Doris Mendiola - Comments to NRC Draft Regulatory Guide DG-4012

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Date: 11/01/2007 2:05 PM
Subject: Comments to NRC Draft Regulatory Guide DG-4012
CC: <exo@nrc.gov>

7/31/07
72FR 41794
(3)

On behalf of Studsvik, Inc., please accept the attached comments to Draft Regulatory Guide DG-4012.

I would greatly appreciate it if you can please confirm that you have received this email and the attached comment letter. Thank you for your assistance.

Sincerely yours,

Evan Schultz

<<Studsvik Comments to DG-4012 Nov 1 2007.pdf>>

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Studsvik

Via Electronic Mail

November 1, 2007

Mr. Edward O'Donnell
NRC Senior Program Manager
Office of Nuclear Regulatory Research
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Draft Regulatory Guide DG-4012, "Minimization of Contamination and Radioactive Waste Generation in Support of Decommissioning"

Dear Mr. O'Donnell:

I am the general counsel of Studsvik, Inc., a company whose principal business in the U.S. is the stabilization, volume reduction, processing, and management of low-level radioactive waste generated by nuclear power plants. Pursuant to the solicitation for comments that the NRC published in the Federal Register at 72 F.R. 41794 (July 31, 2007), I am writing in regard to NRC Draft Regulatory Guide DG-4012, which concerns minimizing radioactive contamination. The sort of stabilization of low-level waste that Studsvik performs is an integral component of effective contamination minimization. Therefore, based on our extensive experience in the industry, Studsvik strongly supports promulgating the guide. Studsvik's experience has also given it great expertise in state-of-the-art engineering and science, and in contaminant management philosophy. Drawing on this expertise, Studsvik offers these comments, which suggest changes for the NRC to consider in order to strengthen the draft guide as the Commission moves toward publishing the final version.

GENERAL COMMENTS:

Historically, with regard to the commercial nuclear reactor plants, both the industry and the NRC have concentrated on engineered safeguards and on strict operating procedures to assure human and environmental protection. This approach has been extremely successful, as demonstrated by the strong safety and environmental record of the nuclear power generating industry.

Studsvik believes it is important for the draft guide to build on these strengths. Accordingly, discussed below are five areas of change that Studsvik asks the NRC to include, as well as a sixth category discussing changes to charts and tables in the draft guide.

SPECIFIC SUGGESTED CHANGES:

1. Apply Draft Guide To New Renewals As Well As To New Applicants

As is discussed above, Studsvik believes that the draft guide's recommendations are sound, and Studsvik supports the NRC's plans to publish the guidance. Given the draft guide's strengths, Studsvik believes that the NRC should expand the reach of the guide. In the current draft, the guide would apply only to new applications. We believe that the practices eventually promulgated should also apply to all license renewals. If the recommendations make sense for new plants, they should also make sense for existing plants. The NRC should therefore

maximize the positive impact of the guidance on minimizing contamination of radioactive waste, to benefit public health and the environment.

2. Further Emphasize Importance Of Waste Stabilization

Much, if not most, of the low-level radioactive material generated during a nuclear plant's life cycle will be generated during the operations phase of the facility. Therefore, an effective contamination minimization plan must take into account this portion of a plant's life cycle. Low-level waste generated during the life cycle will be disposed of in licensed low-level waste facilities, at alternate disposal facilities, or will be stored on the generators' sites (or at other facilities) pending final decommissioning. Under all of these scenarios, the low-level waste should be stabilized with the best available technology, in order to minimize movement into the environment.

The NRC has supported stabilization and provided guidance on this issue with Generic Letter No. 81-39, with the Policy Statement on Low-Level Waste Volume Reduction at 46 CFR 51100 (1981), and with other regulatory guides. Stabilization of low-level waste is a common sense means to minimize the environmental impact in any low-level waste disposal arena. Given that the goal of DG-4012 is to minimize contamination, it is crucial that the guide recommend that generators stabilize the low-level waste they produce during their normal operations.

It is also important to apply the best available technology to stabilize low-level waste. This practice provides maximum assurance that radionuclides will not migrate into the biosphere, and therefore reduces human exposure to radioactive materials. New and superior waste treatment technologies have evolved over the past 10 years to facilitate physical waste form improvement for disposal, and the NRC should clearly call for use of such state-of-the-art technology in the final guide.

The NRC can add its strong support for the stabilization of waste to Paragraph C.4.a of DG-4012 (at Page 12). In addition, the NRC should note that the American Nuclear Society has withdrawn the referenced standard. *See* www.ans.org/store/vc-stnd-2_60. Therefore, the NRC should make clear that this remains the applicable standard.

3. Coordinate Draft Guide With BTP On Concentration Averaging

The draft guide correctly states that "[w]aste streams with significantly different levels of contamination should not be mixed in order to minimize the volume of the higher-activity waste." Of course, the NRC emphasizes this same philosophy in the Branch Technical Position On Concentration Averaging And Encapsulation (ML033630732, Jan. 17, 1995) ("BTP"). Given that the BTP has served the industry well for so many years, and given that the industry is very familiar with the BTP's procedures and rules, the NRC would simplify and strengthen the draft guide if the NRC revises it to refer specifically to, and adopt by reference, the BTP. The NRC could accomplish this goal by modifying Paragraph C.4.b (at Page 12) accordingly. Also in that paragraph, the word "contamination" should be replaced with "activity" to be consistent with "higher-activity" wastes.

4. Coordinate Draft Guide With 10 CFR 20.2002

The draft guide correctly discourages on-site disposal of waste. While the draft guide does mention 10 CFR 20.2002, it should go further in detailing the options available under that regulation for off-site disposal of waste. Therefore, in Paragraph C.4.c (Page 12), the draft guide should make clear that it endorses 10 CFR 20.2002 and that regulation's alternate disposal options at certain disposal sites (hazardous and industrial landfills, for example), to encourage preservation of licensed low-level waste disposal capacity. Obviously, any alternate disposal options must be conducted pursuant to all applicable federal and state regulations and laws. For on-site disposals, the full gamut of options should be provided. This paragraph of the draft guide should also make clear that any low-level waste disposed of on-site should be stabilized using the best available technology.

5. Encourage State Regulators To Adopt Recommendations In The Draft Guide

The states, rather than the federal government or the NRC, have primary regulatory authority over much of the process of disposing of low-level waste. Therefore, the draft guide should make clear that states should themselves adopt the recommendations in the draft guide. The NRC should include this approach in the "Agreement State" program.

6. Changes To Flow-Chart And Table

In addition to the comments above, Studsvik further recommends that the following changes be made to the charts and tables in the draft guide, at Pages 13-14:

Changes To Flow-Chart (DG-4012, Page 13)

- Add second box under left-hand "Yes" as follows:
  - Utilize Best Available Volume Reduction and Stabilization Technology to dispose/store Operational Waste.
- Add the same box under each of the three bottom boxes.

Changes To Table 1 (DG-4012, Page 14)

Under Group 2, for "low level waste disposal facility":

- Change "liquid" category to "3." This change is warranted because all low-level waste may end up here, and it will contain some liquid component if not processed using state-of-the-art stabilization techniques.
- Change "gas" category to "3." The justification is same as above, especially for waste ion exchange resin.

We are happy to provide you with any other materials, suggestions, and supporting data that you might find helpful. Thank you for the opportunity to present these comments, which I hope the NRC will consider closely.

Regards,

Joseph DiCamillo
General Counsel

JGD:s