



Nuclear Regulatory Commission’s Low-Level Radioactive Waste Classifications

Summary

NRC has segmented LLW into categories of Class A, Class B, Class C, and Greater-Than-Class C (GTCC).

Three classes of LLW – A, B, and C – are considered suitable for shallow land burial.

- Class A LLW contains the least radioactivity, most of which comes from relatively short-lived radionuclides that decay to background levels within a few decades.
- Class B LLW is also relatively short-lived, but contains larger concentrations of short-lived radionuclides than Class A LLW.
- Class C LLW can contain larger concentrations of both short-lived and long-lived radionuclides.

GTCC LLW contains even larger concentrations of short-lived and long-lived radionuclides.

- GTCC LLW may require different and more stringent disposal methods.
- There may be some GTCC LLW for which near-surface disposal is safe for public health and the environment.
- Waste that exceeds the Class C levels is evaluated by NRC on a case-specific basis to determine whether it requires disposal in a deep geologic repository or whether an alternative disposal facility can be demonstrated to provide safe disposal.

Commercial LLW disposal facilities are licensed by either NRC or Agreement States under 10 CFR Part 61.

These classifications apply to NRC-regulated commercial LLW and an overview is provided below based on 10 CFR 61.55.

U.S. Commercial Low-Level Radioactive Waste Classification

Class A	Class A waste is determined by characteristics listed in 10 CFR 61.55(a)(2)(i) and physical form requirements in 10 CFR 61.56(a). (U.S. does not have a minimum threshold for Class A waste).
Class B	Waste that must meet more rigorous requirements on waste form than Class A waste to ensure stability. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in 10 CFR 61.56.
Class C	Waste that not only must meet more rigorous requirements on waste form than Class B waste to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion, such as engineered barriers or greater depth of burial. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in 10 CFR 61.56.
Exceeds Class C	In accordance with NRC regulations, 10 CFR part 61, sections 61.55(a)(2)(iv) and 61.58, waste that exceeds the Class C levels is evaluated on a case-specific basis to determine whether it requires disposal in a deep geologic repository, or whether an alternative disposal facility can be demonstrated to provide safe disposal.