UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

December 19, 2012

Mr. R. W. Borchardt
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: RESPONSE TO THE OCTOBER 26, 2012, EDO LETTER REGARDING TECHNICAL INFORMATION NEEDS AFFECTING POTENTIAL REGULATION OF EXTENDED STORAGE AND TRANSPORTATION OF SPENT NUCLEAR FUEL

Dear Mr. Borchardt:

In our letter dated September 11, 2012, we recommended that aging management programs (AMPs) for dry cask storage systems (DCSSs) should address the potential for stress corrosion cracking (SCC) in stainless steel canisters exposed to marine environments. We expanded on this recommendation by stating that AMPs should address the development and progression of SCC of stainless steel canisters currently in service in marine environments and should consider the potential for preventive maintenance techniques to mitigate SCC. We also stated that the staff should update guidance to ensure that future DCSSs destined for service in marine environments are fabricated using materials and processes known to significantly reduce the potential for SCC.

In your October 26, 2012, response letter, you stated that the NRC staff agrees that AMPs for DCSSs should address the potential for SCC in austenitic stainless steel canisters exposed to marine environments. We find this response to be satisfactory with two exceptions: (1) the response makes no reference to the issue of potential preventive maintenance techniques to mitigate SCC and (2) the response makes no reference to the updating of guidance to ensure that future DCSSs destined for service in marine environments are fabricated using materials and processes known to significantly reduce the potential for SCC.

You also stated that NUREG-1927, Section 3.4, provides guidance to NRC staff to verify that renewal applications include the identification of materials, environments, potential aging effects, and appropriate aging management activities for in-scope structures, systems, and components. However, we find that NUREG-1927 does not provide any explicit guidance on SCC for DCSSs in a marine environment.

We request that the staff consider these recommendations further.

Sincerely,

/RA/

J. Sam Armijo
Chairman

REFERENCES:

1. Letter to the Honorable Allison M. Macfarlane, Technical Information Needs Affecting Potential Regulation of Extended Storage and Transportation of Spent Nuclear Fuel September 11, 2012, (ML12255A067)

2. Letter to J, Sam Armijo, Chairman, ACRS; Response to the Advisory Committee on Reactor Safeguards Letter, on Technical Information Needs Affecting Potential Regulation of Extended Storage and Transportation of Spent Nuclear Fuel, dated October 26, 2012 (ML12292A638)

You also stated that NUREG-1927, Section 3.4, provides guidance to NRC staff to verify that renewal applications include the identification of materials, environments, potential aging effects, and appropriate aging management activities for in-scope structures, systems, and components. However, we find that NUREG-1927 does not provide any explicit guidance on SCC for DCSSs in a marine environment.

We request that the staff consider these recommendations further.

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