



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON NUCLEAR WASTE
WASHINGTON, D.C. 20555

December 29, 1995

The Honorable Shirley Ann Jackson
Chairman
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Chairman Jackson:

SUBJECT: COMMENTS ON SECY-95-201 AND THE NRC ACTIVITIES REGARDING
LOW-LEVEL RADIOACTIVE WASTE

I. Introduction

The NRC staff has proposed significant reductions to NRC's Low-Level Radioactive Waste (LLW) Program in SECY-95-201, "Alternatives to Terminating the NRC's Low-Level Radioactive Waste Disposal Program." As requested by the Commission in the Staff Requirements Memorandum dated September 14, 1995, the Advisory Committee on Nuclear Waste (ACNW) is providing comments on SECY-95-201, including practicable alternatives to the proposed options in the SECY paper and ACNW views on the significant consequences of the alternatives available to the Commission. We had the benefit of the documents referenced.

The ACNW has a number of concerns with the conclusions of SECY-95-201. While recognizing current budgetary constraints, the ACNW concludes that it is in the national interest to have a centralized LLW program within the NRC. This, we believe, is in concert with NRC's fundamental mission to protect the health and safety of the public and the environment. We strongly recommend that the Commissioners prioritize the LLW program in relation to all activities within the agency. On the basis of the assigned priority, the NRC staff should reevaluate the LLW program as part of the current reassessment-rebaselining effort, using its own expertise as well as the suggestions described herein, and structure a program that is responsive to the national need and the mission of the NRC.

The ACNW has reviewed the SECY document, and heard presentations from and held discussions with staffs of the Office of State Programs, the Office of Nuclear Materials Safety and Safeguards, the Department of Energy (DOE), various interested industry groups, and representatives from states and their associations that have responsibility in LLW management. In addition, the ACNW has received several written communications from states and others (referenced) that would be affected by the actions proposed in the

SECY document. Members and staff of the ACNW have attended several related meetings with state representatives. This topic was also a subject of discussion by the ACNW during its 78th, 79th, and 80th meetings.

II. ACNW Analysis of the Options in the SECY Document

SECY-95-201 describes three options regarding the future of the LLW program in the NRC. These options can be briefly described as: (1) continue the program as currently in place, (2) reduce the program by eliminating or reducing various parts, and (3) terminate all parts of the LLW program. The stress of budget reductions is cited in SECY-95-201 as the driving force for eliminating Option 1. The third option requires major changes in the legislation that mandates NRC's responsibilities. The SECY document concludes that, based on statutory requirements and budget restrictions, Option 2 is the only practicable alternative.

The Committee was unable to evaluate in detail the program as outlined in Option 2 because of the lack of specificity in resource allocations for various activities. Further, the use of terms in SECY-95-201 such as "limited" and "essential" to describe the resources and activities under Option 2 is notably ambiguous. In addition, we believe the staff has taken a pessimistic view of NRC's future activities in LLW disposal, and the proposed reductions in activities appear to conform to this evaluation. The staff is silent on the importance of the activities in the program and the rationale governing retention or elimination of the listed functions. The most important shortcoming of the SECY paper is the failure to address the question of what the LLW program ought to be in order to satisfy the mission of the NRC.

III. External Opinions

The overwhelming majority of the opinions expressed by representatives of industry groups, DOE, Agreement States, non-Agreement States, and associations of state officials that have responsibilities related to LLW were strongly opposed to reductions in the NRC LLW program activities. Only occasional recognition of NRC's need to reduce expenditures was evident. On the other hand, the view that NRC has an important role in supporting state activities and the need to maintain or even increase such support was a prominent part of the basis for urging substantial maintenance of the NRC program.

IV. The ACNW View of the Role of the NRC in LLW

Recognizing that the fundamental mission of the NRC is to protect the health and safety of the public and the environment, the ACNW has concluded that in the radioactive waste field, the management of LLW poses broader, more direct and ubiquitous potential risks to health and safety than any other activity. Factors contributing to

the risk of low-level waste include the long time frames associated with large volumes of uranium-contaminated waste, the performance of near-surface facilities for long-term disposal, and the existence of multiple disposal sites. Hence, the proper management of the storage and disposal of such wastes should command major attention from the NRC. We note that generating, storing, and disposing of LLW at multiple sites often affect the public and other stakeholders more directly than other activities in which NRC participates. We believe the NRC provides the important consistency and technical competence that these stakeholders require to ensure that their interests are protected. Finally, the orderly progress toward safe disposal of LLW requires a stable regulatory base that can only be provided by a centralized agency thoroughly involved in the LLW program.

The Agreement State program has shifted responsibility for many of the regulatory aspects of LLW to the states that participate in this program. It is clear that these states still rely on the NRC for technical and other support. Such reliance is important for several reasons. In addition to assuring consistency in regulation on a nationwide basis, a centralized source of information ensures that advances in the regulatory approach, e.g., use of risk-based regulations, are promulgated and implemented in an appropriate manner and on a timely basis.

The NRC brings two main strengths to interactions and activities in the LLW area: (1) its regulatory experience and (2) its technical expertise. The NRC's experience in developing LLW regulations and guidance, which is the foundation of all state LLW regulations, includes its ability to discuss, interpret, and clarify issues to various stakeholders with regard to 10 CFR Part 61 and supporting guidance. The NRC also maintains a very strong base of technical and scientific expertise among both staff and contractors that is recognized by most stakeholders. No other organization has the combined regulatory perspective and integrated LLW knowledge base and staff capability that NRC has developed and maintained. These strengths are important components of a coherent national regulatory framework for LLW.

The NRC has several groups within the agency that interact with the Agreement States and supports their needs. Not all of the LLW disposal regulatory activities are carried out by Agreement States, and those few states that are neither part of a compact nor an Agreement State clearly depend on the NRC to regulate LLW disposal activities. Finally, the LLW research activities carried out by the NRC tend to be important to a wide range of LLW disposal problems.

V. Consequences of Options 2 and 3 in SECY-95-201

Although it is difficult to predict the ultimate impact of implementing major reductions in the NRC LLW program, we believe that

several potentially undesirable consequences could accrue if this were to be done in accord with Options 2 and 3 of the SECY paper.

- A. The ACNW is concerned about the already fragmented regulatory base for radioactive materials. Under present law, radioactive materials may be regulated by the NRC, DOE, EPA, or the states, depending on Agreement State status, on the presence of other hazardous materials in the waste stream, or on the concentration of radionuclides in the waste. Fragmentation would be exacerbated if Options 2 or 3 were implemented. Inconsistencies, overlap, and gaps in regulatory boundaries will be the likely result and should be avoided.
- B. Some of the Agreement States have requested technical advice from the NRC in licensing LLW facilities. Under Options 2 or 3, this high-quality technical expertise may no longer be available. As a consequence, it may be difficult to respond with technically competent advice.
- C. The absence of a strong, centralized NRC program could be a detriment to the siting and operation of LLW facilities in certain states. This situation could recreate the difficulties that existed before the compact-forming legislation and could hinder the orderly disposal of LLW widely distributed throughout the states.
- D. In the absence of a broad, continuing NRC LLW program, as envisioned in Options 2 and 3, the updating and revision of LLW regulations that take advantage of experience and changes in basic standards is problematic. This could result in health and safety performance measures and other requirements that may be inconsistent and may not be optimized for safety, economics, and long-term impact on the public.
- E. In our view, the absence of a centralized, competent NRC LLW program will diminish the perception that public health and safety are assured. The result will likely be an increased reluctance to allow the use of radioactive materials, to the detriment of society in energy, medicine, and commerce.

VI. Observations and Recommendations

The ACNW believes that none of the three options provided to the Commission in SECY-95-201 is satisfactory. The budgetary focus of the SECY document fails to address the fundamental responsibility of the NRC. Budgetary reductions need to be made in accordance with priorities set with reference to the underlying mission of the NRC. Owing to the importance we believe should be assigned to the LLW program activity, which is directly connected to the public health and safety, we recommend that the LLW program should contain or recapture the following elements:

- A. Staff assigned to the LLW program should include experts in each of the technologies critical to evaluation of the siting, environmental impact, operation, and closure of LLW facilities. Specific expertise among staff and contractors should be maintained in the following areas: infiltration; engineered barriers performance; source term, including near-field flow, geochemistry, and transport; hydrology, including groundwater flow and transport, surface-water flow and transport, and the development of appropriate pumping-well scenarios; and dose, including dosimetry, uptake, and development of reference biosphere models. The staff should also maintain LLW performance and risk assessment capabilities.

The ACNW is concerned that the level of effort committed to LLW has been declining and notes that the continuing reduction of capability as indicated in Option 2 has been a de facto process for several years. We believe this trend should be unacceptable to the Commission. The existence of experts in state agencies distributed throughout the country is not a deterrent to the creation and maintenance of NRC staff experts in a centralized agency.

- B. The NRC LLW program needs to provide technical assistance to those preparing license applications for LLW disposal facilities. Although the various jurisdictions have differing regulations concerning the content and standards for such applications, the broad expertise of the LLW program staff is directly applicable to the commonalities of disposal sites and facilities. We have previously commented on the obvious need for support to the agencies or groups preparing license-related technical or scientific material and have recommended that the NRC staff develop broad guidelines that could be used by such groups to form their own peer review and oversight panels. We reiterate this recommendation and believe it should be part of the NRC LLW program.

In addition, the NRC staff should provide to Agreement States and others such guidance (e.g., staff technical positions) as is needed, first on a generic basis and then on a site-specific basis, unless it is clear that the same information is readily available from other sources. In particular, the Branch Technical Position (BTP) on LLW Performance Assessment is an important and appropriate guidance document because it integrates updated technologies and methodologies for LLW Performance Assessment with regulatory requirements under 10 CFR Part 61. The BTP on LLW Performance Assessment also provides an important transition to a more risk-based approach to LLW regulation from traditional deterministic approaches.

- C. In view of the pending prelicensing activities of the non-Agreement States, the agency needs to maintain its capability

for processing license applications from non-Agreement States for LLW disposal facilities in a timely fashion, and for other licensing activities described in the SECY paper. The ACNW recognizes that flexibility exists to use resources from different waste programs.

- D. The staff proposed in the SECY paper that research in LLW areas be eliminated. We agree that selected long-term studies that have been under way for some time should be brought to closure in a manner that ensures that their value is not lost. The planned "transfer" of support for selected research activities from LLW programs to Site Decommissioning Management Plan (SDMP) programs is appropriate. However, such a transfer requires detailed examination of the importance of such expenditures in light of prioritized needs of the NRC staff responsible for SDMP activities. Finally, limited research activities in the LLW program should be identified and supported by priority judgments. These priorities should be derived from performance assessments for a variety of facility designs and locations. Further, the research should be applicable to a broad range of LLW facilities and operations. The NRC needs to involve the states in identifying, developing, and monitoring these research activities. In addition, the Office of Nuclear Regulatory Research (RES) should be encouraged to ensure that this research and resulting technology is transferred more directly to the states.
- E. Activities targeted for termination or for limited support under Option 2 may be sufficiently related to the mission of the NRC to warrant more expanded attention than indicated in the option. These activities and the ACNW recommendations are as follows:
1. The review of topical reports has, as we understand it, already been discontinued. We believe this is a mistake. In any event, the NRC staff should maintain the technical capability to review topical reports and to evaluate technical information included in license applications.
 2. We strongly recommend that the NRC maintain and strengthen the ability to review the quality of Agreement State LLW programs. The Committee urges that the reviews of adequacy and compatibility include increased emphasis on the technical aspects of the programs. This activity falls directly within the mission of the NRC, as we have noted earlier.
 3. We believe it is important for the NRC to represent the United States in both national and international activities relating to LLW disposal regulations and standards. Attention should be given to the waste activities of the IAEA/NEA and, for example, the efforts of Europe, Canada,

and Japan. This is particularly important in light of the foreign technology being incorporated into some state disposal systems. We recognize that such participation will require judicious use of resources.

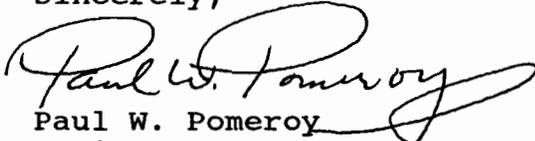
4. Although the ACNW does not encourage the removal of the import/export authorizations and emergency access request evaluations, these activities could be managed by a different agency, as suggested in SECY-95-201, provided that the safety standards promulgated by the NRC are not compromised.
5. Technical expertise should be available to ensure that LLW regulations are revised and updated to be consistent with NRC's transition toward risk-based regulation and with Environmental Protection Agency (EPA) standards.

VII. Proposed Actions

The Committee proposes that:

- A. the Commissioners evaluate the priority of the LLW program relative to other agency programs on the basis of (1) public health and safety and (2) the national need for a centralized source of regulatory and technical expertise to ensure a consistent, adequate, and coherent approach to LLW programs; and
- B. on the basis of the priority assigned to LLW by the Commissioners, the NRC staff reassess the elements of the LLW program as part of the rebaselining process, using the recommendations presented above, and configure these elements into a program that is responsive to the national need.

Sincerely,


Paul W. Pomeroy
Chairman

References:

1. SECY-95-201, Memorandum dated July 31, 1995, from James M. Taylor, NRC Executive Director for Operations, for the Commissioners, Subject: Alternatives to Terminating the Nuclear Regulatory Commission Low-Level Radioactive Waste Disposal Program
2. Staff Requirements Memorandum dated September 14, 1995, from John C. Hoyle, Secretary of the Commission, to James M. Taylor, NRC Executive Director for Operations, Subject: SECY-95-201 - Alternatives to Terminating the NRC's Low-Level Radioactive Waste Disposal Program

3. Letter dated November 9, 1995, from R. E. Gingerich, CT LLRW Program, Connecticut Hazardous Waste Management Service, to Paul W. Pomeroy, ACNW Chairman, regarding comments on NRC's Low-Level Radioactive Waste Program
4. Letter dated November 15, 1995, from J. B. Deshais, Northeast Interstate Low-Level Radioactive Waste Commission, to Paul W. Pomeroy, ACNW Chairman, regarding NRC's Low-Level Radioactive Waste Disposal Program
5. Letter dated November 8, 1995, from J. R. Weingart, New Jersey Low-Level Radioactive Waste Disposal Facility Siting Board, to Paul W. Pomeroy, ACNW Chairman, regarding NRC's Low-Level Radioactive Waste Program
6. Letter dated November 15, 1995, from M. Alissi, Nuclear Energy Institute, to Paul W. Pomeroy, ACNW Chairman, regarding NRC's Low-Level Radioactive Waste Program