

How to Handle Common Low Level Radioactive Waste Issues

What Was Observed	What the Issue Is	How to Correct
Dry active waste was accumulated loose in a drum.	Opening the drum with loose waste inside can cause contamination to “puff” out of the drum onto the surrounding area and anyone handling the waste.	Always use a bag or a drum liner to accumulate dry active waste to avoid contamination of personnel and storage areas.
Radioactive material (RAM) was stored in a common area without a responsible party nearby.	Unsecured RAM is a safety and security risk, as well as a license violation.	RAM must be stored in a secure area away from personnel who are not trained in radiation safety.
Non-radioactive waste was accumulated in radioactive waste containers.	This approach increases both waste volume and disposal costs.	Set up separate bags or drums for waste and PPE, and make sure they are clearly marked.
A drum was the primary container for liquids without any inner containers.	If the primary drum develops a leak, the emergency response and cleanup is extensive.	The added cost of an overpack or secondary container is well worth the safety of the liquids during storage and transportation.
A drum of high dose rate material was stored against a wall shared with a frequently used hallway.	Personnel on the other side of the wall shared with the storage room could be exposed to radiation while crossing the hallway or if stopped in the hallway.	Store high dose rate materials away from any area where personnel could be unknowingly exposed. Conduct surveys to ensure safety to the public.
Radioactive “aqueous” waste was mixed with RCRA hazardous constituents and disposed of via a sanitary sewer.	This method is a violation of RCRA for improper disposal of untreated hazardous waste.	Conduct a hazardous waste characterization for all wastes, and ensure disposal is in accordance with NRC, EPA, and State regulations.
Liquid wastes were mixed in with dry active waste.	This methodology is a waste acceptance criteria violation at the waste processing or disposal facility, which can lead to surcharges or rejection of waste back to the licensee.	Accumulate liquid wastes separately from dry wastes. If unsure whether they can be mixed, ask your service provider.
Labeling of drums and containers was incomplete.	Incomplete labeling is a violation of license and hazard communication regulations.	Drums and containers should be labeled with the isotopes and individual activities (with units), trefoil, “CAUTION, RADIOACTIVE MATERIAL”, date, radiation levels, and description of waste or materials.
Incorrect type of shielding was used for radioactive materials	The use of the wrong shielding can create a more hazardous condition.	Always consult the RSO before adding shielding to assure it is done correctly. Follow up with surveys to ensure safety.
Untrained personnel were handling radioactive waste.	Without proper training, waste can be placed in the wrong accumulation containers or discarded into normal trash. The individuals handling the waste could unknowingly spread contamination.	Train all potentially impacted employees to follow and adhere to all postings, signs, and procedures and to seek assistance from the RSO if they are unsure of proper protocols.