

## **INSTRUCTIONS FOR OPENING RADIONUCLIDE SHIPMENTS**

All packages containing radioactive material are received at the Department of Environmental Health & Safety where the contamination of the package exterior is assessed and external radiation levels are monitored (if required). The radioactive stock vial in the package is logged into the campus radionuclide inventory system. The Department of Environmental Health & Safety will not normally open packages unless there is a particular need, such as possible damage or to verify the contents of the package.

The radionuclide user must follow the procedures below when opening radioactive material packages:

- Conduct the package survey as soon as possible on the same day that it is delivered to the lab.
- Wear personal protective equipment (lab coat, gloves, eye protection) when opening the package.
- Open the package in an area of the radiation lab marked for radioactive material use.
- Open the package and visually inspect for any sign of damage (e.g. crushed items, broken seals or vials, discoloration of packaging material). Examine the stock vial to confirm that the stock material that was received is the material that was ordered. If you find anything other than expected, stop and notify the RSO.
- Survey the shipping package, stock vial and packaging material for contamination. For packages containing Fe-55 or soft beta emitters (e.g. H-3, C-14, S-35, Ca-45, P-33) wipe tests must be conducted using a liquid scintillation counter (LSC). Packages containing isotopes with beta radiation of higher energy (e.g. P-32, Na-22, Cl-36, Ru-86, I-131) and most gamma emitters (e.g. Cs-137, Cr-51, Fe-59, Co-60) may be surveyed using a thin end-window GM survey meter instead of wipe testing. Packages containing low-energy gamma emitters (e.g. I-125) may be surveyed using a low energy gamma survey meter instead of wipe testing. If you are uncertain which instrument to use to conduct a contamination survey, contact Environmental Health and Safety at 831-8475. If contamination is found, stop and notify the RSO.
- Record the findings of the package survey.
- If the shipping package is not contaminated, it may be discarded in the regular trash *after removing or completely defacing all radiation warning labels*.