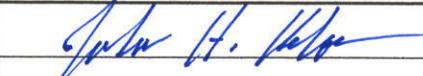
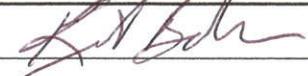


Approved by:		
	General Manager	Radiation Safety Officer

STANDARD OPERATING PROCEDURE

15.OPS.19

DECONTAMINATION OF PERSONNEL

1.0 OBJECTIVE

To provide instruction on specific actions to be taken upon detection of personnel contamination.

2.0 SCOPE

This standard operating procedure (SOP) applies to all workers at the Clean Harbors Deer Trail (CHDT) facility that may potentially be contaminated by radioactive materials. As noted in SOP 15.RPP.06, *Emergency Response*, life-threatening injuries in an emergency situation may supersede contamination concerns, as dictated by the CHDT Radiation Safety Officer (RSO) or designee.

3.0 POLICY

Radiation exposures for CHDT and other personnel will be maintained as low as reasonably achievable (ALARA). Decontamination will be performed on personnel who become contaminated with radioactive materials. Emergency medical care should be administered immediately for injuries affected by radioactive materials. Medical treatment of injuries shall take precedence over potential radioactive contamination concerns. This SOP is intended to comply with the current version of Clean Harbors procedure HS 1.11, *Decontamination Guidelines*.

4.0 RESPONSIBILITIES

Responsibilities of the CHDT RSO, management, and staff are defined in the CHDT Radiation Protection Plan (DR 15.RPP.01).

5.0 DECONTAMINATION TECHNIQUES

If contamination is a potential issue, appropriate personal protective equipment (PPE) should be worn.

5.1 General Decontamination of Personal or Protective Clothing

Contamination may be removed from personnel clothing by patting the affected area with sticky tape (e.g., duct tape), followed by a resurvey to determine if additional decontamination is necessary. If contamination can not be reduced to background levels below the applicable levels and ALARA, the clothing will be removed from service (either entirely or with the affected portion cut out) for disposal as radioactive material.

5.2 General Decontamination of Skin

If personnel require skin decontamination, they shall be decontaminated by the following methods. *Situations that require more than removal with adhesive or soap and water are rare and are unlikely to be encountered by CHDT or other Clean Harbors personnel.*

- Personnel skin contamination above 1.5X background must be reported to the CHDT RSO or designee. The CHDT RSO will determine if a skin dose assessment must be performed.
- Survey the affected area and record the types and initial levels of contamination. If possible, remove particles of contamination with tape and save the particles for evaluation as necessary.
- Attempt localized washing with warm water and soap ensuring the contamination is not spread to uncontaminated parts of the body.
- Resurvey the affected area to determine if the contamination has been reduced to background levels and ALARA.
- If contamination persists, decontamination attempts and resurveys may be repeated multiple times but should stop if these methods are ineffective or skin irritation occurs.
- If the area can not be decontaminated sufficiently with soap and water, the area may be covered (e.g. with plastic or by wearing latex gloves) to allow contamination to be removed through perspiration. Notify the CHDT RSO or designee if contamination cannot be removed.

5.3 Decontamination in Situations Requiring Medical Treatment

As noted above, the response to life-threatening emergency situations must take precedence over any potential radioactive contamination concerns that may be encountered by CHDT or other Clean Harbors personnel. Personnel decontamination in situations where medical treatment is required should proceed according to the following:

- Emergency medical care should be administered immediately for injuries affected by radioactive materials.
- Medical treatment of injuries shall take precedence over radiological considerations.
- The CHDT RSO or designee will provide medical personnel with any necessary radiological support in regards to contamination control and monitoring of the patient and medical staff.
- The treatment of radioactively-contaminated injuries should include the following:
 - Treatment of contaminated wounds by medically qualified individuals,
 - Monitoring of wounds, bandages, and medical instruments and equipment for contamination, and
 - Radionuclide identification

- Contaminated wounds of any kind will be decontaminated under the supervision of the CHDT RSO or designee. Severe wounds will be decontaminated under the supervision of medical personnel.
- Depending on the levels of contamination encountered, an internal dosimetry evaluation and/or bioassay may be required.

6.0 RECORDKEEPING

Records of contamination events must be maintained in the employee's occupational exposures file. Information regarding a contamination event may be recorded in a field logbook or on a form – an example is provided in Attachment A. Following decontamination, a report should be prepared and submitted to the CHDT RSO or designee. At a minimum, the information provided in this report will consist of the following:

- Employee name, date, time, radiation work permit number (if appropriate), project name and number, and technician/supervisor,
- When contamination occurred, description of the cause, where happened/what specific task,
- A comments/additional information section,
- How contamination could have been prevented /corrective actions,
- A drawing of a human figure (front and back views) to document the location of contamination,
- Survey data – instrument information, pre-decontamination, after each decontamination attempt, radionuclide/form, decontamination method(s), bioassay results (if applicable), and
- Surveyor and CHDT RSO or designee signatures with signature dates

The information requested in this report must be provided as completely and accurately as possible for evaluation of subsequent actions, personnel dose, and for required documentation.

7.0 REFERENCES

Clean Harbors Environmental Services. HS 1.11, *Decontamination Guidelines*, Current Version.

ATTACHMENT A – PERSONNEL CONTAMINATION FORM
(Page 1 of 2)

Contaminated Individual's Name:		Date:	Time:	RWP/Task #:	
Project Name/Number:		Approx. surface area of contamination (cm ²):		Technician/Supervisor:	
Approximate length of time that individual remained contaminated, including decontamination attempts:			Type of Contamination: <input type="checkbox"/> Localized <input type="checkbox"/> Discrete Particle <input type="checkbox"/> Distributed		
PPE Level	<input type="checkbox"/> Level D	<input type="checkbox"/> Level C	<input type="checkbox"/> Level B	<input type="checkbox"/> Level A	<input type="checkbox"/> Other (describe below)
Description of PPE:					

Probable Reason for Contamination:

- | | | | | |
|--|---|---|-----------------------------|---|
| <input type="checkbox"/> Poor Practices | <input type="checkbox"/> Work | <input type="checkbox"/> Inadequate Controls | <input type="checkbox"/> HP | <input type="checkbox"/> Inadequate PPE |
| <input type="checkbox"/> PPE Failure | <input type="checkbox"/> Contaminated PPE | <input type="checkbox"/> Perspiration Through PPE | | |
| <input type="checkbox"/> Planned Contamination | <input type="checkbox"/> Accidental Contamination | <input type="checkbox"/> Spread From Adjacent Work Area | | |

Comments:

Action Taken:

