

**West Valley Site Management Program  
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**RP-RPP010.00**

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SUBJECT: Personnel Monitoring on the Retained Premises

RPP-RPP010.00

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## 1.0 PURPOSE

This document establishes the West Valley Site Management Program's (WVSMP) requirements for monitoring personnel (and personal items) for radioactive contamination in accordance with 10 CFR 20. This procedure also describes the process to be followed for personnel contamination monitoring (i.e., frisking) using hand-held instruments.

## 2.0 GENERAL REQUIREMENTS

Personnel will perform a whole-body frisk after exiting a contamination area or a work area where radioactive materials were handled. In addition, frisking will be performed as directed by task-specific safety documentation, the Radiation Safety Officer (RSO) or appropriately trained radiological support personnel. Frisking will be performed to monitor for radioactive contamination on skin, personal clothing and personal items.

Personnel performing radiological work on the Retained Premises will be qualified to frisk themselves and their personal items by completing radiological worker training, including the hands-on practical. Frisking will be performed by, or under the direction and supervision of, radiological support personnel when present.

## 3.0 INSTRUMENTS

Monitoring for beta-gamma contamination will be performed using a survey ratemeter (e.g., Ludlum 3 or 177, or equivalent) with an attached pancake Geiger-Mueller (GM) detector (Ludlum 44-9, 44-40, or equivalent). The monitoring equipment will not be used in the field unless it has been appropriately calibrated within the past year, and can pass a performance check the day of usage. The instrument audio will be turned on and set at the lowest operating range before monitoring.

## 4.0 MONITORING PROCEDURES AND GUIDELINES

Personnel frisking will be performed after removal of protective clothing, and prior to washing or showering.

- For self-monitoring, the worker will monitor his/her hand before picking up the detector to start monitoring.
- Frisking will be performed by holding the probe less than one-half inch from the surface and moving the probe slowly over all the surfaces being monitored (at a rate of approximately two inches per second) for at least 2.5 minutes, until the whole body is monitored. If the count rate increases during frisking, pause at the location for 5 to 10 seconds to verify the count rate.

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- The WVSMP RSO will be contacted if the instrument alarms during monitoring. If the person being monitored is alone, he or she will don two pairs of disposable gloves and shoe covers before using a radio, or proceeding to a telephone to contact the RSO. Follow-up actions will be carried out as discussed in Section 5.0.
  - Upon completion of a thorough whole-body frisk, personnel will return the probe to its holder and leave the area. The probe will be placed either on its side or face up to allow the next person to monitor their hands before handling the probe.

#### **5.0 FOLLOW-UP TO INSTRUMENT ALARM**

Upon notification that an instrument alarm has occurred, the RSO and/or appropriately trained radiological support personnel will determine the extent of the contamination, complete the whole-body monitoring of the worker and initiate appropriate decontamination methods. The WVSMP RSO or appropriately trained radiological support personnel will consult with other available health physics resources, as appropriate, to evaluate the need for additional actions to assess potential internal exposure based on the location and extent of the external contamination.

#### **6.0 RECORDKEEPING**

The WVSMP RSO will maintain records of personnel contamination monitoring that resulted in an instrument alarm where contamination was confirmed. These records will be kept in the confidential WVSMP personnel files maintained by the WVSMP Office Manager until license termination by NYSDOH. All personnel contamination incidents will be reported to the Radiation Safety Committee as soon as practical after the event and be documented in the quarterly ALARA review report.