

February 1, 2002

The Honorable Robert C. Byrd, Chairman  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

I am enclosing a summary of actions taken by the U.S. Nuclear Regulatory Commission (NRC) in response to recommendations contained in various General Accounting Office reports that address NRC activities. This summary, which is required by Section 236 of Public Law 91-510, the "Legislative Reorganization Act of 1970," describes the progress made in addressing the recommendations since our last summary report of February 20, 2001.

Sincerely,

Richard A. Meserve

Enclosure: Summary of NRC Actions

cc: Senator Ted Stevens

SUMMARY OF NRC ACTIONS

RESPONSE TO GAO REPORTS

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GAO Report - Nuclear Regulation  
Action Needed to Control Radioactive Contamination  
at Sewage Treatment Plants  
May 1994  
(GAO/RCED-94-133)

The General Accounting Office (GAO), in its report "Nuclear Regulation - Actions Needed to Control Radioactive Contamination at Sewage Treatment Plants," made specific recommendations for responding to contamination of sewage sludge by discharges from NRC and Agreement State licensees. The recommendations and the NRC's responses are provided below.

Recommendation 1

Determine the extent to which radioactive contamination of sewage sludge, ash, and related byproducts is occurring.

NRC Response

The NRC is continuing to evaluate the extent to which radioactive contamination of sewage sludge, ash, and related byproducts is occurring. Initial results of NRC inspections and research analysis conducted in the mid-to-late-1980s indicated that any problem arising from NRC-licensed materials was limited to a few treatment plants that served licensees engaged in certain well-defined activities. As a result, NRC regulations (10 CFR Part 20) were revised in 1991 to prohibit the discharge of liquids containing radioactive waste materials that tended to settle out of sewage water.

In addition to the changes to our regulations, in 1993 NRC initiated additional studies to understand the complexities of radioactive material reconcentration, such as the possible effects of implementation of state-of-the-art sewage treatment technologies on materials that, under traditional treatment methods, did not reconcentrate. In a letter dated October 11, 1994, NRC and the Environmental Protection Agency (EPA) notified officials of all States responsible for regulating water quality and radiological health and safety of the potential for reconcentration of radioisotopes in sanitary sewer systems.

Through the Sewage Sludge Subcommittee of the Interagency Steering Committee on Radiation Standards, NRC and EPA are conducting a national survey of sewage treatment plants to assess the extent of radioactive contamination in sludge and ash. A pilot survey for nine facilities was completed and the results were published in May 1999 and are available at <http://www.iscorg.org/pilot-combined2.pdf>. For the full survey, questionnaires were sent to 631 facilities in June 1999, 420 facilities completed and returned the questionnaires. Of these, 316 were selected for the sampling phase of the survey. Sampling was conducted in 1999 and 2000. Final laboratory results were received in October 2000, and an analysis of the data is scheduled to be completed in July 2002.

In addition, NRC and EPA are developing guidance on radioactive material in sewage sludge and ash. The current draft guidance document was issued in June 2000 and is available at <http://www.iscorg.org/sewageguidance06-2000.pdf>.

This GAO recommendation remains open.

### Recommendation 3

Establish acceptable limits for radioactivity in sludge, ash, and related by-products to ensure the health and safety of treatment workers and the public.

### NRC Response

NRC agrees that it is important to have acceptable limits for radioactive materials in sludge, ash, and related by-products. We will continue to work with EPA and with the operators of publicly owned treatment works (POTWs) through the Sewage Sludge Subcommittee to develop a national approach to this issue and ensure adequate protection of the public health and safety. The current EPA standards for sewage sludge (40 CFR 503) do not include radionuclides.

The NRC received a number of comments in response to an Advance Notice of Proposed Rulemaking (59 FR 9146; February 25, 1994), soliciting information and suggestions in the area of sewer disposal of radioactive materials. As the NRC staff proceeds, it also intends to address the possible uses of the slightly contaminated sludge and ash in commercial products such as fertilizers and the dose effects of these uses.

The staff, in conjunction with the EPA, through the Sewage Sludge Subcommittee, is developing a more realistic model to evaluate the sewage sludge exposure pathway. The draft dose assessment document, issued in November 2001, is available at <http://www.iscours.org/sewage.htm>. Completion of the dose modeling and completion of the joint NRC/EPA survey is anticipated to occur in 2002.

In any rulemaking activities associated with release of radioactive materials to sewers, the NRC will consider the various pathways whereby the public could receive a radiation dose, including doses due to exposure to radioactivity in sludge and ash. The NRC will consider rulemaking for the disposal of radioactive material by licensees into the sewer system after completion of the modeling work and the analysis of the results of the NRC/EPA sewage survey. The sampling and laboratory analysis were completed in October 2001. The laboratory results are currently being analyzed and a report is scheduled to be completed in July 2002.

This GAO recommendation remains open.

GAO Report - Nuclear Regulation  
Strategy Needed to Regulate  
Safety Using Information on Risk  
March 1999  
(GAO-RCED-99-95)

The General Accounting Office (GAO), in its report "Nuclear Regulation - Strategy Needed to Regulate Safety Using Information on Risk," made specific recommendations to help ensure the safe operation of plants and the continued protection of public health and safety in a competitive environment. The recommendations and NRC's response are provided below.

GAO Recommendation

To help ensure the safe operation of plants and the continued protection of public health and safety in a competitive environment, we recommend that the Commissioners of NRC direct the staff to develop a comprehensive strategy that includes but is not limited to objectives, goals, activities, and time frames for the transition to risk-informed regulation; specifies how the Commission expects to define the scope and implementation of risk-informed regulation; and identifies the manner in which it expects to continue the free exchange of operational information necessary to improve the quality and reliability of risk assessments.

NRC Response

NRC agrees that there is a need for a comprehensive strategy. Considerable progress has been made towards risk-informing the agency's regulatory activities but more work remains to be done.

The NRC developed a strategy and a plan (Risk-Informed Regulation Implementation Plan, SECY-00-0213, October 26, 2000). The purpose of the Risk-Informed Regulation Implementation Plan is to integrate the Commission's risk-informing activities by identifying requirements and practices that need to be risk-informed and the data, methods, guidance, and training needed to meet these goals. This plan also explains the agency's risk-informed regulation policy to the public and the nuclear industry. The Commission was briefed on the plan in November 2000 and, as a result, the staff was tasked to revise the plan in a variety of areas. On December 5, 2001, the Update of the Risk-Informed Regulation Implementation Plan (SECY-01-0218) was issued. The updated plan:

- Identifies the priorities of the various implementation activities, the resources needed for the various activities, the tools that need to be developed, and the critical path activities and those that have cross-cutting dimensions
- Adds or deletes implementation activities to provide a better focus on those agency activities that are most directly tied to risk-informed regulation
- Describes activities that are planned or underway, their interrelationships and major milestones

- Includes cost-benefit aspects in the set of considerations that will be used to evaluate whether to risk-inform particular nuclear materials and waste regulatory applications

The Risk-Informed Regulation Implementation Plan will continue to evolve to reflect lessons learned from the application of risk-informed regulation and plans for additional implementation activities. The staff will continue, and where necessary initiate, activities to:

- Articulate and propose clear and consistent statements of the vision for risk-informed regulation
- Develop and propose criteria for judging whether activities to risk-inform regulation are proceeding in a successful manner
- Discuss the programs that are intended for risk-informed regulation, and assess whether they are both necessary and sufficient to accomplish the stated goals
- Identify new programs and recommend changes to existing programs for applying risk information in the regulatory decision making process
- Develop arena-specific communication plans related to implementing risk-informed regulation to support the NRC's performance goal to increase public confidence
- Facilitate the availability and understandability of risk assessment models and data to the interested public, as appropriate

The NRC staff expects to have a methodology for identifying new activities to risk-inform in place in Fiscal Year 2002

This GAO recommendation remains open.

GAO Report - Nuclear Safety: Concerns with  
the Continuing Operation of Soviet-Designed  
Nuclear Power Reactors  
April 2000  
(GAO/RCED-00-97)

The General Accounting Office (GAO), in its report "Nuclear Safety: Concerns with the Continuing Operation of Soviet-Designed Nuclear Power Reactors," made specific recommendations for responding to concerns about management of some Department of Energy (DOE) and Nuclear Regulatory Commission (NRC) safety assistance activities. Recommendations for the NRC, and the NRC's response to them, are provided below.

Recommendation 1

Develop a strategic plan for the Commission's nuclear safety assistance activities that, at a minimum, establishes program priorities and goals, ways to measure how well the goals are being met, and time frames for meeting the goals.

NRC Response

The NRC's Office of International Programs (OIP) has developed a strategy covering nuclear safety assistance-related activities. This strategy is an integral part of NRC's overall Strategic Plan. As such, implementation of this strategy is reflected in the Assistance to Foreign Regulators section of OIP's Operating Plan for the International Nuclear Safety Support arena. Consistent with this strategy, OIP staff recently evaluated the progress achieved in each country after some ten years or more of assistance. OIP concluded that the nuclear safety authorities in the Czech Republic, Hungary, and the Slovak Republic are no longer in need of NRC assistance. In contrast, the OIP evaluation found that continuation of assistance activities is warranted with the nuclear safety regulatory authorities in Armenia, Bulgaria, Kazakhstan, Russia, and Ukraine.

We consider this GAO recommendation closed.

GAO Report - Facility Relocation  
NRC Based Its Decision to Move Its Technical  
Training Center on Perceived Benefits -- Not Costs  
October 2000  
(GAO-01-54)

The General Accounting Office (GAO), in its report "Facility Relocation: NRC Based Its Decision to Move Its Technical Training Center on Perceived Benefits -- Not Costs," made specific recommendations for identifying the skills needed to provide technical training and developing a succession plan for technical training staff. Recommendations for the NRC, and the NRC's updated responses to them, are provided below.

Recommendation 1

Identify the skills required for the staff who will replace the NRC technical training instructors.

NRC Response

The NRC has completed a comprehensive review of the qualification and training requirements for inspectors who support the NRC's reactor oversight process. The results of this review, to a large extent, dictate the competency areas which must be present within the technical training instructional staff in order to maintain an effective and efficient program. The NRC also reviewed the existing and desired competency requirements for technical training instructors.

The competency requirements for the technical training instructional staff remain centered in two broad areas of concern -- instructors and project managers. Adequate numbers of appropriately qualified instructors are necessary for continued success in areas for which the bulk of the courses are provided by in-house instruction. Adequate numbers of appropriately qualified project managers are necessary for continued success in areas for which the bulk of the courses are provided by contractors. Technical training project managers serving in this role must be able to manage both the technical content (technical monitor role) and administration (contract project manager role) of contracts. In general, these technical training staff competencies include comprehension of nuclear facility design and operation; demonstrated knowledge and understanding of NRC regulatory programs; demonstrated ability to provide classroom and full scope reactor simulator presentations, directed discussions, seminars, and workshop activities; demonstrated ability to plan, develop, and implement technical training programs; and demonstrated ability to exercise judgment and exhibit flexibility in the completion of training activities during difficult or challenging situations.

The skill and competency requirements for technical training instructors, as validated by the reviews noted above, have been and will continue to be used in the selection process through which retiring instructors are being replaced.

We consider this GAO recommendation closed.



## Recommendation 2

Develop a succession plan to ensure that qualified staff are available and trained to minimize the disruption of the technical training provided.

### NRC Response

A succession plan for technical training instructional staff was developed and is being implemented. The elements of this straightforward plan are the following:

- Identify the competency needs to support the technical training program
- Determine the eligibility and projected retirement timing for the technical training instructional staff
- Evaluate the projected competency gaps over time to determine vulnerabilities to the technical training program
- Employ appropriate human capital strategies to ensure appropriate numbers of technical training instructional staff with appropriate competencies are available to provide the technical training program needed by the agency.

The eligibility and projected retirement timing for the technical training instructional staff were determined during the last quarter of calendar year 2000. The time when each technical training instructional staff member would be eligible to retire based on age, length of service, and retirement plan was determined. Additionally, each staff member was asked to provide his or her best estimate of the projected retirement date based on the circumstances as they existed at that time. The results of this data resulted in significant projected competency gaps over a two year period.

As a result of these perceived program vulnerabilities, actions were taken in advance of the earliest projected retirements. Two technical training instructor positions and one technical training project manager were filled during 2001 to offset the competency gaps that would be created by retiring personnel with competency gains that would be created by qualification of replacement personnel.

Finally, the eligibility and projected retirement timing for the technical training instructional staff were again determined during September 2001. Again, each staff member was asked to provide his or her best estimate of the projected retirement date based on the circumstances as they existed at that time. The competency gaps that are now projected are much less severe than those projected as a result of the data collected in late calendar year 2000. Acute competency gaps are not expected during any single year. The retirement losses now projected for 2003 and 2005 will be ameliorated by implementation of the agency early replacement hiring policy.

We consider this GAO recommendation closed.

GAO Report - Nuclear Waste  
Agreement Among Agencies Responsible  
for the West Valley Site is Critically Needed  
May 2001  
(GAO/RCED-01-314)

The General Accounting Office (GAO), in its report "Nuclear Waste: Agreement Among Agencies Responsible for the West Valley Site is Critically Needed (GAO-01-314)" made a specific recommendation to help address NRC's and EPA's regulatory responsibilities at NRC licensed sites, and specifically the West Valley site. The recommendation and NRC's response are provided below.

GAO Recommendation

The Chairman, NRC, and the Administrator, EPA, in coordination with New York State, agree on how their different regulatory cleanup criteria should apply to the site.

NRC Response

Since the GAO Report was issued, we believe there have been recent developments that constitute significant progress in addressing this GAO recommendation. In an August 10, 2001, letter to the Committee on Government Reform, NRC reported that NRC, EPA Region II, and the New York State Department of Health have met on matters related to the West Valley Demonstration Project (WVDP) site. This letter referred to a July 17, 2001, meeting in which these agencies discussed how the different agencies' cleanup criteria should be applied at the WVDP site. Following these discussions, NRC staff received a letter from EPA's Region II, dated July 23, 2001, which provided EPA's opinion confirming the adequacy of the level of protectiveness afforded by NRC's existing cleanup requirements and specifying its view of responsibilities for determining compliance with radiological standards as applied to the WVDP site.

On November 27, 2001, NRC, EPA Region II, New York State Department of Health, and New York State Department of Environmental Conservation met to continue the discussion on applicable cleanup criteria for the WVDP site. These agencies agreed to work together in developing a matrix of remediation requirements that each agency believes to be applicable to the WVDP site. This approach should help to clarify what regulatory requirements apply to this site. There appears to be a developing consensus that each agency's needs can be met by utilizing the tiered, dose-based approach in NRC's 10 CFR Part 20 Subpart E License Termination Rule.

The Commission has completed action on the final decommissioning criteria for the WVDP site.

This GAO recommendation remains open.

GAO Report - Nuclear Regulation  
Progress Made in Emergency Preparedness  
at Indian Point 2, but Additional  
Improvements Needed  
July 2001  
(GAO-01-605)

In its report entitled "Nuclear Regulation - Progress Made in Emergency Preparedness at Indian Point 2, but Additional Improvements Needed," the General Accounting Office (GAO), specifically recommended that the U. S. Nuclear Regulatory Commission (NRC) assess its communications during non-emergency situations. The following paragraphs present this recommendation and the NRC's response.

GAO Recommendation

Since the responsibility for responding to radiological emergencies at a large percentage of this Nation's nuclear power plants rests with an entity other than the State, we recommend that the Commissioners direct NRC staff to assess the agency's position of generally communicating with State officials during non-emergency situations.

NRC Response

The Commission agrees that it is appropriate for the NRC staff to continue assessing the agency's policies for non-emergency communication with State and local officials. Although NRC's policy is to meet formally at the State level to discuss emergency preparedness, local officials are not precluded from attending and participating in such meetings. Local government officials are also invited to attend annual public NRC meetings with utilities in which the results of the reactor oversight process are discussed for each plant. The staff has conducted separate public meetings with local government representatives immediately following the annual assessment meetings, during which the reactor oversight process itself is discussed. The NRC staff is continuing to review these and other forums to determine whether they are appropriate for or whether they can be optimized to include official government-to-government interactions concerning emergency preparedness. The staff will recommend changes in keeping with the agency's performance goal to increase the public's confidence in it as a regulator, but balanced with the need to maintain its resources and effectiveness in other performance areas.

The GAO's recommendation is similar in nature to one identified by the NRC's Office of the Inspector General (OIG) in a report titled "NRC's Response to the February 15, 2000, Steam Generator Tube Rupture at Indian Point Unit 2 Power Plant." That report also noted the concern expressed by local officials regarding a lack of routine communications with the NRC and its Resident Inspectors at Indian Point 2. The staff has already initiated actions in response to the OIG's report and will consider the GAO recommendation as part of its ongoing assessment. The staff anticipates completing the assessment by February 1, 2002. Upon completion of the assessment, a report will be provided to GAO identifying any related policy changes.

This GAO recommendation remains open.

Identical letter to:

The Honorable Robert C. Byrd, Chairman  
Committee on Appropriations  
United States Senate  
Washington, D.C. 20510  
Senator Ted Stevens

The Honorable Joseph I. Lieberman, Chairman  
Committee on Governmental Affairs  
United States Senate  
Washington, D.C. 20510  
cc: Senator Fred Thompson

The Honorable C.W. Bill Young, Chairman  
Committee on Appropriations  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative David Obey

The Honorable Dan Burton, Chairman  
Committee on Government Reform  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Henry Waxman

The Honorable Joseph I. Lieberman, Chairman  
Committee on Governmental Affairs  
United States Senate  
Washington, D.C. 20510  
cc: Senator Fred Thompson

The Honorable Joe Barton, Chairman  
Subcommittee on Energy and Air Quality  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative Rick Boucher

The Honorable W.J. "Billy" Tauzin, Chairman  
Committee on Energy and Commerce  
United States House of Representatives  
Washington, D.C. 20515  
cc: Representative John D. Dingell

The Honorable Harry Reid, Chairman  
Subcommittee on Transportation, Infrastructure  
and Nuclear Safety  
Committee on Environment and Public Works  
United States Senate  
Washington, D.C. 20510  
cc: Senator James M. Inhofe

The Honorable Jeff Bingaman, Chairman  
Committee on Energy and Natural Resources  
United States Senate  
Washington, D.C. 20510  
cc: Senator Frank Murkowski

The Honorable David M. Walker  
Comptroller General of the United States  
General Accounting Office  
Washington, D.C. 20548

The Honorable Mitchell E. Daniels, Jr.  
Director, Office of Management and Budget  
Washington, D.C. 20503