

POLICY ISSUE NOTATION VOTE

January 9, 2012

SECY-12-0003

FOR: The Commissioners

FROM: R. W. Borchardt
Executive Director for Operations

SUBJECT: DRAFT FINAL POLICY STATEMENT ON VOLUME REDUCTION AND
LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT

PURPOSE:

To obtain Commission approval to publish in the *Federal Register* a final revision of the Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management (VRPS or Policy Statement). The revised statement specifies that licensees should consider all waste management strategies, not only volume reduction, when determining how to manage low-level radioactive waste (LLRW).

BACKGROUND:

In 1981, the U.S. Nuclear Regulatory Commission (NRC) published a policy statement regarding the volume reduction of LLRW (the 1981 Policy Statement).

The 1981 Policy Statement addressed:

- the need for a volume reduction policy;
- suggestions of volume reduction techniques.

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The NRC issued the 1981 Policy Statement in response to a General Accounting Office (now U.S. Government Accountability Office (GAO)) report¹ that recommended that the NRC take this step to help preserve disposal facility space. The 1981 Policy Statement was issued when disposal space was scarce, since two of the three operating LLRW disposal sites had threatened to close at that time, and one had recently reduced the annual amount authorized for disposal by half. Furthermore, volume reduction techniques were not yet in widespread use. The NRC's 1981 Policy Statement was meant to encourage the use of such techniques.

Volume reduction is widely practiced today. For example, from 1980 to 2000, pressurized water reactor licensees in the U.S. reduced the volume of LLRW disposed of by a factor of 25.² In addition to the 1981 Policy Statement's endorsement of volume reduction, the cost of disposal has been a significant incentive to reduce LLRW volumes. Given the success in volume reduction by industry, the staff believed that the 1981 Policy Statement could be updated to recognize the progress that has been achieved, and to acknowledge that licensees may consider other factors in determining how best to manage their LLRW.

The staff's recommendation to update the 1981 Policy Statement was also influenced largely by comments from stakeholders received in a series of public meetings in December 2009. Several stakeholders quoted the 1981 Policy Statement to support their opposition to intentional, large-scale blending by waste processors.³ They argued that blending of nuclear power plant ion exchange resins would result in an increase in waste volume, which is in direct contrast to volume reduction. These comments suggested that available volume reduction techniques should be used to reduce the actual volume of waste.

The staff disagreed that blending would increase the volume of waste. Blending, as defined by the staff, consists of creating a homogenous mixture from similar waste streams of different concentrations. The resulting blended mixture would result in the same volume of waste. For example, blending Class A waste with Class B waste could result in a larger volume of Class A waste with a requisite reduction in the volume of Class B waste, so the overall volume of waste would remain the same. In addressing this comment, the staff recognized the need to clarify the positions in the 1981 Policy Statement to better explain the Commission's position on large-scale blending and the role of volume reduction in the context of LLRW management.

DISCUSSION:

On April 7, 2010, staff issued SECY-10-0043, "Blending of Low-Level Radioactive Waste," and addressed the 1981 Policy Statement in response to stakeholder comments. On October 13, 2010, the Commission approved the staff's recommended Option 2 in a Staff Requirements

Memorandum (SRM) for SECY-10-0043, which included updating the existing Policy Statement to recognize the progress that has been achieved, and to acknowledge that other factors may

¹ U.S. Government Accountability Office (formerly General Accounting Office), "The Problem of Disposing of Nuclear Low-Level Waste: Where Do We Go From Here?" || GAO Report No. EMD- 80-68, March 31, 1980.

² Source: INPO-01-003 and 96-02, WANO Performance Indicators for U.S. Nuclear Utility Industry.

³ Summary of Public Meeting Between U.S. Nuclear Regulatory Commission and Studsvik on Low-Level Waste Blending (Agencywide Documents Access and Management System (ADAMS) Accession No. ML093650201) and Meeting Presentation "Changing NRC Policy on Waste Dilution to Alter Waste Classification: Why Now?" (ADAMS Accession No. ML093620115).

be used by licensees in determining how best to manage their LLRW. Therefore, the staff revised the 1981 Policy Statement to acknowledge the success in volume reduction since its publication in 1981. The revised VRPS clarifies that volume reduction has certain advantages, such as preserving disposal space, but it is one of a number of techniques that licensees can use to safely and responsibly manage LLRW that they generate. The revised VRPS explicitly acknowledges that other factors can be used by licensees in determining how best to manage their LLRW.

Consistent with the direction in the SRM for SECY-93-323, "Withdrawal of Proposed Rulemaking to Establish Procedures and Criteria for On-Site Storage of Low-Level Radioactive Waste After January 1, 1996," the revised VRPS reaffirms that disposal of LLRW is the preferred option for managing LLRW.

The specific changes to the revised VRPS are as follows:

- Changes the title to "Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management";
- Deletes outdated "advanced" technologies (e.g., evaporation);
- Recognizes progress made in reducing waste volumes since the VRPS was first issued 30 years ago;
- Recognizes volume reduction is only one aspect of LLRW management;
- Suggests licensees consider all means available to manage LLRW in a manner that is secure and protects public health and safety, such as:
 - Waste minimization;
 - Short-term storage and decay;
 - Long-term storage;
 - Use of the alternate disposal provision in 10 CFR 20.2002;
 - Use of waste processing technologies; and
 - Use of licensed disposal facilities.
- Affirms disposal is considered the safest and most secure long-term management approach.

In a June 24, 2011, memorandum, the staff informed the Commission of its intent to publish, in the *Federal Register* for public comment, the proposed revision to the Policy Statement on Low-Level Waste Volume Reduction. The draft Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management was published in the *Federal Register* on August 15, 2011. Ten (10) separate comment letters were received from stakeholders and the interested public. Based on the staff's consideration of written comments, the staff concluded that several minor changes should be made to the draft Policy Statement that was published for public comment. For example, a commenter stated that waste management practices (e.g., waste minimization and long-term storage) should be listed in a hierarchy of preferential order. Staff did not agree with this comment, but added a statement that the waste management practices were listed "in no particular order and thus not indicating any NRC preference".

Enclosed is the draft final version of the revised Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management.

RECOMMENDATION:

The staff recommends that the Commission approve the draft final Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management for publication in the *Federal Register*.

RESOURCES:

Revision of the VRPS was already accounted for in the FY2011 and FY2012 budgets; no additional resources were required.

COORDINATION:

The Office of the General Counsel has no legal objection to this paper.

The staff has coordinated with the Agreement States in the development and implementation of the Commission paper on LLRW blending, SECY-10-0043, including this revision to the VRPS. This coordination has consisted of conference calls, and presentations at the 2010 and 2011 Organization of Agreement States annual meetings. Additionally, a call was made to six Agreement States with waste processing and disposal facilities to further inform them of the progress of the VRPS revision.

The staff has submitted the required paperwork to the Office of Management and Budget (OMB) for non-major rule determination, which must be obtained before the final Policy Statement can be published in the *Federal Register*.

/RA by Michael F. Weber for/

R. W. Borchardt
Executive Director
for Operations

Enclosures:

1. Draft Final Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management
2. Original Policy Statement on Low-Level Waste Volume Reduction
3. Public Comments
4. Summary of Public Comment Letters Received

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