

RADIOACTIVE MATERIALS LABORATORY SURVEY REPORT

Principal Investigator Name _____

Report Due (check one):

Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1 Aug 1 Sep 1 Oct 1 Nov 1 Dec 1

Instructions: Complete all applicable sections of the form below. Refer to the back for further information. Scan or fax this form to the EH&S Radiation Safety Division (829-2029). **File the original in lab notebook with the raw data.**

Lab Location _____ active inactive Lab Location _____ active inactive

INSTRUMENTATION					
Survey Type	Instrument Type	Instrument Location	Background CPM	Check Source CPM	Efficiency/Nuclide
Wipe	LSC				
	Gamma Counter				
Survey Type	Instrument Type	Serial Number	Background CPM	Check Source CPM	Efficiency/Nuclide
Meter	Beta Probe				
	Gamma Probe				

METER AND WIPE SURVEY RESULTS							
Portable contamination instrument survey performed: <input type="checkbox"/> Yes <input type="checkbox"/> N/A							
Non-radioactive trash containers surveyed using meter: <input type="checkbox"/> Yes <input type="checkbox"/> No Contamination found in trash can: <input type="checkbox"/> Yes <input type="checkbox"/> No							
#	Description	Meter CPM	Meter DPM	Wipe CPM	Wipe DPM	Nuclide	Actions Taken
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							

Comments:

Surveyed By _____

Date of Survey _____

RADIOACTIVE MATERIALS LABORATORY SURVEY REPORT

Instructions and Definitions

Instructions: A documented contamination survey consisting of wipes, analyzed with a liquid scintillation counter (LSC) or gamma counter, and use of a portable survey meter (**for other than H-3**), is required for each active radioactive materials lab and waste storage area at least once each month that radioactive materials are used. If no radioactive material is used during the month, no survey is required (report the lab location as "inactive").

For wipe tests, count an appropriate standard and calculate the instrument efficiency. For survey meters, count the attached check source, record the reading, and list the appropriate nuclide efficiency from the calibration label. Calculate and record disintegrations per minute (DPM) for areas contaminated greater than three times the background counts per minute (CPM). **Take action per limits listed in the "Radioactive Materials Safety Manual."** Fax to the EH&S Radiation Safety Division (829-2029). **File original in Radiation Protection Binder with the raw data.**

Definitions:

Report Due Date -- **Surveys must be performed after every use of radioactive materials.** A documented survey (using this form) is required at least once every month radioactive materials are used. The Survey Report is due at EH&S on the first day of the month to report the status of the lab during the previous month.

Instrumentation Section

Wipe Survey -- Use a small piece of filter paper (approximately one square inch is size) or swab (cotton tip applicator) to wipe approximately 100 cm² of the area to be checked for the presence of removable contamination. Individually wipe each potentially contaminated item or area (floors, bench top, waste containers, etc.). Analyze the wipes with a LSC or gamma counter as appropriate for the nuclide(s) used in the lab during the month.

Wipe Instrument Location -- Enter the room number and the building name where the counter is located.

Wipe Background CPM -- Enter the result in counts per minute for a blank sample counted with the same instrument in the same manner as the wipes.

Wipe Check Source CPM -- Enter the result in counts per minute for an appropriate standard (H-3 for H-3, C-14 for other beta emitters, I-129/Cs-137 for gamma emitters) counted with the wipes.

Wipe Efficiency/Nuclide -- Enter the result obtained from:

$$\text{Wipe Efficiency} = (\text{Wipe Check Source CPM} / \text{Check Source DPM}) * 100\%$$

The Check Source DPM is the **decay corrected** disintegrations per minutes for the standard. Also, enter the nuclide associated with the efficiency.

Meter Survey -- Use a portable survey meter to check surfaces for the presence of removable and fixed contamination. Select the probe appropriate for the nuclide(s) used in the lab during the month. Verify proper battery operation before starting the survey.

Meter Serial Number -- Enter the "S/N" listed on the survey meter's calibration label.

Meter Background CPM -- Enter the result in counts per minute for the background reading for the instrument.

Meter Check Source CPM -- Enter the result in counts per minute from holding the survey meter probe against the check source attached to the survey meter. Do not use the meter and contact EH&S if the result is not within 10% of expected reading (listed on the survey meter's calibration label).

Meter Efficiency/Nuclide -- Enter the value listed on the survey meter's calibration label for the appropriate nuclide used in the lab during the month. If the efficiency is not listed, contact EH&S.

Meter and Wipe Survey Results Section

Perform a survey of radioactive materials work areas including trash containers using a portable survey instrument. Place a check mark in the applicable boxes. After the meter survey, take wipes of the work areas.

Description -- Enter a brief location identification of the work area surveyed ("floor", "bench top", "microfuge", etc.). For wipes, these areas should also be indicated on a diagram of the lab kept in the Radiation Protection Binder.

Meter CPM -- Enter the maximum survey instrument reading of the work areas surveyed.

Meter DPM -- If the Meter CPM value is greater than three times the Meter Background CPM, calculate and enter:

$$\text{Meter DPM} = (\text{Meter CPM} - \text{Meter Background CPM}) / \text{Meter Efficiency}$$

Wipe CPM -- Enter the result in counts per minute for each wipe.

Wipe DPM -- If the Wipe CPM value is greater than three times the Wipe Background CPM, calculate and enter:

$$\text{Wipe DPM} = (\text{Wipe CPM} - \text{Wipe Background CPM}) / \text{Wipe Efficiency}$$

Nuclide -- Enter the nuclide ("H-3", "C-14", "P-32", etc.) associated with the contamination.

Actions Taken -- Describe any decontamination results, etc.