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Texas Low-Level Radioactive Waste Disposal Compact Commission
919 Congress Avenue, Suite 830
Austin, Texas 78701

Via email to: Administration @tllrwdcc.org

Dear Chairman Brandon Hurley, Texas Low-Level Radioactive Waste Disposal Compact Commissioners and Executive Director Leigh Ing,

The Powers and Policy section of your website lays out the responsibilities of each party state. It states that "It is the policy of party states to cooperate in the protection of the health, safety and welfare of their citizens and the environment and to provide for and encourage the economical management and disposal of low-level radioactive waste."

I encourage each of you to use your position and authority to speak out against the attempt to dispose of ever more radioactive materials at WCS' site, immediately adjacent to the Compact Waste Facility. Importing this waste could introduce serious complications into the role you have in oversight regarding the Compact Waste Facility.

The current effort to dispose of the entire inventory of Greater–Than-Class C (GTCC) and GTCC-like waste, which includes transuranic waste (TRU), at the WCS site is incredibly dangerous, and must be halted immediately.

The site is not licensed to dispose of this waste, and should not be authorized to do so under any circumstances and whether this hotter waste goes under any revised name or title. Accepting this waste stream is not in the keeping with the "protection of health, safety and welfare" of the people of Texas.

The Final Environmental Impact Statement for the Disposal of Greater-Than-Class C Low-Level Radioactive and GTCC-Like Waste **says in Section 1.4.1 that this waste is "not generally acceptable for near surface disposal" and that the "waste form ad disposal methods must be different and, in general, more stringent than those specified for Class C."**

However, the Environmental Assessment done for the WCS site portrays a different view, one in which GTCC and GTCC-like waste can be handled just the same as the other waste they handle.

The GTCC and GTCC-like inventory is about 12,000 cubic meters in volume and contains 160 million curies of radioactivity. The plan is to send all of it to Texas.

This was made clear when the U.S. Department of Energy (DOE) subsequently published the Environmental Assessment for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste and GTCC-Like Waste at Waste Control Specialists, Andrews County, Texas, in October 2018. It clarified that the proposal is to send the entire vast GTCC waste stream to the WCS site in West Texas, for shallow burial in the Federal Waste Facility there.

Adopting a generic EIS for this purpose is inadequate and wrong. An Environmental Assessment (EA) for WCS has been done, but the plan to bring massive quantities of extremely hot GTCC waste to Texas should require a unique NEPA process, with a full Environmental Impact analysis using updated data and opportunities for public comment and hearings. The inadequate EA relies largely on other and older analyses.

This very hot radioactive waste belongs deep underground in a geologic repository. Instead, the plan is that it would go into containers that would each weigh 100,000 pounds, stacked atop each other up to seven units high, with the bottom unit at 120' below grade. An engineered cover of 25'- 45' feet would be on top, which would presumably prevent infiltration of precipitation until final closure.

Nothing about this plan makes sense. It doesn't even meet the common sense test. This is a plan designed to tempt fate, not a good idea when it comes to radioactive waste.

DOE reported to Congress in November 2017 on Alternatives for Disposal of GTCC and GTCC-like waste, noting that since "full waste emplacement operations at WIPP are not expected until the 2021 timeframe: therefore, DOE is primarily considering disposal in generic commercial facilities." The DOE Environmental Impact Statement, from January 2016, carried the same message. However, after $2 billion or so in repairs it was announced in June 2018 that routine transuranic waste handling operations were resuming at WIPP. SEED Coalition does not recommend sending this waste to the WIPP site or any other specific site, but GTCC and GTCC-like waste is clearly not suitable for shallow burial.

The generic DOE Environmental Impact Statement determined that for the GTCC waste to go to the WIPP Site in New Mexico, **transportation would require 33,700 truck shipments or about 11,800 rail shipments.** The WCS Environmental Assessment expects that the same number of shipments would be expected if the waste went to WCS in Texas.

Here are some things to consider carefully:
The Federal Waste Facility opened in 2013 and is currently licensed for 26 million cubic feet of waste. The GTCC and GTCC-like waste would require 420,000 cubic feet, so there would be physical space, but the intense amount of concentrated radioactivity is a problem.

The Compact Facility has limits of 9 million cubic feet and 3.89 million curies. The adjacent Federal Waste Facility, where this waste would go, is licensed for 5.6 million curies. **The GTCC waste would be 160 million curies, more than 28 times the licensed amount for the Federal Waste Facility.**

This is 41 times the curies allowed for the Compact Waste Facility.

The Environmental Assessment (EA) notes that TCEQ could be asked to increase the curie limit with a license amendment. What? The Federal Waste Facility is huge to start with. It's

the largest of WCS' three low-level radioactive waste pits, and the currently licensed 5.6 million curies is already a massive amount. How can such an enormous increase even be contemplated?

The Environmental Assessment is full of contradictions. It continually implies that nothing can go wrong, that risks are small and that this massive change of disposing of GTCC waste would not really make any difference at the site. It points out the many things that could go wrong, but these things could of course never really happen.

While there are supposed to be no significant impacts, Section 2.1.2 notes that "closure could consist of any one or a combination of the following activities: closure, dismantlement, decontamination, decommissioning, reclamation, disposal, aquifer restoration, stabilization, monitoring or post-closure observation and maintenance." Decontamination? Aquifer restoration? Stabilization? At a site where nothing can go wrong?

Natural Disasters and Climate Extremes

The EA notes that the site has temperature extremes and brief frequent intense thunderstorms. Andrews County experiences one flooding event per year. Will that 25' – 45' foot soil cover be able to keep moisture out for millennia to come, at a presumably dry site that already has to pump water out routinely and has ephemeral playas nearby that can hold water for two weeks?

Between 1962 and 1982 there were two F2 tornadoes, with wind speeds from 113 to 157 mph. There were nine F1 tornadoes, with wind speeds up to 112 mph and thirteen with speeds up to 72 mph. Tornadoes during the handling of this waste could be disastrous.

A 3.3 earthquake 18 years ago had its epicenter in Eunice, NM, only five miles from the WCS site, and there have been numerous earthquakes in the region for decades. (https://earthquaketrack.com/us-nm-eunice/recent)

The EA claims that the seismic hazard is low, but points out that the largest nearby was 19 miles from the WCS site, Rattlesnake Canyon earthquake in 1992, with a magnitude of 5. There has been subsidence in the region as well, including the San Simon Swale, the San Simon Sink, the Wink Sinks and a sink northwest of Jal, New Mexico. The AE says that seismic activity could potentially affect engineered barriers, but that seismic hazards have been integrated into the design, which "would not be impacted by the proposed disposal of GTC and GTCC-like waste."

How would 100,000 pound containers, stacked seven deep, fare in an earthquake? How would we know if containers were damaged as a result of an earthquake and how would we be able to access that damage? What could be done about it if there was radioactive contamination?

Worker and Public Exposures

Worker exposure has been a problem at the WCS site in the past. The excerpt below is from Good to Glow, by Forrest Wilder, in the April 4, 2008 Texas Observer.
https://www.texasobserver.org/2729-good-to-glow-despite-its-own-scientists-objections-state-regulators-are-greenlighting-a-massive-nuclear-waste-dump-in-west-texas/

> In March 2005, Waste Control began processing radioactive waste from the Rocky Flats plant, a site in Colorado that manufactured plutonium triggers for the United States' Cold War-era hydrogen bomb program. On June 2, 2005, while processing this waste, a worker known in state documents as Number 67 at Waste Control's mixed waste facility was wounded on his leg by a piece of contaminated metal. The company tested the worker's urine and feces, and found elevated levels of two plutonium isotopes, as well as americium-241. Later in June, an independent expert determined that the worker had probably inhaled the radionuclides. Over the next few months, as processing of the Rocky Flats waste continued, the investigation expanded to include eight of Number 67's co-workers. All but one tested positive for low levels of radionuclides, including one employee who hadn't worked at the mixed waste facility for three years. On September 22, Waste Control management decided to suspend operations at the mixed waste facility and expand the testing to virtually all employees.
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> In all, 43 individuals had been exposed to plutonium and americium, company testing showed, according to documents uncovered by the *Observer*. According to Waste Control, a ventilation system wasn't working properly, allowing plutonium and americium particles to escape into the lunchroom and adjacent hallways.

A TCEQ audit later found that worker exposures might have been going on intermittently since 2002.

Again, the Environmental Assessment for bringing GTCC waste to Texas is inadequate. It relies on the DOE's generic final Environmental Impact Statement to evaluate the human health impacts that could occur with disposal of the entire inventory of GTCC and GTCC-like waste. A full-blown site specific EIS should be required in order to ensure health and safety and to minimize financial risks to the entire state, instead of relying on a generic document, especially since contamination has already been a problem in the past at the WCS site.

The Environmental Assessment relies on a previous analysis, instead of doing the appropriate updated analysis. An earlier report is referenced that says that the estimated dose to a person offsite would be below the 100 mrem dose limit for a member of the public, but this was without the much hotter GTCC waste even being in the picture yet. Even so, there were plenty of reasons for concern. The same previous 2007 WCS Environmental Report noted that there could be an explosion or fire at the Federal Waste Facility. It states that "containers could be breached by various mechanisms, including dropping, collision, crushing, container defect, or spills. These mechanisms for breaching or rupturing a container could occur during vehicle transport or handling on site during a number of operational activities. "

Potential Water Contamination

According to the Environmental Assessment, keys to isolating the waste from the public and limiting human radiological exposure are "the inherent geological features of the site in limiting the infiltration of waste into the waste, dissolving the waste, and transporting the waste via water to points where it might be consumed by individuals. Engineered features, such as waste packaging and disposal site design, liners and a closure cap limit the potential for water to come into contact and subsequently interact with waste and transport radionuclides from the disposal site." Then it says that these features may not be fully functional after institutional controls are lost.

Potential groundwater intrusion into the low-level radioactive waste facility was the reason that the entire TCEQ Radioactive Materials Division recommended (August 14, 2007) denying the license for the Compact and Federal Waste Facilities. Three professional employees resigned over the licensing.

While it would be slower than transport via groundwater, the EA also says that the other pathway for environmental contamination is by upward diffusion of radionuclides through the overlying cover system to the atmosphere (where winds could transport radionuclides) or downward to underlying groundwater. Potential radioactive exposure pathways included "inhalation of outdoor gas-phase radionuclides emanating from the closed facilities, inhalation of particulates due to resuspension of surface soil above the facilities, incidental ingestion of surface soil, external dose from the surface and near-surface soil and exposure to oil well drill cuttings in a mud pit." No new accident scenario evaluation is planned for the GTCC proposal.

The upward diffusion of volatile radionuclides could include helium-3, carbon-14, argon-39, krypton-85, iodine-120 and radon-222. These volatile radionuclides could diffuse in the air and water in the soil. The "peak dose for most receptors is dominated by upward diffusion of technetium-99." The EA says that putting the GTCC and GTCC-like waste at the bottom of the pit, with other low-level waste on top of it, would not cause any long term issues, and the upward diffusion would be further stunted with the bottom two layers being more than 100 feet underground.

Why not put this waste in a geologic repository instead of risking upward diffusion of radionuclides?

Sabotage and Terrorism Risks

The Doe's generic EIS evaluated sabotage and terrorist scenarios for GTCC and GTCC-like waste. Destructive acts could occur "during transportation of the waste to the disposal facility, while the waste containers are being handled at the disposal facility (unloading, temporary storage, and emplacement), or after emplacement." Site-specific risks for sabotage and terrorism should be updated and analyzed in a unique EIS.

No new mitigation measures are planned in light of the GTCC proposal, despite the significant increase in curies that would occur. The EA says that current and planned measures "could include design, operational and monitoring activities to prevent and provide early detection of releases of radionuclides and chemical constituents before they leave the disposal site boundary." Really? This is insane. Where are the well-defined enhanced requirements and monitoring that should be demanded, instead of vague suggestions of what could be done it anyone thought it might be nice to do so?

WCS would not hire any additional employees for disposal of GTC or GTCC-like waste, so there would be no additional jobs.

Why would anyone consider importing GTCC and GTCC-like transuranic waste to Texas? It can only mean disaster. Please speak out clearly and soon. A public meeting hosted by the NRC will be held the evening of Aug. 27th in Austin and public comment will be open until Sept. 20th.

Sincerely,

Karen Hadden

Karen Hadden, SEED Coalition, Executive Director