

XXXX Nuclear Laboratory

Sealed Source Inventory and Leak Test Policy

1. An inventory of all sealed sources shall be kept in the department and will be checked and documented at least semi-annually. The inventory must contain the model/serial number of each source, the identity of each source by radionuclide, its appropriate activity, the location of each source and the name of the individual who performed the inventory. The inventory must be kept for 3 years. (See attached form)

2. Current Inventory of Radioactivity kept on the premise:

Type:	Isotope:	Activity:	Location:
Sealed gel source	Co57	5.2 mCi	Hot Lab
Sealed gel source	Cs137	266 uCi	Hot Lab
Sealed flood	Co57	10 mCi	Hot Lab

3. Test for leakage must be done every 6 months on the sealed sources. The leak test must be capable of detecting 0.005 uCi. If the leak test reveals the presence of >0.005 uCi of removable contamination, the source must immediately be withdrawn from use and stored, disposed of or cause to be repaired. A report must be filed within 5 days.

- A separate wipe sample (prep pad) should be obtained from each rubber chicken and appropriately identified. The individual performing the wipes must wear gloves and proper protective clothing.
- Each wipe sample should be counted for 1 minute in a sodium iodide well scintillation counter to obtain the wipe counts per minute and recorded. A separate background count rate should also be obtained and recorded.

c. The activity (in uCi) of each wipe sample should then be determined according to:

$$\text{Activity (uCi)} = \frac{\text{Measured wipe (cpm)} - \text{background (cpm)}}{\text{Detector efficiency} \times 2.22 \times 10^6 \text{ dpm/uCi}}$$

d. Record activity in uCi of each wipe sample. It must be <0.005 uCi. The leak test results must be recorded and include the model/serial number of each source tested, the identity of each source by radionuclide, its estimated activity, the results of the test, the date of the test, the name of the individual who performed the test, and any action taken. (See attached form)

e. If the wipe same is greater than 0.005 uCi, the leaking source must be removed from used and stored, disposed, or repaired. The RSO is responsible for these actions. A report will be filed with in 5 days in accordance with 35.3067.

Written: _____	Date: _____
Revised: _____	Date: _____
Reviewed: _____	Date: _____
_____	Date: _____