

April 30, 2010

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

SUBJECT: RECOMMENDATIONS CONCERNING DRAFT FINAL REVISION 1 OF
REGULATORY GUIDE 1.141, "CONTAINMENT ISOLATION PROVISIONS FOR
FLUID SYSTEMS"

Dear Dr. Abdel-Khalik:

Thank you for your letter of March 25, 2010, concerning Draft Final Revision 1 to Regulatory Guide (RG) 1.141, "Containment Isolation Provisions for Fluid Systems." I appreciate the time the Advisory Committee on Reactor Safeguards (ACRS) spent to provide its recommendations. The staff has reviewed the recommendations contained in that letter and has taken the actions listed below.

ACRS Recommendation 1:

Revision 1 of RG 1.141 should be issued as final after recommendation 2 has been addressed.

NRC Staff Response:

The staff agrees.

ACRS Recommendation 2:

RG 1.141 endorses ANSI N271-1976, "Containment Isolation Provisions for Fluid Systems," as providing a generally acceptable and adequate basis for use, subject to specific additional requirements. These additional requirements should include provisions similar to those included in Section 4.7.5 of 1989 ANSI/ANS 56.2, "Relief Valves in the Forward Flow Direction," regarding the use of relief valves for containment isolation:

- a) Minimize such use and limit it to only when there is no satisfactory alternative to either the system design or the selection of valve type;
- b) Specify the seating pressure of the relief valve to be at least 95 percent of the set pressure.

NRC Staff Response:

The guidance in RG 1.141 Revision 1 will incorporate Recommendation 2(a) regarding limiting use of relief valves whose discharge terminates outside primary containment with some additional wording for clarification.

The RG guidance will incorporate Recommendation 2(b) by including the provision that relief valve reseating pressure be greater than 1.425 times the containment design pressure. This would be consistent with RG 1.141 providing guidance regarding containment isolation provisions. A relief valve protecting system piping with a design pressure (e.g., 2485 psig) well above containment design pressure (e.g., 45 psig) is likely to have a set pressure well above containment design pressure. The guidance will seek to maintain a similar margin relationship with containment design pressure for valve reseating pressure as with the set pressure.

ACRS Recommendation 3:

Appropriate portions of the Standard Review Plan, NUREG-0800, should be revised for application to future reviews, consistent with Recommendation 2.

NRC Staff Response:

The staff will revise the appropriate portions of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," to incorporate additional guidance consistent with recommendation 2.

Sincerely,

/RA by Bruce S. Mallett for/

R. W. Borchardt
Executive Director
for Operations

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

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