



FirstEnergy Nuclear Operating Company

Perry Nuclear Power Plant  
10 Center Road  
P.O. Box 97  
Perry, Ohio 44081

April 22, 2002  
PY-CEI/NRR- 2638L

United States Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Perry Nuclear Power Plant  
Docket No. 50-440  
Submittal of Emergency Plan  
Implementing Instructions

Gentlemen:

Pursuant to 10 CFR 50 Appendix E, enclosed are changes to the Emergency Plan Implementing Instructions (EPIs) for the Perry Nuclear Power Plant. These changes constitute revisions, temporary changes, or reissued pages. Please follow the updating instructions per the attached Controlled Document Instruction Sheet and return the signed Acknowledgment of Receipt form.

If you have questions or require additional information, please contact me at (440) 280-5294.

Very truly yours,

Vernon K. Higaki, Supervisor  
Emergency Planning Unit

VKH:byr

Enclosure

cc: NRC Project Manager  
NRC Resident Inspector  
NRC Region III, Incident Response Center w/2 attachments

A045

**FirstEnergy Nuclear Operating Company**

**PERRY NUCLEAR POWER PLANT**

**UNIT 1 & 2**

**ACKNOWLEDGMENT OF RECEIPT**

**Title      Emergency Plan Implementing Instructions EPI – B11/ Rev 6**

**Control No. 60**

**Letter No./Date PY-CEI/NRR-2638L / April 22, 2002**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Title**

**Return to:**

**Perry Nuclear Power Plant  
Attn: B.Y. Richardson, A240  
P. O. Box 97  
Perry, Ohio 44081**

**FirstEnergy Nuclear Operating Company  
Perry Nuclear Power Plant**

**Controlled Document Instruction Sheet**

**Manual: Emergency Plan Implementing Instruction (EPI-B11/ Rev 6)**

**Control Number 60**

| <b><u>Revision<br/>Number</u></b> | <b><u>Temporary<br/>Change No.</u></b> | <b><u>Remove and Replace Pages</u></b> |
|-----------------------------------|--|--|
| <b>6</b>                          | <b>N/A</b>                             | <b>Reissue Entire Document</b>         |

# PERRY OPERATIONS MANUAL

## Emergency Plan Implementing Instruction

PNPP  
~~UNCLASSIFIED~~  
CONTROLLED COPY  
No. ☒ 0 ☒ 6 ☒ 0

INFORMATION  
ONLY

TITLE: EMERGENCY DOSIMETRY ISSUE

REVISION: 6

EFFECTIVE DATE: 4-22-02

## ADMINISTRATIVE REVISION

Preparer of Previous Revision Joseph D. Anderson

EFFECTIVE PIC'S

[illegible]

EMERGENCY DOSIMETRY ISSUE

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SCOPE OF REVISION:

- Rev. 6 -
1. Incorporated C-1, C-2 from previous revision.
  2. Incorporated/corrected format per PAP-0507.
  3. Changed Health Physics (HP) to Radiation Protection (RP) throughout document per USAR/Tech Spec changes.

## EMERGENCY DOSIMETRY ISSUE

### 1.0 PURPOSE

This instruction describes the method to be used for the issuing and tracking of emergency dosimetry in the Control Room, Technical Support Center (TSC), Operations Support Center (OSC), Emergency Operations Facility (EOF), at the Primary Vehicle Access Point, and for Radiation Monitoring Team (RMT) personnel.

### 2.0 REFERENCES

#### 2.1 Source References:

1. Emergency Plan for PNPP Docket Nos. 50-440/50-441

#### 2.2 Use References:

1. EPI-B3: Radiological Surveys for Emergencies
2. EPI-B4: First Aid and Medical Care
3. PSI-0018: Maintenance and Inventory of Emergency Equipment
4. SPI-0010: Vehicle Access
5. HPI-B0003: Processing of Personnel Dosimetry
6. Commitments addressed in this document:

None

### 3.0 DEFINITIONS

#### 3.1 Fire Department Number

An employee identification assigned to fire department personnel by their respective organization for communication purposes. These numbers will be used for radio identification of fire department personnel responding to the plant.

#### 4.0 RESPONSIBILITIES

##### 4.1 Security Officer(s) Assigned to Primary Vehicle Access Point

1. Ensure the issuance of emergency dosimetry to offsite emergency response personnel and its collection in accordance with this instruction.

##### 4.2 TSC Radiation Protection Coordinator

1. Ensure the issuance and collection of emergency dosimetry in the TSC in accordance with this instruction and <HPI-B0003>.

##### 4.3 EOF Offsite Radiation Advisor

1. Ensure the issuance and collection of emergency dosimetry in the EOF in accordance with this instruction and <HPI-B0003>.

##### 4.4 OSC Coordinator

1. Ensure dosimetry is issued to all OSC staff and Control Room personnel upon declaration of a Site Area Emergency.

##### 4.5 Dosimetry Specialist

1. Ensure the processing of issued dosimetry from the Control Room, OSC, TSC, EOF, Primary Vehicle Access Point, and RMT(s).
2. Ensure that used dosimetry packets are collected from Primary Vehicle Access Point and re-issued with a new thermoluminescent dosimeter (TLD) per <HPI-B0003>.
3. Ensure that adequate quantities of emergency dosimetry are stored and maintained at the onsite emergency facilities and Primary Vehicle Access Point in accordance with <PSI-0018>.

##### 4.6 Supervisor, Emergency Planning Unit

1. Ensure that offsite fire department personnel responding to the Perry Plant site are familiar with the emergency dosimetry issue procedure outlined in Section 5.5.

##### 4.7 Radiation Protection Technician Responding to Offsite Hospital

1. Ensure the collection of emergency dosimetry issued to ambulance personnel and victim after being released at the hospital per <EPI-B4>.

##### 4.8 Emergency Response Organization (ERO) Personnel

1. Ensure that required dosimetry is issued to you or obtained, and that an accurate record is maintained per this instruction.

## 5.0 ACTIONS

### 5.1 TSC Dosimetry Issue

#### 5.1.1 TSC Radiation Protection Coordinator:

1. Direct available Dosimetry/RPTU Support Staff or Radiation Protection (RP) technician to issue a 0-500 mrem direct-reading dosimeter (DRD), and TLD if not presently issued, to TSC and OSC staff per <HPI-B0003> when both of the following conditions are met:

NOTE: Dosimetry is stored in OSC Radiation Protection Equipment Locker on 599' Control Complex.

- Site Area Emergency declared.
  - TSC and OSC have been declared operational.
2. Direct Dosimetry/RPTU Support Staff or available OSC RP support to assemble additional dosimetry to support facility staff and RMT augmentation and relief.
  3. When elevated radiation levels in or adjacent to the TSC warrant further monitoring, perform the following:
    - a. Direct that additional high range or electronic DRDs be distributed to TSC staff, as warranted.
    - b. Recommend the evacuation of unnecessary TSC, OSC, and plant staff.
    - c. Consider recommending the possible relocation of the TSC and/or OSC.

#### 5.1.2 Dosimetry/RPTU Support Staff or RP technician shall:

1. Obtain the 0-500 mrem DRDs and TLDs from the OSC Radiation Protection Equipment Locker (in RP Counting Room), and rezero the DRDs if necessary.
2. Issue a dosimetry packet to TSC and OSC staff members who are without a TLD and/or DRD per <HPI-B0003>.
3. If an individual returns with a DRD reading greater than 3/4 full scale, off scale, or with an unexplained significant increase, contact the Radiation Protection Coordinator to determine what actions should be taken for this individual.
4. Obtain additional dosimetry, if needed, to support EOF staff augmentation and relief.



5. Collect the dosimetry packets upon the deactivation of the TSC or at the direction of the Radiation Protection Coordinator, and forward collected dosimetry packets to the Dosimetry Office for processing.

5.1.3 TSC Staff shall:

1. Upon escalation of the event to a Site Area Emergency, obtain dosimetry, if needed, through the TSC Radiation Protection Coordinator when directed.
2. Check DRD frequently. Report to the Radiation Protection Coordinator any unexplained significant increase in your DRD reading, or if the DRD reaches 3/4 scale or goes off scale.
3. Upon TSC deactivation or staff rotation, turn in emergency issued dosimetry to available Dosimetry/RPTU Support Staff as directed by the Radiation Protection Coordinator.

NOTE: Dosimetry may be retained for later collection for TSC staff members leaving the TSC after being relieved if a release is on-going or significant exposure is possible due to ground deposition.

5.2 EOF Dosimetry Issue

5.2.1 EOF Offsite Radiation Advisor shall:

1. Request that the TSC Radiation Protection Coordinator dispatch a Dosimetry/RPTU Support Staff or RP technician to the EOF to issue dosimetry to personnel staffing the EOF.
2. Once the EOF has been declared operational, verify that a TLD and 0-500 mrem DRD have been distributed or are in the process of being distributed to EOF staff.
3. Direct available RP/dosimetry support or request through the TSC Radiation Protection Coordinator that additional dosimetry packets be assembled in support of EOF staff and RMT augmentation and relief.
4. When elevated radiation levels in or adjacent to the EOF warrant further monitoring, perform the following:

- a. Direct the distribution of additional high range DRDs to EOF staff.

NOTE: Limited quantities of 0-5 rem DRDs are stored in the EOF Decon Room.

- b. Consider the evacuation of non-essential EOF staff members.

- c. Consider recommending the possible relocation to the Backup EOF.
5. Coordinate with the TSC Radiation Protection Coordinator to ensure that relief staff personnel gathering at offsite FirstEnergy facility receive adequate radiation monitoring coverage and dosimetry prior to entering 10-mile Emergency Planning Zone (EPZ).
6. Ensure that emergency issued dosimetry, once collected, is all accounted for and delivered to the TSC Radiation Protection Coordinator or Dosimetry Office for processing.

5.2.2 **Dosimetry/RPTU Support Staff or RP technician shall:**

1. Obtain the 0-500 mrem DRDs and TLDs from the EOF Decontamination Room, and rezero the DRDs.
2. Issue a dosimetry packet to EOF staff who are without a TLD and/or DRD per <HPI-B0003>.
3. If an individual returns to the Access Control Point with a DRD reading greater than 3/4 full scale, off scale, or with an unexplained significant increase, contact the Offsite Radiation Advisor to determine what actions should be taken for this individual.
4. Obtain additional dosimetry, if needed, to support EOF staff augmentation and relief.
5. Collect the dosimetry packets upon the deactivation of the EOF or at the direction of the Offsite Radiation Advisor, and forward collected dosimetry packets to the Dosimetry Office for processing.

5.2.3 **EOF Staff shall:**

1. Obtain a 0-500 mrem DRD and TLD from the Dosimetry Clerk or RP technician present in the EOF when directed.
2. Check DRD frequently. Report to the Offsite Radiation Advisor any unexplained significant increase in your DRD reading, or if the DRD reaches 3/4 scale or goes off scale.
3. Upon EOF deactivation or staff rotation, turn in dosimetry as directed by the Offsite Radiation Advisor.

NOTE: Dosimetry may be retained for later collection for EOF staff members leaving the EOF after being relieved if a release is on-going or significant exposure is possible due to ground deposition.

### 5.3 Control Room/OSC Dosimetry Issue

#### 5.3.1 OSC Coordinator shall:

1. Upon declaration of a Site Area Emergency or initiation of personnel accountability, direct the OSC RP Supervisor to issue a DRD, and if necessary a TLD, to OSC staff and Control Room personnel currently without dosimetry.

NOTE: Dosimetry will be issued from the inventory of DRDs available in the OSC RP Equipment Locker using normal Radiation Protection guidance.

2. When the OSC is deactivated, direct the OSC RP Supervisor to coordinate the collection of dosimetry issued by the OSC.

### 5.4 Radiation Monitoring Team (RMT) Dosimetry Issue

#### 5.4.1 RMT personnel shall:

1. Obtain a dosimetry packet during the inventorying of RMT equipment kit; rezero and don dosimetry per <EPI-B3>.
  - a. When relieving RMT personnel, obtain spare dosimetry from EOF Decon Room containing a TLD and required DRDs. Contact TSC Radiation Protection Coordinator or EOF Offsite Radiation Advisor if dosimetry is not available.
2. When recalled/relieved, record the DRDs final reading and date collected on the Dosimetry Issuance Card, and turnover packet to TSC or EOF as part of RMT debriefing per <EPI-B3>.

### 5.5 Primary Vehicle Access Point Dosimetry Issue

#### 5.5.1 Security Officer(s) manning the PACP Vehicle Access shall:

1. Verify with the Secondary Alarm Station (SAS) whether offsite emergency responders (i.e., fire department, ambulance, law enforcement personnel, etc.) will be entering the Radiologically Restricted Area (RRA).
2. If one or more of the criteria listed below is met, perform the following:
  - Site Area Emergency declared.
  - Entry into the plant RRA is required or can not be determined.

- a. Obtain the Offsite Dosimetry Kit and binder containing Fire Department Personnel Listings.

NOTE: For reference purposes, a Fire Department Personnel Listing (Attachment 2) is provided.

- b. Rezero the DRDs in at least 5 packets.
  - c. Verify the identity of the responding organization and name, or fire department number, of each responder requiring access into the Protected Area.
  - d. Assign and issue a dosimetry packet to each responder.
  - e. Record the identification number labeled on each dosimetry packet on the appropriate Fire Department Personnel Listing next to the name of responder.
    - 1) If a listing is not available for the responding agencies or an individual is not on listing, record the name and SSN of individuals on separate Dosimetry Issuance Cards contained in dosimetry packet.
  - f. If an ambulance other than Perry Township Fire Department requires entry, place an Ambulance Support Kit on vehicle.
3. Coordinate entry into the Protected Area in accordance with <SPI-0010>.
  4. Notify the Dosimetry Office or Radiation Protection if additional dosimetry is required.
  5. If dosimetry was issued, perform the following upon exiting the Protected Area:
    - a. Collect issued dosimetry packet from offsite responders as they leave the Protected Area, with the exception of the ambulance crew and RP technician accompanying a contaminated victim.
    - b. Record the following information on the respective Dosimetry Issuance Card for each packet collected:
      - 1) Final DRD reading.
      - 2) Date collected.
      - 3) Name and SSN of responder.
    - c. Segregate collected dosimetry packets with the completed Dosimetry Issuance Cards and used Fire Department Personnel Listing.

d. Contact the Dosimetry Office at Ext. 5488 for pickup and processing of dosimetry.

6. Request that SAS notify the on-call Emergency Planning Unit (EPU) Representative using the Integrated On-Call Report.

#### 5.5.2 Dosimetry Office Personnel:

1. Process collected dosimetry packets per <HPI-B0003>.
2. Inventory and replace used dosimetry packets in the vehicle trap.

### 5.6 Records

#### 5.6.1 Records Handling

1. The completed Dosimetry Issuance Card and Fire Department Personnel Listing will be forwarded to the Dosimetry Office to be handled in accordance with their procedures for normal dosimetry issuance.

#### 5.6.2 Records Capture

The following records are generated by this document:

##### Quality Assurance Records

None

##### Non-Quality Records

Fire Department Personnel Listing (Record Type 2Z100)

Dosimetry Issuance Card (PNPP No. 7522)

DOSIMETRY ISSUANCE CARD (PNPP No. 7522)

|   |  |  |         |
|---|--|--|---------|
| PNPP No. 7522 Rev. 10/31/01   |  | <b>DOSIMETRY ISSUANCE CARD</b>             | EPI-B11 |
| <b>USER INSTRUCTION:</b>  |  |  |         |
| <ol style="list-style-type: none"><li>1. Fill in Name, SSN, Date Issued, DRD No., and initial DRD reading.</li><li>2. Wear Dosimetry and periodically observe DRD reading per guidance on back of card.</li><li>3. When no longer needed, observe DRD reading and record dose under Final Reading.</li></ol> <p style="text-align: center; margin: 0;"><b>DELIVER DOSIMETRY PACKET TO RADIATION PROTECTION.</b></p> |  |  |         |
| Packet No. _____  |  | Date Issued ____/____/____                 |         |
| Name _____  |  | Social Security No. ____-____-____         |         |
| DRD No. (1) _____ / (2) _____   |  | NOTE: DRD serial number is engraved on DRD |         |
| DRD Initial Reading (1) _____ / (2) _____   |  |  |         |
| TLD Badge No. _____   |  |  |         |
| DRD Final Reading (1) _____ / (2) _____   |  | Date Collected ____/____/____              |         |

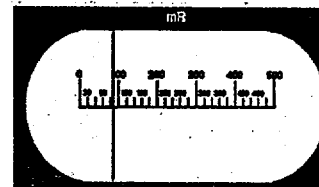
***Wearing Dosimetry***

If you are required to wear dosimetry, it must be worn on the front part of the body, between the waist and shoulders. The TLD beta window should face away from the body and be located next to the DRD.

Dosimetry devices to be worn no farther apart than 4 inches

***Use of Dosimetry***

The DRD will provide you with an approximation of dose received while on the job. To obtain the dose, look through the cylinder while pointing it at a light, with the scale held horizontally. A vertical hair line, which can be seen inside the cylinder, crosses a numerical scale is the dose.



FIRE DEPARTMENT PERSONNEL LISTING  
(Example Format)

Page 1 of 1

FIRE DEPARTMENT PERSONNEL LISTING

| DEPARTMENT:          | REV./DATE         |                           |                         |
|----------------------|-------------------|---------------------------|-------------------------|
| FIRE DEPT.<br>NUMBER | INDIVIDUAL'S NAME | SOCIAL SECURITY<br>NUMBER | DOSIMETER<br>PACKET NO. |
| 023                  | Doe, John D       | 111-11-111                |                         |
| 999                  | Smith, Frank E    | 999-99-999                |                         |