hours of exposure.

2.2.8 Provide each individual receiving KI with a copy of Appendix ERP-660-4, Instruction and Record Sheet For Persons Receiving KI, AND instruct them to report back each day for follow-up dosages.

2.2.9 Complete information required for each person on Appendix ERP-660-2, Potassium Iodide Administration Record Form.

2.2.9.1 Use this information to administer follow-up dosages.

2.2.10 Inform HPTL when completed.

## 3.0 CONTINUING ACTIONS

3.1 HPTL shall:

3.1.1 Notify Medical Division at Ext. 801-6395, 801-6413, or 801-4371 AND Emergency Director of all persons who received KI.

3.1.2 Ensure that KI is administered in the proper dosage AND for proper number of doses.

## 4.0 FINAL CONDITIONS

4.1 Thyroid uptake of iodine is evaluated and resultant radiation doses estimated and entered into personnel monitoring records.

4.2 Reports and evaluations are completed and any exposure in excess of the applicable limits in 10CFR20. et. seq. are reported to the NRC pursuant to 10CFR20.

4.3 Exposure data is reported to the individual pursuant to 10CFR19.13.

## 5.0 APPENDICES

5.1 ERP-660-1, Potassium Iodide Work Sheet

5.2 ERP-660-2, Potassium Iodide Administration Record Form

5.3 ERP-660-3, Potassium Iodide Consent Form

5.4 ERP-660-4, Instruction and Record Sheet For Persons Receiving KI

## 6.0 SUPPORTING INFORMATION

### 6.1 Purpose

6.1.1 The purpose of this procedure is to provide guidelines for administration of KI to emergency personnel for use as a thyroid blocking agent to provide protection against airborne radioiodine.

### 6.2 Criteria for Use

6.2.1 An actual or potential thyroid CDE equal to or greater than 25 REM (1,000 DAC-hr) for any individual.

### 6.3 Special Equipment

6.3.1 KI tablets not beyond the expiration date.

### 6.4 References

6.4.1 Nuclear Emergency Plan, Section 6.4.2.3

6.4.2 NUREG 0654, Rev. 4, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

6.4.3 Reg. Guide 1.109, Rev. 4, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I

6.4.4 ERP-600, Health Physics Team

6.4.5 EPA-400-R-92-001

### 6.5 Commitment Annotation

6.5.1 0EAP A0370948 (Entire Procedure)

# APPENDIX ERP-660-1
# POTASSIUM IODIDE WORKSHEET

DATE: _____ TIME: _____

NAME: _____ S.S.N. _____

AREA: _____ Task Duration (hrs): _____

I-131 Concentration (uCi/cc) in Affected Area: _____

Respiratory Equipment (Check one)

| | TYPE | PROTECTION FACTOR (PF) |
|---|---|---|
| ☐ | Full Face Piece - Negative Pressure | 1 |
| ☐ | Airline Atmosphere Supplying Fullface - Continuous Flow | 2000 |
| ☐ | SCBA - Pressure Demand | 10,000 |
| ☐ | None | 1 |

***NOTE**

When using a fullface respirator within a GRI canister for I131 exposure, only a protective factor of 1 may be applied. Actual protection will be significantly higher. When conditions require use of this device, a Whole Body Count should be given to individuals exiting a I131 atmosphere and actual uptake assessed.

**NOTE**

25 REM thyroid exposure is equivalent to 1,000 DAC-hr I131. DAC-hr calculations may be substituted for the following dose calculations:

Previous Thyroid Dose Accumulation During Emergency: _____REM

Perform Calculation:

Total Thyroid Dose, REM =

$$1.361E6\left(\frac{R/hr}{UCi/cc}\right) \times \text{Conc I-131}\left(\frac{UCi}{cc}\right) \times \text{Task Duration (hrs)} \times \frac{\quad}{(PF)} + \text{Thyroid Dose (REM)}$$

Total Thyroid Dose = _____ REM

IF Total Thyroid Dose equals or is greater than 25 REM, THEN recommend administration of KI.

HPTL Approval: _____

# APPENDIX ERP-660-2
## POTASSIUM IODIDE ADMINISTRATION RECORD FORM

| NAME | SOCIAL SECURITY NUMBER | COMPANY | DATES | | | | | | | | | | DOSAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
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# APPENDIX ERP-660-3
# POTASSIUM IODIDE CONSENT FORM

I_____ volunteer to receive 130 milligrams per day for the next 10 days of the thyroid blocking agent potassium iodide. I have been informed by a representative of Exelon that this drug will block the absorption of radio-iodine by my thyroid and thereby reduce the exposure to radiation of the thyroid; that potassium iodide does not reduce the uptake of other radioactive material by the body; nor, does it provide protection against exposure from external radiation. I also understand that there may be some side effects upon taking potassium iodide.

Signature_____

S.S.N. _____

Date _____

## APPENDIX ERP-660-4

## INSTRUCTION AND RECORD SHEET FOR PERSONS RECEIVING KI

NAME _____

SSN _____

**WARNING**

If you feel sick, report immediately to Dosimetry or HPTL.

You have just received 130 mgs. of the thyroid blocking agent KI. In order to be most effective you should receive an additional nine (9) doses over the next 9 days. Each day for the next 9 days, take this form and report to the _____ for a thyroid count and another KI tablet.

| | DATE | THYROID COUNT RESULTS (DATE, TIME, INITIALS) | 130 mg KI TABLET ADMINISTERED (DATE, TIME, INITIALS) |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |

EXELON NUCLEAR
LIMERICK GENERATING STATION
EMERGENCY RESPONSE PROCEDURE

# ERP-650 ENTRY FOR EMERGENCY REPAIR AND OPERATIONS

## 1.0 RESPONSIBILITIES

1.1 Emergency Director (ED) authorizes emergency exposures.

1.2 Health Physics Team Leader (HPTL)

1.2.1 Directs implementation of procedure, emergency RWPS (Ref. 7.2), and exposure limits.

## 2.0 INITIAL ACTIONS

2.1 HPTL shall:

> **NOTE**
>
> Implementation of ERWP "To be used upon activation of the OSC to support emergency repair and operations" allows for exposures up to 5 REM and does not require ED approval to exceed administrative limits described in HP-C-106.

2.1.1 Direct implementation of ERWP and review attachment ERP-650-5.

2.1.2 Discuss with Health Physics Group Leader (HPGL):

2.1.2.1 Implementation of ERWP and review ERP-650-5.

2.1.2.2 Planned emergency activities.

2.1.2.3 Associated plant conditions.

2.1.2.4 Protective Requirements.

2.1.2.5 Priority of activity.

2.1.2.6 Exposure estimates.

**NOTE:**

ONLY THE ED CAN AUTHORIZE EXPOSURE GREATER THAN 5Rem.

**NOTE:**

ED MAY VERBALLY AUTHORIZE EXPOSURE AND COMPLETE DOCUMENTATION AT A LATER TIME.

2.1.3 If the anticipated dose is greater than the authorized limit associated with the Emergency RWP "To be used upon activation of the OSC to support emergency repairs and operations", consider use of one of the following:

2.1.3.1 Emergency RWP "Protection of Valuable Property, With Emergency Director Approval", (up to 10 REM limit) with ED approval per ERP-650, Appendix 2.

2.1.3.2 Emergency RWP "Lifesaving Or Protection Of Large Population With Emergency Director Approval" (up to a 25 REM limit), with ED approval per ERP-650, Appendix 2.

2.1.3.3 For greater than 25 REM a specific ERWP must be developed.

2.2 HPGL shall:

2.2.1 Determine radiological conditions:

2.2.2 Discuss radiological conditions for planned entries with HPTL.

2.2.3 Specify entry requirements.

2.2.3.1 Evaluate the need for thyroid blocking agents per ERP-660.

2.2.4 Determine team member's dose balance and inform team members of allowable exposure.

2.2.5 <u>WHEN</u> directed by HPTL,
<u>THEN</u> brief entry team per ERP-650-4.

2.2.6 Verify the Personnel Assignment Status and Exposure Control Board updated for personnel responding to accident assessment and mitigation.

## 3.0 CONTINUING ACTIONS

3.1 ED shall:

3.1.1 Ensure appropriate notification(s) required by 10CFR20.2202 be made.

3.1.2 Ensure appropriate reports required by 10CFR20.2203 be generated.

3.2 HPTL shall:

3.2.1 Inform ED of doses received in excess of 10CFR20.2202(b) limits in a 24-hour period, which are as follows:

3.2.1.1 5 Rem TEDE

3.2.1.2 15 Rem LDE

3.2.1.3 50 Rem SDE

3.2.1.4 Notify the ED that a 24-hour notification to the NRC is required.

3.2.2 Inform the ED of doses received in excess of 10CFR20.2202(a) limits, which are as follows:

3.2.2.1 25 Rem TEDE

3.2.2.2 75 Rem LDE

3.2.2.3 250 Rem SDE

3.2.2.4 Notify the ED that an immediate notification to the NRC is required.

3.2.3 Ensure incidents(s) (See Appendix ERP-650-1) are brought to the attention of the Occupational Health & Safety at Ext. 801-6395, 801-6413, or 801-4371.

3.2.3.1 Review ERP-650-6 and discuss the need for medical evaluation.

3.2.4 Ensure completion of ERP-650-2 and ensure these conditions are met:

3.2.4.1 Individual shall be a volunteer for >25 REM TEDE.

3.2.4.2 Individual is technically qualified for assigned tasks.

3.2.4.3 Individual is familiar with radiological consequences of exposures.

3.2.4.4 Pregnant females shall not take part.

3.2.4.5 Individual has not received prior emergency exposure.

3.2.5 Ensure exposure data is reported to individual and ERP-650-3 is reviewed prior to consent/volunteer assignment.

3.3 HPGL shall:

3.3.1 Complete Appendix ERP-650-4, Section II, Exit Debriefing Access Control Briefing Guide.

3.3.2 Document exposure of team members.

3.3.3 Ensure completion of ERWP sign in sheet.

3.3.4 Ensure survey results are documented and debrief HPTL.

## 4.0 FINAL CONDITIONS

4.1 Routine Health Physics procedures can be utilized for entries into affected areas.

4.2 Records generated are compiled and reviewed for submittal to NRMS.

## 5.0 ATTACHMENTS AND APPENDICES

5.1 ERP-650-1, Emergency Dose Authorization Guidelines

5.2 ERP-650-2, Emergency Dose Authorization Form

5.3 ERP-650-3, Potential Biological Effects Associated with Emergency Exposure Guidelines.

5.4 ERP-650-4, Access Control Briefing Guide

5.5 ERP-650-5, Health Physics Considerations

5.6 ERP-650-6, Criteria for Medical Evaluation

## 6.0 REFERENCES

6.1 Nuclear Emergency Plan

6.2 NUREG 0654, Rev. 2 Criteria for Preparations and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants

6.3 NCRP Report No. 39, Basic Radiation Protection Criteria

6.4 ERP-200, Emergency Director Response

6.5 HP-C-106, Dosimetry Program

6.6 HP-C-214, Collection and Analysis of Air Samples

6.7 HP-C-310, Radiation Work Permits (RWP)

6.8 ERP-660, Distribution of Thyroid Blocking (KI) Tablets

6.9 HP-C-108, Planned Special Exposures

6.10 10CFR20.2202, Notification of Incidents

6.11 10CFR20.2207, Reports of Over Exposures and Excessive Levels and Concentrations

6.12 EPA 400-R-92-001

6.13 BEIR (Biological Effects of Ionizing Radiation) III

## 7.0 COMMITMENT ANNOTATION

7.1 OEAP AO370949-AE02 (Entire Procedure)

7.2 EP Action Item Q0004965

## Appendix ERP-650-1

## EMERGENCY DOSE AUTHORIZATION GUIDELINES

| Dose Limit * (Rem) | Activity | Condition | ERWP Title |
|---|---|---|---|
| 5 | All | | To Be Used Upon Activation Of The OSC To Support Emergency Repair And Operations |
| 10 | Protecting valuable property | Lower dose not practicable | Protection Of Valuable Property, With Emergency Director Approval |
| 25 | Life saving or protection of large population | Lower dose not practicable | Lifesaving Or Protection Of Large Population With Emergency Director Approval |
| >25 | Life saving or protection of large populations | Only on a voluntary basis to persons fully aware of the risks involved. (See Appendix 3) | Developed as necessary |

*Sum of external effective dose equivalent and committed effective dose equivalent to non-pregnant adults from exposure and intake during an emergency situation. Workers performing services during emergencies should limit dose to the lens of the eye to three times the listed value and doses to any other organ (including skin and body extremities) to ten times the listed value. These limits apply to all doses from an incident, except those received in unrestricted areas as members of the public.

## Appendix ERP-650-2

## EMERGENCY DOSE AUTHORIZATION FORM

(Page 1 of 2)

SECTION A

1. Name: _____ 2. Soc.Sec. #: _____

3. Sex _____ 4. Age _____

5. Individual TLD Number: _____ Lifetime dose _____.

6. Employer/Work Group: _____ \ _____

7. Task(s) to be Performed: _____

8. Location: _____

9. Estimated time to complete the task _____ min.

10. Estimated exposure:

EDE = _____
TEDE = _____
LDE = _____
CDE Thyroid = _____
CEDE = _____

Authorized Limit _____ Rem

11. Date of Authorization: _____

12. Basis for Authorization: _____
(From Appendix 1)

13. Emergency Director: _____ (Signature)

---

SECTION B (To be completed by volunteer if expected exposure is >25 REM)

I have been briefed in the radiological consequences of the proposed emergency exposure. I have not received a previous emergency dose. I consider myself in good general health.

Signature: _____ Date: _____

**Appendix ERP-650-2 (CONTINUED)**

**EMERGENCY DOSE AUTHORIZATION FORM**
(Page 2 of 2)

SECTION C (Post-Exposure Evaluation)

1. Dose equivalent assigned for entry: _____

2. TLD/Dosimetry Results: _____

3. Bioassay Results: _____

4. Medical Evaluation/Action: _____

Doctor: _____

SECTION D

1. Disposition (Allow additional exposure, restricted access, etc.): _____

2. Individual assigned to follow up report(s): _____

3. HPTL: _____ Date: _____

4. Individual: _____ Date: _____

## Appendix ERP-650-3

## POTENTIAL BIOLOGICAL EFFECTS ASSOCIATED WITH EMERGENCY EXPOSURE GUIDELINES

Health Effects Associated with Whole-Body Absorbed Doses Received Within a Few Hours(*a)

| Whole Body Absorbed Dose (rad) | Early Fatalities(*b) (percent) | Whole Body Absorbed Dose (rad) | Prodromal Effects(*c) (percent affected) |
|---|---|---|---|
| 140 | 5 | 50 | 2 |
| 200 | 5 | 100 | 15 |
| 300 | 50 | 150 | 50 |
| 400 | 85 | 200 | 85 |
| 460 | 95 | 250 | 98 |

(*a) Risk will lower for protracted exposure periods.

(*b) Supportive medical treatment may increase the dose at which these frequencies occur by approximately 50 percent.

(*c) Forewarning symptoms of more serious health effects associated with large doses of radiation.

Approximate Cancer Risk to Average Individuals from 25 Rem Effective Dose Equivalent Delivered Promptly

| Age at exposure (years) | Appropriate risk of premature death (deaths per 1,000 persons exposed) | Average years of life lost if premature death occurs (years) |
|---|---|---|
| 20 to 30 | 9.1 | 24 |
| 30 to 40 | 7.2 | 19 |
| 40 to 50 | 5.3 | 15 |
| 50 to 60 | 3.5 | 11 |

## Appendix ERP-650-4

## ACCESS CONTROL BRIEFING GUIDE

I. PRE-ENTRY BRIEFING

Team Members _____ _____
_____ _____

Date of Entry: _____ Time of Entry: _____ ERWP # ____
Purpose: _____
_____

CHECK

_____ 1. Work scope presented & understood (ERP-500 brief)
_____ 2. Potential hazards - radiological AND non-radiological.
_____ 3. Dose rates AND activity levels.
Travel: _____ Work Area: _____ ARM: _____
_____ 4. Dosimetry type (TLD, high range self-reading extremity, etc.): _____
_____ 5. Respiratory protection: _____
Qualifications Checked: _____
_____ 6. Protective clothing: _____
_____ 7. Instruments to be used: _____

_____ 8. Surveys to be performed (☐ air, ☐ cont. ☐ rad.).
_____ 9. Complete ERP-650-2 if required (>25 Rem).
_____10. Use ERWP: _____
ED Set Points: _____ mRem; _____ dose rate $^{mR/hr}/_{R/hr}$.
_____11. Stay times on exposure limit discussed AND understood.
Initials of Entry Team: _____, _____, _____, _____.

Briefing Performed By: _____

II. EXIT BRIEFING

_____ 1. Total exposure _____ AND time _____ hr/min in area.
_____ 2. Monitor for personnel contamination, document positive findings.
_____ 3. Determine approximate dose-rates from survey meter.
_____ 4. Document any noticeable radiological OR operations concerns, i.e., gas leaks, liquid spills, alarms, equipment malfunction, etc.
_____ 5. Document recommended bioassay.
_____ 6. Take nasal swabs of persons in airborne contamination areas.
_____ 7. Obtain any survey data sheets.

Debriefing Performed By: _____

Time of Debriefing: _____

Comments: _____
_____
_____

**Appendix ERP-650-5**

**HEALTH PHYSICS CONSIDERATIONS DURING EMERGENCIES**

I. Access Control

1. Are affected areas defined?
2. Are access routes defined?
3. Are barriers AND postings in place?
4. Are access doors locked OR guarded?
5. Are control points set up?

II. Contamination Control

1. Is affected area isolated?
2. Are personnel monitoring points defined?

III. Surveillance

1. Has ARM AND PRM data been reviewed?
2. Has habitability been checked in emergency response facilities?
3. Is air sampling AND analysis taking place?
4. Is radiation, airborne AND contamination data documented? distributed?
5. Is alpha surveillance necessary?
6. Have plant air AND water systems been monitored?

IV. Exposure Control

1. Is personnel exposure data available?
2. Are exposures being logged AND tracked?
3. Have beta/gamma neutron/alpha ratios been evaluated?

V. Bioassay

1. Have individuals been identified for bioassay (WBC, urinalysis, fecal)?

VI. Equipment

1. Dosimetry
2. Respiratory Protection
3. Instrumentation
4. Protective Clothing
5. Documentation

VII. Manpower

1. Short Term needs
2. Long term needs

## Appendix ERP-650-6

### CRITERIA FOR MEDICAL EVALUATION RE: EMERGENCY EXPOSURE

The following criteria should be applied as a minimum to any individual potentially exposed to excessive radiation levels:

IF an individual's emergency dose equivalent exceeds any of following:

1) 10 Rem whole body

2) 30 Rem thyroid

3) 60 Rem skin

4) 150 Rem extremity

5) internal disposition equivalent to one organ burden

THEN the details of the exposure incident shall be brought to the attention of the Director, Occupational Health and Safety. The Director, Occupational Health and Safety shall determine the need, extent, and nature of any clinical, biological or biochemical examinations, or the need for expert consultation.

Effective Date: 1/31/02



**EXELON NUCLEAR**
**LIMERICK GENERATING STATION**
**EMERGENCY RESPONSE PROCEDURE**

ERP-630 VEHICLE AND EVACUEE CONTROL GROUP

## 1.0 RESPONSIBILITIES

1.1 Health Physics Team Leader (HPTL) shall coordinate the needs and actions of the Vehicle and Evacuee Control Group with needs and actions of other elements of the Health Physics Team.

1.2 Vehicle and Evacuee Control Group Leader coordinates the actions of the Vehicle and Evacuee Control Group Members and is the Emergency Assembly Area Coordinator at the off-site assembly area.

1.3 Vehicle and Evacuee Control Group Members perform the duties in this procedure at the designated assembly areas.

## 2.0 INITIAL ACTIONS

2.1 HPTL shall:

2.1.1 If a release is imminent or in progress, verify with the Emergency Director which offsite Assembly Area is to be used.

2.1.2 If a release has not occurred, recommend releasing non-essential site personnel home rather than to the designated offsite assembly area.

2.1.3 Appoint a Vehicle and Evacuee Control Group Leader, 2 HP Technician Members and direct them to report to the TSC display area.

2.1.4 Brief the group on the selected offsite assembly area and other pertinent information. Alpha contamination should be considered whenever there is reactor fuel degradation.

2.2 Vehicle and Evacuee Control Group Leader shall:

2.2.1 Report to the TSC and obtain keys for assembly area kits. (Keys located in EP key locker)

2.2.2 Contact the HPTL and request that the Maintenance Repair Team Leader provide a vehicle and driver in support of the Vehicle and Evacuee Control Group, with the driver to report to the TSC, if required.

2.2.3 Report to the Offsite Assembly Area with group members.

2.2.4 Upon arrival at the Offsite Assembly Area, establish communications with the HPTL in the TSC via portable radio or available telephone, 326-9860 or station ext. 2624.

2.2.5 Instruct the team members to implement section 2.3 of this procedure.

2.2.6 Ensure Personnel Assembly and Accountability is performed. ERP-630, Attachment 2 may be used to support this effort.

2.3 Vehicle and Evacuee Control Group Members shall:

2.3.1 Upon the direction of the Group Leader, proceed to the designated offsite assembly area.

2.3.2 Obtain an Assembly Area Kit at the Offsite Assembly Area.

2.3.3 Perform an inventory of the equipment in the kits by comparing contents with the inventory lists contained in the respective kits.

2.3.4 Coordinate the set-up of a Personnel Contamination Monitoring Area, a Vehicle Contamination Monitoring Area, and a Vehicle Decontamination Area. Background radiation is to be less than 300 cpm as measured with an E140N with HP-210/HP-260 probe or equivalent.

2.3.5 Perform battery, calibration and source checks on all instrumentation.

2.3.6 Report any missing items or inoperable equipment to the Group Leader and request replacements.

| | |
|---|---|
| NOTES: | PRIORITY SHOULD BE GIVEN TO THE MONITORING OF PERSONNEL. VEHICLE MONITORING, IF NECESSARY, SHOULD ONLY BE PERFORMED WHEN PERSONNEL MONITORING HAS BEEN COMPLETED. |

2.3.7 Perform whole body frisk of each individual in accordance with HP-818-1, Whole Body Frisking Method.

2.3.8 If individuals are found to be contaminated, decontaminate using the techniques described in HP-C-818, Personnel Decontamination, and complete the documentation described therein.

2.3.9 All materials used to perform decontamination or other materials which are found to be contaminated and which are to be disposed of shall be placed in plastic bags and, when full, sealed with radioactive material tape.

| | |
|---|---|
| NOTE: | WHILE STORED AT THE ASSEMBLY AREA, RADIOACTIVE MATERIAL MUST BE STORED IN AREAS POSTED IN ACCORDANCE WITH RP-AA-376, RADIOLOGICAL POSTINGS, LABELING, AND MARKINGS. |

2.3.10 If any individual cannot be decontaminated below the release limits specified in HP-C-818, contact the Vehicle Evacuee and Control Group Leader for further instructions. Personnel at the Offsite Assembly Area who are identified as being contaminated should not be returned to the site for decontamination if a release is ongoing or expected to occur.

2.3.11 Perform vehicle surveys in accordance with HP-C-211 surveying both the exterior and interior of the vehicle.

2.3.11.1 If contamination levels are less than 100 cpm above background as determined by an E140N equipped with an HP-210 or HP-260 probe or equivalent, release the vehicle or equipment by checking the appropriate block on the report.

2.3.11.2 If the vehicle is contaminated, record readings on the Vehicle Survey and Decontamination Report (Appendix ERP-630-1) and note contaminated areas and levels on the illustration.

2.3.11.3 Move contaminated vehicles to designated area.

2.3.11.4 All materials used to perform decontamination or other materials which are found to be contaminated shall be handled as described in 2.3.9.

2.3.12 Perform vehicle decontamination as follows:

2.3.12.1 Upon arrival at the decontamination area:

A. Set up a holding area for vehicles that cannot be decontaminated after several attempts.

B. Set up a designated clean area for checking vehicles once decontamination is completed.

| | |
|---|---|
| NOTE: | DRY METHODS OF DECONTAMINATION SHALL BE THE METHOD OF CHOICE. FIRST PRIORITY OF DECONTAMINATION SHALL BE TO THOSE VEHICLES NEEDED TO SUPPORT THE EMERGENCY RESPONSE FOR WHICH DRY METHODS WILL BE EFFECTIVE. |

2.3.12.2 Decontaminate vehicles using the following techniques:

A. Wipe down hard, smooth surfaces with dry masslin cloth

B. Wipe down vehicles with damp cloth.

| | |
|---|---|
| NOTE: | USE WATER SPARINGLY AND ONLY WITH APPROVAL OF THE PERSONNEL SAFETY TEAM LEADER. |

2.3.12.3 After the initial decontamination, the Health Physics Technician shall resurvey the vehicle and record post-decontamination survey results on the copy of Vehicle Survey and Decontamination Report (ERP-630-1) accompanying the vehicle.

2.3.12.4 Vehicles meeting the release criteria may be released to the owner, if present. If owner is not present, move vehicle to clean holding area.

2.3.12.5 If vehicle is still contaminated, return it to the contaminated holding area for further decontamination at a later time.

2.3.12.6 When decontamination operations are complete, return completed forms to the Vehicle and Evacuee Control Group Leader.

2.3.12.7 Remain on-station until released by the Group Leader.

## 3.0 CONTINUING ACTIONS

3.1 Vehicle and Evacuee Control Group Leader shall:

3.1.1 When all personnel and vehicles have been monitored, and the team is no longer needed for decontamination, instruct them to survey the monitoring areas, themselves, their equipment and vehicle, and return to the TSC, or to the EOF if the TSC is inaccessible.

3.1.2 Upon return of the group, collect personnel and vehicle survey and decontamination records and forward them to the HPTL.

3.1.3 Using completed Vehicle Survey and Decontamination Reports (ERP-630-1), contact owners and inform them where and when they may pick up their vehicle.

3.1.4 Arrange for return of all contaminated material to the site for disposition in accordance with HP procedures.

3.2 Vehicle and Evacuee Control Group Members shall:

3.2.1 Upon release, return equipment to the TSC or other location as directed.

3.2.2 Return all survey and decontamination records to the Vehicle and Evacuee Control Group Leader.

## 4.0 FINAL CONDITIONS

4.1 HPTL shall:

4.1.1 **IF** event is terminated ensure inventory and resupply of equipment in Vehicle and Evacuee Control Kit.

4.1.2 **IF** event is continuing but Vehicle and Evacuee Control Group is no longer needed, ensure inventory and resupply of equipment, and reassign group members as appropriate.

## 5.0 ATTACHMENTS AND APPENDICES

5.1 ERP-630-1 Vehicle Survey and Decontamination Report

5.2 ERP-630-2 Accountability List

## 6.0 SUPPORTING INFORMATION

### 6.1 Purpose

6.1.1 The purpose of this procedure is to establish provisions for personnel monitoring and decontamination and vehicle monitoring and decontamination during a Site Evacuation when contamination may be present.

### 6.2 Criteria for Use

6.2.1 Emergency has been declared per ERP-101, Classification of Emergencies.

6.2.2 An atmospheric release of radioactive material has occurred or is occurring, and a Site Evacuation has been ordered or is underway.

6.2.3 As directed by the HPTL.

### 6.3 Special Equipment

6.3.1 Assembly Area Kit

6.3.2 Portable Radio (1/Team)

### 6.4 References

6.4.1 ERP-120 - Station Evacuations

6.4.2 HP-C-818 - Personnel Contamination Monitoring and Decontamination

6.4.3 ERP-101, Classification of Emergencies

### 6.5 Commitment Annotation

None

**ERP-630-1 - VEHICLE SURVEY AND DECONTAMINATION REPORT**

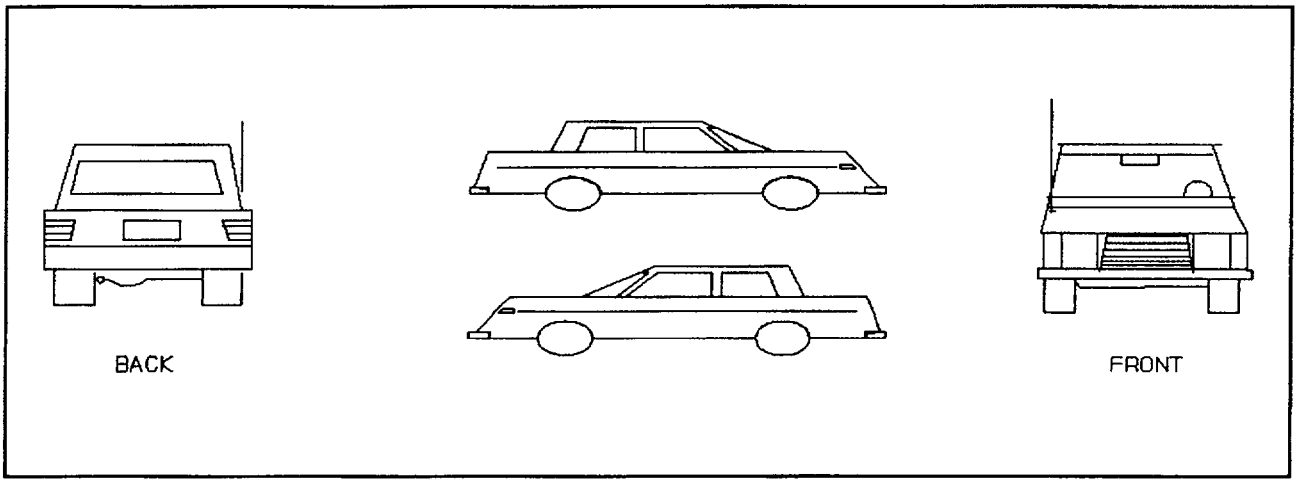
LICENSE #_____ STATE _____

NAME OF OWNER _____ PHONE ( )_____( )_____
HOME WORK

ADDRESS (IF NOT EXELON)_____
NUMBER - STREET CITY STATE ZIP

INITIAL SURVEY RESULTS

INSTRUMENT USED_____ ____ _____ DATE_____TIME_____ SURVEYED BY: _____
MODEL NO. S/N PROBE TYPE




_____CLEAN-AUTHORIZED FOR RELEASE _____ CONTAMINATION DETECTED-RELEASE DENIED

COMMENTS

_____

POST-DECONTAMINATION SURVEY RESULTS

DECONED BY:_____
NAME DATE TIME

DECON METHOD USED: _____

POST-DECON SURVEY RESULTS: _____

INSTRUMENT USED: _____ DATE:_____ TIME:_____

FOLLOWUP ACTION REQUIRED _____NONE_____SPECIAL FOLLOWUP
(SPECIFY) _____

SIGNATURE: _____

**ERP-630-2 - ACCOUNTABILITY LIST**
**ATTACHMENT 2**

LOCATION: _____

DATE: _____ TIME: _____ COMPLETED: _____

| LAST NAME | FIRST NAME | M.I. | SUPERVISOR OR GROUP | SOCIAL SECURITY NUMBER |
|---|---|---|---|---|
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Effective Date: 1/31/02



EXELON NUCLEAR
LIMERICK GENERATING STATION
EMERGENCY RESPONSE PROCEDURE

ERP-600 **HEALTH PHYSICS TEAM**

## 1.0 RESPONSIBILITIES

| | |
|---|---|
| NOTE: | THE PURPOSE OF THIS PROCEDURE IS TO PROVIDE GUIDELINES FOR THE ACTIONS REQUIRED TO ACTIVATE AND ASSEMBLE THE HEALTH PHYSICS TEAM. |

1.1 A Senior Health Physics Technician on shift is assigned as the Interim Health Physics Group Leader and assumes role of Interim Health Physics Team Leader and implements this procedure until relieved.

1.2 Health Physics Group Leader (HPGL) coordinates activities of Health Physics Group Members and assumes the role.

1.3 Health Physics Team Leader (HPTL) directs and coordinates the team's activities and interfaces with the Chemistry Sampling and Analysis Team Leader for preparation and shipping of chemistry samples.

1.4 Health Physics Group members conduct surveys and provide health physics coverage.

1.5 Health Physics Network Communicator provides Health Physics and Dose Assessment information to NRC.

## 2.0 INITIAL ACTIONS

2.1 HPTL shall:

2.1.1 Direct implementation of ERWPs per ERP-650

2.1.2 Activate Health Physics Team in accordance with Appendix ERP-600-1.

2.1.3 Inform the EP Coordinator (Extension 5109) of any Communications Problems, Administrative Supply deficiencies and Team Readiness to Activate.

2.1.4 Upon arrival at the TSC discuss radiological considerations with Emergency Director (ED).

| NOTE |
|---|
| HEALTH PHYSICS TEAM ACTIVITIES SHOULD BE GIVEN TO THE ASSESSMENT OF INPLANT RADIOLOGICAL CONDITIONS AND SUPPORT OF EMERGENCY ENTRIES UNTIL TSC HAS BEEN ACTIVATED. |

2.1.5 Prioritize Personnel assignments.

2.1.5.1 ERP-630, Vehicle and Evacuee Control Group

2.1.6 Direct group leaders to report group activities.

2.2 HPGL shall:

2.2.1 Assume the role of interim HPTL and implement ERP-600 "Health Physics Team" until relieved by the HPTL.

2.2.2 Ensure Health Physics Team Member activation per Appendix ERP-600-1.

2.2.3 Ensure that ERWP status has been established.

2.2.4 Report to Operations Support Center (OSC).

2.2.5 Assemble 2 Field Survey squads (Notify Maintenance Group Leader) (1-HP Tech and 1-I&C Tech each)
**AND** direct squads to: (Ref 6.5.2 and 6.5.3 and 6.5.5).

2.2.5.1 Assemble at SMB (F/S Kit Location)

2.2.5.2 Retain personal dosimetry upon exit of Plant

2.2.5.3 Contact DAC at Extension 2620 for further instructions

2.2.6 Ensure Emergency Response Facility habitability surveys for the OSC are performed and report results of the survey to the OSC Director.

2.2.7 Obtain a briefing from OSC Director

2.2.7.1 Plant conditions

2.2.7.2 Affected areas

2.2.7.3 Proposed entries

2.2.8 **IF** the TSC is activated,
**THEN** communicate with HPTL

2.2.8.1 Radiological conditions (actual & projected)

2.2.8.2 Course of action

2.2.8.3 Protective measures

2.2.8.4 Survey data required

2.2.8.5 Health Physics escort requirements

2.2.9 Establish a course of action

2.2.10 Dispatch HP technician to Aux Equipment Room, ARM panel to record ARM readings if required.

> NOTE
>
> IN-PLANT RADIATION SURVEYS SHOULD BE CONDUCTED IN CONJUNCTION WITH ENTRIES FOR OTHER PURPOSES. ARM READINGS SHOULD BE USED IN LIEU OF PRE-ENTRY SURVEYS IF POSSIBLE.

2.2.11 **IF** surveys are requested,
**THEN** determine:

2.2.11.1 Survey information needed

2.2.11.2 Type of survey(s) to be conducted

2.2.11.3 Instrumentation to be used

2.2.12 Form HP Survey Squads as needed

> NOTE
>
> ON-SITE, OUT OF PLANT SURVEYS MAY BE PERFORMED BY FIELD SURVEY TEAMS IF AVAILABLE. PRIMARY RESPONSIBILITY IS HEALTH PHYSICS GROUP.

2.2.13 **IF** a radiological release outside the plant is occurring
**OR** imminent
**THEN**:

2.2.13.1 Remain cognizant of location of Health Physics personnel on-site, out of plant

2.2.13.2 Coordinate with Dose Assessment Team

2.2.13.3 Determine locations of possible radiological problems

2.2.13.4 Direct on-site, out of plant surveys as necessary

2.2.14 Implement Emergency RWP.

2.2.15 Brief the technician/emergency team prior to affected area entry using Appendix ERP-650-5.

2.2.16 Brief all Squad members to ensure knowledge of:

2.2.16.1 Worksite location

2.2.16.2 Worksite radiological conditions

2.2.16.3 Route to worksite

2.2.16.4 Work to be done

2.2.16.5 Maximum allowed exposure limit

2.2.16.6 Emergency Radiation Work Permit restrictions

2.2.16.7 Proper instrumentation and air sampling equipment

2.2.17 Ensure Squad is equipped with needed tools and equipment.

2.2.18 Estimate total exposure accumulated of task.

2.2.18.1 **IF** entry plus exit exposure would exceed allowable exposure, **THEN** contact HPTL at ext. 2624 or Prelude 127.

2.3 Health Physics Squad Members shall:

```
*********************************************************
*
*  ENTRY INTO RADIATION AREAS EXCEEDING THE RANGE OF THE
*  SURVEY INSTRUMENT IN USE IS NOT ALLOWED.
*********************************************************
```

2.3.1 Respond to call-out per Appendix ERP-600-1.

2.3.2 Report directly to the HPGL in the OSC.

2.3.3 Perform Health Physics activities as required.

2.3.4 Upon arrival at survey locations:

2.3.4.1 Conduct rapid surveys

2.3.4.2 Estimate exposures based on actual readings

2.3.4.3 Set maximum stay time based on estimated exposure

2.3.4.4 Notify Squad members of stay time

2.3.5 **WHEN** work task is commenced, **THEN**:

2.3.5.1 Continue to monitor area dose rates

2.3.5.2 Be cognizant of actions which could change radiological conditions

2.3.5.3 Communicate initial and significantly changing dose rates to HPGL.

## 3.0 CONTINUING ACTIONS

3.1 HPTL shall:

3.1.1 Contact HPGL in OSC and assess existing in-plant radiological conditions.

3.1.2 **IF** requested by NRC

**THEN** appoint technically qualified Health Physicist as HPN Communicator.

3.1.2.1 Must have direct access to health physics **AND** dose assessment information.

3.1.3 Consider need for implementation of protective actions for emergency workers including need for potassium iodide (KI) in accordance with ERP-660, Distribution of Thyroid Blocking Tablets.

3.1.4 Ensure sufficient Health Physics Team members are available at assembly areas (OSC HP Field Office).

3.1.4.1 Call in additional personnel as needed.

3.1.5 Coordinate exposure control for emergency workers per ERP-650, Entry For Emergency Repair and Operations

3.1.6 Assign personnel to support positions and ensure radiological protection functions are covered.

3.1.7 Provide Chemistry Sampling and Analysis Team support for shipment of high activity samples per ERP-440. (Ref 6.5.1)

3.1.8 Communicate with Emergency Medical Director and Porter Consultants regarding the condition and treatment of injured individual(s).

3.1.9 Maintain communications with groups.

3.2 HPN Communicator shall:

| NOTE |
| --- |
| CONTACT NRC FROM HPN PHONE IN TSC |

3.2.1 Contact NRC at:

3.2.1.1 301-816-5100 (Primary Number)

3.2.1.2 301-415-0550 (Primary Backup)

3.2.2 Identify yourself as LGS HPN communicator.

3.2.3 Request connection to HPN system.

3.2.4 Provide information required.

3.2.5 Maintain continuous communications until NRC requests disconnection
**OR** relieved.

NOTE

HEALTH PHYSICS TEAM SUPPORT STAFF PERSONNEL ARE ASSIGNED TO ACTIVITIES AS DETERMINED BY THE HPTL.

3.3 Dosimetry or designated personnel shall:

3.3.1 Report to the HPGL in the OSC or as directed.

3.3.2 Provide personnel exposure information to station personnel as required.

3.3.3 Ensure emergency dosimetry is available as required.

3.3.4 Ensure emergency dosimetry for Field Survey Personnel is available as required.

3.3.5 **IF** directed by HPTL,
**THEN** administer potassium iodide (KI) in accordance with ERP-660, Distribution of Thyroid Blocking Tablets.

3.3.6 Ensure dosimetry devices are processed.

3.3.7 Initiate necessary exposure evaluations.

3.3.8 Ensure bioassay samples are analyzed.

3.4 Health Physics Group Members shall:

3.4.1 Record results of all surveys on Survey Data Sheet or equivalent.

3.4.2 Review exposures received by team members.

3.4.3 Record all observations and conditions on survey Data Sheet.

3.4.4 Report survey results
**AND** personnel exposures to HPGL.

3.4.5 **IF** directed by HPGL,
**THEN** turn in Squad dosimetry.

3.4.6 Analyze air sample media.

3.4.7 Provide survey records to HPGL.

3.5 HPGL shall:

3.5.1 Report radiological conditions
**AND** personnel exposure status to HPTL.

3.5.2 Provide plant survey Squads
**AND** OSC Director with status updates.

3.5.3 Ensure the Personnel Assignment Status and Exposure control Board is maintained up-to-date.

3.5.4 Direct plant survey Squads to other locations as needed.

3.5.5 **IF** additional personnel are needed, **THEN** inform the HPTL.

## 4.0 FINAL CONDITIONS

4.1 **IF** directed by the ED to deactivate the Health Physics Team, the HPTL shall:

4.1.1 Instruct all Health Physics Group Members and Leaders to:

4.1.1.1 Return RWP status to normal

4.1.1.2 Forward all records, forms and logs to HPTL for review.

4.1.1.3 Inventory all emergency supplies and replace as necessary.

4.1.1.4 Return areas to non-emergency status.

4.2 When directed by the HPTL to deactivate the Health Physics Group the HPGL shall:

4.2.1 Instruct all Health Physics Personnel Members to:

4.2.1.1 Forward all records, forms and logs to HPTL for review.

## 5.0 ATTACHMENTS AND APPENDICES

5.1 ERP-600-1, Health Physics Team Activation

## 6.0 SUPPORTING INFORMATION

6.1 Purpose

6.1.1 The purpose of this procedure is to provide guidelines for the actions required to activate and assemble the Health Physics Team.

6.2 Criteria for Use

6.2.1 This procedure shall be implemented at ALERT or higher emergency classification or at the discretion of the ED.

6.3 Special Equipment

None

6.4 References

6.4.1 Limerick Generating Station Emergency Plan

6.4.2 NUREG 0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

6.4.3 ERP-630, Vehicle and Evacuee Control Group

6.4.4 ERP-660, Distribution of Thyroid Blocking Tablets

6.4.5 ERP-650, Entry for Emergency Repair and Operations.

6.4.6 HP-514, Acceptance Criteria for Respiratory Protective Equipment received from Offsite Cleaning Facilities.

6.4.7 HP-515, Inspection, Maintenance and Repair of Respiratory Protection Equipment.

6.4.8 ERP-440, Offsite Analysis of High Activity Samples

6.4.9 ERP-230, Operations Support Center Director

6.4.10 HP-C-214, Collection and Analysis of Air Samples

6.5 Commitment Annotation

6.5.1 EP Action Item AR #A0004445, QE #Q0004101

6.5.2 EP Action Item Q0004967

6.5.3 EP Action Items Q0004906 and Q0004968

6.5.4 PEP #I0007597

6.5.5 PEP #I0007596

## APPENDIX ERP-600-1
## (PAGE 1 OF 1)

### HEALTH PHYSICS TEAM ACTIVATION

1.0 On call HPTL and HPGL shall:

> NOTE
>
> CALL BACKS TO AUTODIALER MUST BE PERFORMED DURING NORMAL WORK HOURS AS WELL AS OFF HOURS.

1.1 **IF** contacted by pager or autodialer,
**THEN** respond to code as follows:

1.2 Call autodialer at 1-800-MAGENTA (1-800-624-3682) or follow autodialer prompts.

> NOTE
>
> PAGER CODES ARE AS FOLLOWS:
> 6611 - CALL IN PAGER TEST
> 6622 - CALL IN AND RESPOND DRILL
> 6633 - CALL IN AND RESPOND, REAL EMERGENCY

1.3 **IF** autodialer is busy,
**THEN** callback autodialer after a short wait.

1.4 **IF** autodialer fails,
**THEN** call LGS ASPEN,
**AND** enter "4#",
**AND** follow prompts.

1.5 In the event of autodialer failure contact Health Physics Technicians per ERP-600 Appendix 1, Step 1.6.1

1.6 Ensure a minimum staffing as follows:
**9 Technicians, 1 DAC or PBAPS DAC, 1 HPTL, and 1 HPGL.**

1.6.1 Between the hours of 6:00 AM and 6:00 PM Monday-Friday or in the event of autodialer failure the HPGL on-call shall ensure manual call-out of Health Physics Technicians (taking credit for technicians already on site) until a minimum total technician staffing of 12 technicians has been established.

1.6.2 Between the hours of 6:00 PM and 6:00 AM seven days a week including 24 hours per day on weekends and holidays the autodialer will automatically contact a minimum of 12 technicians.

2.0 Health Physics Team Members shall:

2.1 **IF** contacted by autodialer callout,
**THEN** follow prompts,
**AND** respond as required.

EXELON NUCLEAR
LIMERICK GENERATING STATION
EMERGENCY RESPONSE PROCEDURE

ERP-340 FIELD SURVEY GROUP

## 1.0 RESPONSIBILITIES

1.1 Dose Assessment Coordinator (DAC) directs actions of Field Survey Team Members per ERP-300 until relieved by EOF Field Survey Group Leader (FSGL).

1.2 Field Survey Team (FST) Members conduct field surveys.

## 2.0 INITIAL ACTIONS

2.1 DAC performs initial dispatch of FST per ERP-300-3.

2.2 FST Members shall:

2.2.1 Obtain key to Site Management Building (SMB) and Equipment Storage Locker from Rad Pro(RP) Field Office or Technical Support Center (TSC) key locker.

2.2.2 Keep all dosimetry upon leaving protected area.

2.2.3 Report to the SMB.

2.2.4 Contact DAC by phone (ext. 2620) and provide:

2.2.4.1 Name (RP and Driver)

2.2.4.2 Social Security Number (RP and Driver)

2.2.4.3 Team color designation (by kit selected)

2.2.5 Obtain Emergency Equipment:

2.2.5.1 Field Survey Kit

2.2.5.2 Emergency Dosimetry

2.2.5.3 Radio Equipment

a. Hand held radio
b. Two batteries
c. Antenna and Cigarette Lighter Adapter, only necessary if radio is not installed.

2.2.6 **IF** seal on Field Survey Kit is broken **THEN** obtain a sealed kit **OR** perform inventory per G0000578 and G0000579.

2.2.7 Perform Step 1 of ERP-340-2.

2.2.8 Notify DAC of any equipment that did not function correctly or is missing.

> **NOTE**
>
> Relocate to a minimum of 50 feet from any site building prior to communication check.

2.2.9 Perform radio communication check with DAC.

> **NOTE**
>
> Channel 1 is used to communicate with the FSGL; Channel 2 is used to communicate with other FSTs.

2.2.9.1 **IF** vehicle has installed radio **THEN** use installed radio as primary communications.

a. Switch radio on
b. Perform radio check

2.2.9.2 **IF** vehicle dose not have installed radio but DOES have cigarette lighter, **THEN** use portable radio with charger.

a. Locate radio charger in vehicle
b. Plug charger into cigarette lighter
c. Put radio into charger face down
d. Place magnetic-based antenna on roof
e. Perform check using charger speaker and microphone

2.2.9.3 **IF** vehicle does not have an installed radio **OR** cigarette lighter, **THEN** use portable radio only.

a. Switch radio on
b. Adjust Squelch
c. Perform radio check

2.2.10 Ensure E-520/HP-270 or equivalent is operating at all times.

2.2.11 Proceed to initial location as directed.

## 3.0 CONTINUING ACTIONS

> NOTE
>
> Section 3.1 is to be performed ONLY in the event that EOF Dose Assessment is not staffed to perform these FSGL functions.

3.1 DAC shall:

3.1.1 Direct activities of the FST.

3.1.1.1 Maintain communications with FST

3.1.1.2 Record data on Appendix ERP-340-1

3.1.1.3 Provide status updates to the FST

> NOTE
>
> Direct Reading Dosimeter (DRD) reading X projected dose ratio = estimated TEDE.

3.1.1.4 Keep FST informed of projected dose ratio **AND** assist FST in using ratio to estimate Total Effective Dose Equivalent(TEDE) dose.

3.1.2 Inform Dose Assessment Team Leader (DATL) of results from field surveys, particularly where:

3.1.2.1 Actual readings differ significantly from expected (projected) values.

3.1.2.2 Field dose rate equals or exceeds 250 mRem/hr.

3.1.2.3 Field radioiodine concentration equals or exceeds 6E-9 μCi/cc (.3 DAC $I^{131}$).

3.1.3 **IF** field radioiodine concentration exceeds 2E-8 μCi/cc **THEN** initiate team member DAC-hr tracking.

3.1.4 **IF** informed by FST that team DAC-hr exceeds 1,000 DAC-hrs **OR** dose projections indicated that team DAC-hr may reach 1,000 DAC-hr **THEN** arrange for relief team dispatch **OR** initiate dose extension per ERP-650.

3.1.5 **IF** informed by FST that team DAC-hr may exceed 1,000 (25 REM), **THEN** initiate ERP-660 "Distribution of Thyroid Blocking Agents".

3.1.6 **WHEN** scan results of field air sample is available **THEN** calculate efficiency factor using the following equation **AND** transmit to teams.

$$\text{Eff Factor} = \frac{\text{Estimated Concentration}}{\text{Actual Concentration}}$$

3.1.7 **IF** FST members or vehicles become contaminated, **THEN** inform the Health Physics Team Leader.

3.1.8 **WHEN** the EOF is in command and control of Dose Assessment, **THEN** turnover DAC duties to EOF FSGL using Appendix ERP-300-3.

3.2 FST Members shall:

**WARNING**

ALWAYS FOLLOW EXELON ENERGY VEHICLE AND PERSONNEL SAFETY TECHNIQUES.

3.2.1 Perform radiation survey while in transit to specified survey location.

3.2.2 Notify DAC or FSGL at the EOF of arrival and dose rate encountered.

3.2.3 At each survey location:

3.2.3.1 Perform airborne, radiation and contamination survey, unless directed otherwise by DAC or FSGL.

3.2.3.2 Start air sample

1. Particulate filter and silver zeolite cartridge marked to indicate direction of air flow
2. Flow rate observed and recorded not to exceed 3 scfm
3. 10 cubic feet minimum volume

3.2.3.3 Perform open/closed waist level survey using E-520/HP-270.

3.2.3.4 Perform gross masslin smear survey

3.2.3.5 Move to low background area.

3.2.3.6 Transmit data points 1-5 from ERP-340-3 to the DAC or FSGL via radio.

> NOTE
>
> SURVEY NUMBER INCLUDES BOTH LETTER AND NUMBER. LETTER IS DETERMINED BY TEAM DESIGNATED COLOR, NUMBER IS SEQUENTIAL BY TEAM. EXAMPLE-SURVEY G-3 WOULD BE THE 3RD SURVEY PERFORMED BY THE GREEN TEAM.

3.2.4 **IF** unable to contact DAC or FSGL by radio, **THEN**:

a. Switch to Channel 2 and attempt a communications relay with another team
b. Telephone TSC at (610) 718-2620 **OR** EOF at (610) 380-3847 or 3848.

3.2.5 Upon arrival at Low Background Area:

> NOTE
> THE AIR SAMPLE CALCULATIONS USED IN APPENDIX ERP-340-3, FIELD SURVEY DATA SHEET USE THE METHODOLOGY DESCRIBED IN HP-204.

3.2.5.1 Remove and count filter per HP-C-214 or equivalent Exelon procedure.

3.2.5.2 Run air sampler for one minute with silver zeolite cartridge in place to purge cartridge of noble gases.

3.2.6 Field count smears per HP-C-211 or equivalent Exelon procedure.

3.2.7 Field count iodine cartridge per HP-204 or equivalent Exelon procedure.

3.2.8 Complete Field Survey Data Sheet (ERP-340-3) and transmit Data Items #6 and 7 to FSGL.

3.2.9 Perform additional surveys as directed.

## 4.0 FINAL CONDITIONS

4.1 Survey all personnel and vehicles for radioactive contamination before returning to site.

4.2 Deliver all samples to Chemistry Group at Radwaste 217' **OR** as directed.

4.3 Deliver data sheets to DAC.

4.4 Inventory Field Survey Kit **AND** report results to HPTL in the TSC.

## 5.0 APPENDICES

5.1 ERP-340-1, FSGL Data Sheet

5.2 ERP-340-2, FST Member Checklist

5.3 ERP-340-3, Field Survey Data Sheet

## 6.0 SUPPORTING INFORMATION

6.1 Purpose

6.1.1 To provide guidelines for actions of Field Survey Group.

6.2 Criteria for Use

6.2.1 Field Survey Group shall be activated at Alert level or as determined by The Emergency Director.

6.3 Special Equipment

6.3.1 Radio with battery packs and charger

6.3.2 Field survey kits

6.3.3 Vehicle

6.3.4 Emergency Dosimetry

6.4 References

6.4.1 HP-204

6.4.2 HP-C-214

6.4.3 Letter #JGF-89-11

6.4.4 NUREG/CR-3011 Dose Projection Considerations for Emergency Conditions at Nuclear Power Plant

6.4.5 HP-C-211

6.4.6 ERP-600

6.4.7 ERP-300

6.4.8 ERP-650

6.4.9 G0000579, G000578

6.4.10 EPA400-R-92-001, Oct. 1991, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents.

6.5 Commitment Annotation

6.5.1 A.I Q0001944

6.5.2 OEAP A0370948-AE02 (Entire Procedure)

**APPENDIX ERP-340-1**

DATE_____
FSGL_____

FIELD SURVEY GROUP LEADER DATA SHEET

| | DATA NUMBER | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SURVEY NUMBER | 1 | | | | | | | | | | |
| SURVEY LOCATION | 2 | | | | | | | | | | |
| TIME OF SURVEY | 3 | | | | | | | | | | |
| OPEN WINDOW mR/hr | 4 | | | | | | | | | | |
| CLOSED WINDOW | 5* | | | | | | | | | | |
| GROSS SMEAR (cpm) MASSLIN | 6 | | | | | | | | | | |
| | 6 | | | | | | | | | | |
| IODINE CONCENTRATION µCi/cc | 7* | | | | | | | | | | |
| | | | | | | | | | | | |
| DOSE RATIO | | | | | | | | | | | |
| | | | | | | | | | | | |

*IF CLOSED WINDOW(#5) >250 OR IODINE CONCENTRATION(#7) >$6.5 \times 10^{-7}$, NOTIFY DOSE ASSESSMENT COORDINATOR IMMEDIATELY

APPENDIX ERP-340-2
FIELD SURVEY TEAM MEMBER CHECK LIST

1. BEFORE LEAVING SITE

| INSTRUMENT INVENTORY | | | | | |
|---|---|---|---|---|---|
| INSTRUMENT TYPE | SERIAL NUMBER | CAL DUE | BATTERY CHECK | RESPONSE CHECK | CHECK-OFF |
| RO-2A | | | | | |
| E-520 | | | | | |
| E-140N HP210T | | | | | |
| Radeco H 890C | | | | N/A | |
| A) All Equipment accounted for and operable | | | | | |
| B) Ensure all team members have Emergency Dosimetry and it is zeroed (0-1500mR and 0-5R DRD's) | | | | | |
| C) Notified DAC by phone X2620 | | | | | |
| D) Radio communication check performed | | | | | |
| 1) Kit color designation _____team | | | | | |
| E) Have been briefed on situation, etc. | | | | | |
| F) E520/HP270 is ON | | | | | |

APPENDIX ERP-340-3
FIELD SURVEY DATA SHEET

| READ NUMBERED DATA TO FSGL/DAC W/O UNITS UNLESS DIRECTED OTHERWISE | |
|---|---|
| SURVEY NUMBER (#1) | SURVEY LOCATION (#2) |
| | |
| **AIRBORNE SURVEY DATA** | |
| Duration = (survey time - time off) _____ min | |
| Total cfm = (initial flow rate + final flow rate) _____ cfm | |
| Avg flow rate = (total flow rate / 2) _____ cfm | |
| Retention factor (RF) = (20 - Avg Flow Rate) _____ | |
| Volume = (Duration x Avg Flow rate) _____ | |
| | |
| **RADIATION SURVEY DATA (WAIST HIGH)** | |
| OPEN WINDOW mR/hr (#4) _____ | CLOSED WINDOW mR/hr (#5) _____ |
| | |
| **CONTAMINATION SURVEY DATA GROSS SMEARS (MASSLIN)** | |
| LOCATION | net cpm (#6) |
| LOCATION | net cpm (#6) |
| | |
| **AIRBORNE SURVEY CALCULATIONS** | |
| Gross cpm Filter | net cpm Filter |
| Gross cpm Cartridge | net cpm Cartridge |
| | |
| **ESTIMATE RADIOIODINE CONCENTRATION & DAC FRACTION** | |
| Eff Factor = 1 unless FSGL notifies otherwise | |
| IODINE CONCENTRATION uCi/cc = $\frac{\text{Net cpm Cartridge}}{(7.86 \times 10^{6})(\text{Volume})(\text{RF})(\text{Eff Factor})}$ = (#7) _____ | |
| DAC FRACTION = $\frac{\text{Estimated Radioiodine Concentration}}{\text{DAC I-131 (Ref 6.5.1)}}$ = $\frac{\_\_\_\_\_}{2.0 \times 10^{-8}}$ = _____ | |

APPENDIX ERP-340-4
FIELD SURVEY DATA SHEET

**(IF REQUESTED BY FSGL/DAC)**

**TEAM DOSE AND DAC-HR ESTIMATION**

Estimate time in plume(hr) _____ x DAC Fraction _____ = Current DAC-hr _____

Previous DAC-hr_____+ Current DAC-hr _____= Team DAC-hr_____

IF TEAM DAC-HR EXCEEDS 1,000, NOTIFY FSGL IMMEDIATELY

Completed by: _____
Date:_____

| | RP TECH | DRIVER |
|---|---|---|
| 1. Prev. Est. TEDE | | |
| 2. Prev. DRD Reading. | | |
| 3. Current DRD Reading. | | |
| 4. Current Est. Proj. Dose Ratio | | |

IF TOTAL DOSE EXCEEDS 75% OF CURRENT AUTHORIZED LEVEL, NOTIFY FSGL IMMEDIATELY

**RP TECH**

Current HP DRD Reading (3)_____- Prev. HP DRD Reading (2)_____= Current HP Exp. _____

Current HP Exp ____ x Current Est. Dose Ratio (4)____ = Current HP TEDE _____

Prev. HP TEDE (1)_____ + Current HP TEDE_____ = total TEDE _____

**I&C TECH (Driver)**

Current Driver DRD Rdng (3)_____- Prev. Driver DRD Rdng (2)_____=Current Driver Exp.____

Current Driver Exp_____ x Current Est. Dose Ratio (4)____= Current Driver TEDE _____

Previous Driver TEDE (1)_____+ Current Driver TEDE_____= Total TEDE_____

EXELON NUCLEAR
LIMERICK GENERATING STATION
EMERGENCY RESPONSE PROCEDURE

ERP-300 DOSE ASSESSMENT COORDINATOR

## 1.0 RESPONSIBILITIES

1.1 Shift Dose Assessment Person (SDAP) performs dose assessment activities as necessary or until relieved.

1.2 Dose Assessment Coordinator (DAC) coordinates Dose Assessment and Field Survey activities **AND** advises Emergency Director (ED) on Protective Action Recommendations (PAR) based on dose projections.

## 2.0 INITIAL ACTIONS

NOTE

IMPLEMENTATION OF THIS PROCEDURE DOES NOT CONSTITUTE IMPLEMENTATION OF THE EMERGENCY PLAN.

NOTE

TURNOVER OF DOSE ASSESSMENT RESPONSIBILITIES TO THE TSC DOSE ASSESSMENT COORDINATOR SHALL OCCUR WHEN HP TECH ON SHIFT IS DIRECTED TO REPORT TO THE TSC REGARDLESS OF TSC ACTIVATION STATUS.

2.1 SDAP on shift reports to the TSC as directed by the DAC.

2.1.1 The DAC should receive turnover information from the SDAP.

2.2 TSC Dose Assessment Coordinator shall:

2.2.1 Complete ERP-300, Appendix 2.

2.2.2 **IF** computer problems are encountered, refer to Appendix 11.

2.2.3 Obtain wind speed, wind direction, Delta-T using Appendix 7.

2.2.4 If PMS is unavailable, use Appendix 8 to obtain Met Data.

2.2.5 Using Appendix 14, determine the stability class and hang appropriate stability class isopleth on EPZ maps.

2.2.6 Determine appropriate site evacuation area and route, per ERP-120, Station Evacuation (Ref. 6.4.13).

2.2.7 Coordinate formation of Field Survey Teams (FST) per Appendix ERP-300, Appendix 3.

2.2.8 Inform the FST of the projected dose ratio.

2.2.9 When DAC is ready to assume dose assessment responsibilities
**THEN**:

2.2.9.1 Assume responsibility for all Dose Assessment activities.

2.2.9.2 Inform the ED that Dose Assessment is being performed in the TSC.

2.2.10 Perform dose projections and calculations as necessary using Appendix 4.

2.2.11 Review results of dose projections and refer to Appendix 13 for self check principals.

2.2.11.1 **IF** EAL summary on Page 2 of printout indicates an EAL has been exceeded:

A. Complete the Dose Assessment Portion of ERP-300, Appendix 9.

B. Review with ED immediately.

2.2.11.2 **IF** conditions exist that indicate a PAG is exceeded at the EPZ boundaries or field survey measurements identify that a PAG is exceeded outside of the EPZ boundary,
**THEN** include a PAR based on best information from all sources for areas outside of the EPZ on ERP-300, Appendix 9, "Protective Action Worksheet".

2.2.12 **IF** notified that FST DAC-hr iodine exceeds 1,000 DAC hours
**OR** is projected to exceed 1,000 DAC hours
**THEN** rotate teams
**OR** initiate actions to issue KI to field teams per ERP-660.

2.2.13 **IF** notified by FST that offsite iodine concentration exceeds 2.6 X $10^{-6}$ uCi/cc
**THEN** calculate child thyroid dose commitment
Dose Rate = 1.94 x 10 P9 x Iodine Conc. (uCi/cc)
**AND** notify ED of General Emergency condition.

2.2.14 **IF** notified by FST that offsite dose rate equals or exceeds 1000 mr/hr
**THEN** notify ED of General Emergency condition.

NOTE

THE FOLLOWING PROTECTIVE MEASURE SHOULD BE CONSIDERED ONLY AFTER SAMPLE DATA VERIFIES THE PRESENCE OF IODINE.

2.2.15 **IF** projected or actual iodine deposition is greater than 0.13 uci/$m^2$ (1.5 Rem ingestion dose)
**THEN** inform ED to recommend sheltering all lactating dairy animals and putting them on stored feed and water.

NOTE

THE FOLLOWING PROTECTIVE MEASURE SHOULD BE CONSIDERED ONLY AFTER FIELD SURVEY DATA INDICATING IODINE DEPOSITION IS RECEIVED AND VERIFIED.

2.2.16 **IF** notified that actual field samples indicate iodine deposition >1.3 uci/$m^2$
**THEN** inform ED to recommend to state.

2.2.16.1 Isolate contaminated food products and prevent introduction into commerce.

2.2.16.2 Determine whether condemnation or other disposition is appropriate after consideration of food products in question.

## 3.0 CONTINUING ACTIONS

3.1 Dose Assessment Coordinator shall:

> NOTE
>
> TRANSFER OF DOSE ASSESSMENT RESPONSIBILITY FROM TSC TO EOF SHALL BE PERFORMED UPON AGREEMENT OF ED, EMERGENCY RESPONSE MANAGER AND DOSE ASSESSMENT TEAM LEADER AT EOF AND THE DAC AT THE TSC.

3.1.1 **WHEN** contacted by EOF Dose Assessment Team Leader (DATL) perform turnover of Dose Assessment and Field Survey Activities using ERP-300, Appendix 3.

> NOTE
>
> 1. AFTER TURNOVER TO EOF DATL, ALL DOSE ASSESSMENT COMMUNICATION SHOULD BE DIRECTED TO EOF DOSE ASSESSMENT LEAD.
>
> 2. AFTER TURNOVER TO EOF, ALL DOSE ASSESSMENT INFORMATION SHOULD BE DISSEMINATED FROM EOF (REF 6.4.7).

3.1.2 Upon activation of the EOF Dose Assessment Team the DAC shall support EOF activities by:

3.1.2.1 Maintaining awareness of Plant Condition.

3.1.2.2 Assist EOF Dose Assessment in performance of duties.

3.1.2.3 **IF** EOF Emergency Response Facility Data System fails **THEN** provide Met and Radiological Data to the EOF Dose Assessment Team.

3.1.3 Update ED of significant changes in radiation or meteorological parameters.

3.1.4 Maintain Status Board.

## 4.0 FINAL CONDITIONS

4.1 The ED has determined that the TSC Dose Assessment functions are no longer required.

4.2 Records generated are compiled for review and submitted to NRMS.

## 5.0 APPENDICES

5.1 ERP-300, Appendix 1, Dose Assessment Team Activation

5.2 ERP-300, Appendix 2, Dose Assessment Team Check-off List

5.3 ERP-300, Appendix 3, Turnover of Dose Assessment Responsibilities

5.4 ERP-300, Appendix 4, Dose Assessment Data Sheet

5.5 ERP-300, Appendix 5, Use of Mesorem, Jr. Auto Mode A

5.6 ERP-300, Appendix 6, Obtaining Radiological Data

5.7 ERP-300, Appendix 7, Obtaining Met Data from PMS

5.8 ERP-300, Appendix 8, Obtaining Met Data from National Weather Service

5.9 ERP-300, Appendix 9, Protective Action Worksheet

5.10 ERP-300, Appendix 10 Use of North Stack Dose Rate to Estimate Release Source Term

5.11 ERP-300, Appendix 11, Operation of IBM PS/2 Model L40SX

5.12 ERP-300, Appendix 12, Limerick Liquid Release Dose Calculations

5.13 ERP-300, Appendix 13, Dose Assessment Self Check

5.14 ERP-300, Appendix 14, Stability Class Determination

## 6.0 SUPPORTING INFORMATION

6.1 Purpose

6.1.1 To provide guidelines for activation of Dose Assessment Team and transfer of Dose Assessment functions.

6.2 Criteria for Use

6.2.1 This procedure shall be implemented to perform off-site dose calculations.

6.2.2 Utilizing Appendix ERP-300-13 this procedure may be used for rapid determination, during a declared emergency, of whole body and organ doses due to liquid releases.

6.3 Special Equipment

6.3.1 Mesorem, Jr.

6.3.2 RM-11

6.4 References

6.4.1 Impell Mesorem Jr Users Manual

6.4.2 Impell Mesorem Jr Technical Manual

6.4.3 ERP-360 - Adjust of Wide Range Gas Monitor Conversion Factor

6.4.4 ERP-340 - Field Survey Group

6.4.5 Reg. Guide 1.109

6.4.6 EPA400-R-92-001 Oct. 1991, Manual of Protective Action Guides and Protective Actions for Nuclear Incidents

6.4.7 Action Item Q0003303 (Section 3.1.1 NOTE)

6.4.8 OEAP A0370948-AE02 (Entire Procedure)

6.4.9 PEP Issue I0001344 (ERP-300, Appendix 5)

6.4.10 PEP Issue I0002326 (ERP-300, Appendix 5, Step 6)

6.4.11 PEP Issue I0002326 (Eval 27) (ERP-300, Appendix 12)

6.4.12 EP Action Item Q0004727 (ERP-300, Appendix 13)

6.4.13 EP Action item Q0005406 (ERP-300, Appendix 2 Step 2.2.8)

6.5 Commitment Annotation

None

# 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 | 0006 | EMERGENCY OPERATIONS FACILITY (EOF) ACTIVATION/DEACTIVATION | 06/25/01 | | |
| LG | PROC | ERP | ERP-C-1000-1 | 0004 | EOF ACTIVATION CHECKLIST | 06/25/01 | | |
| 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-1000-5 | 0000 | MIMIMUM STAFFING POSITIONS NECESSARY TO ACTIVATE THE EOF | 06/25/01 | | |
| LG | PROC | ERP | ERP-C-1100 | 0003 | EOF STAFF AUGMENTATION INCORPORATED INTO ERP-C-1250 | 09/14/94 | | |
| LG | PROC | ERP | ERP-C-1200 | 0011 | EMERGENCY REPSONSE MANAGER | 06/25/01 | 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 | 0004 | EMERGENCY PREPAREDNESS COORDINATOR/EOF | 06/25/01 | | |
| 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 | ENERGENCY 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 | 0004 | DOSE ASSESSMENT TEAM LEADER (DATL) INITIAL ACTIONS | 06/25/01 | | |
| 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 | 0002 | DOSE ASSESSMENT GROUP MEMBER (DAGM) INITIAL ACTIONS | 06/25/01 | | |
| 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 | 0005 | ENGINEERING SUPPORT TEAM | 06/25/01 | | |

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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-1400-1 | 0002 | ENGINEERING SUPPORT TEAM CHECKLIST | 11/02/98 | | |
| 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 | 09/09/98 | | |
| | | | | | CANCELLED | | | |
| 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 | 0002 | PROCEDURES FOR ESTIMATING FUEL DAMAGE BASED ON MEASURED I-131 AND XE-133 CONCENTRATIONS | 06/25/01 | | |
| 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 | 0011 | CLASSIFICATION OF EMERGENCIES | 09/14/99 | LWE | |
| LG | PROC | ERP | ERP-101 BASES | 0002 | LGS EAL TECHNICAL BASIS MANUAL | 07/24/01 | | |
| 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 | 0007 | STATION EVACUATIONS | 12/07/01 | LWE | |
| LG | PROC | ERP | ERP-140 | 0010 | STAFFING AUGMENTATION | 12/07/01 | LWE | |
| LG | PROC | ERP | ERP-200 | 0015 | EMERGENCY DIRECTOR (ED) RESPONSE | 12/07/01 | LWE | |
| LG | PROC | ERP | ERP-200-1 APP | 0012 | EMERGENCY DIRECTOR FORMS | 12/07/01 | 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 | 0023 | DOSE ASSESSMENT COORDINATOR | 01/31/02 | 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 ASSESSMEMT 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 METEROLOGICAL 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 | STABILTIY CLASS DETERMINATION | 04/03/00 | | |
| LG | PROC | ERP | ERP-316 | 0000 | OPERATION OF THE DOSE ASSESSMENT COMPUTER (CM-4) | 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-326 | 0000 | SHIFT DOSE ASSESSMENT PERSONNEL (SDAP) | 06/20/00 | | |
| LG | PROC | ERP | ERP-330 | 0000 | USE OF NORTH STACK-DOSE RATE TO ESTIMATE RELEASE SOURCE TERM CANCELLED INCORPORATED INTOERP-300 APP.10 | 11/14/94 | LWE | |
| LG | PROC | ERP | ERP-340 | 0009 | FIELD SURVEY GROUP | 01/31/02 | 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 | 0013 | CHEMISTRY SAMPLING AND ANALYSIS TEAM | 07/24/01 | 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 | 0013 | HEALTH PHYSICS TEAM | 01/31/02 | LWE | |
| LG | PROC | ERP | ERP-620 | 0002 | PLANT SURVEY GROUP CANCELLED - NO REPLACEMENT | 05/02/95 | LWE | |
| LG | PROC | ERP | ERP-630 | 0004 | VEHICLE AND EVACUEE CONTROL GROUP | 01/31/02 | LWE | |
| LG | PROC | ERP | ERP-640 | 0008 | EMERGENCY RESPONSE FACILITY HABITABILITY | 04/17/99 | LWE | |
| LG | PROC | ERP | ERP-650 | 0011 | ENTRY FOR EMERGENCY REPAIR AND OPERATIONS | 01/31/02 | LWE | |
| LG | PROC | ERP | ERP-660 | 0007 | DISTRIBUTION OF THYROID BLOCKING TABLETS | 01/31/02 | 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 | 0001 | MAINTENANCE TEAM ACTIVATION | 07/24/01 | | |
| 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 **