

January 5, 2009

Mr. Michael P. Gallagher
Vice President License Renewal Projects
AmerGen Energy Company, LLC
200 Exelon Way
Kennett Square, PA 19348

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THREE MILE ISLAND
NUCLEAR STATION, UNIT 1, LICENSE RENEWAL APPLICATION, (TAC NO.
MD7701)

Dear Mr. Gallagher:

By letter dated January 8, 2008, AmerGen Energy Company, LLC (AmerGen) submitted an application pursuant to 10 *Code of Federal Regulation* Part 54 (10 CFR Part 54) to renew the operating license for Three Mile Island Nuclear Station, Unit 1 for review by the U.S. Nuclear Regulatory Commission (NRC or the staff).

By letter dated October 16, 2008 (ADAMS Accession No. ML082520614) the staff requested additional information. By letter dated November 12, 2008 (ADAMS Accession No. ML083190038) you replied to the request.

Based on the review of your response, the staff has identified, in the enclosure, areas where additional information is needed to complete the review. Further requests for additional information may be issued in the future.

Items in the enclosure were discussed with Chris Wilson, of your staff, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-2878 or e-mail Jay.Robinson@nrc.gov.

Sincerely,

JRA

Jay Robinson, Sr. Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure:
As stated

cc w/encl: See next page

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Kennett Square, PA 19348

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Jay Robinson, Sr. Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosure:
As stated

cc w/encl: See next page
DISTRIBUTION: See next page
ADAMS Accession No.: ML083510040

OFFICE	LA:DLR	DLR:RER1	PM:DLR:RPB1	BC:DLR:RPB1
NAME	SFiguroa	JDozier	JRobinson	DPelton
DATE	12/31/08	1/5/09	1/5/09	1/5/09

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Letter to M. Gallagher from J. Robinson dated January 5, 2009

DISTRIBUTION:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THREE MILE ISLAND
NUCLEAR STATION, UNIT 1, LICENSE RENEWAL APPLICATION (TAC NO.
MD7701)

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DKern

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Three Mile Island Nuclear Station,
Unit 1

- 2 -

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REQUEST FOR ADDITIONAL INFORMATION (RAI)

THREE MILE ISLAND NUCLEAR STATION, UNIT – 1

LICENSE RENEWAL APPLICATION

RAI#: AMR-GENERIC-2

LRA Section: 3.X.1 Tables, Associated Evaluation Paragraphs

Background:

In the Three Mile Island, Unit – 1, (TMI-1), License Renewal Application, section 3.X.1 tables, “Not Applicable” is listed in the discussion column for many line items (ie; lines 3.1.1-23 and 3.2.1-17). For many of the line items, a subsection of the LRA is referenced (ie; “See Subsection 3.1.2.2.7,” and “See Subsection 3.2.2.2.9”). In many cases, the referenced subsection does not provide a specific reason why the item is not applicable. (ie: “Item Number 3.2.1-17 is not applicable to TMI-1. This component, material, environment, and aging effect/mechanism does not apply to Engineered Safety Features”).

In AmerGen Energy Company, LLCs (the applicant) response to RAI-AMR-GENERIC-1 (ADAMS Accession No. ML083190038), the applicant indicated that “Not Applicable” has been used when the component, material and environment combination does not exist in the identified GALL system grouping and also when the component, material and environment combination does exist but the LRA Table 3.x.1 item was not used because a different Table 3.x.1 item was selected to manage the identified aging effect/mechanism.

Issue:

Based on the response to RAI-AMR-GENERIC-1, the staff cannot determine the specific reason why certain items are not applicable and therefore, cannot complete its evaluation. The two reasons cited in the response to RAI-AMR-GENERIC-1 are general reasons and not specific to each item.

Request:

For each of the LRA Table 3.x.1 items where “Not Applicable” is listed in the “Discussion” column, indicate the specific reason why the item is considered not applicable to TMI-1. For example, one reason may be that the component, material, environment combination does not exist at TMI-1. Items that are listed as “Not Applicable” due to reactor type (BWR vs. PWR) do not have to be listed.

If the component, material and environment does exist but the LRA Table 3.x.1 item was not used, indicate what other 3.x.1 item was selected to manage the identified aging effect/mechanism.

RAI#: AMR-GENERIC-3

Background:

In AmerGens responses to RAIs 3.3.1.21-1, 3.3.1.32-1, 3.3.1-48-1, 3.3.2.2-1, and 3.3.2.2-3 (ADAMS Accession No. ML083190038), Electric Power Research Institute (EPRI) Report 1010639, "Non-Class 1 Mechanical Implementation Guideline and Mechanical Tools", Revision 4, is used to justify elimination of aging mechanisms from evaluation.

Issue:

Only citing EPRI Report 1010639 as the basis to justify elimination of aging mechanisms from evaluation does not provide sufficient information to enable the staff to complete its evaluation.

Request:

Provide the following:

For RAIs 3.3.1.21-1 and 3.3.2.2-3, state the reasons why the loss of material due to fouling is not predicted in steel components in a lubricating oil environment.

For RAIs 3.3.1.32-1 and 3.3.2.2-1, state the reasons why pitting and crevice corrosion is not predicted for copper alloy with less than 15% zinc in a fuel oil environment.

For RAI 3.3.1.48-1, state the reasons why galvanic corrosion is not predicted for component, material, and environment combinations when the material subject to aging management review (AMR) is not in contact with a material of different electrochemical potential.

RAI# 3.1.1-2

Background:

In AmerGens response to RAI# 3.1.1-1 (ADAMS Accession No. ML083190038) it is stated that the ISI program includes examination of small bore piping welds and that under the RISI program, socket welds have been selected for VT-2 examination. The response further states that the RISI program includes small bore piping welds.

Issue:

Welds selected for inspection are based on RISI, however, it is not clear if welds specific to the reactor coolant system (RCS) and Core Flooding System will be subject to inspection.

Request:

Provide information indicating which small bore piping welds of the RCS and Core Flooding System receive volumetric or VT-2 inspection. Identify inspections and the schedule for welds in small bore piping where cracking has been discovered.

RAI#: 3.1.2.2.7-2

LRA Section: 3.1.2.2.7, Cracking due to Stress Corrosion Cracking, and AmerGen Response to RAI# 3.1.2.2.7-1

Background:

In AmerGens response to RAI 3.1.2.2.7-1 (ADAMS Accession No. ML083190038) it was stated that the stainless steel reactor vessel closure head flange leak detection line and the stainless steel bottom-mounted instrument guide tubes exist and are in scope for license renewal. The response also stated that the components are stainless steel with an external environment of Air in Borated Water Leakage and an internal environment of Reactor Coolant. The response also stated that the aging management review (AMR) results for these components are included in LRA Table 3.1.2-2 and are shown on pages 3.1-74 and 3.1-75 of the LRA.

Issue:

The Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants, NUREG-1800, Rev. 1, (SRP-LR), Section 3.1.2.2.7, paragraph 1, states that cracking due to stress corrosion cracking (SCC) could occur in the stainless steel reactor vessel flange leak detection line and the bottom-mounted instrument guide tubes exposed to reactor coolant. The GALL Report recommends further evaluation of a plant specific aging management program (AMP) to ensure that the aging effects are adequately managed.

The AMPs credited in the LRA to manage the aging effect of cracking due to SCC in the stainless steel reactor vessel flange leak detection line and the bottom-mounted instrument guide tubes are Water Chemistry and the ASME Section XI Inservice Inspection, Subsections IWB, IWC and IWD.

Request:

Explain how the aging effect of cracking due to SCC in the stainless steel reactor vessel closure head flange leak detection line and the stainless steel bottom-mounted instrument guide tubes will be detected by the ASME Section XI Inservice Inspection, Subsections IWB, IWC and IWD and what corrective actions would be taken if indications of cracking or leakage are found in these components.

RAI# B.2.1.20-2

Background:

The staff reviewed API Standard 1631 and noted that Section 10.6.2 provides a requirement to install cathodic protection if UT examination determines the wall thickness to be between 75% and 85% of the original wall thickness.

Issue:

The staff noted that wall thicknesses between 75% and 85% of the original wall thickness indicates active loss of material and measures should be implemented to mitigate corrosion.

Request:

Confirm that cathodic protection will be implemented if wall thicknesses between 75% and 85% of the original wall thickness are detected, or indicate what measures will be taken to mitigate corrosion if cathodic protection will not be implemented.