

PROCEDURE

HNP-8009
PROCEDURE NUMBER

LAB
RESPONSIBLE SECTION

NON-SAFETY RELATED ()

[illegible]

REFERENCE
ONLY


HNP-9

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MANUAL SET

APPROVAL
See Title Page
DATE
See Title Page

E. I. HATCH NUCLEAR PLANT

Georgia Power 

PROCEDURE NO
HNP-8009
REVISION NO
4
PAGE NO
1 of 6

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PERSONNEL CONTAMINATION SURVEY

A. PURPOSE

To provide instructions for the monitoring of personnel for radioactive contamination.

B. SAFETY

Observe Radiation Protection procedures.

C. GENERAL

This procedure contains the methods for monitoring personnel for radioactive contamination by utilizing sensitive portable survey instruments, hand and foot monitors, and/or portal monitors. Also included is a procedure for taking a nasal smear following suspected inhalation of radioactive material. It is the responsibility of each individual to monitor himself as per Section E of this procedure before leaving a Radiation Control Area. If contamination is detected, Health Physics should be notified.

Each time contamination is found on the hands or shoes or when leaving any area where protective clothing was worn a whole body contamination survey must be performed.

D. EQUIPMENT

1. Portal Monitor.
2. Hand and Foot Monitor.
3. Beta - Gamma Rate Meter (RM-14 with HP-210 probe or equivalent).
4. Portable Alpha Survey Meter (PAC-4G or equivalent).


E. PERSONNEL CONTAMINATION SURVEY

1. Portal Monitor:
 - a. Step into the portal monitor.
 - b. Insure the white counting light on the console is on.
 - c. When the Green Safe Light comes on, step out of the monitor.

REFERENCE
ONLY

APPROVAL
See Title Page
DATE
See Title Page

E. I. HATCH NUCLEAR PLANT

Georgia Power 

PROCEDURE NO
HNP-8003
REVISION NO
4
PAGE NO
2 of 6

- d. If the red Alarm light comes on, push the reset button and notify Health Physics immediately:

NOTE

Do not leave area before Health Physics has released you.

2. Hand and Foot Monitor:

- a. Step onto the base of the instrument and insert your hands into the slots. A white counting light will come on.
- b. Stay in this position until the green safe light comes on. When it does, you are free to go on.
- c. If an alarm light comes on notify Health Physics immediately. Begin a complete thorough survey of the entire whole body surface area with an E-120 or RM-14 frisker. Health Physics will make a survey of the whole body as per Section F. Do not leave the area before Health Physics has released you.

3. Radiation Monitor RM-14:

- a. Operate the RM-14 as per HNP-8114.
- b. At various locations inside the protected area we have monitors located for tool and personnel survey. At each location is a sign such as:

"FRISK YOURSELF BEFORE PASSING THIS POINT"

You should frisk yourself in accordance with the instructions on the sign. These monitors are located at key spots to control spreading of contamination.

When you approach a monitor you should first observe the monitor meter reading and then insert your hands underneath the probe to see if they are contaminated. If your hands are clean then pick up the probe and go over your shoes very slowly about 1/2 inch away, for not less than 6 seconds for each foot and not less than 3 seconds for each hand.

NOTE


A meter reading of 100 counts per minute above the initial background reading indicates contamination.

REFERENCE

ONLY MANUAL SET

APPROVAL
See Title Page
DATE
See Title Page

E. I. HATCH NUCLEAR PLANT

Georgia Power 

PROCEDURE NO.
HNP-8003
REVISION NO.
4
PAGE NO.
3 of 6

If this happens stay where you are, if possible, and have someone contact Health Physics. If you are at a phone, call Health Physics and get instructions on what to do. Health Physics will make a survey of the whole body as per Section F. Remember two things, do not spread the contamination and get in touch with Health Physics. If you check out O.K. then go on about your business.

- c. When leaving an area where you have been wearing protective clothing, you must perform a whole body survey. This includes areas where you have worn just shoe covers and gloves or areas where full protective clothing is worn.

F. PERSONNEL CONTAMINATION SURVEY BY THE HEALTH PHYSICS STAFF

1. Count Rate Meter Model E-120 or equivalent.
 - a. Operate E-120 as per HNP-8120.
 - b. Observe the meter and determine the background. (Should be less than 200 CPM).
 - c. Move the probe very slowly, within 1/2" of skin surface, over the entire body, paying particular attention to the hands, feet, hairy portions, and exposed portions of the body.
 - d. If a reading that is about 100 CPM above background is noted, resurvey the suspected area. If the high reading is repeated, proceed to Section G.
2. Gas Proportional Alpha Counter Model PAC-4G
 - a. Operate the PAC-4G as per HNP-8105.
 - b. Move the probe very slowly over the entire body paying attention to the hands, feet, hairy portions, and exposed portions of the body.

NOTE

The detector face is very thin and easily punctured. Do not bring the detector into contact with sharp objects. The detector must be held within 1/2 inch of the surface being checked in order to detect alpha.


- c. If any needle deflection is noted, resurvey the suspected area and if the deflection is repeated, proceed to Section G.

REFERENCE

ONLY MANUAL SET

APPROVAL
See Title Page
DATE
See Title Page

E. I. HATCH NUCLEAR PLANT

Georgia Power 

PROCEDURE NO
HNP-8000
REVISION NO
4
PAGE NO
4 of 6

3. Nasal Smears (performed following suspected inhalation of radioactivity).
 - a. Survey external surface of the nose with an RM-14 with HP-210 probe or equivalent.
 - b. Remove any extensive contamination near nostrils.
 - c. Wet two cotton tip applicators (Optional Step).
 - d. Have subject himself wipe the inside of each nostril with an applicator.
 - e. Check each applicator by taking a near contact reading with an HP-210 probe connected to an RM-14 or equivalent. Be careful not to contaminate the probe. Record results on Form 1, Personnel Contamination Report.
 - f. If results are detected above background, report it immediately to a laboratory foreman or supervisor.

G. FOLLOW-UP PROCEDURE

1. All personnel contamination shall be immediately reported to the Health Physics staff and shall be documented on Form 1, Personnel Contamination Report, when determined necessary by a Health Physics Foreman or designated alternate.
2. If a Whole Body Count indicates greater than 5% body burden or if the Health Physics Foreman deems it necessary, the individual should be given two plastic containers and told to collect urine output over the next 72 hours. Containers shall be labeled with the person's name, type of specimen and date.
3. The Health Physics representative attending to the contamination incident shall initiate Form 1 if the presence of contamination is verified.
4. The Health Physics representative will proceed with decontamination measures in accordance with Procedure HNP-8006, Decontamination.
5. After completion of Form 1, the original will be filed in a Personnel Contamination Report file, the pink copy in the Individual's Exposure Record file, and the yellow copy sent to the individual's supervisor.

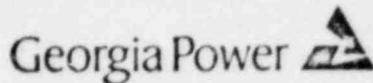
NOTE

The Personnel Contamination Report should be logged on Form 2, PERSONNEL CONTAMINATION LOG.

REFERENCE
ONLY

APPROVAL
See Title Page
DATE
See Title Page

E. I. HATCH NUCLEAR PLANT



PROCEDURE NO.
HNP-8009
REVISION NO.
4
PAGE NO.
5 of 6

FIGURE 1

FORM 1		NUMBER	
PERSONNEL CONTAMINATION REPORT		DATE OF ISSUANCE	
		TIME OF ISSUANCE	
Name _____	Dept. _____		
GPC Employee <input type="checkbox"/>			
NON GPC Employee <input type="checkbox"/>	(Company) _____		
Reason For Survey _____			
Cause of Contamination (if known) _____			
Initial Survey Results: _____ (Beta-Gamma)			
Location of Contamination: _____			
Instrument (s) Used: _____ (Alpha) (Calib. Date) (Beta-Gamma) (Calib. Date)			
Surveyor: _____			
Decontamination Measures Taken: _____			
HP Representative: _____			
Final Survey Results: _____ (Alpha) (Beta-Gamma)			
Instrument (s) Used: _____ (Alpha) (Calib. Date) (Beta-Gamma) (Calib. Date)			
Surveyor: _____			
Action Taken To Preclude Future Occurrence: _____			
Additional Comments: _____			
Orig. - H.P. Office _____			
Pink - Indiv. Unit's Exposure Record File _____			
Yellow - Individual's Supervisor _____			
Reviewed: _____		Laboratory Supervisor	
		HNP-8009	
		Rev. 04	

REFERENCE
ONLY

