

UNIVERSITY OF CINCINNATI  
RADIATION SAFETY COMMITTEE  
POLICY STATEMENT 07-2

Policy Concern: This policy covers how fixed contamination shall be handled, including in areas where radioactive material use is no longer being performed.

Policy Implementation: The Radiation Safety Officer (RSO) is directed to implement this policy upon approval by the Radiation Safety Committee (RSC).

Discussion: Each year there are a couple of instances where new areas of fixed contamination are detected. Often the contamination is first detected during a decommissioning survey, because it was previously covered by large equipment. Some of the contamination is recent and some is from many years ago and no one is sure where it came from. Some of the contamination is from short half-life radionuclides; however, some of the contamination is from long half-life radionuclides. Some of the contamination is on items which are easily removed; some is on items that are not easily removed (e.g., pipes inside walls) and some is on asbestos containing countertops, which requires asbestos abatement removal.

OAC 3701:1-40-18(C) states “a licensee shall provide written notice to the director within sixty days of the occurrence of (any) the following activity ... (4) no licensed activities have been conducted for a period of twenty-four months in any separate ... room... that contains residual radioactivity such that the ... room ... is unsuitable for release in accordance with Chapter 3748. of the Revised Code and the rules adopted there under.” Also, OAC 3701:1-40-18(D) states “in the event of any occurrence as set forth in paragraph (C) of this rule the licensee shall either (1) begin decommissioning the site, and any separate ... room ...that contains residual radioactivity so that the ... room ... are suitable for release in accordance with Chapter 3748 of the Revised Code and the rules adopted there under; or ....

From time-to-time the fixed contamination is in a room where radioactive material usage is stopping (i.e., the room is being requested to be completely decommissioned). From time-to-time there is no authorized user (AU) available to take responsibility for the contamination. From time-to-time the contamination can not be removed within 24-months.

Policy Definitions

Department – The University of Cincinnati, Cincinnati Children’s Hospital Medical Center or Shriners’s Hospital for Children department for which the fixed contamination area is officially assigned by the institution.

Responsible Administrator – The department chair or higher level individual who has sufficient knowledge and control of operations in an area where fixed contamination is present to ensure Radiation Control and Safety Program (RCSP) requirements are followed and to ensure the RSO is notified in a timely manner to ensure proper removal and disposal of the fixed contamination.

## Policy Statement

- (1) If an area of suspected fixed contamination is detected by the RSO of during a survey the following actions shall occur.
  - A. Within 30 days of detection of the contamination, the RSO shall determine the likely contaminate radionuclide and the department staff shall make a serious attempt to decontaminate.
  - B. If the contamination cannot be decontaminated to background levels (i.e., 100 cpm above background), then within 30 days, the current AU and/or a Responsible Administrator in consultation with the RSO and other appropriate personnel shall determine if the contamination can be allowed to decay in accordance with this policy, or if the contamination can be removed without special provisions due to other hazards that are present, such as asbestos abatement.
    - i. If the contaminate has a half-life 120 days or less, then decay maybe used to remove the contamination. If decay is used, the room must be retained on an authorization for contamination oversight until the contamination is determined to have decayed to background.
    - ii. If the contamination has a half-life of greater than 120 days, or has a half-life of 120 days or less and the department chooses not to use decay to remove the contamination, and the contaminated area can be removed without special provisions due to other hazards, the contaminated area shall be removed within 30 days and promptly disposed through the RSO of as radioactive waste. Any costs greater than \$500 associated with the disposal of the waste are the responsibility of the department. The department shall, within 30 days, provide the RSO of with an account number and/or payment to cover the disposal costs.
    - iii. If the contaminate cannot be removed without special provisions due to other hazards being present, the room must be retained on an authorization for contamination oversight until the contamination is removed.
  - C. If an authorization is required for contamination oversight, the department has the following options.
    - i. Retain the room as a radioactive material use area under an AU's authorization and ensure radioactive material is used in a procedure within the room at least once every 24 months.
    - ii. Have the room transferred to an AU who is willing to accept the contamination, and include and use the area as a radioactive material use area under their authorization. For this a radioactive material procedure must be performed in the room at least once every 24 months.
    - iii. Have the room listed as a "fixed contamination" area under a departmental AU's authorization.
    - iv. Have the room listed as a "fixed contamination" area under the authorization of a Responsible Administrator.
      1. A Responsible Administrator authorization.
        - a. Does not require the individual to be a radiation worker.
        - b. Does not require the individual to submit a quarterly inventory.
        - c. Does require the individual to enforce general RCSP rules within the area. These rules include, but are not limited to:
          - i. Ensuring the room door is labeled "caution radioactive material."

- ii. Ensuring the contaminated area is labeled “caution radioactive material” and lists the suspected contaminate and activity.
    - iii. Ensuring no one eats, drinks or smokes in the room, and no food or drink is brought into the rooms.
  - 2. Responsible Administrators are not subject to the point system. Any noncompliance observed to RCSP rules shall be brought directly to the RSC.
  - 3. Responsible Administrators shall be required to renew their authorization annually. This annual renewal maybe in lieu of an audit and must include signature on a statement acknowledging responsibility of oversight of the area and timely notification to the RSO regarding any changes that could impact the contamination, such as construction within the room.
- (2) All rooms listed as “fixed contamination” areas on an authorization shall:
  - A. Be surveyed at least quarterly by the RSO, unless exempted from survey by the RSC.
  - B. Except for contamination resulting for radionuclides with half-lives 120 days or less, attempt to have the contamination removed and disposed through the RSO as radioactive waste within 24 months. Any costs greater than \$500 associated with the disposal of the waste are the responsibility of the department. The department shall in a timely manner provide the RSO with an account number and/or payment to cover the disposal costs.
  - C. If the contamination cannot be removed with 24 months, provide notification to the RSO at least 3 months prior to the 24 month deadline. The notification shall include either:
    - i. Justification as to why the contamination cannot be removed within the 24 month period and a timetable for decontamination and/or contamination removal. (Or)
    - ii. Documentation that a procedure involving the use of radioactive material has been or will be performed in the room. The documentation must include the date performed, the radionuclide used, who used the radioactive material, and a brief description of the use.
- (3) The RSO is instructed to notify the Ohio Department of Health in accordance with regulation any fixed contamination which is not removed within 24 months located in a room which has not had a radioactive material procedure performed in the last 24 months.

Approval

August 15, 2007

Revision approved by the Radiation Safety Committee 2/16/11

Signature of RSC Administrative Representative on file