

April 30, 2011

Dr. Said Abdel-Khalik, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: RESPONSE TO THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
LETTER DATED MARCH 23, 2011, ON THE STATUS OF GROUNDWATER
PROTECTION TASK FORCE EFFORTS

Dear Dr. Abdel-Khalik:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter dated March 23, 2011, on recommendations made by the Advisory Committee on Reactor Safeguards (ACRS) on the status of the activities of the Groundwater Protection Task Force. The NRC staff's response to the recommendations in your letter is discussed below.

ACRS Conclusions and Recommendation 1:

We agree with the Senior Management Review Group (SMRG) and the Groundwater Task Force (GTF) report that the NRC is accomplishing its stated mission to protect public health and safety, and the environment.

NRC Response

The NRC staff agrees.

ACRS Conclusions and Recommendation 2:

There are differences in the environmental standards for protection of groundwater among the NRC, the Environmental Protection Agency (EPA), and the states in which nuclear power plants reside. There is a lack of understanding among stakeholders regarding the different standards, the numerical limits, what the differences mean, how they came to exist, and how they are applied.

NRC Response

The NRC staff agrees. The NRC has updated the fact sheet entitled, "Tritium, Radiation Protection Limits, and Drinking Water Standards," issued February 2011, available on the NRC public Web page, with the different dose limits and the basis for them. The NRC has also updated the fact sheet entitled, "Biological Effects of Radiation," issued January 2011, to provide up-to-date information on the effects of exposure to radiation.

The NRC Blog is now available to increase the NRC's interaction with the public. Although this issue has not been specifically discussed, this new communications tool serves as a vehicle (1) to inform, explain, and clarify the actions, roles, and responsibilities of the NRC; (2) to raise

awareness about the agency and its mission; and (3) to provide the public with an additional method for communicating with the NRC in a public forum. In addition, the NRC staff has developed information posters on the effects of radiation and the different radiation standards for staff use as visual aids during open houses held before public meetings near nuclear power plants (e.g., during periodic end-of-cycle meetings).

ACRS Conclusions and Recommendation 3:

Implementation of the initiatives identified in SECY-11-0019 and its companion memorandum should continue.

NRC Response

The staff agrees that implementation of the initiatives identified in SECY-11-0019, "Senior Management Review of Overall Regulatory Approach to Groundwater Protection," dated February 9, 2011, and its companion memorandum should continue. The staff is currently engaged in the evaluation of the long-term effectiveness of industry initiatives; it is participating in consensus standards development, evaluating changes to the Reactor Oversight Process (ROP), and addressing remediation of residual activity from leaks and spills. In addition, the NRC has undertaken a number of initiatives to communicate the impact of releases of tritium into ground water to the public and other external stakeholders. The initiatives include the development of a strategy for strengthening stakeholder confidence in the NRC's actions, improvements in the presentation and reporting of the effluent data, initiation of dialogue with international regulators to understand their regulatory approaches to ground water protection, and development of a standard protocol for engaging States on unintended releases of radioactive material.

The evaluation of industry ground water programs is ongoing through the inspection program. The NRC has made changes to the inspection process in this area, as discussed in detail in the NRC response to Recommendation 4.

With regard to the NRC's participation in standards development, the NRC staff is participating in the American Society of Mechanical Engineers (ASME) and National Association of Corrosion Engineers (NACE) International codes and standards organizations. The workgroup for Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Boiler and Pressure Vessel Code (ASME Code) is evaluating current ASME Code rules and current operating experience to make recommendations for enhancements to the ASME Code. Enhancements may include rules or guidance for nonsafety-related piping that has not typically been included in the scope of piping under the cognizance of ASME. NACE International is developing corrosion prevention standards that are optimized for nuclear power plants. Activities to support ASME and NACE are currently tracked as separate items in the Office of Nuclear Reactor Regulation's buried-piping action plan.

The staff is preparing a separate Commission paper to request Commission policy direction on possible changes to the ROP in the public radiation safety cornerstone. The NRC's response to Recommendation 4 provides detailed information on this activity.

The Commission directed the staff (SRM-SECY-07-0177) to make further improvements to the decommissioning planning process by addressing remediation of residual radioactivity during the operational phase to avoid complex decommissioning issues that can lead to legacy sites. To this end, the Commission directed the staff to develop a technical basis, possible dose limits, criteria for applying the dose limits to address this matter, or alternatives to the dose limits. The staff is currently performing a feasibility study and intends to engage stakeholders in a public workshop in the June/July 2011 timeframe. The goal is to provide a SECY paper for the Commission's consideration by the end of Fiscal Year 2011.

The NRC Communications Council has been evaluating how the agency can strengthen stakeholder confidence in the NRC's actions around reported incidents of low risk and high stakeholder interest. In addition to the actions that the NRC discusses in its response to Recommendation 2, other suggestions/measures that the council is addressing to improve communication include (1) evaluation of ways to improve public meeting feedback; (2) improvements in communicating the NRC's role and mission; (3) improvements in media and public meeting communication training to focus on providing risk perspectives or on cultivating plain language; (4) focused outreach to select groups, such as high school students, civic groups, and other interested parties, (5) the use of other technologies, such as YouTube and other forms of social media; and (6) identification of improvements to the public Web page to help the public better understand the agency's response to leaks and spills.

To help stakeholders easily review and access effluent release information from nuclear power plants, reports summarizing the effluent data reported annually by the commercial nuclear power plants are now available on the NRC public Web site. The radionuclide and radiation dose data in these reports are intended to provide the reader with a means to quickly characterize the effluents from any nuclear power plant. To view all the information contained in the annual radioactive effluent release reports from each nuclear power plant, the public can visit the NRC's Web site at <http://www.nrc.gov/about-nrc/radiation.html>.

The Office of Nuclear Regulatory Research has initiated dialog with international regulators through the Nuclear Energy Agency's Committee on the Safety of Nuclear Installations (CSNI) as part of an ongoing CSNI activity on long-term operations. Information on international operating experience, use of relevant codes and standards, regulatory framework and actions, and technical regulatory concerns will be collected through the use of a survey that will be issued to CSNI-member countries. A final report summarizing the findings is scheduled to be published by June 2012.

The staff is currently developing an agency standard protocol for engaging States on unintended releases of radioactive material. Currently, Region I has developed a standard protocol for handling communications related to ground water issues to engage States when an unintended release occurs. When the region is notified of a ground water contamination issue, if a notification to stakeholders is necessary, the region will contact the State and EPA/Federal Emergency Management Agency (FEMA) regional contacts. If there is a high level of interest, the region will arrange periodic calls with external stakeholders to discuss any updated information on the ground water issue. Federal partners (EPA, FEMA) and external stakeholders, including various interested State agencies, counties, and members of Congress, are invited to participate in the discussion.

ACRS Conclusions and Recommendation 4:

Routine plant inspections should continue assessing the licensees' implementation of NEI-07-07. The staff should consider using the results of these inspections to develop a new radiological effluent performance indicator for the ROP.

NRC Response

The NRC staff agrees with the ACRS recommendation to continue assessing the licensees' implementation of NEI-07-07, "Industry Ground Water Protection Initiative—Final Guidance Document," issued August 2007. The NRC will continue to conduct inspections at all sites to check for gaps in the implementation of the voluntary industry initiative and to verify that the trend of improvements seen over the last 4 years continues. The radiation protection baseline inspection procedures have been revised to include guidance on the inspection of ground water monitoring programs. The NRC will rely on these inspection procedures to verify licensees' long-term implementation of the NEI ground water monitoring programs. Additionally, the NRC will revise and reissue NRC Inspection Manual Temporary Instruction TI-2515/173, "Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative," dated May 29, 2008, which was used in the initial evaluation of NEI-07-07 implementation. The revised TI will enable the staff to verify that licensees with many open items have completed their implementation of any remaining (incomplete) elements of the NEI ground water protection initiative.

As part of its annual self-assessment of the ROP for calendar year 2010, the staff identified that the ROP could be leveraged to affirm licensees' efforts to ensure adequate protection of public health and safety through the implementation of industry initiatives. Enhanced focus on this area could increase predictability, and also increase public confidence in the NRC's oversight activities under the public radiation safety cornerstone of the ROP. ROP tools (i.e., inspection guidance, significance determination process, and performance indicators) could be changed or developed to acknowledge industry activities and performance in meeting voluntary commitments to the industry initiatives. The staff is preparing a separate Commission paper to request Commission policy direction on possible changes to the ROP in the public radiation safety cornerstone.

ACRS Conclusions and Recommendation 5:

Efforts by the NRC, in cooperation with the states and EPA, to develop tools to communicate with the public regarding the differences in groundwater protection standards should continue.

NRC Response

The NRC staff agrees. The NRC staff continues to develop communication tools and is actively identifying opportunities for communicating with the public.

S. Abdel-Khalik

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The NRC staff and I appreciate the comments and recommendations provided by ACRS. The NRC looks forward to continuing to work with ACRS as the staff addresses the nuclear industry's implementation of the ground water protection initiative.

Sincerely,

/RA by Martin J. Virgilio for/

R. W. Borchardt
Executive Director
for Operations

cc: Chairman Jaczko
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
SECY

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