



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 28, 2017

Mr. Anthony Vitale
Site Vice-President, IPEC
Entergy Nuclear Operations, Inc.
450 Broadway, GSB PO Box 249
Buchanan, NY 10511-0249

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3, LICENSE
RENEWAL APPLICATION RAI SET 2017-05 (CAC NOS. MD5407 and MD5408)

Dear Mr. Vitale:

By letter dated April 30, 2007, Entergy Nuclear Operations, Inc. submitted an application pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 54, to renew the operating licenses DPR-26 and DPR-64 for Indian Point, Unit Nos. 2 and 3 for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

These requests for additional information were discussed with Richard Louie, and a mutually agreeable date for the response is within 45 days from the date of this letter. If you have any questions, please contact me at 301-415-6332 or e-mail william.burton@nrc.gov.

Sincerely,

/RA/

William Burton, Senior Project Manager
Project Management and Guidance Branch
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosure
Requests for Additional Information

cc w/encl: See next page

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INDIAN POINT
LICENSE RENEWAL APPLICATION (LRA)
REQUESTS FOR ADDITIONAL INFORMATION (RAI)

RAI 3.3.2-17-IP3-1

Background

Section 54.21(a)(3) of Title 10 of the *Code of Federal Regulations* (10 CFR) requires the applicant to demonstrate that the effects of aging for structures and components will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation. As described in SRP-LR, an applicant may demonstrate compliance with 10 CFR 54.21(a)(3) by referencing the GALL Report and when evaluation of the matter in the GALL Report applies to the plant.

As amended by letter dated December 15, 2016, LRA Table 3.3.2-17-IP3 states that fiberglass city water piping exposed to soil has no aging effect and no recommended aging management program.

The subject letter also describes the change to Table 3.3.2-17-IP3 as: “[p]ermanently repaired pipe (line #1033) with a pressure retaining clamp and using CSI Pipe Wrap-Ply material (carbon fiber) applied on the exterior circumference of the pipe and clamp.”

Issue

1. It is unclear to the staff, based on conflicting information provided above, if the line item represented in LRA Table 3.3.2-17-IP3 is fiberglass piping or is carbon fiber applied on the exterior circumference of the pipe.
2. The “parameters monitored or inspected” program element of GALL Report AMP XI.M41, “Buried and Underground Piping and Tanks,” as modified by LR-ISG-2015-01, “Changes to Buried and Underground Piping and Tank Recommendations,” recommends visual inspections of the external surface condition of polymeric materials to detect (a) loss of material due to wear; and (b) cracking, blistering, and change in color due to water absorption.

Request

1. Clarify if the line item represented in LRA Table 3.3.2-17-IP3 is fiberglass piping or is carbon fiber applied on the exterior circumference of the pipe.
2. State the basis for why (a) loss of material due to wear; and (b) cracking, blistering, and change in color due to water absorption are not aging effects requiring management for polymeric materials exposed to soil.

RAI 3.3.2-19-44-IP2-1

Background

Section 54.21(a)(3) of 10 CFR requires the applicant to demonstrate that the effects of aging for structures and components will be adequately managed so that the intended function(s) will be maintained consistent with the current licensing basis for the period of extended operation. As described in SRP-LR, an applicant may demonstrate compliance with 10 CFR 54.21(a)(3) by

Enclosure

referencing the GALL Report and when evaluation of the matter in the GALL Report applies to the plant.

As amended by letter dated December 15, 2016, LRA Table 3.3.2-19-44-IP2 states that plastic chlorination system piping and valves exposed externally to indoor air and internally to treated water have no aging effects and no recommended aging management programs.

NUREG-1801, "Generic Aging Lessons Learned (GALL) Report," is referenced as a technical basis document in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (SRP-LR). The GALL Report lists generic aging management reviews (AMRs) of systems, structures, and components (SSCs) that may be in the scope of license renewal applications (LRAs). The GALL Report provides little differentiation among generic terms such as plastic for mechanical systems. Therefore, NRC issued the Regulatory Issue Summary (RIS) 2012-02 dated January 24, 2012, "Insights into Recent License Renewal Application Consistency with the Generic Aging Lessons Learned Report." This document provides guidance to the industry in regard to further information recommended in license renewal applications. In regard to plastic materials, the RIS recommends that applicants provide further information in a plant-specific note because the term "plastic" is not sufficient to evaluate potential aging effects. The RIS states:

"The plant-specific note should state the actual material type or grade (e.g., polyvinyl chloride (PVC), fiberglass-reinforced vinyl ester) and identify environmental considerations that are not obvious from the LRA, FSAR, or license renewal drawings, such as exposure to ultraviolet light, ozone, high temperatures, chemicals, or radiation. The staff requires this information because susceptibility to aging varies widely with the specific material type and environment."

An applicant should ensure that the appropriate material type details are included in the LRA when it states that no Aging Effects Requiring Management or AMP is applicable for plastic components.

Issue

For the plastic piping and valves in the chlorination system, the staff does not have sufficient information on the specific type of plastic and the indoor air and treated water environments to evaluate whether the appropriate aging effects have been identified.

Request

1. State the specific type of plastic material used for the chlorination system piping and valves.
2. State the degree to which the external surfaces of the subject piping might be exposed to ultraviolet light, ozone, high temperatures, chemicals, and radiation.
3. State the chlorine concentration and type of chlorine to which the piping will be exposed.
4. If the above environmental factors are present, state the basis for why the piping is not subject to aging effects requiring management.