WASTE CONTROL
SPECIALISTS LLC

April 6, 2009 VIA CERTIFIED MAIL

Dale Klein, Chairman
Gregory Jaczko, Peter Lyons, Kristine Svinicki, Commissioners
c/o Ms. Annette Vietti-Cook
Secretary of the Commission
United States Nuclear Regulatory Commission
One White Flint North, Mailstop 16 C1
11555 Rockville Pike
Rockville, Maryland 20852-2738

Subject: Information for Consideration by the Commission at Scheduled 4/17/09 Briefing on Low-Level Radioactive Waste

Dear Commissioners Klein, Jaczko, Lyons and Svinicki:

Waste Control Specialists LLC (WCS) is pleased to submit the following information for consideration by the Commission at the upcoming Briefing on Low-Level Radioactive Waste (LLRW), scheduled to be conducted on April 17, 2009. It was our hope to provide this information in person at this briefing. Please keep us in mind for any future opportunities for industry to comment on radioactive material storage, processing, and disposal.

WCS is rapidly becoming the nation's most capable provider of safe storage, processing, and disposal services for our most troublesome waste streams. In addition to authorizations under the Resource Conservation and Recovery Act (RCRA) and Toxic Substances Control Act (TSCA) for hazardous and toxic wastes, the State of Texas also recently licensed WCS to receive and dispose of "11.e.(2)" byproduct material, and approved an Order authorizing WCS—pending closure of certain, limited mineral interest ownership issues—to receive and dispose of Class A, Class B, and Class C LLRW.

Construction of the byproduct material disposal facility is well underway. LLRW will be disposed of in the Compact Waste Facility (CWF), for commercial waste generated in the Texas Compact, or in the Federal Waste Facility (FWF), for waste that is the responsibility of the federal government. The FWF will in turn comprise two units—the Federal Containerized Disposal Unit and the Federal Non-Containerized Disposal Unit. Note that the FWF has also been permitted for hazardous (RCRA) waste disposal, and will be the only disposal destination in the country for Mixed LLRW once the Nevada Test Site is closed to this type of waste next year. WCS will also be seeking a TSCA authorization for the FWF, which will allow disposal of radioactively contaminated polychlorinated biphenyls (PCBs) and radioactively contaminated asbestos.

Once all these facilities are constructed, no other site in the country will have comparable authorizations.

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Our view is that we are serving a vital national interest in fostering and facilitating the full beneficent potential of the nuclear sciences. This potential extends from medical research,

diagnosis, and treatment, which have reduced human suffering and increased life spans, to nuclear energy production, which has already offset billions of tons of air pollution and greenhouse gas emissions (all of which would have been introduced into the environment), and holds the promise eventually to virtually secure America's economic, national, and homeland security.

We would like to offer comments in three areas, as follows:

Depleted Uranium

WCS has some concerns related to the recent Commission decision to proceed with a rulemaking to keep high concentration depleted uranium (DU) classified as Class A and require site-specific analysis and approvals. Due to the uncertainty caused by this decision, WCS is currently prohibited by our (conditional) LLRW disposal license from accepting waste streams containing greater than 10 nanocuries per gram of DU even though we performed an assessment in our license application for about 10,000 cubic meters of deconversion waste assumed to be disposed of in the Federal Containerized Disposal Unit.

If it is assumed that the hazard from this waste must be addressed for a very long time (>50,000 years), a conservative intruder risk assessment, similar to that performed in support of the classification system in Title 10 of the U.S. Code of Federal Regulations, Part 61 (10 CFR Part 61), would probably show that the impact would be similar to that for long-lived transuranic waste. The rulemaking must address this issue, such as by requiring additional measures to address the intruder issue. It should be noted that the WCS design would provide three independent intruder barriers—disposal at least 10 meters deep, a shotcrete concrete liner on the disposal cell, and disposal in stable reinforced concrete disposal containers.

It is noted that the Nuclear Regulatory Commission (NRC) staff analysis was performed out to one million years. This is a much longer performance assessment period than is typically performed for shallow land disposal facilities, with the possible exception of identifying potential peak doses for long-lived mobile radionuclides to establish inventory limits. For these long time periods design features such as cover thickness become very uncertain due to the potential for erosion caused by climate changes. This period of performance issue must be addressed in the rule to provide consistency as to how it is addressed in the site-specific analyses that will be required by state regulators.

The rulemaking process will result in an extended time until a solution can be implemented. If the NRC rulemaking requires two years, and the states have up to three years to adopt a compatible rule, and a license amendment is required (which is likely), the process for implementation could take six years. This rule must require strict compatibility for Agreement States to ensure uniform implementation. This potential delay and its effect on the potential generators must be taken into consideration.

Dilution for Purposes of Waste Classification Changes

The NRC is considering reversing its 1995 Branch Technical Position and allowing waste generators to intentionally mix or dilute Class B/C LLRW for the sole purpose of reclassifying and disposing of such waste as Class A LLRW. Consideration of such changes to NRC's longstanding policy is driven by the closure last year of ChemNuclear Systems' disposal facility in Barnwell, South Carolina, to waste generators in 36 states that do not belong to the Atlantic Compact. The NRC should carefully weigh any decision to reverse existing policy that currently prohibits diluting for the sole purpose of changing waste classification, as defined in 10 CFR §61.55, since such changes would significantly impact waste management programs of other federal agencies, Agreement States, Regional Compacts, and other important stakeholders.

The existing NRC policy that prohibits dilution of LLRW for the sole purpose of changing its classification has been addressed in past rulemakings, regulatory guidance, and correspondence between the NRC and its licensees. In a recent proposed rulemaking,[1] NRC stated that dilution of licensed materials to concentrations less than 0.05 weight percent of source materials should not be allowed, without prior authorization, for the purpose of exempting such materials from further regulation under 10 CFR Part 40. In response to public comments, NRC considered defining "dilution" to distinguish between *intentional dilution* for the purpose of circumventing regulatory requirements and *inadvertent* or *natural dilution* that occurs when clean soil is unavoidably mixed with and thereby reduces the concentrations of licensed material during site decommissioning activities.

The NRC also addressed[2] dilution or intentional mixing of clean soil with licensed materials to provide flexibility to licensees' efforts at complying with the License Termination Rule (LTR). The NRC reiterated and "approved use of intentional mixing of homogenous waste streams for meeting the waste acceptance criteria of an offsite disposal facility, *as long as the classification of the waste as defined by requirements of 10 CFR 61.55, is not altered*" (emphasis added). NRC staff also conducted a regulatory analysis comparing the use of intentional mixing of contaminated soil with the policies of other federal agencies, and other regulatory and advisory bodies, including those of the international community. The results[3] of this analysis revealed that the use of intentional mixing for the purpose of changing waste classification was counter to the policy of the U.S. Department of Energy, prohibited by the U.S. Environmental Protection Agency, advised against by the Conference of Radiation Control Program Directors unless specifically approved by a state agency, and advised against in the international community if for the purpose of circumventing regulatory requirements.

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[1] Proposed Rule, *Transfers of Certain Source Materials by Specific Licensees*, 67 Federal Register 167, pp. 55175 – 55179, dated August 28, 2002. The final rule was never promulgated.

[2] *Consolidated Decommissioning Guidance*, NUREG-1757, Volume 1, Revision 2, Section 15.13.1. During deliberations of the policy, Commissioner Merrifield opined that dilution of waste for the sole purpose of altering waste classification was unacceptable (see SECY-04-0035).

[3] See SECY-04-0035, Table 2.1, *Results of the License Termination Rule Analysis*, dated March 1, 2004.

In considering reversal of the existing policy, NRC should carefully weigh views from the States of Texas and Utah. Intentional dilution of waste for the purpose of changing waste classification is specifically prohibited[4] in Texas. Furthermore, waste that is intentionally diluted as a result of stabilization, mixing, or treatment or for any other reason is subject to the disposal regulations it would have been subject to prior to dilution.

The State of Texas has recently made great strides in demonstrating that new disposal facilities can be licensed and available to help solve the nation's challenges of disposing of Class B/C LLRW. As discussed above, the Commissioners of the Texas Commission on Environmental Quality (TCEQ) recently issued an Order authorizing a license for WCS to dispose of Class A, B, and C LLRW. The TCEQ Commissioners based their decision not only on the suitability of the WCS site but also on the tremendous support by the regional and local community for hosting a site designed to safely dispose of Class A, B, and C LLRW.

If NRC elects to change the existing policy, the Commission should clearly articulate the scope of such changes to existing policy as a means to foster openness, transparency and public confidence in the decision-making process. The NRC should specifically address why changes to the dilution policy would be an acceptable remedy to the difficulties associated with disposal of Class B and Class C LLRW while excluding other types of waste, such as "Greater Than Class C" LLRW, that pose similar if not greater regulatory challenges.

The Texas Compact Commission and Importation into the Texas Compact

Members have been named[5] to the Texas Low-Level Radioactive Waste Disposal Compact Commission and the Compact Commission has begun to conduct regular meetings. Of national importance is the authority vested in the Compact Commission by the Texas State Legislature to allow importation of LLRW into the Texas Compact by any person, state, regional body, or group of states.[6] In fact, out-of-Compact attendees at the very first, inaugural meeting of the Compact Commission asked how soon the process could be initiated. Although appropriate rules have yet to be established, the organic statute for the Compact Commission provides that any importation agreement must receive a majority vote of the commission, and that the commission "may adopt such conditions and restrictions in the agreement as it deems advisable."

WCS fully supports the importation of Class A, B, and C LLRW into the Texas Compact. We believe flexible import provisions would go very far toward resolving the nation's challenges with disposal of Class B and Class C LLRW, now that the Barnwell facility no longer allows nationwide access for disposal of these wastes, and toward assuring that these more problematic wastes are safely and securely isolated from the human environment.

WCS requests that a copy of all correspondence regarding this matter be directly faxed (717-540-5102) or emailed (wdornsife@verizon.net) to my attention as soon as possible after

[4] See Title 30, Texas Administrative Code, Chapter 336.229, *Prohibition of Dilution*.
[5] See <http://governor.state.tx.us/news/appointment/11655>.
[6] See Texas Health and Safety Code, Section 403.006, Article 3.05(6).

issuance. If you have any questions or need additional information please call me at 717-540-5220.

Sincerely,

William P Dornsife

William P. Dornsife, P.E.
Executive VP, Licensing and Regulatory Affairs

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