

HOUSTON LIGHTING AND POWER COMPANY
SOUTH TEXAS PROJECT
ELECTRIC GENERATING STATION
PLANT PROCEDURES MANUAL

FOR INFORMATION ONLY

NON SAFETY-RELATED

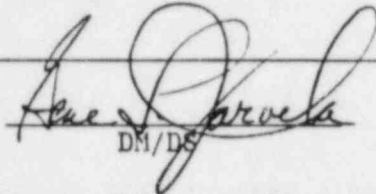
Use of a Direct-Reading Pocket Dosimeter

PRP2-ZX-02

Rev. 0

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APPROVED:


DM/DS

KIA
DATE APPROVED

5/7/04
DATE EFFECTIVE

Field changes to this procedure must be approved by Radiological Services.
This procedure is not described in the FSAR.

1.0 Purpose and Scope

- 1.1 The purpose of this procedure is to provide instructions for the use and care of the direct-reading pocket dosimeter.

2.0 Prerequisites

2.1 Equipment Required

- a. Direct-reading dosimeter
- b. Dosimeter charger

3.0 Precautions

- 3.1 Care must be taken to ensure that the dosimeter is not dropped or severely jarred; this can change the reading, cause the hairline to break, go off-scale, or possibly damage the dosimeter lens.
- 3.2 Due to the similarity in appearance of direct-reading dosimeters, check the scale of the dosimeter prior to use to ensure that the dosimeter chosen has the proper range for the use intended.
- 3.3 Take precautions to prevent contamination of pocket dosimeters which are to be used in contaminated areas.
- 3.4 All requirements regarding access to restricted areas shall apply while working in posted areas.
- 3.5 Every effort shall be made to maintain personnel exposure as low as reasonably achievable.

4.0 Procedure

4.1 Zeroing the Dosimeter

- 4.1.1 Remove the protective caps (if present) from the dosimeter and from the charging contact on the dosimeter charger.
- 4.1.2 Place the charging pin end of the dosimeter on the charging contact and press down firmly. Look through the dosimeter and adjust the charging control until the dosimeter hairline is on zero.
- 4.1.3 Point the dosimeter towards a light source and, with the scale in a horizontal position, check that the dosimeter hairline is still on zero. If the hairline has moved significantly away from the zero mark, recharge the dosimeter and adjust the hairline above or below zero, as necessary, to compensate for the shift.

NOTE: PROPER ORIENTATION OF THE DOSIMETER SCALE SHOULD BE USED WHEN READING THE DOSIMETER.

- 4.1.4 If a dosimeter cannot be zeroed, remove it from service and obtain a replacement from the Radiological Services Office.
- 4.1.5 Replace any previously removed protective caps on the dosimeter and on the charging contact of the dosimeter charger.

4.2 Wearing the Pocket Dosimeter

- 4.2.1 The dosimeter shall be worn adjacent to, but not in front of, a TID.

4.3 Reading the Dosimeter

- 4.3.1 Point the dosimeter toward a light source, look into the glass lens end, and, with the scale in a horizontal position, note the position of the hairline on the scale. This reading is gamma radiation exposure measured in milliroentgens (mR). For dosimeters labeled roentgens (R), the reading must be multiplied by 1000 to change R to (mR).

NOTE: FOR RADIATION PROTECTION PURPOSES, ROENTGENS (R) ARE EQUIVALENT TO REMS (Rem) FOR GAMMA DOSIMETRY.

- 4.3.2 When the hairline on a dosimeter approaches 3/4 of full scale, the reading should be recorded and the dosimeter zeroed to prevent the hairline from going off-scale.

- 4.3.3 If the dosimeter is dropped or jarred, read the dosimeter immediately. Unusually high readings or significant hairline shifts shall be reported to Radiological Services immediately.

4.4 Maintaining the Dosimeter Charger

- 4.4.1 If difficulty is encountered in zeroing the dosimeter, replace the batteries in the charger.
- 4.4.2 If it becomes difficult to read a dosimeter scale while zeroing, replace the charger battery and/or light bulb.

5.0 Acceptance Criteria

None

6.0 Documentation

None

7.0 References

7.1 Technical Sheet(s) for the Direct-Reading Dosimeter

7.2 Technical Sheet for the Direct-Reading Dosimeter Charger

8.0 Support Documents

None