

LP-11
Semiannual Inventory and Employee Verification

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Approved by: _____

Date: _____

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Semiannual Radioisotope Inventory/Employee Verification

This procedure provides guidelines for performing semiannual radioisotope inventories for those laboratories authorized to use radioactive materials. Semiannual inventories are used to demonstrate that radioactive material receipt and use is being monitored and that OSU's possession of radioactive material is within the limits of our Radioactive Materials License.

A semiannual physical inventory is required by the State of Oregon.

Verification of authorized radiation workers will be conducted at the same time as the semiannual inventory.

I. FREQUENCY

A campus-wide physical inventory of all radioactive materials is required every six months. Radiation workers covered under each Radiation Use Authorization are verified at the same time.

NEEDED

- A. Inventory Report from Radiation Safety
- B. Instructions: LP-11 "Semiannual Radioisotope Inventory"
- C. Employee Verification Report

II. PERFORMING THE SEMIANNUAL RADIOISOTOPE INVENTORY

Call Radiation Safety at 7-2227 with any questions or if you need help with your semiannual inventory.

A. Total Inventory of P.I.

Each P.I. will receive by email a "Total Inventory of PI" report sorted by isotope and listing transactions by approval number. Each transaction should be verified both by physical inventory and laboratory records. An explanation of each column heading can be found on the report footer.

- 1. Compare your records to those shown on the "Total Inventory of PI" report. For each approval number, verify each transaction and storage location of the item.**
- 2. Show any discrepancies between the Radiation Safety Office records and your lab records by crossing out the incorrect item on the report and writing the correction next to the item. Isotope amounts must be entered in mCi.**

For example: A waste pick-up record is shown on the inventory report as 0.1 mCi, but should have been 1.0 mCi. Cross out 0.100 and write in 1.0 next to the incorrect entry.

If the item no longer exists in your lab, cross out the “On Hand Decayed Amount” and write in “0” next to the total amount in that column. You must account for all radioactive material shown on your inventory.

Change an incorrect or blank storage location by crossing out the incorrect building or room number and writing the correct location next to the entry.

3. **An explanatory note must accompany the entry if:**
 - a. A corrected amount causes the “On Hand Not Decayed” balance for that approval number to change by 10% (or, if your record keeping procedure accounts for decay, the “On hand Decayed” amount).
 - b. Radiation Safety does not show a record for receipt or disposal of an item.
4. Either the PI or the Lab Contact must sign and date the corrected copy of the inventory and send it to Radiation Safety by the due date noted in the cover email. Keep a copy of the completed semiannual inventory for your records.
5. The inventory report must be signed, dated, and returned to Radiation Safety if any changes are made. An email response is sufficient if no changes are indicated.

B. Decay Correction

In most cases it is not necessary to correct for decay. If there are no corrections to be made, or you want Radiation Safety to calculate decay, then the “On Hand Decayed” Amount on the report is the amount remaining in your lab.

If your record keeping procedure does not account for decay, and you need to make a correction, correct the “On Hand Not Decayed” column. The Radiation Safety database will automatically account for decay of the item once the correction is entered.

In cases where you wish to account for decay of a particular item, use the decay equation below:

$$\text{On Hand Decayed} = \text{On Hand Not Decayed} (e^{-.693T/T_{1/2}})$$

$$\text{where } T/T_{1/2} = \frac{\text{Time elapsed from receipt of isotope to report date (in days)}}{\text{Half Life of Isotope (in days)}}$$

C. Explanatory Note

1. After marking the correct inventory amount on the inventory form, enter an explanatory note in the space provided on the bottom of the “Total Inventory of PI” report. A note must accompany the inventory if a corrected amount causes the “On Hand Not Decayed” or “On Hand Decayed” balance for that approval number to vary by more than 10% of that shown.
2. Write the Approval Number of the item to be corrected in the space provided.
3. Explain briefly why the on hand amount varies from Radiation Safety records by more than 10%. Provide any record numbers, or other evidence that may help clarify your explanation.

For example: A waste pick up is not shown on the Inventory Report for a particular item. The correction changes the amount on hand by + 10% of that shown. After correcting the entry on the inventory, go to the bottom of the report and fill out the explanatory note as shown below:

Approval Number	Explanation of Discrepancy
18182	Picked up by Radiation Safety 08/09/1998. Waste tag #1383

IV. **Employee Verification Report**

Review the Employee Verification Report.

Note: Only workers who are using radioisotopes in your laboratory are included. Non-radiation workers need not be included in this report.

- A. Cross out any radiation workers that have left your lab and record their termination date (month and year).
- B. Add other radiation workers to the bottom of the report. Include first name, last name, middle initial, sex, OSU Identification number, and orientation

date. Note that individuals will not be added to your authorization until they have completed a Radiation Safety orientation. Contact Radiation Safety to sign up for an upcoming session.

- C. Review the Radiation Safety Lab Contact name, extension and e-mail address in the report header. Enter any changes to the Lab Contact information in the space provided at the end of the report.
- D. Sign and date the printed copy of the radiation worker report, and send it to Radiation Safety by the inventory due date. Keep a copy for your records.

Note: For the Employee Verification report, you may elect to send your confirmation or updates by email to radiationsafety@oregonstate.edu. The response must be sent from the email address of the Program Director or the Lab Contact.

V. LATE INVENTORIES

Inventories must be returned to Radiation Safety by the due date specified in the cover letter. An extension may be granted for extenuating circumstances by calling Radiation Safety at 7-2227. Restriction of isotope order privileges or possible suspension of RUA will result if inventories are not received by the due date and an extension has not been granted.