

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

NON SAFETY RELATED

Receipt of Radioactive Material

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APPROVED:

PLANT MANAGER

DATE APPROVED

DATE EFFECTIVE

This procedure is not described in the FSAR.

Field changes to this procedure must be approved by the Plant Manager.

1.0. Purpose and Scope

This document defines the responsibilities, describes the procedures, and specifies the documentation required when shipments of radioactive materials, other than special nuclear materials, are received by the Nuclear Plant Operations Department.

2.0 Prerequisites

- 2.1 Survey instruments calibrated to allow measurement of received materials are available.
- 2.2 Counting equipment for smear activity evaluation is available. The following are acceptable if suitable counting efficiency and instrument calibration are insured.
 - a. Eberline RM-14/HP-210 or RM-14/HP-260
 - b. Eberline MS-3 with HP-210, HP-260, HP-190, or FC-2
 - c. Automatic laboratory counting instrument
- 2.3 Methods used to perform leak tests and assay smear for radioactivity shall have sufficient sensitivity for the detection of 0.001 μCi (2200 DPM) of removable contamination.

3.0 Precautions

- 3.1 Materials received bearing a Radioactive Yellow II, Radioactive Yellow III, or any fissile class shipping label shall be stored in a restricted area established for this purpose and Health and Safety Services shall be notified immediately.
- 3.2 Packages containing radioactive material shall not be opened and shall be kept in a holding area until Health and Safety Services has:
 - 3.2.1 Completed required monitoring
 - 3.2.2 Released the package to the consignee or taken appropriate actions if radiological irregularities are discovered.
- 3.3 Health and Safety Services Division personnel shall use appropriate protective measures to reduce personnel exposure and prevent the spread of contamination during package inspections, unpacking, and surveys.
- 3.4 Monitoring of incoming shipments of radioactive material is required:
 - 3.4.2 No later than 18 hours after arrival, if received after normal working hours.
- 3.5 Health and Safety Services Division personnel shall immediately notify the final carrier, the DOT, the Texas Department of Health, and the NRC Regional Office, per 10 CFR 20.205, if any of the following conditions are found:
 - 3.5.1 Removable contamination in excess of 0.001 microcuries (2,200 dpm) per 100 cm² of package on the external surface.
 - 3.5.2 Radiation levels in excess of limits applicable for package labeling in accordance with 49 CFR 172.400.
- 3.6 All requirements regarding access to restricted areas shall apply while working with radioactive materials
- 3.7 Every effort shall be made to maintain personnel exposure as low as reasonably achievable.

4.0 Procedure

4.1 Responsibilities

- 4.1.1 The Health and Safety Services Division Manager (H&SSDM) at STPEGS shall have primary responsibility for insuring that

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all regulatory requirements for the handling and monitoring of radioactive material shipments are followed and that required notifications are made in cases of noncompliance.

- 4.1.2 The HL&P receiving department supervisor for each facility shall have responsibility for notifying H&SSD immediately upon arrival at the facility of any shipment containing radioactive materials. Notification shall include time of arrival and contents of package (if such can be determined from package label or externally attached packing list). Packages are not to be opened except by or under supervision of Health and Safety Services.
 - 4.1.2.1 H&SSD at the STPEGS shall be contacted by phone at:

Normal working hours (0730-1600) - Extension 6301
or
Extension 6304

Backshifts, weekends and holidays - 972-3611
(Security)
 - 4.1.2.2 Receiving Department personnel shall notify H&SSD as to the time of receipt. H&SSD will complete the Receipt of Radioactive Materials Record (-01).
- 4.1.3 The senior security officer on duty shall be responsible for the notifications specified in Section 4.1.2 of this procedure if a package is delivered during hours when receiving Department personnel are not available.
- 4.1.4 H&SSD personnel assigned to perform receipt inspection and survey shall be responsible for:
 - 4.1.4.1 Insuring that smears are counted and leak test results are entered on the Receipt Record.
 - 4.1.4.2 Assuring that the Receipt Record is completed and routed for approval and filing.
 - 4.1.4.3 Notifying the H&SSDM or his designee in cases of leakage or other noncompliance.
 - 4.1.4.4 Releasing radioactive material to user if conditions are in compliance.
 - 4.1.4.5 Placing package on HOLD and taking such precautions as are necessary to prevent the spread of contamination and to protect personnel from radiation and/or contamination in the event of noncompliance.

4.2 Receipt, Receipt Inspection, and Documentation

4.2.1 Receiving personnel shall notify H&SSDM of the arrival of a radioactive material shipment as specified in Section 4.1.2 or 4.1.3 of this procedure.

4.2.2 The H&SSD person receiving notification shall insure that personnel are assigned to perform a receipt inspection and survey, and shall specify the time requirements for the survey to be performed.

4.2.3 H&SSD personnel shall perform initial external package inspection and survey at shipment receiving location (smear paper and a frisker/pancake probe combination are sufficient for a preliminary contamination check).

4.2.3.1 If the preliminary survey does not exceed the guidelines established for notification purposes in Section 3.4, the opening, unpacking, and storage may be performed by/or under the supervision of Health and Safety Services personnel.

4.2.3.2 Information to be entered on the Receipt of Radioactive Materials Record (-01) at this time includes:

- a. Isotope(s)
- b. Specified source activity and type of emission
- c. Shipment or source serial or I.D. number
- d. Type of source
- e. Time of day and date of survey
- f. "Surface" and "at 1 meter" radiation levels
- g. Package condition (in "Remarks" section of the
- h. ^{Form} Package Labeling

4.2.3.3 Count smears taken for the contamination evaluation, determine contamination levels, and enter results of the Receipt of Radioactive Material Record (-01).

NOTE: DO NOT COUNT SMEARS ON AUTOMATIC BACKGROUND COUNTING INSTRUMENTS IF PRELIMINARY COUNTS WITH FRISKER SHOW MORE THAN 2000 c/m. USE CALIBRATED PANCAKE PROBE OR MANUAL COUNTER ONLY.

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- 4.2.3.4 Insure that any non-compliances discovered are documented on the Receipt Form and that cognizant H&SSD supervision is notified immediately when noncompliance is discovered or suspected.

5.0 Acceptance Criteria

- 5.1 Acceptance of material may be refused if surveys indicate contamination levels in excess of STPEGS release limits.

6.0 Documentation

- 6.1 Route completed Receipt of Radioactive Materials Record (-01) to the cognizant supervisor for approval.
- 6.2 Receipt documentation shall be retained at the Document Control Center for 5 years.

7.0 References

- 7.1 10CFR20.205
- 7.2 10CFR30.51
- 7.3 49CFR173.389, 173.397, 172.400
- 7.4 Texas Regulations for Control of Radiation, 21.207

8.0 Support Documents

- 8.1 Receipt of Radioactive Materials Record (-01)

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Date _____		Time _____		Manufacturer _____	
Received at _____					
Shipped From _____		By _____		Number of Packages _____	
(facility)					
Carrier _____		Item Description _____			
Package Labeling		Type			
_____ Radioactive I		_____ Sealed Source-Solid			
_____ Radioactive II		_____ Liquid			
_____ Radioactive III		_____ SNM			
_____ Other _____		_____ Other _____			

Isotope I.D.	Activity in Curies	Model Number	S/N

RECEIPT SURVEY

Survey Date _____

Survey Time _____

Surveyed By _____

INSTRUMENTS

MFG - S/N	TYPE

ITEM		RADIATION LEVEL SPECIFY BETA/GAMMA OR GAMMA mrem/hr.		SMEARABLE CONTAMINATION IN DPM PER 100 CM ²		REMARKS
		Surface	3 feet	Alpha	Beta Gamma	
Package	1					
	2					
	3					
Contents	1					
	2					
	3					
	4					
	5					
	6					
	7					

Reviewed and Approved by _____
 Title _____