

**FOR INFORMATION ONLY**

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

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NON-SAFETY-RELATED

Storage and Handling of Personnel Dosimeter

PRP2-ZX-14  
Rev. 2  
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APPROVED: \_\_\_\_\_

DN/DS

NA  
DATE APPROVED

8/22/84  
DATE EFFECTIVE

Field changes to this procedure must be approved by the Health and Safety Division Manager.

This procedure is not described in the FSAR.

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1.0 Purpose and Scope

- 1.1 This procedure describes the methods and precautions which must be exercised in storing and handling thermoluminescent dosimeters (TLDs) to assure that dosimetry evaluations are accurate.
- 1.2 This procedure is applicable to personnel TLDs although parts may be useful guides for handling other dosimetry.

2.0 Prerequisites

- 2.1 Prior to sending TLDs to the facility issue point(s) an inventory of TLDs shall be completed for the purpose of maintaining an accurate list of TLDs at each issue point(s).
- 2.2 Prior to sending TLDs to the issue point(s), custodians of the TLDs shall be given written instructions for the proper storage and issuance of TLDs to personnel.

3.0 Precautions

- 3.1 As listed below in part 4.0.

4.0 Procedure

- 4.1 An inventory shall be kept of all in-service TLDs which includes the

current location and the last anneal date.

- 4.2 TLDs shall be stored in a low radiation area (less than 20  $\mu$  R/h) following annealing and prior to delivery to the facility issue point(s).
- 4.3 A set of area radiation TLD's shall be kept where TLD's are stored and processed. These dosimeters will be evaluated as appropriate to assure that personnel dosimeter evaluations do not include exposure incurred while awaiting processing.
- 4.4 TLDs shall be segregated by type and shall be stored in well marked racks or bins until delivered to the facility issue point(s).
- 4.5 No TLDs shall be sent to the facility issue point(s) until they have been annealed.
- 4.6 TLDs shall be delivered to the facility issue point(s) using the following precautions:
  - 4.6.1 Each batch of TLDs shall include at least two (2) travel controls, two (2) storage background controls, and two (2) exposed controls.
  - 4.6.2 At least one (1) of the travel controls shall be returned immediately after delivery of the batch of TLDs and it (they) shall be evaluated for accidental, in transit, exposure.
  - 4.6.3 Each batch of TLDs shall include a number of extra TLDs for issuance to visitors or others at the issue point(s).
  - 4.6.4 Each batch of TLDs shall be accompanied by a dosimeter assignment roster to aid in the issuance of TLDs. This form shall be returned along with the batch of TLDs at the end of the exchange cycle.
  - 4.6.5 All control TLDs kept at the issue point(s) shall be stored in the same badge racks as the assigned and unassigned TLDs.
- 4.7 No TLDs shall be kept at the issue point(s) beyond the issue cycle.
- 4.8 TLD Return for Processing
  - 4.8.1 All dosimeters should be monitored for detectable contamination and this survey should be documented on the assignment roster when they are returned to the dosimetry facility.
  - 4.8.2 If dosimeters are found to be contaminated, the dosimetry

facility shall be notified for special handling instructions.

4.8.3 If dosimeters are returned to the dosimetry facility unmonitored, dosimetry personnel shall monitor them and complete the assignment roster survey information prior to processing.

4.9 Any incident during storage or handling of a batch of TLDs which could affect the evaluation of those TLDs shall be reported to dosimetry immediately.

4.10 TLDs shall not be used for "test" exposures.

#### 5.0 Acceptance Criteria

5.1 Storage and handling of a batch of TLDs shall be judged adequate if travel and background controls indicate no undue exposure (less than 20 mrem) and if exposed controls indicate no significant fade (less than 30%).

#### 6.0 Documentation

6.1 Reports shall be prepared in the event a batch of TLDs fails to meet the Acceptance Criteria of section 5.0 above.

6.2 A record of the current location of all TLDs as described in step 4.1 above shall be available for inspection at all times.

#### 7.0 References

7.1 NVLAP Dosimetry LAP Handbook

7.2 PRP2-ZX-11 (Use of Thermoluminescent Dosimeters)

#### 8.0 Support Documents

None