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Draft Environmental Impact Statement for the Disposal of Greater-Than-Class C Low-Level Radioactive Waste and GTCC-Like Waste

WASHINGTON – The Department of Energy (DOE) has issued a Draft Environmental Impact Statement for the Disposal of Greater-Than-Class C (GTCC) Low-Level Radioactive Waste (LLRW) and GTCC-Like Waste (DOE/EIS-0375D, Draft EIS) as required under the National Environmental Policy Act for public review and comment.

GTCC LLRW consists of a small volume of low-level radioactive waste generated throughout the United States as the result of Nuclear Regulatory Commission (NRC) and Agreement State licensed activities, including production of electricity from nuclear power plants; the production and use of radioisotopes for diagnostics and treatment of cancer and other illnesses; oil and gas exploration; and other industrial uses. "GTCC-like" waste consists of DOE owned or generated LLRW and potential non-defense transuranic waste which is similar to GTCC LLRW and for which there is currently no available disposal capability. GTCC LLRW and GTCC-like waste does not include spent nuclear fuel or high-level waste.

The total volume of GTCC LLRW and GTCC-like waste currently in storage is approximately 1,100 cubic meters. Over the next 60 years, the Draft EIS estimates that on average, an additional 175 cubic meters will be generated each year from commercial and DOE, primarily from cleanup operations. This amounts to a little more than the volume of an average garage each year.

Although the amount of waste is relatively small, safe and secure disposal of this material would support important medical activities and address national security concerns associated with certain disused sealed sources.

Safe and Secure Disposal Will Contribute to National Security

One type of GTCC-waste, called "sealed sources," includes small, high-activity radioactive materials encapsulated in closed metallic containers, which represent about a quarter of the total volume of GTCC wastes. Today, many disused sealed sources are stored at hospitals, construction sites, universities, and other locations awaiting disposal.

Due to their concentrated activity and portability, radioactive sealed sources could be used in radiological dispersal devices, like dirty bombs, and pose a national security risk.

Safe and Secure Disposal Will Support the Future of Nuclear Medicine

The availability of a GTCC disposal path is important to the future of nuclear medicine, especially for the planned domestic production of Molybdenum-99 (Mo-99) which is used in as many as 50,000 diagnostic medical procedures every day in the U.S.

Today, the U.S. depends on foreign nuclear reactors to produce Mo-99, but shortages in recent years have highlighted the need to produce this material domestically. Commercial entities in the U.S. are developing the capability to produce Mo-99, but will require a safe and secure method to dispose the GTCC waste resulting from the production of Mo-99.

A Range of Disposal Methods and Locations Are Evaluated

The Draft EIS analyzes potential environmental impacts from constructing and operating a new facility or facilities for the disposal of GTCC and GTCC-like wastes, as well as the impacts of using an existing facility.

Several disposal methods were evaluated, including: deep geological repository, intermediate depth boreholes, enhanced near surface trenches, and above grade vaults. Disposal locations analyzed include the Hanford Site in Washington; Idaho National Laboratory in Idaho; the Los Alamos National Laboratory, the Waste Isolation Pilot Project (WIPP), and the WIPP vicinity in New Mexico; the Nevada National Security Site (formerly the Nevada Test Site) in Nevada; and the Savannah River Site in South Carolina. The Draft EIS also evaluates generic commercial disposal sites in four regions of the U.S., as well as a no action alternative.

DOE does not have, and did not identify, a "preferred alternative" for the disposal of GTCC and GTCC-like waste. DOE will include a preferred alternative in the Final EIS based on the analysis in the Draft EIS and public comments received. The preferred alternative could be a combination of two or more alternatives, based on the characteristics of the waste and other key factors. Before DOE makes a final decision on a disposal method or location, DOE must submit a report to Congress that includes a description of the alternatives under consideration and await action by Congress.

The Draft EIS provides the public and interested stakeholders with information on options for the disposal of GTCC and GTCC-like waste. A Federal Register Notice will be published on February 25, 2011 and will start a 120-day public comment period, during which DOE will hold meetings at the DOE sites that are evaluated in the Draft EIS for the disposal of GTCC and GTCC-like waste.

Additional information can be found at <http://www.gtccceis.anl.gov>.

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