

WASTE CONTROL SPECIALISTS LLC

September 22, 2009

Ms. Annette L. Vietti-Cook, Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Re: Low-Level Radioactive Waste Policy

Dear Ms. Vietti-Cook:

As you know, the Commission has invited comment on the development of policy related to low-level radioactive waste ("LLW"). Waste Control Specialists LLC ("WCS") submitted comments to the Commission in connection with its briefing on LLW policy on April 17, 2009. We now submit further comments in light of the substantial confusion that has arisen as a result of a letter issued by the U.S. Nuclear Regulatory Commission (NRC) staff on the subject of the blending of LLW waste. We reference the letter from Larry W. Camper (NRC) to Thomas E. Magette (EnergySolutions, Inc.), *Blending of Low-Level Radioactive Waste* (August 27, 2009). This letter leaves the implication that the NRC now will accept the blending of Class B/C LLW for the purpose of allowing its disposal as Class A waste. It is our view that such a significant departure from established policy should be accomplished only by an open and transparent process.

Please contact me if you have any questions about the attached submission. I request that any correspondence concerning this matter be submitted to my attention upon issuance by fax (972-448-1419) or email (skirk@valhi.net).

Sincerely,



J. Scott Kirk, CHP
Director of Licensing and Corporate Compliance,
Corporate Radiation Safety Officer

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cc: Gregory B. Jaczko, Ph.D., Chairman
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Kristine L. Svinicki, Commissioner
R. William Borchardt, NRC
Martin J. Virgilio, NRC
Charles L. Miller, Ph.D., NRC
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MEMORANDUM

Blending of Low-Level Radioactive Waste for the Purpose of Changing Waste Classification

Waste Control Specialists LLC ("WCS") submitted comments to the Commission in connection with its briefing on low-level radioactive waste ("LLW") policy on April 17, 2009.¹ This memorandum is submitted by WCS to provide further comments on this subject in light of substantial confusion created by a recent letter issued by the U.S. Nuclear Regulatory Commission ("NRC") staff to a representative of EnergySolutions, Inc. (hereinafter "EnergySolutions letter"), on the subject of the blending of LLW waste.²

The NRC letter leaves the implication that the NRC now will accept the blending of Class B/C LLW for the purpose of allowing its disposal as Class A waste. We understand that there is significant pressure to modify existing policy as a result of the closure of the Barnwell facility to non-compact generators. Nonetheless, it is our view that such a significant departure from established policy should be accomplished only by an open and transparent process. We urge the NRC to clarify that blending for the purpose of allowing Class B/C waste to be disposed of as Class A waste is not allowed, at least until such time that the NRC has gone through a thorough and public review of the matter.

WCS Reliance on Established NRC Policy

We note at the outset that the State of Texas has made great strides in demonstrating that new facilities could be licensed and made available to help solve the Nation's challenges in disposing of Class B/C LLW. On September 10, 2009, WCS received its final license from the Texas Commission on Environmental Quality authorizing disposal of Class A, B, and C LLW at its facility in Andrews County, Texas. The issuance of this license is the first step to opening the first facility for disposal of LLW under the Low-Level Radioactive Waste Policy Act of 1980 ("LLWPA").

We are optimistic that the WCS facility will eventually be open for disposal of Class A, B, and C LLW by non-regional generators. Over the past several months, the Texas Low-Level Radioactive Waste Disposal Compact Commission ("Texas Compact Commission") has been establishing rules to govern the import and export of Class A, B and C LLW into and out of the Texas Compact. If the Texas Compact Commission allows importation of Class B/C LLW, then waste generators across the country may

¹ Letter from William P. Dornsife, P.E. (WCS) to Dale Klein, Ph.D. (NRC), *Information for Consideration by the Commission at Scheduled 04/17/09 Briefing on Low-Level Radioactive Waste* (April 6, 2009).

² Letter from Larry W. Camper (NRC) to Thomas E. Magette, P.E. (EnergySolutions, Inc.), *Blending of Low-Level Radioactive Waste* (August 27, 2009).

again have continued access to a licensed disposal facility for such waste. Such actions would allow management of radioactive waste to continue under the current regulatory framework and negate the need for radical changes in established policy—changes which are sure to result in controversy and strong opposition.

We urge the NRC to consider the economic consequences that will arise if the thrust of the recent *EnergySolutions* letter—allowing the blending of B/C waste for disposal in a Class A facility—were to become the *de facto* national policy. We believe the vast majority of Class B/C LLW volumes will be converted to Class A waste by blending. This would have devastating consequences for WCS, which has built its disposal facility using state-of-the-art science and technology designed specifically for Class B/C LLW. The facility was designed so as to ensure protection of the public for thousands of years into the future.³ The extra cost that WCS has incurred to protect the public, in reliance on longstanding NRC policy, would be compromised if generators could simply arrange for the processing of their Class B/C waste for disposal as Class A waste.

The end result of a reversal in established policy could compromise the economic viability of the first disposal facility licensed and designed specifically for Class B/C LLW since enactment of the LLWPA by Congress in 1980. Accordingly, WCS respectfully requests that the Commission thoughtfully evaluate the unintended and adverse consequences such change could cause, not only to the success of our facility, but also to waste management practices administered by the States of Tennessee, Utah, and Texas, and perhaps also to several sites operated by the U.S. Department of Energy (“DOE”).

The NRC Letter to *EnergySolutions*, Inc.

With the closure of Barnwell to non-regional generators, NRC appears to be wavering on its commitment to a fundamental waste management policy to discourage the downblending of waste to change its waste classification. In the letter to *EnergySolutions*, NRC appears to introduce new terminology as a potential means to sidestep or subvert the established policy. The letter distinguishes *blending* from *dilution* of waste streams. Under this new terminology, *blending* and *dilution* would be distinguished by whether or not the waste volumes and likelihood of environmental releases were increased by the processes used, without any reference to the policy objective of avoiding an intentional change in waste classification. The letter implies that blending to change waste classification will be accepted.

In the letter to *EnergySolutions*, NRC concurs that its regulation (10 CFR 20, Appendix G, Section III.A) does not prohibit deferring waste classification until after the material is shipped from a generator to a processing facility. However, Appendix G is administrative in nature and applies to the control, tracking and recordkeeping of radioactive materials at

³ Under Title 30, Texas Administrative Code (TAC), Chapter 336.709, a minimum period of 1,000 years after closure or the period where peak dose occurs, whichever is longer, is required as the period of analysis.

a licensed facility. Nothing in Appendix G suggests that waste could or should be blended for the purpose of changing waste classification. The letter implies, however, that “material” may be “processed” (i.e., blended or diluted) extensively until such time as it is classified as Class A LLW. The letter implies that only after classification would NRC’s established policy of discouraging the downblending of waste to change its waste category apply. In our view, the letter invites the intentional circumvention of established NRC policy to prohibit blending for this purpose. Texas regulations specifically recognize and prevent this potential for mischief.⁴

WCS believes that terminology changes should not be introduced with the purpose or effect of overriding established policy or confusing the public. Any modification of core and long-articulated waste management principles should be accomplished in a rulemaking with opportunity for public comment.

Cornerstones of Waste Management Practices

Waste minimization, isolation, and containment have always been the cornerstones of waste management—ever since the 1960s when the environmental community effectively championed the notion that “dilution is not the solution to pollution.” The NRC’s Branch Technical Position⁵ (“BTP”) implements the core principles by placing bounds on blending of waste streams. Under this policy, waste generators were allowed to mix homogenous waste streams provided that the purpose was not to change the waste classification as defined in Title 10, Code of Federal Regulations (CFR), Part 61.55.

Over the past ten years, NRC has reaffirmed this position in rulemaking proceedings, regulatory guidance, and correspondence with its licensees. Most recently, the *Draft Interim Guidance for Concentration Averaging for Waste Determination* would only allow blending of waste if no “extreme measures” were taken to accomplish this task.⁶ Extreme measures were defined as “deliberate blending of lower concentration waste streams with higher activity waste streams to achieve waste classification objectives.” Consequently, blending of Class A with Class B/C LLW for the purpose of reclassifying the waste as Class A LLW would be an extreme measure and prohibited under the guidance issued on December 16, 2005.

NRC also prepared the *Draft Interim Guidance for Concentration Averaging for Waste Determination* to support the *NRC Staff Guidance for Activities Related to U.S. Department of Energy Waste Determination*.⁷ These documents provide guidance in

⁴ See 30 TAC 336.229, which provides that “[r]adioactive material that has been diluted ... for any reason ... shall be subject to the disposal regulations it would have been subject to prior to dilution” (emphasis added).

⁵ 1995 *Final Branch Technical Position for Concentration Averaging and Encapsulation*.

⁶ See Federal Register for December 16, 2005 (Volume 70, Number 241), pp. 74846–74850.

⁷ *Draft Final Report for Interim Use, NRC Staff Guidance for Activities Related to U.S. Department of Energy Waste Determination* (NUREG-1854), issued August 2007, may be used to evaluate and classify

determining whether certain waste resulting from spent nuclear fuel reprocessing at certain DOE facilities can be considered LLW and managed accordingly. The latter document (Section 3.5.1.1 of NUREG-1854) also defines fundamental principles regarding concentration averaging that are equivalent to the BTP. These fundamental principles explicitly proscribe “extreme measures” that involve the “deliberate blending of lower concentration waste streams with higher activity waste streams solely to achieve waste classification objectives.”

The NRC’s Advisory Committee on Nuclear Waste commented that the staff guidance should contain circumstances where blending of certain waste classes may be appropriate. In response, NRC reiterated that blending of waste streams should not be undertaken solely for the purpose of changing waste classification.⁸

Changes in NRC’s longstanding policy prohibiting blending of waste for the purpose of changing waste classification could have far-reaching implications not only to NRC and Agreement State licensees, but also perhaps to several DOE facilities. A policy reversal would be especially problematic if waste owned by the DOE that was incidental to reprocessing of spent nuclear fuel was allowed to be intentionally blended for the purpose of reclassifying it as Class A LLW for disposal at a commercially licensed facility.

Potential Impacts to Agreement States

As stated in our views to the Commissioners (Reference 1), the State of Texas in its regulations specifically prohibits intentional dilution of waste for the purpose of changing waste classification. Waste that is intentionally blended or diluted as a result of stabilization, mixing, or treatment or for any other reason is subject to the disposal regulations to which it would have been subject prior to dilution.

In 2005, the Utah legislature enacted Code Section 19-3-103.7, prohibiting any entity from accepting or seeking a license to accept Class B/C LLW. In 2007, Governor Jon Huntsman also signed an agreement with EnergySolutions reaffirming that it would not accept Class B/C LLW. Under a similar agreement, EnergySolutions also agreed to limit the volume of Class A LLW that would be disposed of at the site.

Utah regulators have expressed concerns regarding potential changes to the BTP-established policy that would have the effect of circumventing Utah’s prohibition of disposing of Class B/C LLW in Utah. In fact, on August 6, 2009, a petition for rulemaking was introduced in Utah seeking a new *Utah Rule 313-25-36* that would explicitly prohibit processing of *material* that would otherwise be Class B/C LLW to change its ultimate waste classification, as well as the processing of waste at other

waste incidental to reprocessing of spent nuclear fuel at the Savannah River Site, Idaho National Laboratory, Hanford, and the West Valley Demonstration Project pursuant to the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005.

⁸ See NUREG-1854, p. C-26.

locations if intended to circumvent existing laws regarding disposal of Class B/C LLW. While the fate of the this petition for rulemaking remains uncertain it underscores the opposition that some in Utah have against the effect that such changes to the BTP would cause.

In its letter to *EnergySolutions*, NRC noted that changes to the BTP may be forthcoming and that such clarification to the policy may be worthwhile and appropriate given the current waste management conditions. However, unanimity against changes to the BTP-established policy exists among the states that host a commercial disposal facility, as well as among the Regional LLW Compacts.⁹ Coordination with Agreement States should be undertaken before making fundamental changes in policy. This fact reinforces the obligation of the NRC to make any changes in the BTP pursuant to an open, transparent and consultative process.

Conclusions

Existing NRC policy, established in the BTP and reiterated and reinforced in numerous subsequent NRC pronouncements, prohibits the blending/dilution of radioactive material for the purpose of changing its waste classification. The policy promotes fundamental waste management principles and, in effect, this often expressed, direct, and uniform interpretation has become administrative common law. The regulated community has relied on it—they have opened facilities and established businesses based on it.

The August 27, 2009, NRC letter casts doubt on NRC's continued commitment to its established policy. WCS therefore requests that NRC clarify that the BTP-established policy, which proscribes the blending or dilution of radioactive material for purposes of changing its waste classification (or its ultimate waste classification), is still applicable, and that any changes to the policy will be accomplished only through future rulemaking that would solicit and consider the views of the many affected stakeholders.

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Corporate Radiation Safety Officer
Waste Control Specialists LLC

⁹ See prepared statement from Leonard C. Slosky, representing the Low-Level Radioactive Waste Forum, Inc., and the States of South Carolina, Utah, and Washington for the U.S. Nuclear Regulatory Commission meeting on Low-Level Radioactive Waste, dated April 17, 2009.