



American Radiolabeled Chemicals, Inc.
101 ARC Drive
Saint Louis, MO 63146 USA
P: 314-991-4545 ~ F: 314-991-4692
arcinc@arc-inc.com ~ www.arc-inc.com

To: Kevin Mull
From: R. Greenwood
Re:
Fax: 630-829-9782
Date: 8/2/12
Pages: ~~5~~

Urgent For Review Please Comment Please Reply Please Recycle



5 Pages including
this one

AMERICAN RADIOLABELED CHEMICALS, INC
STANDARD OPERATING PROCEDURE - SOP 42

Supersedes: new Reviewed by RSC: 5/17/12, 8/1/12

SUBJECT: Repair or replace Contaminated Roofing

OBJECTIVE: This procedure is designed to ensure that no contaminated, or potentially contaminated, roofing material is removed from the ARC site due to repair and/or replacement of the laboratory roofs due to severe hail damage.

It also is designed to provide the involved (non ARC) workers with radiation safety training commensurate with the hazard involved.

This SOP will go into effect at the time an amendment request to replace the roofs is approved by Region III. This SOP will be suspended upon completion or termination of the job.

RESPONSIBILITY: Radiation Safety Officer

PROCEDURE:

1.0 Scoping Survey

- 1.1 A direct scan survey using a calibrated survey meter with a G-M pancake probe will be performed covering the entire roof area of each building.
- 1.2 An approximate one meter grid will be used for the survey. All results will be documented
- 1.3 Results of more than twice back ground will require wipe measurements.
- 1.4 As the survey meter results will not include Tritium, a scaling factor of 25 will be used. This is the historical ratio of H-3 to C-14 in ARC gaseous effluent.
- 1.5 Surveys have been completed and documented.

2.0 Radiation Safety Training

2.1 Requirement

Training is required for individuals who perform work functions such as (but not limited to) the removal of contaminated (or potentially contaminated) roofing material.

2.2 Training subjects.

- 2.2.1 Nature of radioactive material
- 2.2.2 Difference between radiation and contamination
- 2.2.3 Beta emitters vs other emissions

AMERICAN RADIOLABELED CHEMICALS, INC
STANDARD OPERATING PROCEDURE - SOP 42

Supersedes: new Reviewed by RSC: 5/17/12, 8/1/12

SUBJECT: Repair or replace Contaminated Roofing

- 2.2.4 Effect of beta energy
 - 2.2.5 Beta shielding from clothing, etc
 - 2.2.6 Dose, internal vs external, internal only
 - 2.2.7 Protective clothing and equipment (PCE)
 - 2.2.8 Donning and wear of PCE
 - 2.2.9 Removal of protective clothing when exiting a contaminated area.
 - 2.2.10 Surveys and survey meters.
 - 2.2.11 Requirement for bioassay
 - 2.2.12 Requirement for whole body frisk
 - 2.2.13 Action levels
- 3.0 Certification of training and exposure time
- Each individual trained shall fill out and sign the "Certificate of Training and Exposure Time"
- 4.0 Location and Description Repair Site
- Workers will be required to review and understand the survey results
- 5.0 Any contaminated or potentially contaminated material will be disposed of as Red Waste.
- 6.0 All workers will be surveyed as they leave the roof and again at the end of the work day before leaving site.
- 7.0 All workers are required to participate in the ARC Bioassay program.
- 8.0 Surveillance
- 8.1 Removal of contaminated areas of building 100/200 roofing will be performed by ARC personnel under supervision of ARC HP personnel.
 - 8.2 Work on the building 300 roof will consist of frisking and bioassay only.
 - 8.3 Work on the remainder of building 100/200 roof will have intermittent supervision by ARC HP personnel.

AMERICAN RADIOLABELED CHEMICALS, INC
STANDARD OPERATING PROCEDURE - SOP 42

Supersedes: new

Reviewed by RSC: 5/17/12, 8/1/12

SUBJECT: Repair or replace Contaminated Roofing

AMERICAN RADIOLABELED CHEMICALS, INC
STANDARD OPERATING PROCEDURE - SOP 42

Supersedes: new Reviewed by RSC: 5/17/12, 8/1/12

SUBJECT: Repair or replace Contaminated Roofing

ATTACHMENT A

Certificate of Training and Exposure Time

I certify that I have received the training instructions listed in 2.2 above.

Company name

Name (please print)

And that I spent the following time within the area described in 4.0 above

Start date _____ End date _____ Hours _____

Start date _____ End date _____ Hours _____

Start date _____ End date _____ Hours _____

Start date _____ End date _____ Hours _____

Bioassay

Results _____

Signature