

GAO Highlights

Highlights of [GAO-24-105998](#), a report to the Committee on Armed Services, House of Representatives

Why GAO Did This Study

Radioactive sources are commonly used for medical, industrial, and research purposes. However, these materials can be harmful and dangerous, if used improperly.

NRC and states to which it has delegated authority issue licenses for the possession and use of radioactive sources. These entities regulate disposal facilities that can accept certain sources and waste. Several federal programs support disposal of some sources, but some licensees still hold onto sources beyond their useful lives. Doing so increases the risk that sources could be orphaned and misused, for example, in a dirty bomb.

House Report 117-118 accompanying a bill for the National Defense Authorization Act for Fiscal Year 2022 includes a provision for GAO to review the disposition of radioactive sources. This report examines (1) the factors that contribute to licensees delaying disposal of disused high-risk radioactive sources, and (2) leading practices that, if implemented, could help address challenges related to the disposal of some disused radioactive sources. GAO reviewed relevant laws, regulations, and key organizations' documents on leading practices. GAO also interviewed agency and industry officials and conducted site visits.

What GAO Recommends

GAO is making three recommendations, including that NRC should assess leading practices that would minimize the time that disused sources are in a licensee's possession. NRC neither agreed nor disagreed with this recommendation, and the agencies generally agreed with the other two recommendations.

View [GAO-24-105998](#). For more information, contact Allison Bawden at (202) 512-3841 or bawdena@gao.gov.

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HIGH-RISK RADIOACTIVE MATERIAL

Opportunities Exist to Improve the Security of Sources No Longer in Use

What GAO Found

Licensees of high-risk radioactive sources may delay disposing of sources that are in their possession but no longer in use (i.e., disused) for a variety of reasons. For example, the U.S. Nuclear Regulatory Commission (NRC) does not require licensees to dispose of radioactive sources unless a licensee is terminating all activities under its license at specific locations. In addition, some high-risk sources containing radioactive materials that have a long life cycle, including cesium-137 and americium-241, have limited disposal pathways that may require government assistance or may not have a viable disposal pathway at all. Specifically, sources used in the oil and gas industry that contain americium-241 of foreign origin currently have no permanent disposal pathway, leaving them vulnerable to loss or abandonment.

Disused High-Risk Radioactive Sources at a Source Processing Facility



Source: GAO. | GAO-24-105998

GAO identified leading practices supported by key entities—such as the International Atomic Energy Agency—that are not reflected in NRC requirements and could help address some disposal challenges. These practices include tracking sources, imposing limits and fees on possession, or collecting financial assurances at the time a source is purchased to offset later disposal costs. Assessing adoption of these leading practices nationwide may more broadly incentivize timely disposal, potentially reduce overall cost to the government, and reduce the risk that radioactive sources could be used in a dirty bomb.