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Sent: Tuesday, May 25, 2021 2:08 PM
To: AdvancedReactors-GEISDocsPEm Resource
Subject: NRC - Greater-Than-Class C and Transuranic Waste
Attachments: NRC 2019 GreatClassC_TransWaste.pdf

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Greater-Than-Class C and Transuranic Waste

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Background

The Commission's licensing requirements for the land disposal of Low-Level Radioactive Waste (LLRW) reside in [Part 61](#) of Title 10 of the *Code of Federal Regulations* (10 CFR), "Licensing Requirements for Land Disposal of Radioactive Waste." Part 61 defines LLRW as "radioactive waste not classified as high-level radioactive waste [HLRW], transuranic [TRU] waste, spent nuclear fuel, or byproduct material as defined in paragraphs (2), (3), and (4) of the definition of *Byproduct material* set forth in § 20.1003 of this chapter." In 10 CFR § 61.55, the U.S. Nuclear Regulatory Commission (NRC) has developed a classification system for LLRW which categorizes waste as Class A, B, C, or Greater-Than-Class C (GTCC). GTCC is LLRW with concentrations of radionuclides that exceed the limits established by the Commission for Class C LLRW.

The Low-Level Radioactive Waste Policy Amendments Act of 1985 (Amendments Act) states that GTCC waste, "result[ing] from activities licensed by the [NRC] . . . shall be disposed of in a facility licensed by the [NRC]." DOE was assigned responsibility for disposal of GTCC low-level radioactive waste (LLRW). The Act does not address Agreement State regulation of the disposal of GTCC waste generated as a result of [Agreement State] licensed activities. Also, Section 274 of the AEA provides for Agreement State licensing of disposal of byproduct material (i.e., GTCC waste) unless the Commission finds that "because of the hazards" or "potential hazards" it should be licensed by the Commission.

The Part 61 classification system provides for increased physical and administrative controls for LLRW according to increased hazards and declares that quantities of LLRW with radionuclide concentrations in excess of certain values (i.e., GTCC) are generally not suitable for near-surface disposal. In 1989, the NRC promulgated a regulation, 10 CFR § 61.55(a)(2)(iv), specifying that GTCC waste must be disposed of in a geologic repository licensed by the NRC unless the Commission approves an alternative proposal. In addition to Part 61, storage of GTCC waste is addressed in Part 72, "Licensing Requirements for the Independent Storage of Spent Fuel, High-Level Radioactive Waste, and Reactor-Related Greater than Class C Waste." Part 61 provides a possible regulatory pathway for disposal of GTCC waste in a Part 61 facility, but no technical criteria. On the other hand, the definition of LLRW currently found in Part 61 excludes transuranic waste, although Table 1 in 10 CFR § 61.55 allows waste streams with concentrations of transuranic radionuclides less than 100 nanocuries per gram to be managed as Class C LLRW. Accordingly, waste streams with concentrations of transuranic radionuclides greater than 100 nanocuries per gram cannot be disposed of in a Part 61 disposal facility at this time and may be viewed as orphan waste.

On January 30, 2015, the Texas Commission on Environmental Quality sent a [letter](#) to the NRC with questions concerning the State's authority to license a disposal cell for GTCC, GTCC-like, and transuranic waste. The staff conducted an analysis of the questions Texas posed and developed three options, outlined in [SECY-15-0094](#). On August 13, 2015, the Commission held a [meeting](#) on the Current Regulatory Environment and Challenges for the Disposal of GTCC LLRW.

On December 22, 2015, the Commission in [SRM-SECY-15-0094](#) directed the staff to draft a response to Texas' inquiry, prepare a regulatory basis for the disposal of GTCC and transuranic waste within six months of the completion of the ongoing Part 61 rulemaking; conduct a public workshop during the development of the regulatory basis to receive input from stakeholders; and address transuranic waste in Part 61. On March 9, 2016, the NRC sent a [response](#) to the Texas inquiry describing the development of the regulatory basis. The response noted that the regulatory basis for a possible rulemaking to address the disposal requirements for GTCC waste would analyze whether, in accordance with section 274c.(4) of the Atomic Energy Act, disposal of GTCC waste presents a hazard such that the NRC should retain authority over its disposal, and will inform the NRC's final determination regarding Texas' jurisdictional questions. In [SRM-M181011](#), the Commission directed the staff to decouple to the extent practicable the issuance of the draft Regulator Basis directed in SRM-SECY-15-0094 from Commission action on Part 61. The decoupling would allow for earlier public engagement on staff's analysis of any potential regulatory barriers to the disposal of Greater than Class C waste.

On February 25, 2016, DOE issued its "[Final Environmental Impact Statement for the Disposal of Greater-Than-Class C \(GTCC\) Low-Level Radioactive Waste and GTCC-Like Waste.](#)" The Final EIS identified the preferred alternative as the Waste Isolation Pilot Plan geological repository and/or land disposal

at generic commercial facilities. The Final EIS is not a decision on GTCC LLRW waste disposal. Under the Energy Policy Act of 2005, prior to making a final decision on the disposal alternatives, DOE is required to: (i) submit a report to Congress that describes the disposal alternatives and includes all of the information required in the comprehensive report DOE submitted to Congress in February 1987, and (ii) await action by Congress.

In November 2017, DOE submitted the [Alternatives for the Disposal of Greater-Than-Class C Low-Level Radioactive Waste and Greater-Than-Class C-Like Waste Report to Congress, as required by Section 631 of the Energy Policy Act of 2005 \(DOE 2017\)](#) [\(EXIT\)](#) [\[PDF\]](#). This Report to Congress provides an overview of the disposal alternatives for GTCC LLW and GTCC-like waste that were analyzed in the Final EIS. The Report to Congress noted that full waste emplacement operations at the Waste Isolation Pilot Plant in New Mexico are not expected until the 2021 timeframe; therefore, DOE is primarily considering disposal in generic commercial facilities.

In October 2018, DOE issued the [Environmental Assessment \(EA\) for the Disposal of Greater-Than-Class C \(GTCC\) Low-Level Radioactive Waste and GTCC-Like Waste at Waste Control Specialists \(WCS\), Andrews County, Texas \(EA-2082\)](#). The EA provides a site-specific analysis of the potential environmental impacts of disposing the entire inventory- 12,000 cubic meters- of GTCC LLRW and GTCC-like waste at WCS.

The NRC reviewed the Final EIS and EA during development of the draft regulatory basis for GTCC and transuranic waste disposal. The [draft regulatory basis for GTCC](#) [\[PDF\]](#) was issued for public comment on July 22, 2019 ([84 FR 35037](#) [\(EXIT\)](#) [\[PDF\]](#)). The draft regulatory basis is also available through the NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. [ML19059A403](#) [\[PDF\]](#). In response to several requests, the NRC subsequently extended the public comment period by 60 days, from September 20, 2019 to November 19, 2019 ([84 FR 48309](#), [September 13, 2019](#) [\(EXIT\)](#) [\[PDF\]](#)). For additional information, go to [regulations.gov](#) and search for Docket ID NRC-2017-0081.

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Public Involvement

The NRC has a long-standing practice of conducting its regulatory responsibilities in an open manner. For that reason, the NRC is committed to informing the public about its regulatory, licensing, and oversight activities, and providing opportunities for the public to participate in the agency's decision-making process.

For general information about the available opportunities for public involvement in NRC activities, see [Public Meetings and Involvement, Hearing Opportunities and License Applications](#), and [NUREG/BR-0215](#), "Public Involvement in the Regulatory Process."







The staff has conducted public meetings on the draft regulatory basis to engage interested stakeholders. Please see details on these meetings below.

Date	Description
08/27/2019	Public meeting to discuss the Draft Regulatory Basis for the Disposal of Greater-than Class C (GTCC) and Transuranic Waste <ul style="list-style-type: none">Meeting Notice and AgendaMeeting TranscriptPresentation Slides
08/22/2019	Public Webinar to discuss the Draft Regulatory Basis for the Disposal of Greater-than Class C (GTCC) and Transuranic Waste <ul style="list-style-type: none">Meeting Notice and AgendaMeeting TranscriptPresentation Slides
03/23/2018	U.S. Nuclear Regulatory Commission Low-Level Radioactive Waste Program Public Meeting <ul style="list-style-type: none">Meeting Notice and AgendaMeeting TranscriptPresentation Slides
02/22/2018	U.S. Nuclear Regulatory Commission Very Low-Level Radioactive Waste Scoping Study and Greater Than Class C Waste Public Meeting <ul style="list-style-type: none">Meeting Notice and AgendaMeeting TranscriptPresentation Slides

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Related Information

1. The document SECY-15-0094, Historical and Current Issues Related to Disposal of GTCC Low Level Radioactive Waste, dated July 17, 2015, [\[PDF\]](#)

- (ADAMS Accession No. [ML15162A807](#) ) , provides background information relative to the issues surrounding GTCC waste.
2. On December 22, 2015, the Commission, in Staff Requirements Memorandum (SRM)-SECY-15-0094, "Historical and Current Issues Related to Disposal of GTCC Low Level Radioactive Waste (LLRW)" (ADAMS Accession No. [ML15356A623](#) ) , directed the NRC staff to develop a regulatory basis for disposal of GTCC and transuranic waste through means other than a deep geologic disposal.
 3. On February 14, 2018, the NRC noticed in the Federal Register ([83 FR 6475](#) **EXIT** ) the availability of the draft "NRC Staff Analyses Identifying Potential Issues Associated with the Disposal of Greater-Than-Class C Low-Level Radioactive Waste," (ADAMS Accession No. [ML17362A012](#) ) . The document provides some of the staff's initial technical analyses relative to the development of the draft regulatory basis for the disposal of GTCC and transuranic waste.
 4. On October 23, 2018, Staff Requirements Memorandum – Briefing on Strategic Programmatic Overview of the Decommissioning and Low-Level Waste and Spent Fuel Storage and Transportation Business Lines, 9:00 A.M., Thursday, October 11, 2018, Commissioners’ Conference Room, One White Flint North, Rockville, Maryland (Open to Public Attendance) (ADAMS Accession No. [ML18296A479](#) ) , decoupled the schedule of the GTCC draft regulatory basis development from the 10 CFR Part 61 rulemaking schedule.
 5. The Draft Regulatory Basis for the Disposal of GTCC and Transuranic Waste is available at ADAMS Accession No. [ML19059A403](#) .

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