Radiation Safety Checklist

Often times, radiation safety concerns aren't addressed until a laboratory audit is performed or a contamination or radiation event arises. Being proactive in radiation safety issues is extremely important. To help you determine how you are doing with respect to radiation safety, we've devised the checklist below to outline the most common problems we find when we are out in the labs. See how you are doing!

☐ All rooms with a "Caution Radioactive Materials" sign are locked when unattended. If you are unable to lock a room (e.g., darkrooms), make sure no radioactive material is kept unattended in the room. Also, consider ALL rooms listed on your Radionuclide Use Permit. This would include counting rooms, cold rooms, and shared laboratories. All individuals are responsible for securing these rooms, not just the lab who “owns” the space. Also, be aware of individuals in the area. If you do not recognize them, ask them their business.

☐ Required surveys (direct radiation and contamination) are performed in ALL rooms listed on your permit. Once again, if a room is “owned” by another lab (i.e., a specific PH who oversees the shared lab) but you use it for part of your radioactive work, a survey must be performed in that area. Some labs prefer to obtain a copy of the survey from the “owner” of the lab and place it in their survey book. This is acceptable provided that all areas where radioactive material was used are included in the survey. To avoid confusion and possibly missed surveys, we recommend that each Permit Holder survey all affected labs independently.

☐ 200 counts per minute (cpm) is the magic number! If any of your monthly wipes exceed 200 cpm above background, you must record the results and decontaminate the area in question. Once this is done, the area must be resurveyed and those results recorded. If a waste container exceeds 200 cpm above background (from wipes taken on the outside of the containers), it must be decontaminated or repackaged before it may be disposed of through the Radiation Safety Office.
Radioactive waste is fully prepared prior to placing a request for waste pick-up. This includes the completion of all surveys and paperwork. Failure to properly package waste and complete paperwork will result in refusal of the waste. Because Department of Transportation (DOT) regulations apply to our waste pick-ups, we must be strict about this policy. The pick-up request must be received in the Radiation Safety Office no later than 3:00 pm on the day before the scheduled pick-up date.

Lab personnel have completed all required Radiation Safety training in a timely manner. Form A-3 “Authorization to Use Radioactive Materials” must be completed by all new personnel. Once this form has been reviewed by the RSO, the individual will be notified of his/her training requirements. Failure to complete these requirements not only affects the individual’s approval to use radioactive materials, but it may also jeopardize the designated permit. This includes training required for summer students and interns.

New laboratories have been approved by Radiation Safety prior to moving radioactive materials into them. Although a lab may have a “radioactive materials” sign on the door, a permit holder is not authorized to use the lab for radioactive work/storage until the room is on his/her permit.

Radionuclide inventory is up to date. A “running total” should be kept for each individual radionuclide (See page 65 of the Radiation Safety Procedures Manual for clarification). Any old radioactive material that has decayed or is chemically compromised such that it will not be used in the future should be disposed through the RSO. If the material has a relatively short half-life (e.g., $^{32}$P, $^{125}$I), please record the decayed activity on the waste tag. This will give us a good estimate of the true activity for disposal. The original activity (before decay) should be provided on the shipping paper. This paper is used to update your inventory records in our computer system.

Survey meters should be checked before each use. The dial or button may be set or pressed to check the battery function. If the needle is not in the “bat test” area, the batteries must be replaced. Battery replacement is the responsibility of the laboratory.