

June 14, 2013

MEMORANDUM TO: Michael J. Case, Director
Division of Engineering
Office of Nuclear Regulatory Research

FROM: Thomas H. Boyce, Chief **/RA/**
Regulatory Guide Development Branch
Office of Nuclear Regulatory Research

SUBJECT: Results of Periodic Review of Regulatory Guide (RG) 4.21

This is to document the agency's periodic review of RG 4.21 "Minimization of Contamination and Radioactive Waste Generation: Life Cycle Planning." As discussed in Management Directive 6.6 "Regulatory Guides," the NRC staff reviews regulatory guides approximately every five years to ensure that the guides continue to provide useful guidance. Documentation of the staff's review is enclosed.

On March 26, 2012 and August 15, 2012 NRC received unsolicited comments on the guide from an organization called TA Technical Associates as part of two petitions they submitted for rulemaking (ML121280451 & ML12270A318). The petitions were to amend 10 CFR Parts 50, Part 20, RG 1.21 and RG 4.1 and other applicable regulatory guides as documented in the petitions. The petitions' central theme was to update requirements for "...upgraded and new technology in Radionuclide Monitoring instrumentation in nuclear power plants." The petitions were denied in a June 22, 2012 (ML121280539) and a January 15, 2013 (ML12268A125) NRC response because the petitioner did not propose a general solution to a problem in the regulations.

Subsequent to the second denial, Penny Randall of TA Technical Associates sent Cindy Bladey, ADM, an e-mail on February 6, 2013 inquiring about how to submit the portion of the petitions dealing with regulatory guides and this request was referred to the Regulatory Guide Development Branch. The Branch's Regulatory Guide Specialist spoke directly to Ms. Randall by telephone and guided her to the Branch's web page where comments could be submitted. Although no comments were received following that telephone call, the suggestions from the two petitions were considered in the context of the periodic review of RG 4.21 and this documentation of the guide's review is not a response to the petitions. The periodic review is being done in accordance with Management Directive 6.6 and the staff response to the TA Technical Associates suggestions is enclosed.

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With regard to RG 4.21, TA Technical Associates recommended utilization of automatic real-time continuous alarming radiation monitoring systems at several places in the guide. In a few cases the staff agreed with the suggestions. However, an automatic real-time alarming radiation monitoring system is not appropriate in all cases. For example, such a requirement may be an un-necessary burden for facilities that use little or no liquids. In that case, the focus should be on inventory control. Therefore, although we agree with a few of TA Technical Associate's editorial suggestions, the staff concludes that these do not warrant revision of the guide at this time. The staff will retain the comments should the staff decide to revise the guide in the future.

Enclosure:

1. Response to Review Questions for RG 4.21
2. Response to Public Suggestions

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DISTRIBUTION:

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