

**West Valley Site Management Program
RECORD OF REVISION AND DISTRIBUTION**

TITLE: Personnel Decontamination Procedure for the Retained Premises

RP-RPP008.00

Record of Revision:

| Description of Change(s) (and pages affected) | Date Issued |
|--|----------------|
| RP-RPP008.00 Original issue | 04/19/2012 |

Record of Distribution:

| Record of Distribution (Distribution List) | Date Distributed |
|--|---------------------|
| RP-RPP008.00 WVSMP Plans and Procedures Manuals (AOC Office, SDA and Annex) Central Files (Original with green sheets) | 04/19/2012 |
| RP-RPP008.00 Transmittal to Chad Glenn, NRC (under separate cover PJB/12amd019.ejt) Edward Traverso, RSO, RP-RSC, Controlled Binder 1 Tom Attridge, RP-RSC Controlled Binder 2 Paul Bembia, RP-RSC Controlled Binder 3 RP-RSC Controlled Binder 4 (<i>never issued</i>) Jean Williams, RP-RSC Controlled Binder 5 Duane Quayle, EnergySolutions, (Radiation and Safety Contractor Manager) RP-RSC Controlled Binder 6 Central Files 10512-12 – RP-RSC Controlled Binder 7 Elizabeth Lowes, RP-RSC Controlled Binder 8 Alita Dueringer, RP-RSC Controlled Binder 9 | 07/30/2012 |

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SUBJECT: Personnel Decontamination Procedure for the Retained Premises RP-RPP008.00

1.0 PURPOSE

This document establishes the West Valley Site Management Program's (WVSMP) requirements for documenting personnel contamination events and performing personnel decontamination following the discovery of radiological contamination of personnel and/or clothing on the Retained Premises of the Western New York Nuclear Service Center.

2.0 GENERAL REQUIREMENTS

NYSERDA will, on a task-specific basis, assess the potential for personnel contamination prior to performing work in any area where radioactive materials may be encountered in unknown concentrations. Such assessments, with appropriate monitoring and decontamination requirements, will be documented in the radiation safety plan prepared for the work.

When required by the task-specific radiation safety plan, personnel monitoring or frisking will be performed after the removal of protective clothing prior to decontamination. Any personnel contamination event will be reported to the Radiation Safety Officer (RSO) immediately. Workers found with detectable radiological contamination on their skin and/or clothing will be promptly decontaminated. All sampling media (e.g., smears, nasal swabs, air samples, etc.) that are collected in response to a contamination event will be retained for possible dose evaluation until released by the RSO.

The following precautions and limitations apply to all decontamination activities performed within the purview of the Retained Premises - Radiation Protection Program (RP-RPP):

- Lifesaving medical procedures shall always take precedence over the decontamination of personnel.
- Decontamination of wounded or injured personnel shall only be performed by, or under the direction of, qualified medical personnel. If a contaminated person is injured, the event will be treated as an emergency. Contact the WVSMP Emergency Coordinator to initiate emergency response in accordance with ER100, *Emergency Response Plan for the West Valley Site Management Program*.
- Water used for the decontamination of personnel or personal articles shall be treated as contaminated (i.e., contained to prevent release to the environment and disposed of accordingly).
- At the direction and/or discretion of the NYSERDA RSO or Radiation Safety Committee (RSC), tritium smears may be used to measure tritium contamination after personnel perform tasks that could potentially involve tritium contamination.
- Decontamination should take place upwind and upslope from the scene of the contamination event to minimize further contamination resulting from any runoff created by decontamination activities. Any runoff created by decontamination should be contained.

3.0 DECONTAMINATION PROCEDURES AND GUIDELINES

Radiation safety personnel will conduct full body radiological surveys to monitor for radioactive material contamination using appropriate contamination detection equipment. Personnel with detectable contamination (other than natural background contamination) on their skin or clothing should be promptly decontaminated.

Upon discovery of personnel contamination, radiation support personnel will have the individual minimize their movement to prevent the spread of contamination. The NYSERDA RSO will be contacted immediately. Radiation support personnel will conduct additional monitoring to determine the extent of skin contamination prior to decontamination, and complete the WVSMP Retained Premises Personnel Contamination Report Form (Attachment A), describing the event in detail.

If contamination is discovered on the face, the radiation safety personnel will collect nasal swabs to determine if the contamination has been potentially inhaled. In addition, if nasal swabs indicate potential inhalation of contamination, or if contamination is discovered around the mouth or lips, a bioassay of the individual is required to determine the extent (if any) of internal contamination.

Because there is no ready source of potable water available on the Retained Premises, personnel decontamination will usually be accomplished by using dry decontamination techniques (e.g., towel wipes and/or masking tape); however, any method included in the table below may be used. When required by the task-specific radiation safety plan, specific decontamination methods will be selected based on the contaminants likely to be encountered.

| Personnel Decontamination Methods | | | |
|--|--|------------------------|---|
| Method | Person Authorized to Administer | Effective for | Technique |
| Towel Wipes | Radiation safety personnel | Skin contamination | Wipe gently with absorbent towel. Be careful not to abrade skin. |
| Masking Tape | Radiation safety personnel | Particulates | Apply tape to skin by lightly patting and removing carefully. |
| Soap and Tepid Water | Radiation safety personnel | All skin contamination | Wash area with low alkaline, non-abrasive soap and tepid water. Repeat until desired contamination level has been reached. A soft surgical hand brush may be used with moderate pressure. |
| Shampoo | Radiation safety personnel | Hair contamination | Wash hair and rinse, keeping the head tilted backward and the direct flow of water away from the face. Repeat as needed. |
| Nose Blowing | Individual | Nasal contamination | Blow nose with soft tissue. Repeat until survey of tissue shows no contamination. |

Specific tools and equipment required by the task-specific radiation safety plan will be provided as part of the work planning process. Such equipment may include, but is not limited to, the following depending on the type and method of decontamination required:

- Banner tape to indicate incident boundary and control zones
- Mops and brushes
- Large trash cans
- Water supply
- Different sizes of plastic bags
- Plastic sheeting
- Masking tape
- Towel Wipes
- Shampoo
- Detergent soap (mild soap for personnel)
- Safety cones
- Buckets
- Containment system, including secondary containment, for decontamination water runoff

The individual will be surveyed following each successive round of decontamination. Decontamination will continue until successive rounds result in no change in contamination. If decontamination cannot be achieved by the methods described above, the event will be treated as an emergency, and the NYSERDA Project Manager will contact the WVSMP Emergency Coordinator to initiate emergency response in accordance with ER100.

4.0 RECORDKEEPING

Contaminated areas of the skin will be measured and reported in square inches (or centimeters) with the activity recorded in net counts per minute (cpm) and net disintegrations per minute (dpm). Measurements will be documented on the WVSMP Retained Premises Personnel Contamination Report Form (Attachment A) and kept in the confidential WVSMP personnel files maintained by the WVSMP Office Manager.

5.0 ATTACHMENTS

Attachment A: WVMSP Retained Premises Personnel Contamination Report Form (one page).

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ATTACHMENT A

WVSMP Retained Premises
Personnel Contamination Report

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WVSMP Retained Premises Personnel Contamination Report Form

Name: _____ Date/Time: _____

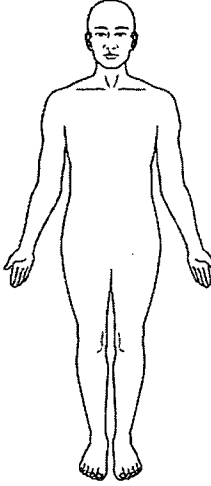
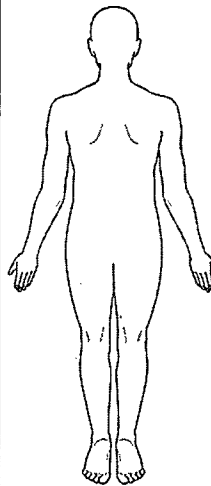
Job Title: _____ RWP #: _____

Survey taken on Skin Protective Clothing Personnel Clothing

Nasal Swabs taken? No Yes

Bioassay Required? No Yes: Collection Date: _____ Time: _____

Mark location of contaminated areas on the charts below.

| FRONT | Area (cm ²) | Alpha cpm/dpm | Beta cpm/dpm | BACK | Area (cm ²) | Alpha cpm/dpm | Beta cpm/dpm |
|--|-------------------------|---------------|--------------|---|-------------------------|---------------|--------------|
|  | 1. | / | / |  | 11. | / | / |
| | 2. | / | / | | 12. | / | / |
| | 3. | / | / | | 13. | / | / |
| | 4. | / | / | | 14. | / | / |
| | 5. | / | / | | 15. | / | / |
| | 6. | / | / | | 16. | / | / |
| | 7. | / | / | | 17. | / | / |
| | 8. | / | / | | 18. | / | / |
| | 9. | / | / | | 19. | / | / |
| | 10. | / | / | | 20. | / | / |

| Location # (from above) | Decontamination Method | Levels Following Decontamination (dpm) | | |
|----------------------------|------------------------|--|-------------|-------------|
| | | 1st Attempt | 2nd Attempt | 3rd Attempt |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Monitored by: _____

Name/Organization: _____

Instrument Type: _____ Probe used: _____

Instrument S/N _____ Instrument efficiency: _____ Calibration Date: _____

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