Progress Energy

10 CFR 50, Appendix E

Serial: RNP-RA/03-0096

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United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23

TRANSMITTAL OF EMERGENCY PROCEDURE REVISIONS

Ladies and Gentlemen:

In accordance with 10 CFR 50.4(b)(5) and Appendix E to 10 CFR 50, Progress Energy Carolinas, Inc. (PEC), is transmitting revisions to H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, Emergency Implementing Procedures. The procedure revisions and effective dates are listed in the attachment to this letter.

A description of the procedure changes is provided on the "Summary of Changes" page for each emergency procedure. Please replace the superseded procedures with the enclosed revisions.

If you have any questions concerning this matter, please contact me.

Sincerely,

C. T. Baucom
Supervisor – Licensing/Regulatory Programs

CAC/cac

Attachment

Enclosures

c: L. A. Reyes, NRC, Region II (2 copies)
NRC Resident Inspector, HBRSEP
C. P. Patel, NRC, NRR (w/o Attachment and Enclosures)

Progress Energy Carolinas, Inc.
Robinson Nuclear Plant
3581 West Entrance Road
Hartsville, SC 29550

Procedure Revisions and Effective Dates

Procedure	Revision No.	Effective Date
EPPRO-01, "Program and Responsibilities"	14	07/01/03
EPSPA-01, "Evacuation and Accountability"	7	07/01/03
EPSPA-04, "Access Control"	2	07/01/03
EPEOF-05, "Radiation Control Manager"	6	07/11/03
EPEOF-06, "Dose Projection Team Leader"	2	07/11/03
EPPRO-00, "Emergency Preparedness Program and Testing"	6	07/17/03

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

PLANT OPERATING MANUAL

VOLUME 2

PART 5

EPPRO-01

PROGRAM AND RESPONSIBILITIES

REVISION 14

SUMMARY OF CHANGES

PRR 96438

STEP #	REVISION COMMENTS
Step 8.1.2.2.e	Added a step to provide guidance for documenting credit for drill and exercise objectives that are met during actual events. (AR #79167)
Step 8.1.4.2.b	Deleted phone number for Telecommunications Help Desk.
Step 8.1.3.5	Added PRR to the list Action Tracking models/types.
Attachment 8.1.14.4 and Attachment 8.1.14.5	Added objective and acceptance criteria to demonstrate radiological exposure control to include issuance of radioprotective drugs. (AR #88194)
Attachment 8.1.14.6	Revised critique guidelines to allow input on objective demonstration from the position evaluator after input from the position participant. (AR #77623)

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8.1 PROGRAM AND RESPONSIBILITIES

8.1.1 DRILL AND EXERCISE PARTICIPATION

1. ERO personnel are expected to drill/exercise with their designated team.

    a. If they will be unavailable for the drill it is their responsibility to ensure some one from another team will fill their position.

    b. Relief team personnel will participate in at least one team Drill, Exercise, or Tabletop each year.

    c. Non-Team designated ERO personnel are expected to coordinate with the other persons qualified for their position to ensure the position is staffed for each drill/exercise and that each ERO member participates in at least one Drill per calendar year.

2. ERO personnel filling critical positions shall be observed at least once in a calendar year performing their ERO duties.

3. Unless otherwise directed by Emergency Preparedness (EP), ERO personnel should respond during augmentation for their facility.

    a. Those personnel available to respond should establish 24 hour coverage for the position.

    b. Personnel on night shift may be exempted from augmentation, but should be used to establish 24 hour coverage.

    c. After the rotation is established, personnel may be simulated to be sent home and return to their place of work.

    d. Personnel are required to keep the manager responsible for their accountability informed of their location should an evacuation be conducted at a later time.

8.1.2 **DRILLS AND EXERCISES**

1. Emergency Response Organization (ERO) personnel will participate in periodic drills at least once each calendar year. Additionally one team, on a rotational basis, will participate in the Graded Exercise. The purpose of conducting drills is to ensure that each team has the skills to successfully deal with a real emergency. The following are the types of drills conducted:

    a. Medical Emergency Drills: Medical emergency drills will be conducted annually. They will involve a simulated contaminated and injured individual. Off-site portions of these drills may be conducted as part of an exercise.

    b. Health Physics Drills: Health Physics drills, including response to and analysis of simulated elevated airborne and liquid samples and direct radiation measurements, will be conducted semi-annually. **{NRC Amendment No. 192}**

        – Participation in the Medical Services (MS-1) drill may also be included.

    c. Combined Functional Drills: Combined Functional Drills may include any of the required drills and serve as the primary method of practical training for new ERO members and continuing training for existing members.

2. An Exercise will be conducted as required by 10 CFR, Part 50, Appendix E.

    a. The scenario which will ultimately escalate to at least a Site Area Emergency.

    b. The scenario will be varied from year to year such that major elements of the Plant, County, and State Plans and emergency organizations are tested within a six (6)-year period. Major elements to be demonstrated are outlined as drill/exercise objectives in Attachment 8.1.14.4. Deletion of any of the elements outlined in Attachment 8.1.14.4 requires PNSC approval. (AR #44128/PNSC Meeting #1999)

8.1.2.2 **DRILLS AND EXERCISES** (Continued)

c. Consideration should be given to vary the scenarios during the six year cycle to include accidents identified in Chapter 15, Accident Analysis, of the UFSAR. (CR 44132)

d. Combined Functional Drills: Combined Functional Drills may include any of the required drills and serve as the primary method of practical training for new ERO members and continuing training for existing members.

– An integrated drill involving the fire brigade, Dedicated Shutdown procedures (DSP) and the ERO should be practiced once during a two year cycle.

e. Each Exercise scenario will include a list of performance objectives and a description of the expected responses. Specific tasks that should be evaluated are listed in Attachment 8.1.14.4 and 8.1.14.5, "Drill Objectives" and "Acceptance Criteria" respectively.

– Attachments identify the Emergency Response facility where the activity is most likely to occur, however, the objective may be judged acceptable if performed in an alternate location.

– Credit may be taken for objectives that are satisfactorily completed during actual events. A memo should be generated that provides a summary/synopsis of the event and the performance objectives that were demonstrated during the actual event. (AR #79167)

f. An off-hours exercise which starts between 6:00 p.m. and 4:00 a.m. will be conducted once every six (6) years.

g. Advance knowledge of the scenario content and the times of the exercises will be kept to a minimum to ensure a realistic participation by those involved.

8.1.2.3 **DRILLS AND EXERCISES** (Continued)

3. The EP Staff is responsible for planning and conducting drills and exercises not addressed elsewhere (e.g., Fire Drills are addressed in the Fire Plan). They shall provide:

   a. The scenario including objectives for the drill/exercise.

      – From time to time "specific objectives" which are in addition to required performance objectives will be added to the Training Exercise Objectives. These may be in response to previous deficiencies, EP TPC items or require that normally simulated items be actually performed. A prompt to consider these items is contained in the pre-drill checklist.

      – An extent of play describing the degree of simulation for drill/exercise activities.

      – Qualified Controller/Evaluators to evaluate the drill/exercise.

      – As a minimum, Controller/Evaluators should be available to evaluate the following:

         - each facility activating,
         - Environmental Monitoring Teams,
         - Mechanical Damage Control Missions (as applicable),
         - Electrical Damage Control Missions (as applicable),
         - Chemistry/Health Physics Missions,
         - Offsite functions to be simulated,
         - any special functions (e.g. fire, injury)

   b. A yearly plan for ERO exercises.

   c. A critique report noting strengths, issues, weaknesses, and items for management consideration. Critiques will be conducted after each drill/exercise in accordance with Attachment 8.1.14.6 (AR #44128,CAPR). Critique observations should be categorized during the lead evaluator critique roll-up as noted below:

NOTE:	Critique reports for small scale drills may be documented in memo format.

8.1.2.3.c **DRILLS AND EXERCISES** (Continued)

- **Strength**: an action or activity performed in an above average manner, or in a creative manner to resolve a problem without the violation of a requirement. These are items which all teams should consider adopting.

- **Issue**: an activity or action that results in failure to comply with the Emergency Plan/procedures, or failure to meet the acceptance criteria resulting in inadequate demonstration of a drill/exercise objective; an activity or action which interferes with the ability of the ERO to mitigate the consequences of an accident and protect the health and safety of the public.

- **Weakness**: an action or activity that interferes with the operation of the Emergency Response Organization to a degree that is correctable, however, if not corrected could to a reduction in the ability of the ERO to protect the health and safety of the public.

- **Item for Management Consideration**: an action or activity that meets current minimum response requirements and is within procedural requirements, but improvement would increase the efficiency and effectiveness of the response effort.

- **Comments**: items not meeting the criteria for a strength, issue, weakness, or improvement item. Comments identified on EP Improvement Forms will be screened and entered into Action Tracking as a Nuclear Task Management (NTM) item as applicable.

- Draft critique reports should be issued for comment to the participating ERO team members within seven working days following the post drill controller/evaluator meeting.

    1. Published drill comments will be limited to those that do not compromise the confidentiality of the scenario.
    2. If multiple drills are conducted during consecutive weeks, then the seven working day criteria will begin at the end of the final post drill controller/evaluator meeting.

8.1.2.3.c **DRILLS AND EXERCISES** (Continued)

– The draft critique report will normally consist of the following:

1. Cover Letter and Summary, signed by the Supervisor of Emergency Preparedness, with a brief statement containing the date the drill(s) was conducted; team(s) that participated; and a summary statement of overall drill performance.

2. Objectives and Objective Status

   – The objectives should be listed for each facility.

   – The status of each objective (met or not met) will be listed for each facility based on the acceptance/evaluation criteria.

   – Satisfactory completion of an objective by any team will satisfy that requirement for the Site.

   – Any team failure to demonstrate an objective is a deficiency and will be handled as such. At the discretion of EP Supervision failure to demonstrate an objective(s) may require re-demonstration by the team.

3. The final critique report will be documented as a self assessment per CAP-NGGC-0201, Self-Assessment Program.

d. A pre-drill and post-drill review of items needed to prepare for the drill/exercise or return to normal following the drill/exercise (i.e., reset simulator telephones).

8.1.3 **EP PROCEDURE MAINTENANCE AND PROGRAM IMPROVEMENTS**

1. The Emergency Plan and Implementing Procedures Review will be documented as a mandatory self assessment per CAP-NGGC-0201 and should be a cross-functional.

2. Procedure improvements may be recommended by initiating a procedure revision request (PRR) in Action Tracking.

8.1.3 (Continued)

3. Procedure changes to the Robinson Emergency Plan and/or Emergency Procedures will be accomplished as required by AP-044, Procedure Review and Approval Process, and PRO-NGGC-0204.

   a. Emergency Preparedness will be responsible to maintain the Emergency Action Levels (EAL) and supporting basis documents, as well as the Emergency Procedures.

   b. Documents will be developed and maintained to comply with applicable regulations.

   c. The EAL basis document will be revised to reflect NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," or other management directives and policies.

   d. All Emergency Procedures, EALs, and the Emergency Plan shall be reviewed per REG-NGGC-0010, 10 CFR 50.59 Reviews.

4. For each drill or real event, EP improvement forms will be made available.

5. Items reported on EP improvement forms will be screened for entry into Action Tracking as a NCR, PRR, or NTM, as applicable.

6. Feedback regarding disposition of items will be provided to the individual who initiated the comment, normally within ten working days.

8.1.4 **INADVERTENT SIREN ACTIVATION**

1. Upon receiving a report of an inadvertent siren activation:

   a. If a real emergency or drill/exercise is in progress that involves sounding of the sirens, then direct the callers to tune to an Emergency Alerting System Station listed in the emergency public information distributed by Progress Energy.

   b. If no event is in progress obtain information requested on attachment 8.1.14.2, Siren System Inadvertent Activation Report and ask the caller if a call back is desired once more information is known.

8.1.4 **INADVERTENT SIREN ACTIVATION** (Continued)

2. If an inadvertent siren activation has been confirmed, then notify the following:

   a. All County Emergency Operations Center or Warning Points concerning the plant status. This can be accomplished via Selective Signaling or the Bell lines.

      Sirens are located as follows:

      – Chesterfield County - 13 Siren Locations
        Siren #'s - 01, 02, 03, 04, 05, 06, 09, 10, 11, 15, 16, 17, and 45

      – Darlington County - 28 Siren Locations
        Siren #'s - 07, 08, 12, 13, 14, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 30, 31, 32, 33, 34, 36, 37, 38, 39, 41, 42, 43, and 44

      – Lee County - 4 Siren Locations
        Siren #'s - 28, 29, 35, and 40

      Total Sirens - 45 Siren Locations (All Counties)

   b. Notify the Telecommunications Help Desk that an inadvertent siren activation has occurred and request that repair personnel be dispatched to correct the problem. Request a work order Number and a return call when the sirens have been silenced.

   c. Notify Emergency Preparedness by phone or pager. The ERO Phone Book has the necessary information.

   d. Notify Robinson Communications of the inadvertent siren activation and request immediate notification if a press release is to be issued. A press release relating to this event is reportable to the NRC. Consult AP-030, NRC Reporting Requirements.

8.1.4 **INADVERTENT SIREN ACTIVATION** (Continued)

3. When the Unit 2 Control Room is notified that the siren(s) have been silenced ensure that:

   a. Evaluate AP-030, NRC Reporting Requirements, for potential NRC reporting.

   b. Notify the State and County Warning Points concerning the status of the sirens.

   c. Notify Robinson Communications.

4. Forward information gathered and any completed Attachment 8.1.14.2 forms to Emergency Preparedness for retention as appropriate.

8.1.5 **EMERGENCY RESPONSE ORGANIZATION BEEPER DISTRIBUTION**

1. After qualifying as an ERO member, EP will arrange an ERO beeper for the positions identified in Attachment 8.1.14.3, ERO Beeper Distribution.

2. Beepers are to ensure that the plant has the ability to meet the 30-45 minute response staffing requirements.

3. Plant Public Address, Non-Responding Emergency Communicators, dialogic and/or beepers are used to contact the 60-75 minute staff, and other positions not required by NUREGs.

8.1.6 **HURRICANE PREPARATION GUIDANCE (CR 16553)**

OMM-021 “Operation During Adverse Weather Conditions”, provides direction for hurricane/adverse weather preparations. Additional tasks for the EP staff to consider are:

- Establish the response teams.
- Designate and post sleeping areas.
- Set up and test the satellite telephone.

8.1.7 **INTENTIONALLY BLANK**

8.1.8 **INTENTIONALLY BLANK**

8.1.9 **INTENTIONALLY BLANK**

8.1.10 **SCENARIO DEVELOPMENT**

Guidelines for the development, conduct, and assessment of drill/exercise scenarios are contained in EPPRO-05, Scenario Development and Drill Control Guidelines.

8.1.11 **DRILL/EXERCISE SELF EVALUATION (AR #44128)**

1. Evaluate the effectiveness of each of the following drill/exercise cycle phases at least once during the biennial exercise cycle:
   a. Analysis
   b. Design
   c. Development
   d. Implementation
2. Select one or more of the following self-evaluation programs to determine the effectiveness of a specific phase:
   a. Corrective action
   b. Operating experience
   c. Self-assessment
   d. Benchmarking
3. Probe to identify the following:
   a. Flawed defenses
   b. Error precursors
   c. Weak organizational processes

8.1.11 (Continued)

4. Consider the following elements:
   a. Results
   b. Behaviors
   c. Task demands
   d. Work environment
   e. Individual capabilities

8.1.12 **PUBLIC EDUCATION AND INFORMATION**

1. Emergency Preparedness and Site Communications shall perform the following actions:

   a. In cooperation with the State of South Carolina, local governments and with corporate CP&L efforts, ensure that public education and information efforts are consistent and complementary.

   b. Ensure that a public information program for persons living in the possible plume exposure Emergency Planning Zone includes the following elements:

      – Brochures or other media containing educational information on emergency preparedness, nuclear power and radiation, and how to contact CP&L for more information.

      – Coordination of speakers to address emergency preparedness when requested.

      – Supplying news material for the media.

8.1.12.1 (Continued)

c. Ensure that the public education program includes the following information:

– The potential for occurrence of a radiological emergency.

– How to recognize a radiological emergency notification.

– What proper, immediate actions (e.g., return to home, close windows and turn on radio) should be taken upon notification.

– Protective actions to be taken if shelter is prescribed.

– General procedure to follow if an evacuation is required.

– General education on radiation.

– A contact for how to learn more about emergency preparedness.

8.1.13 **RECORDS**

1. Attachment 8.1.14.2 is to be maintained in the EP Unit files for a period of two years unless otherwise specified.

2. The following documents are to be submitted for retention as vital records in the plant vault per RDC-NGGC-0001:

   – Recurring drills/exercise maintenance and testing records documented per EPPRO-02.

   – NRC Biennial Graded Exercise scenario narrative/timeline, scope and objectives, and final critique report.

3. For Full Scale Drills/Exercises, copies of the scenario timeline, draft critique reports, attendance records, and final critique reports should be maintained by the EP Staff for a period of six (6) years.

4. For Small Scale Drills, copies of the covered topics, attendance records, and critique reports should be maintained by the EP Staff for a period of six (6) years.

8.1.14 **ATTACHMENTS**

8.1.14.1 EP Improvement Form

8.1.14.2 Siren System Inadvertent Activation Report

8.1.14.3 ERO Beeper Distribution

8.1.14.4 EP Drill and Exercise Objectives

8.1.14.5 Acceptance Criteria

8.1.14.6 Guidelines for Emergency Response Organization (ERO) Critiques

ATTACHMENT 8.1.14.1
Page 1 of 1

EP IMPROVEMENT FORM

DATE:_____ ERO POSITION: _____

NAME: _____

RECOMMENDED CHANGE IS IN REFERENCE TO:

_____ EMERGENCY PLAN _____ EMERGENCY FACILITY

_____ EP-_____ (Give Number) _____ EP TRAINING

_____ EQUIPMENT _____ OTHER (List) _____

I RECOMMEND THE FOLLOWING CHANGE, ADDITION OR IMPROVEMENT:

(Be specific - list all information)_____

_____

_____

_____

_____

For Emergency Preparedness Use

NTM #: _____

Date Received:_____ Date Originator Notified: _____

This form is for information only. No record retention requirements apply.

ATTACHMENT 8.1.14.2
Page 1 of 1

SIREN SYSTEM INADVERTENT ACTIVATION REPORT

Date: / / Time:

Fill out as much of the following information as possible:

1. Incident Date: / / Incident Time:

2. Caller's Name: Caller's Phone No.:

3. Location of siren(s) (include County and Community of caller):

The siren number is the preferred information. The siren number is located on the siren pole. If the caller cannot provide the siren number, obtain any information which may aid in identifying the siren. For example, request a description of the siren location, a road number, or of the location of the person who is making the report and the direction from which the sound is coming.

Siren Number(s) or Location

4. Additional questions: (circle one)

– What noise did the siren make (steady tone, wavering tone, etc.)?

– Is the siren still sounding? (Yes / No)

– For what length of time did the siren sound?
(1 min / 2 min / 3 min / Continuous / Unknown)

– Is more than one siren sounding? (Yes / No)

5. Name of Person Receiving Report | Location | Telephone Number

Completed documents to be maintained in EP Files for a period of two years.

ERO BEEPER DISTRIBUTION

All Team Members in the following positions.

SEC	OSC Leader	AERM
POD	ERM	NRC
TAD	A&LM	EP
ERD	TAM	JIC Director
RCD/RCM	POA	Reactor Engineer
ESTL	EC	Computer Support
Superintendent Shift Operations Desk	DPTL	Company Spokesperson
State/County Communicator		RC Tech-Damage Control
RC Tech Facilities (45 min)		En Mon Team (45 min)
JIC Technical Spokesperson		

Rotational Beeper positions

NRC Communicator	Environmental/Chemistry Tech
PI Communicator	Electrical Engineer
Security Lieutenant	Mechanical Engineer
Damage Control Leaders	RC Tech-Facilities (75 min)
(1) Mechanics	En Mon Team Leader
(1) I&C/Electricians	En Mon Team (75 min)

(1) Normally on shift, beepers available

This information is for resource allocation only. No record retention requirements apply.

EP DRILL AND EXERCISE OBJECTIVES

	NUREG 0654	OBJECTIVE	CR	TSC	OSC	JIC	EOF	FREQ
1	A.1.e F.1.a	Provide 24 hour per day on shift emergency response personnel as required by the Emergency Plan including the capability of 24 hour per day manning of communications.	X					6 yr
2	A.4	Demonstrate ability to staff Emergency Response Facilities (ERF) 24 hours per day.		X	X	X	X	6 yr
3	B.5 H.4 B.7 [1]b.2	Demonstrate the ability to augment shift staff and activate ERFs with Emergency Plan Table 5.3.2-1, "Capability for Additions" column for 30-45 min and 60-75 min.		X	X		X	2 yr
4	B.7.a B.7.b B.7.c B.7.d	Demonstrate the ability to augment shift staff with: -Logistics support personnel -Technical support for reentry/recovery operations -Management interface with governmental authorities -Corporate interface with news media		X		X	X X X	2 yr

NOTE: Deletion of EP Drill and Exercise Objectives from this attachment requires PNSC approval. (AR #44128/PNSC Meeting1999)

[1]10CFR50.47

EP DRILL AND EXERCISE OBJECTIVES

	NUREG 0654	OBJECTIVE	CR	TSC	OSC	JIC	EOF	FREQ
5	B.8	Demonstrate the ability to contact Contractors and private organizations for technical assistance.					X	Ann
6	B.9 L.4 [1]b.12	Demonstrate the ability to obtain assistance from law enforcement, medical, and fire-fighting organizations including assistance for contaminated personnel.	X					Ann
7	C.2.b	Demonstrate the ability to provide a representative to the SEOC (when activated) and County EOCs.					X	2 yr
8	C.3 [1]b.9	Demonstrate the ability to coordinate radiological monitoring and analysis.					X	Ann
9	D.1 I.1 [1]b.4	Demonstrate the ability to identify and properly classify events using appropriate procedures, plant system parameter values, and the EALs.	X	X				Ann
10	E.2 F.1.e [1]b.2	Demonstrate the ability to alert, notify, and mobilize ERO personnel	X	X	X	X	X	Ann
11	E.3 [1]b.5	Demonstrate the ability to make initial emergency notification to State and Chesterfield, Darlington, and Lee County Warning Points or EOCs within 15 minutes following declaration of each emergency classification.	X				X	Ann

NOTE: Deletion of EP Drill and Exercise Objectives from this attachment requires PNSC approval. (AR #44128/PNSC Meeting1999)

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EP DRILL AND EXERCISE OBJECTIVES

	NUREG 0654	OBJECTIVE	CR	TSC	OSC	JIC	EOF	FREQ
12	E.4 [1]b.5	Demonstrate the ability to make follow-up notifications to State and Chesterfield, Darlington, and Lee County Warning Points or EOCs within 60 minutes following initial and change of classification notifications.	X				X	Ann
13	E.7 J.7 [1]b.10	Demonstrate the ability to formulate protective action recommendations and transmit to State and County personnel.					X	Ann
14	F.1 F.1.a F.1.b	Demonstrate the ability to communicate with State and County personnel using primary and backup communication systems.	X				X	Ann
15	F.1.c	Demonstrate the provisions to communicate with Federal emergency response organizations.	X	X				Ann
16	F.1.d [1]b.6	Demonstrate the ability to communicate between the CR, TSC, EOF, OSC, and Enmon teams.	X	X	X		X	Ann
17	F.1.f	Demonstrate the ability to communicate with the NRC within 60 minutes following each emergency classification declaration.	X	X				Ann
18	G.3.a G.3.b	Demonstrate timely activation of the Joint Information Center.				X		2 yr

NOTE: Deletion of EP Drill and Exercise Objectives from this attachment requires PNSC approval. (AR #44128/PNSC Meeting1999)

[1]10CFR50.47

EP DRILL AND EXERCISE OBJECTIVES

	NUREG 0654	OBJECTIVE	CR	TSC	OSC	JIC	EOF	FREQ
19	G.4.a [1]b.7	Demonstrate the ability to obtain emergency related information.				X		2 yr
20	G.4.b G.4.c	Demonstrate the ability to disseminate timely, accurate, and appropriate emergency information including provisions for rumor control.				X		2 yr
21	H.6.a H.6.b I.5	Demonstrate the ability to obtain data from meteorological, hydrologic, seismic, radiological monitors, and sampling devices.	X				X	Ann
22	I.2 [1]b.9	Demonstrate the ability to analyze data from post accident monitoring equipment. **{NRC Amendment No. 192}**			X			Ann
23	I.3.a I.3.b	Demonstrate the ability to determine the source term and magnitude of releases.	X				X	Ann
24	I.8 I.9 J.7	Demonstrate the ability to project dosage to the public based on plant and field data.					X	Ann
25	J.1 [1]b.2	Demonstrate the ability to alert and advise individuals who are visitors, contractors, and members of the public onsite.	X					Ann

NOTE: Deletion of EP Drill and Exercise Objectives from this attachment requires PNSC approval. (AR #44128/PNSC Meeting1999)

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EP DRILL AND EXERCISE OBJECTIVES

	NUREG 0654	OBJECTIVE	CR	TSC	OSC	JIC	EOF	FREQ
26	J.3 K.7	Demonstrate the ability to evacuate non-essential personnel from site to be monitored and decontaminated at an offsite location.			X		X	6 yr
27	J.4	Demonstrate the ability to monitor, decontaminate and evacuate non-essential personnel from site.			X		X	6 yr
28	J.5	Demonstrate the ability to account for individuals in the protected area and identify the names of those unaccounted for within 30 minutes.		X				6 yr
29	J.6 K.3.a K.3.b	Demonstrate the ability to provide ERO personnel protective clothing, respiratory protection, dosimetry, and radioprotective drugs. This also includes determination of doses received and maintenance of dose records 24 hours per day.	X	X	X		X	2 yr
30	K.1 [1]b.11	Demonstrate the ability to establish onsite exposure guidelines consistent with EPA emergency worker and lifesaving activities.		X				Ann
31	L.2	Demonstrate the ability to provide onsite first aid capability.			X			Ann

NOTE: Deletion of EP Drill and Exercise Objectives from this attachment requires PNSC approval. (AR #44128/PNSC Meeting1999)

[1]10CFR50.47

EP DRILL AND EXERCISE OBJECTIVES

	NUREG 0654	OBJECTIVE	CR	TSC	OSC	JIC	EOF	FREQ
32	M.1 M.2 M.3 M.4	Demonstrate the ability to reassess plant conditions and evaluate recovery/reentry considerations.					X	6 yr
33	N.1.b	Demonstrate the ability to augment the ERO, during an Exercise, between 6:00 p.m. and 4:00 a.m. or any weekend hours.	X					6 yr
34	N.2.d	Perform Radiological Monitoring Drills which involve collection and analysis of all sample media (e.g., water, vegetation, soil and air), and provisions for communications and record keeping.					X	Ann
35	N.2.b	Perform fire drills which demonstrate the ability of the fire brigade to respond to a fire and interface with offsite fire assistance.	X					6 yr
36	N.2.c	Perform medical emergency drills which demonstrate the ability to deal with a medical emergency involving a simulated contaminated individual including participation of offsite medical treatment agencies.	X		X			Ann

NOTE: Deletion of EP Drill and Exercise Objectives from this attachment requires PNSC approval. (AR #44128/PNSC Meeting1999)

[1]10CFR50.47

EP DRILL AND EXERCISE OBJECTIVES

	NUREG 0654	OBJECTIVE	CR	TSC	OSC	JIC	EOF	FREQ
37	N.2.e (1) [1]b.9	Perform Health Physics Drills which involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment.			X			6 mo
38	ACR 94-01156 CA .1	Perform an offsite hazards drill which will involve response to, and analysis of simulated offsite hazards (examples: chlorine, propane, hydrogen, gasoline or some other offsite hazard either natural man made). Samples and measurements as well as protective measures should be taken.	X	X	X		X	Ann
39	N.4	Perform a critique at the conclusion of an exercise to evaluate the ability of organizations to respond as required.	X	X	X	X	X	Ann
40		Demonstrate that NRC identified open items resulting from previous exercises are corrected.						
41	CR 98-02026	Demonstrate actual use of SCBA's including field change out of spare cylinder.			X			Ann
42	J.6.c	Demonstrate the ability to control radiological exposure to emergency workers including the issuance of radioprotective drugs.	X	X	X		X	2 yr

NOTE: Deletion of EP Drill and Exercise Objectives from this attachment requires PNSC approval. (AR #44128/PNSC Meeting1999)

[1]10CFR50.47

ACCEPTANCE CRITERIA

	OBJECTIVE	ACCEPTANCE CRITERIA
1	Provide 24 hour per day on shift emergency response personnel as required by the Emergency Plan including the capability of 24 hour per day manning of communications.	This objective is met as long as the staffing requirements of Technical Specifications, Emergency Plan Table 5.3.2-1 "Minimum Shift Size" column are satisfied.
2	Demonstrate ability to staff ERFs 24 hours per day.	This objective is met when the ERFs are staffed and a shift turnover is complete.
3	Demonstrate the ability to augment shift staff and activate ERFs with Emergency Plan Table 5.3.2-1, "Capability for Additions" column for 30-45 min and 60-75 min.	This objective is met when the staffing requirements of the Emergency Plan Table 5.3.2-1, "Capability for Additions" column is satisfied.
4	Demonstrate the ability to augment shift staff with: -Logistics support personnel -Technical support for reentry/recovery operations -Management interface with governmental authorities -Corporate interface with news media	This objective is met when facilities are capable of being activated.
5	Demonstrate the ability to contact Contractors and private organizations for technical assistance.	This objective is met when the ability to contact has been demonstrated. The ability to contact should include a verification of the appropriate phone number.
6	Demonstrate the ability to obtain assistance from law enforcement, medical, and fire-fighting organizations including assistance for contaminated personnel.	This objective is met when the ability to contact has been demonstrated. The ability to contact should include a verification of the appropriate phone number.

[1]10CFR50.47

ACCEPTANCE CRITERIA

	OBJECTIVE	ACCEPTANCE CRITERIA
7	Demonstrate the ability to provide a representative to the SEOC (when activated) and County EOCs.	This objective is met when the facilities are activated and an ERO representative is present.
8	Demonstrate the ability to coordinate radiological monitoring and analysis.	This objective is met when appropriate monitoring and analysis data are received. (Portions may be simulated as a control cell.)
9	Demonstrate the ability to identify and properly classify events using appropriate procedures, plant system parameter values, and the EALs.	This objective is met when events are correctly classified in a timely manner.
10	Demonstrate the ability to alert, notify, and mobilize ERO personnel.	This objective is met when the ERFs are activated.
11	Demonstrate the ability to make initial emergency notification to State and Chesterfield, Darlington, and Lee County Warning Points or EOCs within 15 minutes following declaration of each emergency classification.	This objective is met when initial notifications are accomplished within the required 15 minutes. Time starts at emergency declaration and ends at first contact.
12	Demonstrate the ability to make follow-up notifications to State and Chesterfield, Darlington, and Lee County Warning Points or EOCs within 60 minutes following initial and change of classification notifications.	This objective is met when follow-up notifications are accomplished within the required 60 minutes. Time starts at completion of the previous notification and ends at first contact.

[1]10CFR50.47

ACCEPTANCE CRITERIA

	OBJECTIVE	ACCEPTANCE CRITERIA
13	Demonstrate the ability to formulate protective action recommendations and transmit to State and County personnel.	This objective is met when protective action recommendations are transmitted to the State and Counties within 15 minutes following the declaration of a General Emergency.
14	Demonstrate the ability to communicate with State and County personnel using primary and backup communication systems.	This objective is met when communications have been established using the Selective Signaling system and one of the backup systems.
15	Demonstrate the provisions to communicate with Federal emergency response organizations.	This objective is met by agreement letters.
16	Demonstrate the ability to communicate between the CR, TSC, EOF, OSC, and Enmon teams.	This objective is met when none of the other Objectives fail due to communications.
17	Demonstrate the ability to communicate with the NRC within 60 minutes following each emergency classification declaration.	This objective is met when communications are established within the required time. Time starts at emergency declaration and ends at first contact.
18	Demonstrate timely activation of the Joint Information Center.	This objective is met when the Company Spokesperson has declared the Joint Information Center activated and the information has been entered into the log.

[1]10CFR50.47

ACCEPTANCE CRITERIA

	OBJECTIVE	ACCEPTANCE CRITERIA
19	Demonstrate the ability to obtain emergency related information.	This objective is met when facility briefings between the EOF and JIC have been conducted as appropriate.
20	Demonstrate the ability to disseminate timely, accurate, and appropriate emergency information, including provisions for rumor control.	This objective is met when a press conference has been conducted by a Company Spokesperson and false information has been corrected by responsible personnel.
21	Demonstrate the ability to obtain data from meteorological, hydrologic, seismic, radiological monitors, and sampling devices.	This objective is met when data has been obtained and provided to appropriate personnel.
22	Demonstrate the ability to analyze data from post accident monitoring equipment. **{NRC Amendment No. 192}**	This objective is met when core damage assessment has been performed in accordance with applicable procedures.
23	Demonstrate the ability to determine the source term and magnitude of releases.	This objective is met when source term and release magnitude/dose protection have been accurately determined.
24	Demonstrate the ability to project dosage to the public based on plant and field data.	This objective is met when Dose Projection information is included in the General Emergency declaration notification or as a follow-up to the General Emergency notification.

[1]10CFR50.47

ACCEPTANCE CRITERIA

	OBJECTIVE	ACCEPTANCE CRITERIA
25	Demonstrate the ability to alert and advise individuals who are visitors, contractors, and members of the public onsite.	This objective is met when individuals receive, understand, and respond as required to notifications provided by alarms and PA.
26	Demonstrate the ability to evacuate non-essential personnel from site to be monitored and decontaminated at an offsite location.	This objective is met when personnel are sent to an offsite location for decontamination. (Actual transport may be simulated.)
27	Demonstrate the ability to monitor, decontaminate and evacuate non-essential personnel from site.	This objective is met when personnel are able to discuss decontamination procedures.
28	Demonstrate the ability to account for individuals in the protected area and identify the names of those unaccounted for within 30 minutes.	This objective is met when accountability is completed within 30 minutes.
29	Demonstrate the ability to provide ERO personnel protective clothing, respiratory protection, dosimetry, and radioprotective drugs. This also includes determination of doses received and maintenance of dose records 24 hours per day.	This objective is met when adequate supplies are available and dose records are maintained during the drill.

[1]10CFR50.47

ACCEPTANCE CRITERIA

	OBJECTIVE	ACCEPTANCE CRITERIA
30	Demonstrate the ability to establish onsite exposure guidelines consistent with EPA emergency worker and lifesaving activities.	This objective is met when emergency worker and lifesaving exposure guidelines are implemented.
31	Demonstrate the ability to provide onsite first aid capability.	This objective is met when First Responders have provided initial treatment and the victim(s) have been delivered to the rescue squad. (Portions may be simulated as a control cell.)
32	Demonstrate the ability to reassess plant conditions and evaluate recovery/reentry considerations.	This objective is met when a recovery plan and an organization is formulated.
33	Demonstrate the ability to augment the ERO, during an Exercise, between 6:00 p.m. and 4:00 a.m. or any weekend hours.	This objective is met when augmentation is successfully completed between the hours of 6:00 p.m. and 4:00 a.m. or any weekend hours.
34	Perform Radiological Monitoring Drills which involve collection and analysis of all sample media (e.g., water, vegetation, soil and air), and provisions for communications and record keeping.	This objective is met when environmental measurement through analysis of water, vegetation, soil, and air sample media have been completed, recorded and communicated.
35	Perform fire drills which demonstrate the ability of the fire brigade to respond to a fire and interface with offsite fire assistance.	This objective is met when the fire brigade arrives at the scene with appropriate equipment and offsite fire assistance is coordinated. (Portions may be simulated as a control cell.)

[1]10CFR50.47

ACCEPTANCE CRITERIA

	OBJECTIVE	ACCEPTANCE CRITERIA
36	Perform medical emergency drills which demonstrate the ability to deal with a medical emergency involving a simulated contaminated individual including participation of off site medical treatment agencies.	This objective is met when First Responders arrive at the scene and offsite assistance is coordinated. (Actual transport may be simulated. Off-site medical treatment may be demonstrated in conjunction with the medical services (MS-1) drill.)
37	Perform Health Physics Drills which involve response to, and analysis of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment.	This objective is met when response and analysis is made to simulated elevated airborne and liquid samples and direct radiation measurements in the environment. Credit may be taken for participation in the medical services (MS-1) drill.
38	Perform an offsite hazards drill which will involve response to and analysis of simulated offsite hazards (example chlorine, propane, hydrogen, gasoline or some other offsite hazard either natural or man made). Samples, measurements as well as protective measures should be taken.	This objective is met when an offsite hazard is included in a drill or exercise and protective measures are taken and the hazard is measured for the protective measures.
39	Perform a critique at the conclusion of an exercise to evaluate the ability of organizations to respond as required.	This objective is met when facility critiques have been conducted.
40	Demonstrate that NRC identified open items resulting from previous exercises are corrected.	This objective is met by successful demonstration of the task in the area(s) of concern.
41	Demonstrate use of SCBAs including field change out of spare cylinder.	This objective is meet when actual use of SCBAs and change out of cylinder are demonstrated.
42	Demonstrate the ability to control radiological exposure to emergency workers including the issuance of radioprotective drugs.	This objective is met when the need for radioprotective drugs has been determined in accordance with applicable procedures.

[1]10CFR50.47

Guidelines for Emergency Response Organization (ERO) Critiques

Critiques are an important part of the process of self-identifying problems and improvements for the Emergency Response Organization. The following are guidelines for conducting a facilitated critique of the Emergency Response Organization.

Critique Process

The facility leader should conduct a facilitated critique as follows: INIT.

1. Assign someone to record the critique notes. ____
2. Ask for input on each objective and the acceptance criteria on the facility listing.
3. After the participants for each position have completed their input, ask for input from the position evaluators. ____
4. Probe to identify ____
   - Flawed defenses
   - Error precursors
   - Weak organizational processes.
4. Consider the following elements: ____
   - Results
   - Behaviors
   - Task demands
   - Work environment
   - Individual capabilities
5. If problems are identified, prior to continuing, determine whether the problem should be: ____
   a) identified in a Condition Report (CR),
   b) identified on an EP Improvement Form (EPIF), or
   c) included in the critique as a general comment.

   If a Condition Report or EP Improvement Form is warranted, ensure critique participants identify who is responsible to initiate and evaluate the CR or EPIF, and document this in the critique notes.

6. Identify any remediation due to less than acceptable performance and document the recommended remediation in the critique notes. ____
7. After all of the objectives have been addressed, ask for any general comments from:
   - Participants ____
   - Controllers/Evaluators ____
   - NAS ____
   - NRC ____
8. Instruct the note taker to electronically transmit the critique notes to EP prior to the Lead Evaluator /Controller Critique (roll-up). ____

Progress Energy	R Reference Use

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

PLANT OPERATING MANUAL

VOLUME 2

PART 5

EPSPA-01

EVACUATION AND ACCOUNTABILITY

REVISION 7

SUMMARY OF CHANGES
PRR 94317

STEP	REASON FOR REVISION
Entire Procedure	Converted procedure to WORD 2000 and re-formatted procedure to comply with AP-007
Step 8.1.2.1.a	Added a note to the Site Emergency Coordinator's responsibilities section identifying non-essential personnel (AR #82622)
Step 8.1.3.3.d (new)	Added information identifying the existing west access road and the east access roads as site evacuation routes and added access through the Darlington County Plant as an alternate evacuation route from the site. (AR #75501)
Step 8.1.3.4.d (new)	Added information stating that an individual appointed by the Emergency Security Team Leader will provide directions for non-essential personnel leaving the plant site.
Step 8.1.3.7.b	Changed the location of the alternate assembly area from the National Guard Armory to the Darlington County Emergency Operations Center.

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8.1.1 **PURPOSE**

1. This procedure provides instruction for:

   a. Safe and timely evacuation and assembly of personnel within the protected area,

   b. Personnel Accountability, and

   c. Search and rescue operations.

8.1.2 **RESPONSIBILITIES**

1. The Site Emergency Coordinator (SEC) is responsible for the overall safety and well-being of personnel on-site. Specific responsibilities include:

   a. Determining the need for and directing emergency assembly/relocation or sheltering of non-essential personnel inside the protected area;

NOTE: Non-essential personnel include but are not limited to visitors, non-essential contract personnel, declared pregnant females, and handicapped persons. Consideration should be given to any special needs for this population. (AR #82622)

   b. Determining the need for and directing a site or local evacuation; and,

   c. Dispatching a search and rescue team to locate missing personnel.

2. An Environmental and Radiological Controls (E&RC) Supervisor or Lead Technician assigned by the OSC Leader will ensure the assembly area is radiologically safe.

3. Site personnel are responsible for complying with alarms and public address announcements.

8.1.3 **INSTRUCTIONS**

1. The Control Room should:

   a. Determine the appropriate upwind location for assembly of evacuated personnel.

   b. Sound the local or site evacuation alarm, as appropriate.

   c. Make a public address announcement with the "VLC" switch in the emergency position.

      – Give affected area(s) and assembly location.

   d. Repeat the alarm and the announcement.

   e. For Local Evacuation, verify non-essential personnel have evacuated the affected area.

      – Contact security to perform a computer roll call of the area, or

      – Obtain feedback from responders to the area if an area is evacuated that is not covered by a card reader.

2. Upon notification of the declaration of an Alert, a Site Area Emergency, or a General Emergency:

   a. Emergency Response Organization personnel are expected to report promptly to their respective Emergency Response Facility (ERF) and sign in on the roster.

NOTE: The Site Emergency Coordinator may direct a site evacuation or emergency assembly at an emergency level lower than a Site Area Emergency. However, a site evacuation is required for a Site Area Emergency or a General Emergency unless doing so would jeopardize personnel safety. (AR #48487, CA #5)

3. Upon notification of a Site Evacuation:

   a. Non-essential personnel are expected to report to the designated assembly area.

8.1.3. (Continued)

b. The designated assembly areas outside of the protected area are as follows:

NOTE: Non-essential personnel whose work areas are located outside of the protected area should report, as instructed, directly to the designated outside assembly area.

- East Parking Lot or Building 110 (next to Lake Robinson)
- West Parking Lot or the Unit 2 Administration Building Cafeteria

NOTE: Hazardous conditions (such as severe weather, toxic gases, etc.) may preclude immediate implementation of a site evacuation/assembly for non-essential personnel. In such cases, alternate locations should be considered for sheltering/mustering personnel until movement can safely be performed or the hazardous condition no longer exists.

c. The alternate assembly area within the protected area is Modular Building 320. However, the SEC has the discretion to identify other assembly areas within the protected area as dictated by the emergency conditions.

d. The designated evacuation routes from the site are the west access road and the east access road. Should conditions warrant, an alternate route through the Darlington County Plant is available for evacuating the site. (AR #75501)

4. Once a Site Evacuation has been ordered, Security personnel should:

a. Report to the designated assembly area and distribute, as necessary, Attachment 8.1.5.1, Emergency Assembly Form, to each work group. It may be necessary to assign a person to take the names.

8.1.3.4 (Continued)

b. A group supervisor/designee should complete Attachment 8.1.5.1, Emergency Assembly Form, as soon as possible and provide to Security. Personnel who have not reported to the designated assembly area should be listed as missing on Attachment 8.1.5.1.

c. The completed Emergency Assembly Forms should be delivered to the Emergency Security Team Leader (ESTL).

d. An individual appointed by the ESTL or the A&LM will provide instructions to non-essential personnel for leaving the plant site.

5. Accountability of personnel within the protected area shall be performed within 30 minutes of the declaration of a Site Area Emergency or a General Emergency (If no SAE has been declared) (AR #48487, CAPR #1).

a. The ESTL shall perform an accountability of personnel inside the protected area using the security computer roll call.

b. The Operations Support Center (OSC) Leader and the Superintendent Shift Operations (SSO) shall account for ERO personnel assigned to their facilities and provide this information to Security as quickly as possible, typically within 15 minutes.

c. The ESTL shall notify the SEC that accountability is complete and provide the names of missing personnel, if any.

d. Accountability of personnel shall be established and maintained throughout the event.

8.1.3 (Continued)

6. If personnel are not accounted for within the protected area, then conduct search and rescue operations from the OSC as follows.

   a. Obtain equipment as needed

      – protective gear

      – First aid kit

      – survey meter and dosimetry

      – stretcher and blanket

   b. Regulatory limits shall be observed for planned radiation exposures to emergency workers unless the:

      – Plant General Manager or

      – Radiological Control Director (RCD) or the

      – SEC in their absence, authorizes the individual to exceed 5 rem TEDE in a year.

8.1.3.6 (Continued)

c. The Emergency Worker Dose Limits are as follows:

Dose Limit Rem TEDE[1]	Activity	Condition
5	All	
10	Protecting valuable property	Lower dose not practicable
25	Lifesaving or protection Of large populations	Lower dose not practicable
>25	Lifesaving or protection of large populations	Only on a voluntary basis to persons fully aware of the risks involved

[1]Doses to the lens of the eye should be limited to three times the stated TEDE value and doses to any other organ (including skin and body extremities) should be limited to ten times the stated TEDE value.

d. Lifesaving Actions:

In emergency situations that require personnel to search for and remove injured persons or entry to prevent conditions that would probably injure numbers of people, a planned dose should not exceed 25 rem TEDE to the whole body, 75 rem to the lens of the eye, or 250 rem to any other organ (including skin and body extremities). The following criteria should be considered:

NOTE: For this procedure this guideline applies to the removal of injured persons if the saving of life is possible.

– Declared Pregnant Women shall not take part in these actions.

8.1.3.6.d (Continued)

- Internal exposures should be minimized by respiratory protection and contamination controlled by the use of protective clothing. The use of protective equipment must be consistent with maintaining the total effective dose equivalent ALARA.

- Entry into high radiation areas shall not be permitted unless instrumentation capable of measuring the anticipated radiation levels is provided.

- Each emergency worker entering a high radiation area shall wear self-reading dosimeters capable of measuring the expected exposure to be received.

- Entry into radiation fields of greater than 100 Rem/hour shall not be permitted unless specifically authorized by the Plant General Manager or Radiological Control Director; in their absence, the Site Emergency Coordinator may grant approval.

e. Actions Requiring a Dose Exceeding 25 Rem

In emergency situations where a planned dose in excess of 25 Rem TEDE will be required, the following criteria shall be considered:

- Rescue personnel shall be volunteers. Declared Pregnant Women shall not take part in these actions.

- Rescue personnel shall be instructed about the risks involved, including the numerical levels of dose at which acute effects due to radiation will be incurred and numerical estimates of the risk of delayed effects.

- Other things being equal, volunteers above the age of 45 should be selected whenever possible for the purpose of avoiding unnecessary genetic effects.

8.1.3.6.e (Continued)

- Internal exposures should be minimized by respiratory protection and contamination controlled by use of protective clothing. The use of protective equipment must be consistent with maintaining the TEDE ALARA.

- Exposure under these conditions should be limited to once in a lifetime, and shall be included when calculating the future lifetime permissible exposures.

- Entry into high radiation areas shall not be permitted unless instrumentation capable of measuring the anticipated radiation levels in provided.

- Each emergency worker entering a high radiation area shall wear self-reading dosimeters capable of measuring the expected exposure to be received.

- Entry into radiation fields of greater than 100 Rem/hour shall not be permitted unless specifically authorized by the Plant General Manager or RCD; in their absence, the SEC may grant approval.

- Persons receiving doses as indicated above should be counseled to avoid procreation for a period up to a few months.

f. Occupational dose incurred which exceed occupational dose limits shall be included in the individual=s planned special exposure account.

g. Conduct search and rescue mission in accordance with planned actions and routes.

8.1.3.6 (Continued)

h. For each person found

- Analyze injuries and radiological hazard to determine if removal to a lower dose area is required.
- Notify the Unit 2 Control Room if onsite or offsite assistance is necessary. Give best approach if known.
- Administer first aid as necessary, see EPSPA-02, First Aid and Medical Care.
- Record actions taken on attachments in EPSPA-02, First Aid and Medical Care.

7. If a local evacuation of the TSC or Emergency Operations Facility (EOF) is required then:

a. TSC personnel should report to the Unit 2 Control Room.

- Directors should take only essential supplies and personnel to the alternate assembly area.
- Phones and table space are provided along the north wall of the Control Room.

b. EOF personnel should report to the Darlington County Emergency Operations Center, 1625 Harry Byrd Highway, in Darlington, South Carolina.

- As much as possible managers should take necessary supplies to the alternate assembly area.

8. Once accountability is established, personnel shall be controlled such that it is maintained.

8.1.4 **RECORDS**

N/A

8.1.5 **ATTACHMENTS**

8.1.5.1 Emergency Assembly Form

8.1.5.2 Risk Associated with Radiation Exposure

ATTACHMENT 8.1.5.1
Page 1 of 1

EMERGENCY ASSEMBLY FORM

Assembly Area _____

Work Group _____

Name/Date _____

The following personnel have **NOT** reported to the assembly area.

NAME OF PERSONNEL	NAME OF PERSONNEL

When completed, give this sheet to Security.

RISK ASSOCIATED WITH RADIATION EXPOSURE

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

AVERAGE RISK OF DELAYED HEALTH EFFECTS DUE TO ONE REM EXPOSURE

	Whole Body (TEDE)	Thyroid (CDE)
Fatal Cancer	2.8	0.36
Non-Fatal Cancer	2.4	3.2
Genetic Disorders (all generations)	1	-

Effects per Person-Rem per 1000 People

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	15	100	15
300	50	150	50
400	85	200	85
460	95	250	98

[a]Risks will be 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.

Progress Energy	R Reference Use

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

PLANT OPERATING MANUAL

VOLUME 2

PART 5

EPSPA-04

ACCESS CONTROL

REVISION 2

SUMMARY OF CHANGES
PRR 89912

STEP	REVISION COMMENTS
Entire Procedure	Converted to WORD 2000 and re-formatted to comply with AP-007, Writers' Guide.
Step 8.4.3.1.b	Revised step to state that shift supervision and officers manning the Access Control Point (ACP) will be notified to implement additional access restrictions.
Step 8.4.3.1.d, new bullet 2	Added step to state that an alternate access route through the Darlington County Plant may be established as directed by the SEC.
Step 8.4.3.1.d, bullets 3 and 4	Revised step to state that the actions are directed by the ESTL in coordination with the Radiation Control Director.
Step 8.4.3.2	Added new step to state that access control activities may be assumed by local law enforcement in a security event.

TABLE OF CONTENTS

8.4.1 **PURPOSE**

1. Provide guidance for access control upon declaration of a Site Area Emergency or as directed by the Site Emergency Coordinator (SEC).

8.4.2 **RESPONSIBILITIES**

N/A

8.4.3 **INSTRUCTIONS**

1. The Emergency Security Team members shall control access to the plant site as follows:

   a. Security personnel on patrol or assigned to a post shall report by radio or telephone to the Central Alarm Station (CAS) for instructions.

   b. Security shift supervision and officers manning the Access Control Point (ACP) will be notified to implement additional access restrictions.

      – Non-Progress Energy personnel are not allowed access to the plant site unless authorized by the Site Emergency Coordinator or his designee.

      – Verification or validation of responders to the site may be obtained through the Emergency Security Team Leader.

   c. Provide specific destinations to arriving personnel requiring access to the site.

      – Special reporting requirements, like use of alternate facilities will be provided by Emergency Response Personnel as appropriate.

8.4.3.1 (Continued)

d. When a radiological release is in progress Emergency Security Team members shall perform the following:

- Permit exit only to those personnel cleared by Radiation Control personnel.
- As conditions dictate, an alternate route through the Darlington County Plant will be established by the ESTL as directed by the SEC.
- Establish additional control points as directed by the ESTL in coordination with the Radiation Control Director, if necessary, to control the spread of contamination.
- Assist in establishing a decontamination area as directed by the ESTL in coordination with the Radiation Control Director, for any vehicles found to be contaminated when exiting the plant. Decontamination will be accomplished as directed by the Radiological Control Director.

8.4.3.2 When the emergency declarations are based upon a security event, duties within this procedure become secondary for the on-site security force and may be assumed/assigned to local law enforcement agencies (LLEA) by the ESTL.

8.4.4 **RECORDS**

There are no records generated as a result of this procedure.

8.4.5 **ATTACHMENTS**

N/A

Progress Energy	R Reference Use

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

PLANT OPERATING MANUAL

VOLUME 2

PART 5

EPEOF-05

RADIATION CONTROL MANAGER

REVISION 6

SUMMARY OF CHANGES
PRR 95301

STEP #	REVISION COMMENTS
RCM Quick Start Guide, Step 2	Deleted the Dialogic phone number.
Step 8.5.3.1	Changed the location of the alternate assembly area from the National Guard Armory to the Darlington County Emergency Operations Center.
Step 8.5.3.11	Deleted sentence one and re-worded step to direct the use of EPCLA-01 and protective action guides.
Step 8.5.3.12 (new)	Added step directing user to determine protective action recommendations. Added guidance on when the timeliness standards for notification of revised protective action recommendations are applicable. (AR #48774) Re-numbered subsequent steps.
Step 8.5.3.19 (new)	Included guidance for considering the administration of potassium iodide based on I-131 air activity. (AR #88078)
Step 8.5.3.20	Added conditions for applying the Dosimeter Correction Factor to minimize internal dose received. (AR # 88263)
Step 8.5.3.21	Added step to direct the user to route the Dosimeter Correction Factor form to the Emergency Response Manager for approval.
Records Section	Added a statement to forward documentation generated as a result of performance of this procedure to Emergency Preparedness.

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RADIOLOGICAL CONTROL MANAGER (RCM) QUICK START GUIDE

NOTE: Blanks are provided for place-keeping Ts only; logs are the official record. This is a summary level guide and does not replace the procedure steps.

1. Sign-in on the facility sign-in board. Log on the Electronic Display System (EDS). _____

2. If dialogic was used for callout, upon arrival at the Facility, notify Dialogic. _____

3. Obtain briefing from Radiological Control Director (RCD) in the Technical Support Center (TSC) or the relieving RCM. _____

4. Assess radiological control staff availability. Notify additional resources if necessary. Brief radiological control staff. _____

5. Obtain a briefing on the cause of the emergency. _____

6. Review Emergency Action Level (EAL)/Protective Action Recommendation (PAR) status. _____

7. Obtain wind direction (degrees blowing from/to). _____

8. Determine the source term. _____

9. Check alignment of TSC/EOF ventilation through HEPA system (R-38). Assess eating/drinking conditions for TSC/EOF Building and provide results to RCD. _____

10. Prompt dispatch of Environmental Monitoring Teams (Enmon Teams) downwind and verify locations. _____

11. Request updates from the Enmon Team Leader and the Dose Projection Team Leader (DPTL) every 30 minutes. _____

12. Establish contact with the Department of Health & Environmental Control. Refer to the ERO Telephone Directory. _____

13. Refer to procedure steps. _____

8.5 RADIOLOGICAL CONTROL MANAGER (RCM)

8.5.1 PURPOSE

This procedure describes the functional responsibilities and procedure steps for the Radiological Control Manager (RCM).

8.5.2 RESPONSIBILITIES

1. Manage the radiological control activities in the Emergency Operations Facility (EOF).

2. Maintain awareness of meteorology, dose projections, environmental monitoring, and offsite radiological consequences.

3. Recommend protective actions to the Emergency Response Manager (ERM).

NOTE: Sector boundaries are defined by the county/state officials and are represented by landmarks familiar to the public, thus appearing odd-shaped and protruding into the geometric 2-mile, 5-mile and 10-mile radii. Protective Action Recommendations (PARs) for a specific sector should be developed and made based on the requirement for the radius number it defines. PARs intended for the 2-mile radius apply only to those sectors which end in 0 (zero). PARs intended for the 5-mile radius only apply to those sectors, which end in 1. PARS intended for the 10-mile radius apply only to those sectors, which end in 2. (AR #48223)

4. Serve as liaison between the EOF and the Radiological Control Director (RCD) in the Technical Support Center (TSC) and corporate radiation control personnel.

5. Conduct ALARA review of engineering review and tasks proposed by the emergency organization.

8.5.3 INSTRUCTIONS

1. Upon notification, determine if conditions exist which would prevent immediate occupancy of the EOF and require personnel to report to the Alternate Assembly Area at the Darlington County Emergency Operations Center, 1625 Harry Byrd Highway (Highway 151), Darlington, SC.

8.5.3 (Continued)

2. Assess Radiological Control (RC) staff availability. The RC staff includes the Environmental Monitoring Team Leader (Enmon TL), the Dose Projection Team Leader (DPTL), the Environmental Monitoring Teams (Enmon Teams) and the Dose Projection Team (DPT).

3. Manage RC activities in the EOF to include:

   a. Source term assessments,

   b. Dose projection calculations,

   c. Offsite radiological consequences (Enmon Teams),

   d. Meteorological data (request each 1 hour, 3 hour and 3 day forecast), and

   e. Facility habitability.

      – TSC/EOF Building eating, drinking, and smoking restrictions will be determined for the entire facility by the RCM and ERM, status shall be promptly communicated to the RCD for consistency.

4. Assist with notifications to various state and county agencies regarding evacuation and sheltering.

5. Determine the need and availability of offsite assistance.

6. Ensure that necessary information is posted on displays and status boards. Including:

   a. Offsite radiological status,

   b. Protective Action Recommendations (PARs), and

   c. 10 mile emergency planning zone (EPZ) map,

7. Direct issuance of dosimetry as necessary.

8.5.3 (Continued)

8. Determine evacuation routes of personnel to and from the plant. All personnel not needed to mitigate the accident or casualty will be evacuated as Zone A-0 evacuees. If decontamination of personnel and vehicles is not currently being conducted at the plant, then decontamination will occur as for other Zone A-0 evacuees.

9. Based on plant data, dose projections and meteorology, determine the need for protective sheltering or evacuation, including appropriate routes. Utilize Attachment 8.5.5.1, Protective Action Recommendations, initially to determine prioritization.

NOTE: Sector boundaries are defined by the county/state officials and are represented by landmarks familiar to the public, thus appearing odd-shaped and protruding into the geometric 2-mile, 5-mile and 10-mile radii. Protective Action Recommendations (PARs) for a specific sector should be developed and made based on the requirement for the radius number it defines. PARs intended for the 2-mile radius apply only to those sectors which end in 0 (zero). PARs intended for the 5-mile radius only apply to those sectors, which end in 1. PARS intended for the 10-mile radius apply only to those sectors, which end in 2. (AR #48223)

10. Implement EPRAD-03, Dose Projections. This function is delegable to the Dose Projection Team Leader (DPTL). Confer with the DPTL to evaluate results and recommend protective actions. Consider the following:

    a. Plume travel time for evacuation purposes (close-in sheltering vs. evacuation if the plume is already in route or if there will be a short term high dose period),

    b. Evacuation times vs. plume dose duration, and

    c. Hot spots resulting from plume deposition.

11. Utilize EPCLA-01, Emergency Control and the Protective Action Guides to assist in developing protective action recommendations.

8.5.3 (Continued)

12. Determine protective action recommendations (PARs) and recommend to the ERM.

    - PARs should be developed and notification of PARS should be initiated in ≤ 15 minutes of a General Emergency classification.

    - **IF** the event conditions (radiological or meteorological) change resulting in revised PARs, **THEN** the ≤ 15 minute timeliness standard is applicable.

    - **IF** field dose data result in a change in PARs, **THEN** the ≤ 15 minute time standard for PAR development applies from the time the field data is obtained **not** from the time the dose projection is completed. (AR #48774)

13. **IF** the dose projection is > 1 Rem Total Effective Dose Equivalent or 5 Rem Committed Dose Equivalent to the thyroid, **THEN** verify calculation of doses beyond the site boundary per EPRAD-03, Dose Projections.

14. Notify the DPTL of the status of Phase "A" isolation.

15. Obtain offsite radiological data from the Environmental Monitoring Team Leader (Enmon TL). Compare with results from the state and other offsite radiological data. Evaluate abnormal results.

16. Periodically confer with the Department of Health & Environmental Control (DHEC) regarding dose projections and environmental monitoring data.

17. Compare offsite monitoring results and dose projections against the Emergency Action Levels (EALs) to determine if the results warrant a change in emergency classification. Inform the Emergency Response Manager (ERM).

18. As requested by state officials, arrange for analysis of environmental samples by the Brunswick or Harris Plants or the Harris Energy & Environmental Center and for whole body counting and bioassay of affected offsite personnel.

8.5.3 (Continued)

19. Consider the administration of potassium iodide (KI) to the Environmental Monitoring (Enmon) Teams if the expected thyroid Committed Dose Equivalent will exceed 25 Rem.

    - **IF** radioiodine sample analysis results indicate air activity greater than 8.7E-07 µCi/cc I-131, **THEN** potassium iodide should be considered for affected workers. Exposure to radioiodine in this concentration will result in a thyroid dose of approximately 1 Rem for one hour of exposure.

    - Inform the ERM to recommend KI administration to the offsite agencies.

20. Review and approve the Dosimeter Correction Factor (DCF) Worksheet from EPEOF-06 prepared by the Dose Projections Team Leader (DPTL). The Dosimeter Correction Factor is always **ONE** unless:

    a. A General Emergency has been declared, AND

    b. All recommended off-site evacuations are complete, AND

    c. A release is in progress.

    IF all three conditions are true, THEN the exposure limit for the EnMon Teams shall be reduced by the Dosimeter Correction Factor (DCF) to account for internal dose.

21. Route the DCF form to the ERM for approval.

22. Approve exposure extensions.

23. Review PLP-021, “Chemical Storage, Inventory, Spill and Hazard Communication Program”, for items to consider in the event of a chemical spill or accident.

NOTE: Contact numbers for the Environmental Compliance Unit are listed in the Emergency Response Organization Phone Book.

    a. Contact the Environmental Compliance Unit to determine reportability.

    b. Ensure the settling pond is isolated from the discharge canal for spills directed toward storm drains.

8.5.3 (Continued)

24. Coordinate shift change with the Administration & Logistics Manager (ALM).

25. Develop recovery strategy.

8.5.4 **RECORDS**

Documentation generated as a result of the performance of this procedure should be forwarded to Emergency Preparedness for retention per EPPRO-01.

8.5.5 **ATTACHMENTS**

8.5.5.1 Protective Action Recommendations

PROTECTIVE ACTION RECOMMENDATIONS

DETERMINATION OF AFFECTED ZONES BASED ON WIND DIRECTION
(EVACUATION TIME IN MINUTES)

WIND FROM	AFFECTED ZONES	WINTER WEEKDAY, FAIR WEATHER	WINTER WEEKNIGHT FAIR WEATHER	SUMMER WEEKDAY FAIR WEATHER	WINTER WEEKDAY, ADVERSE WEATHER
North (338E - 022E)	A-0, B-1, B-2, C-1, C-2, D-1, D-2	225	180	210	295
Northeast (023E - 067E)	A-0, C-1, D-1, D-2, E-2	225	180	210	295
East (068E - 112E)	A-0, D-1, D-2, E-1, E-2	225	180	210	295
Southeast (113E - 157E)	A-0, A-1, A-2, D-2, E-1, E-2	225	180	210	295
South (158E - 202E)	A-0, A-1, A-2, B-1, B-2, E-1, E-2	225	180	210	295
Southwest (203E - 247E)	A-0, A-1, A-2, B-1, B-2	225	180	210	295
West (248E - 292E)	A-0, B-1, B-2, C-1, C-2	225	180	210	295
Northwest (293E - 337E)	A-0, B-1, B-2, C-1, C-2, D-2	225	180	210	295
ALL ZONES (10 MILE RADIUS)		240	180	215	315

Progress Energy	R Reference Use

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

PLANT OPERATING MANUAL

VOLUME 2

PART 5

EPEOF-06

DOSE PROJECTION TEAM LEADER

REVISION 2

SUMMARY OF CHANGES
PRR 95303

STEP #	REVISION COMMENTS
Dose Projection Team Leader Quick Start Guide	Deleted phone number for Dialogic from Step 2. Added Step 10 to calculate the dosimeter correction factor as necessary. Re-numbered subsequent steps
Responsibilities Section Step 8.6.2.3	Re-worded step to instruct the user to provide the results of the dosimeter correction factor calculation to the EnMon Team Leader to assist in exposure control for the EnMon teams.
Step 8.6.3.5	Added guidance on when the timeliness standards for notification of revised protective action recommendations are applicable. (AR #48774)
Step 8.6.3.7 Note	Added note indicating that the dosimeter correction factor obtained from the HBRDose software printout may be based on plant data or field data. Re-worded step to state “determine dosimeter correction factor”.
Step 8.6.3.8 (new)	Added conditions where use of the dosimeter correction factor is applicable.
Step 8.6.3.9 through Step 8.6.3.14	Added instructions for completing Attachment 8.6.5.4, Dosimeter Correction Factor Work Sheet. Re-numbered subsequent steps.
Records Section	Added instructions to forward records generated per the procedure to Emergency Preparedness for retention.
Attachment 8.6.5.1	Added note to instructions for completing the dose projections section of the emergency notification form to state that the protective action recommendations section could be completed either by the dose projections team or the emergency communicator.
Attachment 8.6.5.4	Added the Dosimeter Correction Factor Work Sheet.
Attachment 8.6.5.5	Added graph for determining internal dose from inhalation based on I-131 and Cs-137.

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DOSE PROJECTION TEAM LEADER (DPTL) QUICK START GUIDE

NOTE: Blanks are provided for place keeping o's only, logs are the official record. This is a summary level guide and does not replace the procedure steps.

The first qualified individual to arrive at the Emergency Operations Facility (EOF) will assume the dose projection function and act as the team leader and/or Radiological Control Manager (RCM) until relieved.

1. Sign-in on the facility sign-in board. Log on the Electronic Display System (EDS). _____

2. If Dialogic was used for callout, upon arrival at the Facility, notify Dialogic. _____

3. Obtain plant and emergency action status briefing. _____

4. Assess dose projection team staff availability. Notify the Administrative and Logistics Manager (ALM) for additional resources if necessary. _____

5. Verify the ability to obtain meteorological data. _____

6. Assign personnel to perform dose projection and source term procedures. _____

7. Brief the dose projection team staff. _____

8. Complete Dose Projection Portion of the Emergency Notification Form when necessary. _____

9. Complete Attachment 8.6.5.3, Radiation Monitor Operability Checklist. _____

10. Complete the Dosimeter Correction Factor Work Sheet as necessary. _____

11. Notify the Emergency Response Manager (ERM) as to readiness to activate. _____

12. Refer to procedure steps. _____

8.6 DOSE PROJECTION TEAM LEADER (DPTL)

8.6.1 PURPOSE

1. This procedure describes the functional responsibilities and procedure steps for the Dose Projection Team Leader (DPTL).

8.6.2 RESPONSIBILITIES

1. Manage the dose projection activities.

2. Monitor meteorology, dose projections, and offsite radiological consequences.

3. Provide results of the Dosimeter Correction Factor (DCF) calculation to the Environmental Monitoring Team Leader to assist in exposure control for the EnMon Teams.

8.6.3 INSTRUCTIONS

1. Manage the dose projection activities in the Emergency Operations Facility (EOF). Including:

   a. Assigning personnel to calculate dose projections,

   b. Assigning personnel to determine source term,

   c. Briefing the dose projection team periodically, and

   d. Keep the Radiological Control Manager (RCM) informed of dose projection results and trends.

8.6.3 (Continued)

2. Direct the Plant Operations Advisor (POA) to conduct the following:

   a. Trend Radiological Monitoring System (RMS) for increased levels

   b. Identify current or potential release paths based on current or projected plant status

   c. Identify possible isolation or rerouting of potential releases

   d. Identify any potential unmonitored release pathway

   e. Assist in determining the estimated duration of releases

   f. Communicate with the Accident Assessment Team regarding plant shutdown times and plant conditions

   g. Communicate with the Plant Operations Director (POD), or if not available, the Control Room

   h. Assist in developing source terms for potential releases

   i. Explain current and potential plant conditions to the Dose Projection Team.

3. Complete the dose projection section of the Emergency Notification Form. Refer to Attachment 8.6.5.1, Completing the Dose Projection Section of the Emergency Notification Form.

4. Complete Attachment 8.6.5.3, Radiation Monitor Operability Checklist, and provide the information to the dose projection team. Information to complete the Attachment should be obtained from the Control Room (CR).

8.6.3 (Continued)

5. Determine Protective Action Recommendations (PARs) and recommend to the ERM.

   - PARs should be developed and notification of the PARs should be initiated in ≤15 minutes of a General Emergency classification.
   - **IF** the event conditions (radiological or meteorological) change resulting in revised PARs, **THEN** the ≤15 minute standard is applicable.
   - **IF** field dose data result in a change in PARS, **THEN** the 15 minute time standard for PAR development applies from the time the field data is obtained **not** from the time the dose projection is completed. (AR #48774)

6. Compare dose projections and pertinent data with environmental monitoring data. Refer to Attachment 8.6.5.2, Dose Projection and Field Data Comparison Guide.

NOTE: The Dosimeter Correction Factor from the HBRDose software printout may be based on plant data (radiation monitor readings, samples, etc.) or field data.

7. Determine the Dosimeter Correction Factor (DCF).

8. The Dosimeter Correction Factor is always **ONE** unless:

   - A General Emergency has been declared, **AND**
   - All recommended offsite evacuations are complete, **AND**
   - A release is in progress.

9. **IF** the Dosimeter Correction Factor from the HBRDose software printout is being used, **THEN** record the DCF in Part I of Attachment 8.6.5.4.

10. Calculate the self reading dosimeter value that would result in the TEDE limit being received.

11. Advise the EnMon Team Leader and the RCM of the results.

8.6.3 (Continued)

12. **IF** the Dosimeter Correction Factor is being manually calculated, **THEN** complete Part II of Attachment 8.6.5.4.

13. Advise the EnMon Team Leader and the RCM of the results.

14. Forward Attachment 8.6.5.4 to the RCM for approval.

15. Coordinate shift change with the Administrative & Logistics Manager (ALM).

8.6.4 **RECORDS**

Documentation generated as a result of the performance of this procedure should be forwarded to Emergency Preparedness for retention per EPPRO-01.

8.6.5 **ATTACHMENTS**

8.6.5.1 Completing the Dose Projection Section of the Emergency Notification Form

8.6.5.2 Dose Projection and Field Data Comparison Guide

8.6.5.3 Radiation Monitor Operability Checklist

8.6.5.4 Dosimeter Correction Factor Calculation Sheet

8.6.5.5 Internal Dose from Inhalation

COMPLETING THE DOSE PROJECTION SECTION OF THE EMERGENCY NOTIFICATION FORM

AIRBORNE RELEASE

TYPE OF RELEASE:

1. If the release is from the stack, mark ELEVATED regardless of wind speed. If the release is from any location other than the stack, mark GROUND LEVEL. If the release location is unknown, mark GROUND LEVEL.
2. Mark the AIRBORNE block.
3. Record the start and stop time and date of any **actual** release in the AIRBORNE Started and Stopped spaces. If the release is underway, put N/A in the Stopped space.
4. Enter N/A in the LIQUID Started and Stopped spaces.

RELEASE MAGNITUDE:

1. Mark the CURIES box.
2. For NORMAL OPERATING LIMITS mark the block for BELOW if the projected dose at the site boundary is below 500 mRem TEDE and 1500 mRem CDE, otherwise mark the box for ABOVE.
3. In the NOBLE GASES space enter the Xe-133 Equivalent Release value which is provided by the Dose Projection Program.
4. In the IODINES space enter the I-131 Equivalent Release value which is provided by the Dose Projection Program.
5. In the blanks for PARTICULATES and OTHER enter "N/A".

ESTIMATE OF PROJECTED OFFSITE DOSE:

1. Mark the NEW box if this is the first dose projection or if the release has changed significantly (approximately 15%), otherwise mark the UNCHANGED box.
2. Enter the time for release duration (in hours), used in the dose projection program in the ESTIMATED DURATION space.
3. Enter the doses provided by the Dose Projection Program in the appropriate TEDE and Thyroid CDE column. Ensure that units are in "mRem", and do not change the units on the form.
4. Enter the time that the dose projection was performed in the PROJECTION TIME space.

METEOROLOGICAL DATA:

1. Enter the wind direction used for the dose projection in degrees for WIND DIRECTION. For elevated releases use the elevated wind direction, and for ground releases use the ground wind direction.
2. Enter the wind speed used for the dose projection in mph for SPEED. For elevated releases use the elevated wind speed, and for ground releases use the ground wind speed.
3. Enter the stability class that was used for the dose projection in the STABILITY CLASS blank.
4. Enter the type precipitation that is occurring in the PRECIPITATION blank. If no precipitation is occurring enter none.

COMPLETING THE DOSE PROJECTION SECTION OF THE EMERGENCY NOTIFICATION FORM

NOTE: Dose projections for the public due to liquid effluents may not be available as quickly as projections of dose due to airborne effluents, therefore the following sections shall be completed as thoroughly as possible with the information available.

LIQUID RELEASE

TYPE OF RELEASE:

1. Mark the GROUND LEVEL block.
2. Enter N/A in the AIRBORNE Started and Stopped spaces.
3. Mark the LIQUID block.
4. Record the start and stop time and date of any actual release in the LIQUID Started and Stopped spaces. If the release is underway, put N/A in the Stopped space.

RELEASE MAGNITUDE:

1. Mark the CURIES box.
2. For NORMAL OPERATING LIMITS mark the block for BELOW if the effluent concentrations are below the Appendix B Table II column 2 values for all nuclides other than entrained Noble Gases which shall be limited to 2E-4 μCi/ml total activity. If the activity is above these limits mark the block for ABOVE.
3. In the blanks for NOBLE GASES, IODINES, and PARTICULATES enter "N/A".
4. In the blank for OTHER enter "See Attachment", and route a document listing the effluent concentrations with the Notification Form.

ESTIMATE OF PROJECTED OFFSITE DOSE:

1. Mark the NEW box if this is the first dose projection or if the release has changed significantly (approximately 15%), otherwise mark the UNCHANGED box.
2. Enter the time for release duration (in hours). This is the time from the start of the release until the end of the release. The SEC, Plant Operations Director, or the Technical Analysis Manager may be contacted to determine this value. Use one hour if the expected duration of the release is unavailable.
3. Enter N/A in the TEDE and Thyroid CDE columns.
4. Enter the dose projections in the blank area of this section.
5. Enter the time that the sample was taken in the PROJECTION TIME space.

COMPLETING THE DOSE PROJECTION SECTION OF THE EMERGENCY NOTIFICATION FORM

LIQUID RELEASE CONT.

METEOROLOGICAL DATA:

Obtain the required meteorological data from ERFIS, the Dose Projection Program, or the National Weather Service Office (phone number in ERO Phone Book) as available. Ensure the wind direction is "from" if it is obtained from a source other than ERFIS. Stability class is available in the procedure for dose projection (EPRAD-03) if ERFIS is not available.

1. Enter the ground wind direction in degrees for WIND DIRECTION.
2. Enter the ground wind speed used for the dose projection in mph for SPEED.
3. Enter the stability class in the STABILITY CLASS blank.
4. Enter the type precipitation that is occurring in the PRECIPITATION blank. If no precipitation is occurring enter none.

AIRBORNE AND LIQUID RELEASE:

TYPE OF RELEASE:

1. Mark the GROUND LEVEL block.
2. If the airborne release is from the stack, mark ELEVATED regardless of wind speed.
3. Mark the AIRBORNE and LIQUID block.
4. Record the start and stop time and date of any **actual** release in the appropriate AIRBORNE and LIQUID Started and Stopped spaces. If the release is underway, put N/A in the Stopped space.

RELEASE MAGNITUDE:

1. Mark the CURIES box.
2. For NORMAL OPERATING LIMITS mark the block for BELOW if the liquid effluent concentrations are below the Appendix B Table II column 2 values for all nuclides other than entrained Noble Gases which shall be limited to 2E-4 ;Ci/ml total activity, and doses at the site boundary due to airborne releases are below 500 mRem/hr TEDE and 1500 mRem/hr CDE to the thyroid. If the activity is above these limits mark the block for ABOVE.
3. In the NOBLE GASES space enter the Xe-133 Equivalent Release value which is provided by the Dose Projection Program.
4. In the IODINES space enter the I-131 Equivalent Release value which is provided by the Dose Projection Program.
5. In the blank for PARTICULATES enter "N/A".
6. In the blank for OTHER enter "See Attachment", and route a document listing the effluent concentrations with the Notification Form.

COMPLETING THE DOSE PROJECTION SECTION OF THE EMERGENCY NOTIFICATION FORM

ESTIMATE OF PROJECTED OFFSITE DOSE:

1. Mark the NEW box if this is the first dose projection or if the release has changed significantly (approximately 15%), otherwise mark the UNCHANGED box.
2. Enter the time for release duration (in hours) for the release that has the longest duration in the ESTIMATED DURATION space. If the airborne release is longest use the duration used in the dose projection program. If the liquid release duration is longest enter the time from the start of the release until the end of the release. The SEC, Plant Operations Director, or the Technical Analysis Manager may be contacted to determine this value. Use one hour if the expected duration of the release is unavailable.
3. Enter the dose projections for the airborne release provided by the Dose Projection Program in the appropriate TEDE and Thyroid CDE column. Ensure that units are in "mrem", and do not change the units on the form.
4. Enter the dose projections for the liquid releases in the blank area of this section.
5. Enter the time that the dose projection was performed in the PROJECTION TIME space.

METEOROLOGICAL DATA:

1. Enter the wind direction used for the dose projection in degrees for WIND DIRECTION. For elevated releases use the elevated wind direction, and for ground releases use the ground wind direction.
2. Enter the wind speed used for the dose projection in mph for SPEED. For elevated releases use the elevated wind speed, and for ground releases use the ground wind speed.
3. Enter the stability class that was used for the dose projection in the STABILITY CLASS blank.
4. Enter the type precipitation that is occurring in the PRECIPITATION blank. If no precipitation is occurring enter none.

PROTECTIVE ACTION RECOMMENDATIONS

NOTE: This section of the emergency notification form can be completed by the Emergency Communicator or the Dose Projections Team.

1. Mark the appropriate box for the recommended protective action. **IF** evacuate or shelter in place are chosen, **THEN** list the sectors for which the recommendation is applicable (i.e., A-0, A-1, B-1, etc.). If the General Emergency is declared you can not check "No Recommended Protective Action".

DOSE PROJECTION AND FIELD DATA COMPARISON GUIDE

NOBLE GAS RATIO

RATIO	POSSIBILITIES	POSSIBLE ACTIONS
<0.001 TO 0.2	UNIDENTIFIED PLANT RELEASE?	BASE ACTIONS ON VERIFIED FIELD MEASUREMENTS[1]
0.2 TO 0.5	UNLIKELY BUT POSSIBLE	BASE ACTIONS ON VERIFIED FIELD MEASUREMENTS[1]
0.5 TO 10	NOT UNUSUAL	BASE ACTION ON PROJECTIONS
10 TO 50	UNLIKELY BUT POSSIBLE	ATTEMPT TO VERIFY PROJECTIONS BY TRAVERSING PLUME. EVALUATE CONFIDENCE IN PLANT RELEASE DATA. BASE ACTIONS ON DOSE PROJECTIONS
>50	FIELD TEAM NOT ON CENTERLINE?	ATTEMPT TO VERIFY PROJECTIONS BY TRAVERSING PLUME. EVALUATE CONFIDENCE IN PLANT RELEASE DATA. BASE ACTIONS ON DOSE PROJECTIONS.

IODINE RATIO

RATIO	POSSIBILITIES	POSSIBLE ACTIONS
<0.001 TO 0.05	UNIDENTIFIED PLANT RELEASE?	BASE ACTIONS ON VERIFIED FIELD MEASUREMENTS[1]
0.05 TO 0.2	UNLIKELY BUT POSSIBLE	BASE ACTIONS ON VERIFIED FIELD MEASUREMENTS[1]
0.2 TO 10	NOT UNUSUAL	BASE ACTIONS ON PROJECTIONS
10 TO 50	UNLIKELY BUT POSSIBLE	ATTEMPT TO VERIFY PROJECTIONS BY TRAVERSING PLUME. EVALUATE CONFIDENCE IN PLANT RELEASE DATA. BASE ACTIONS ON DOSE PROJECTIONS.
>50	FIELD TEAM NOT ON CENTERLINE?	ATTEMPT TO VERIFY PROJECTIONS BY TRAVERSING PLUME. EVALUATE CONFIDENCE IN PLANT RELEASE DATA. BASE ACTIONS ON DOSE PROJECTIONS.

[1] NOTE: MUST BE VERY CONFIDENT THAT FIELD DATA IS CORRECT TO OVERRIDE DOSE PROJECTIONS.

RATIO = $\frac{\text{DOSE PROJECTION}}{\text{FIELD DOSE RATE}}$

RADIATION MONITOR OPERABILITY CHECKLIST

NOTE: Check the appropriate "in service" or "out of service" block to reflect the monitor's operating status and deliver to dose projection personnel.

RADIATION MONITOR	IN SERVICE ✓	OUT OF SERVICE ✓	COMMENTS
R-2			
R-12			
R-14C			
R-14D			
R-14E			
R-15			
R-20			
R-21			
R-30			
R-31A			
R-31B			
R-31C			
R-32A			
R-32B			

Performed By: _____ ____/____/____
Date

DOSIMETER CORRECTION FACTOR WORK SHEET

Automated Dosimeter Correction Factor Calculation

1. Obtain the dosimeter correction factor from the dose projections printout.

   Dosimeter Correction Factor = _____

The TEDE limit shall be divided by the Dosimeter Correction Factor to determine the self reading dosimeter value that would result in the TEDE limit being received.

$$\frac{\text{TEDE}}{\text{DCF}} = \underset{\text{Dosimeter Reading}}{\_\_\_\_\_}$$

2. Advise the RCM and the EnMon Team Leader of the self reading dosimeter value that would result in the TEDE Limit being received.

Completed By : _____ Date/Time:_____
Dose Projection Team Leader

Approved By : _____ Date/Time:_____
Radiological Control Manager

Concurrence : _____ Date/Time:_____
Emergency Response Manager

Upon approval route this form to the ERM.

DOSIMETER CORRECTION FACTOR CALCULATION SHEET

Manual Dosimeter Correction Factor Calculation

1. Log the most current environmental monitoring data that is available from the centerline of the plume below.

   Sample Date:_____ Time:_____ Location:_____

   Iodine Activity: _____ FCi/cc

   Particulate Activity: _____ FCi/cc

   One Meter Closed Window Dose Rate: (#1) _____ mrem/hr DDE/hr

2. Using the Iodine and Particulate activities from the previous step determine the CEDE per one hour exposure due to both Iodines and Particulates using Attachment 8.6.5.5. Record these values below in the appropriate blanks and sum them to determine the CEDE per one hour exposure to these iodine and particulate concentrations.

   CEDE per one hour exposure due to Iodines: _____

   CEDE per one hour exposure due to Particulates: _____

   CEDE per one hour exposure (Part. and Iodines): (#2) _____ mrem per one hour exposure

3. Enter the CEDE per one hour exposure (Part. and Iodines) in the blank below which is labeled #2 and enter the one meter closed window dose rate in the blank labeled #1. The Dosimeter Correction Factor can then be calculated by dividing the **CEDE per one hour exposure #2** by the **one meter closed window dose rate DDE/hr (#1)** and adding the value of one to this quotient.

   $$\frac{\#2\ (\quad)\text{mrem per hour exposure}}{\#1\ (\quad)\text{mrem/hr}} + 1 = \underline{\qquad}$$

   DOSIMETER CORRECTION FACTOR

   The TEDE limit shall be divided by the Dosimeter Correction Factor to determine the self reading dosimeter value that would result in the TEDE limit being received.

   $$\frac{\text{TEDE}}{\text{DCF}} = \underline{\qquad}$$

   Dosimeter Reading

Advise the RCM and the EnMon Team Leader of the self reading dosimeter value that would result in the TEDE Limit being received.

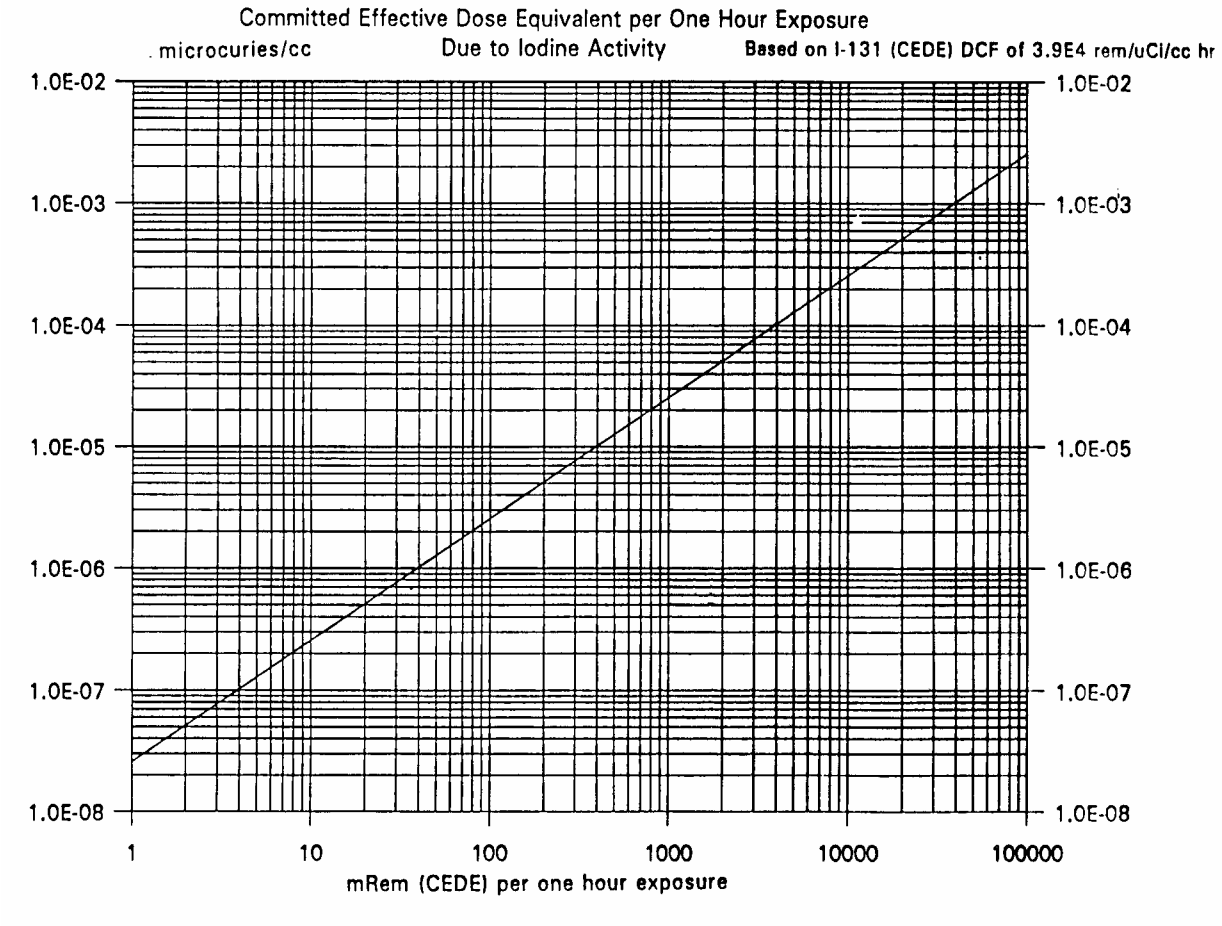
Completed By : _____ Date/Time:_____
Dose Projection Team Leader

Approved By : _____ Date/Time:_____
Radiological Control Manager

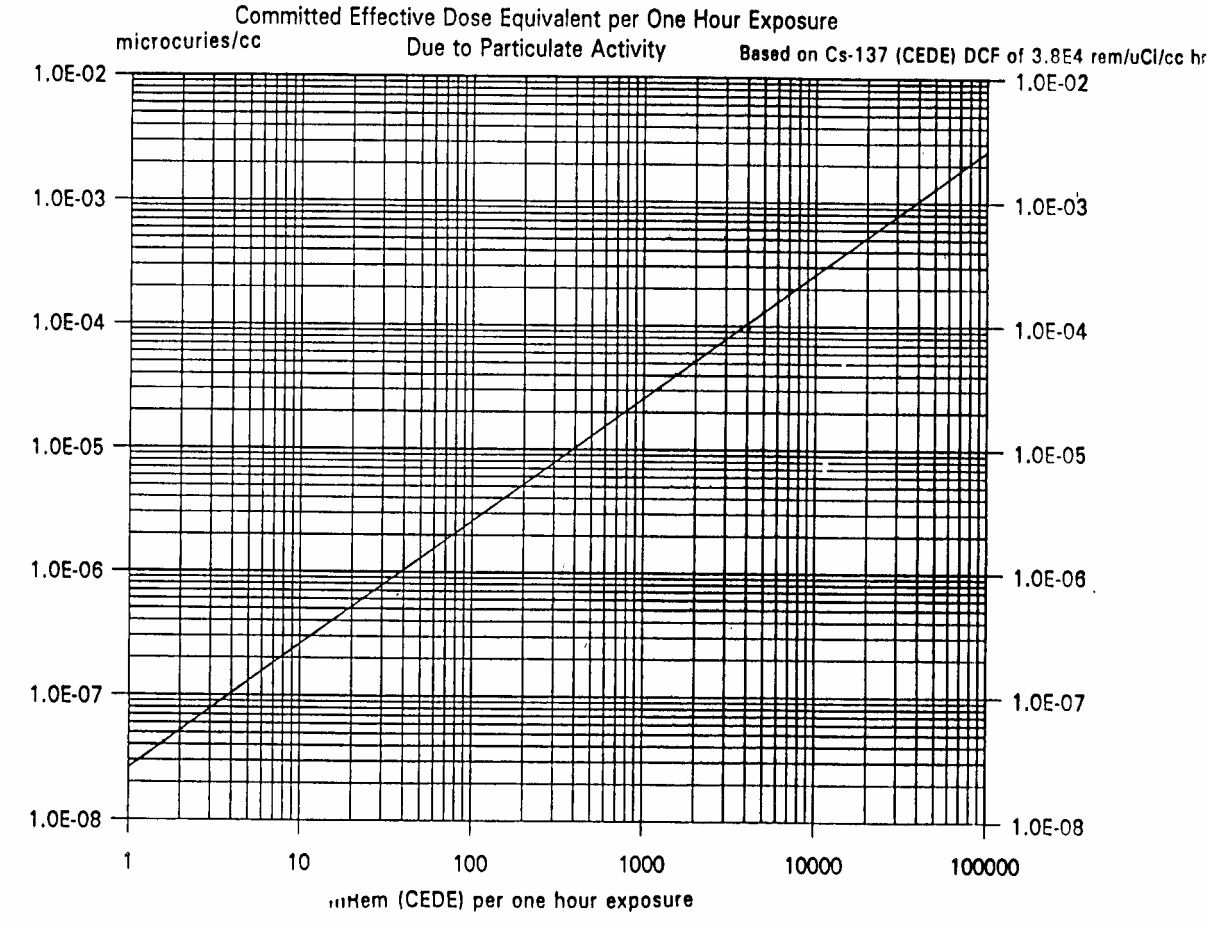
Concurrence : _____ Date/Time:_____
Emergency Response Manager

Upon approval route this form to the ERM.

INTERNAL DOSE FROM INHALATION



INTERNAL DOSE FROM INHALATION



Progress Energy	R Reference Use

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

PLANT OPERATING MANUAL

VOLUME 2

PART 5

EPPR0-00

EMERGENCY PREPAREDNESS PROGRAM AND TESTING

REVISION 6

SUMMARY OF CHANGES
PRR 98303

Step #	REVISION COMMENTS
Reference Section	Added reference to NRC Regulatory Issue Summary 2002-12A Added reference to PLP-122, Security Events
Responsibilities Section Step 3.1.1.7	Added a step for ERO members to respond to security events per PLP-122.
Responsibilities Section Step 3.2.1.2	Added steps for EP Staff actions in the event of an increase in the Homeland Security Threat Levels.
Records Section	Added statement regarding the disposition of records generated per this procedure.
Attachments Section	Attachment 10.1 – Added guidance for performing EP staff actions. Attachment 10.2 – Added guidance for key ERO position actions.

TABLE OF CONTENTS

SECTION PAGE

1.0 PURPOSE

1.1 To instruct personnel on the Emergency Preparedness Program and provide the method of qualification for the Emergency Response Organization (ERO).

1.2 This procedure also outlines the guidance for:

- Performance of drills and exercises,
- Coordinating and maintaining a Public Education program, and
- Dealing with inadvertent siren activation which will ensure prompt resolution of the problem and to minimize adverse public response to the event.
- Emergency Preparedness training and qualification program.

2.0 REFERENCES

2.1 PLP-007, Robinson Emergency Plan

2.2 NUREG-0654/FEMA-REP-1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, January 1980

2.3 10 CFR 50, Licensing of Production and Utilization Facilities

2.4 H.B. Robinson response to NRC Inspection Report No. 50-261/97-13. Robinson File No 13510, Serial RNP-RA/98-0014, Dated Feb 12, 1998. (EPPRO-03)

2.5 NRC Regulatory Issue Summary 2002-12A, “Power Reactors NRC Threat Advisory and Protective Measures System”

2.6 PLP-122, Security Events

3.0 RESPONSIBILITIES

3.1 Emergency Response Organization Member

3.1.1 Each member of the ERO is responsible for:

1. Attending or performing the initial and continuing training required for the position(s) held in the ERO (i.e., respirator qualification).
2. Developing and maintaining adequate skills and knowledge to perform duties for the assigned position(s) within the ERO.

3.1.1 (Continued)

3. Responding to the site in the event of a drill/exercise or a real emergency.

   a. Response to real emergencies is required even when not "ON CALL".

4. Keeping Emergency Preparedness (EP) informed of any changes (i.e., change of home phone number, moving to new location, etc.) which will affect their ability to respond to an emergency.

5. Maintaining Respirator Qualification as designated.

6. Becoming familiar with, and proficient in, the implementation of applicable procedures.

7. Responding to security events in accordance with PLP-122, Security Events.

3.1.2 ERO members who are assigned a pager (beeper), individual or rotational, are responsible for the following functions:

1. Compliance with Fitness for Duty regulations during the period the ERO member is "ON CALL". "On Call" is generally rotated by Team and the specific position and time period assigned is documented by the AON CALL@ roster maintained by EP.

2. Arranging a relief for any period when the "ON CALL" position holder will not be able to respond to the applicable facility within the required time.

   a. When a relief is arranged, the requesting individual is responsible for ensuring that relief personnel obtain an ERO beeper for the period of relief.

   b. If the relief period is less than one week it is not necessary to notify Emergency Preparedness or the Control Room.

   c. If the relief period is for the entire week, then the requesting individual is responsible for notifying EP by noon on Wednesday before the on-call week begins.

3.1.2 (Continued)

3. After being contacted by the Dialogic system, ERO members are required to respond to computer requests and report to the applicable facility.

4. During real emergencies, ERO personnel who carry a pager are required to call Dialogic upon arrival at their facility unless directed by beeper code to do so prior to departure for the facility.

    a. This practice may be modified for conduct of drills and exercises.

5. Maintaining the beeper in close proximity and turned on at all times regardless of "ON-CALL" status, and responding to Beeper activation unless unfit for duty.

6. In the event that a beeper is lost by an on call person during non-working hours, the individual should:

    a. Obtain the spare beeper from Security or,

    b. Arrange for a qualified individual, with a beeper, to be on call or,

    c. Remain near your phone until a new beeper is obtained.

7. When notified of a real emergency, ERO members on vacation or not fit for duty should call their position and make themselves available for relief.

3.1.3 Individuals who are "ON-CALL" and **DO NOT** hold a beeper must:

1. Remain fit for duty during their "ON-CALL" period and stay within 60-75 minutes of their facility.

    a. Joint Information Center (JIC) personnel are required to report to the applicable facility within 2 hours following notification to activate.

    b. Personnel assigned to teams are considered "ON-CALL" the week their designated team has coverage.

3.2 Emergency Preparedness (EP) Staff

3.2.1 The EP Staff is responsible for the following:

1. Ensuring an ERO is staffed and prepared to respond to and mitigate any postulated emergency at H. B. Robinson Steam Electric Plant, Unit No. 2.

2. Notifying the ERO of required actions for an increase in the Homeland Security Threat Level by:

   a. Alerting the ERO via alpha page and site-wide e-mail concerning the increased threat level.

   b. Notifying key ERO positions of the increased threat level and their required actions due to the increased threat level.

   c. Testing communications between the plant and offsite agencies

   d. Briefing the Control Room and the Non-Responding Emergency Communicators on expected actions for alerting the ERO.

3. Develop and maintain the Robinson Emergency Plan and all required implementing procedures.

4. Tracking ERO Qualifications by maintaining a computer database.

5. Maintaining a roster of all qualified ERO personnel.

   a. Declared Pregnant Women will be placed on inactive status for the duration of their pregnancy. (NCR #47657)

6. Planning, scheduling, and administration of drills and exercises (except fire drills).

7. Coordination of the public education and information program.

8. Assuring the annual dissemination of safety information in the possible plume exposure Emergency Planning Zone (EPZ).

3.3 EP Training Staff

3.3.1 EP staff personnel are responsible for the following:

1. Ensuring EP lesson plans are current based on changes made to procedures.

2. Coordinating initial and continuing training needs.

3. Maintaining ERO position task lists.

4. Evaluate training feedback reports for improvements to the training program.

5. Perform a needs or job analysis as required.

3.4 Line Management

3.4.1 Line Management of assigned ERO members are responsible for the following functions:

1. Coaching of personnel assigned an ERO position on proper performance of that position.

2. Selection of personnel to staff the ERO positions and obtain EP concurrence on the selection.

   a. Alternately, selecting personnel to fill ERO positions at the request of EP.

   b. Notifying personnel selected for the ERO of their selection and the expectations for completion of qualification and ERO participation.

3.4 (Continued)

3. Ensuring the personnel in their area of responsibility maintain a current Progress Energy identification/security badge.

4. Ensuring that personnel under their supervision are technically qualified for their ERO position.

5. Submitting request for additions or changes of personnel on the ERO.

6. Ensuring EP is notified of personnel changes that may affect their ability to respond to an emergency.

3.4.2 During a site or local Evacuation, management personnel are responsible for the following:

1. Ensuring that Contractors or offsite personnel reporting to them know where to assemble during the evacuation.

2. Ensuring that designees accounting for personnel during an evacuation are briefed on ensuring safe passage from one location to another.

3. Ensuring that personnel participate in the site wide (owner controlled area) evacuation drills unless specifically exempted by EP Management for critical work.

3.5 EP Training Program Committee (TPC)

3.5.1 The EP TPC is responsible for the following:

1. Identify ERO continuing training needs.

2. Review Drill/Exercise critiques and EP related operating experience feedback items to identify ERO training needs.

3. Evaluate the effectiveness of ERO initial and continuing training.

4. Review/establish ERO training schedules.

4.0 PREREQUISITES

N/A

5.0 PRECAUTIONS AND LIMITATIONS

N/A

6.0 SPECIAL TOOLS AND EQUIPMENT

N/A

7.0 ACCEPTANCE CRITERIA

N/A

8.0 INSTRUCTIONS

See Individual Sections

9.0 RECORDS

Memoranda to file that are generated as a result of this procedure should be submitted for retention in the plant vault.

10.0 ATTACHMENTS

10.1 EP Staff Response to Increased Security Threat Level

10.2 Response to Increased Security Threat Level for Key ERO Positions

EP Staff Response to Increased Security Threat Level (EXAMPLE)

Following notification that the Attorney General has increased the National Advisory Threat Level to Red, Robinson EP will perform the following actions.

1. Distribute an alpha page with the following text message via the Emergency Response Organization (ERO) pagers. “The National Terror Threat Level has been increased to Red. ERO Members should be sensitive to the possibility of activation of the ERO. There is no known credible threat to the Robinson Plant at this time.”
2. Contact the Unit 2 Control Room and remind them of the pager codes, the facilities available to activate, and the methods available to activate the ERO. Use the information available in V:\Emergency Preparedness\Guidelines\Talking Papers for the Control Room.doc as guidance.
3. Test the Selective Signaling Phones between the Robinson Plant and the State and Counties Emergency Operation Centers (EOCs) and Warning Points (WPs). Use the following message when conducting the test, “This is (your name) from the H.B.Robinson Plant. Because of the increased National Terror Threat Level, we will be testing these phones on a frequent basis. Currently, there is no known credible threat to the Robinson Plant. No response from you is expected or required of you at this time.”
4. Distribute a site-wide e-mail with the following text, “The National Terror Threat Level has been elevated to Red. Though there is no known credible threat to this site, we must be prepared at all times to quickly and efficiently respond to ERO callouts. Security events could cause us to activate our facilities with the same degree of urgency as the radiological scenarios that we commonly practice. All ERO members are reminded to have your company picture identification badges with you, when not at the site, to allow rapid access to the plant site should you be needed to staff the Emergency Response Facilities. The badges will be needed for access to the site, facilities, and possibly through traffic control points. If there is a security threat on plant site or your normal facility is inaccessible, then you may be directed to report to the Remote Facility on Railroad Avenue in Hartsville. JIC Staff Members will report to the Florence location under all conditions.”
5. Contact the NRECs and read them the following message, “You are qualified for the position of NREC on the RNP ERO. Please ensure that you have a current copy of the ERO Phone Book. The correct revision is xx, dated xx/xx/xxxx. As the National Terror Threat Level increases, so does the possibility of your position being needed to call members of the ERO. There is no known immediate threat to the Robinson Plant.
6. Contact the ERO Key Positions listed in “V:\Emergency Preparedness\Guidelines\Talking Papers for Key Positions.doc” and discuss the information provided in the guidance.
7. Prepare a memo to file indicating the above actions have been accomplished.

Response to Increased Security Threat Level for Key ERO Positions
(Key positions are listed below)
(EXAMPLE)

The National Terrorism Threat Level has been elevated to ORANGE. As members of the ERO, you should:

- Remain within your response time to the respective facility.
- Keep your RNP security badge or Progress Energy security badge with you for quick response.
- Respond as directed by pager, Dialogic and/or NREC instructions.
- Remain fit for duty.
- Complete Attachment 1, SEC-NGGC-2141 upon arrival at the site.

If the threat level is elevated to RED, key positions of the on-call Emergency Response Organization will be placed on standby. You will be notified of your standby status by Dialogic System, pager text message, or NREC.

If there is a region-specific (SC) credible threat, then an on-call and relief shift will be identified for staffing of the facilities. As a minimum, the following positions will be notified to activate the facilities.

- **EOF** – Emergency Response Manager, Emergency Communicator, and State & County Emergency Communicator
- **TSC**- Site Emergency Coordinator and NRC Emergency Communicator
- Corporate/Site Communications

If there is a specific credible threat to RNP, then the Remote Facility and the Joint Information Center will be staffed and activated as conditions dictate. The remainder of the ERO will continue on standby until needed to respond.

Though there is no known credible threat to the Robinson site, the Emergency Response Organization needs to be prepared to respond as quickly as possible as the scenario dictates.