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

May 26, 2015

LICENSEE: DTE Electric Company

FACILITY: Fermi 2

SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALLS HELD ON DECEMBER 5, 2014, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND DTE ELECTRIC COMPANY, CONCERNING REQUESTS FOR ADDITIONAL INFORMATION PERTAINING TO THE FERMI 2 LICENSE RENEWAL APPLICATION (TAC NO. MF4222)

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of DTE Electric Company (DTE or the applicant) held two telephone conference calls on December 5, 2014, to discuss and clarify the staff's draft requests for additional information (DRAIs) B.1.22-1, 3.1.2.3.2-1, 3.5.2-1, 3.5.2.78-1, 4.2.5-1, 4.2.6-1, B.1.1-1, B.1.17-2, 4.2.2-1, and 4.2.2-3 concerning the Fermi 2 license renewal application. The telephone conference calls were useful in clarifying the intent of the staff's DRAIs.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains a listing of the DRAIs discussed with the applicant, including a brief description on the status of the items.

The applicant had an opportunity to comment on this summary.

/RA/

Daneira Meléndez-Colón, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures:
1. List of Participants
2. Summary of Telephone Conference Calls

cc w/encls: Listserv

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TELEPHONE CONFERENCE CALLS
FERMI 2
LICENSE RENEWAL APPLICATION

LIST OF PARTICIPANTS
DECEMBER 5, 2014

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ENCLOSURE 1

SUMMARY OF TELEPHONE CONFERENCE CALLS
FERMI 2
LICENSE RENEWAL APPLICATION
DECEMBER 5, 2014

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of DTE Electric Company (DTE or the applicant) held two telephone conference calls on December 5, 2014, to discuss and clarify the following draft requests for additional information (DRAIs) concerning the Fermi 2 license renewal application (LRA).

DRAI B.1.1-1

Background:

Generic Aging Lessons Learned (GALL) Report Aging Management Program (AMP) XI.M29, "Aboveground Metallic Tanks," recommends that sealant or caulking be applied to outdoor tanks at the external interface between the tank and concrete foundation. The function of the sealant or caulk is to minimize the amount of water and moisture penetrating the interface between the tank and concrete foundation. The GALL Report, as revised by License Renewal Interim Staff Guidance (LR-ISG)-2012-02, "Aging Management of Internal Surfaces, Fire Water Systems, Atmospheric Storage Tanks, and Corrosion Under Insulation," further states that sealant or caulking is not necessary if the configuration of both the tank bottom and foundation is sloped in such a way that water cannot accumulate. LRA Section B.1.1 states that, "[i]n accordance with installation and design specifications, the tanks do not employ caulking or sealant at the concrete/tank interface."

The design of the condensate storage tank (CST) foundation is a concrete ring with the aluminum tank bottom in contact with graded sand. The design also incorporates drains to facilitate the removal of water from the interior of the concrete ring foundation. However, the top surface of the concrete ring is not sloped to prevent water and moisture intrusion at the outside interface of the ring foundation.

Issue:

It is not clear to the staff if the applicant's Aboveground Metallic Tanks Program contains the appropriate preventive actions to manage the aging associated with the CST. The accumulation of water or moisture at the outside interface of the ring foundation could result in the loss of material or cracking of the aluminum.

Request:

In the absence of caulking or sealant, state how the aging effects of loss of material and cracking of the aluminum in the proximity of the interface between the tank and concrete foundation will be managed during the period of extended operation.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI B.1.1-1.

This request will be sent as a formal RAI.

DRAI B.1.17-2

Background:

GALL Report AMP X.M1, "Fatigue Monitoring," prevents fatigue time-limited aging analyses (TLAAs) from becoming invalid by assuring that the fatigue usage resulting from actual operational transients does not exceed the American Society of Mechanical Engineers (ASME) Code Section III design limit of 1.0. Crack initiation is assumed to have started when the fatigue usage factor reaches a value of 1.0 (the Code design limit). The applicant's Fatigue Monitoring Program monitors the number of occurrences of plant transients in order to ensure that cumulative fatigue usage remains below component design limits based on fatigue crack initiation. However, LRA Table 4.1-1, "List of Fermi 2 TLAAs and Resolution," includes a flaw evaluation TLAA to be managed during the period of extended operation using the Fatigue Monitoring Program. The flaw evaluation TLAA is the main steam bypass lines discussed in LRA Section 4.7.6. Flaw evaluation involves flaw growth analyses; therefore the fatigue usage factor of 1.0 based on crack initiation has been exceeded or is not applicable.

GALL Report AMP X.M1, "Fatigue Monitoring," recommends tracking the number of each plant design transient that significantly contributes to the fatigue usage factor. The events being counted by the applicant's Fatigue Monitoring Program are included in LRA Table 4.3-1, "Analyzed Transients with Projects." The staff noted that Table 4.3-1 includes events that are being counted for the main steam bypass lines that are based on operating time as opposed to plant transients.

Issue:

(1) LRA Table 4.1-1 contains a flaw evaluation TLAA that will be managed by the Fatigue Monitoring Program during the period of extended operation. The applicant's Fatigue Monitoring Program tracks plant transients to ensure that cumulative fatigue usage remains below component design limits based on fatigue crack initiation. The applicant's Fatigue Monitoring Program does not have an enhancement to ensure that analyses other than cumulative fatigue usage remain valid and within acceptable limits during the period of extended operation. It is unclear to the staff if flaw evaluations and flaw growth analyses are within the scope of the applicant's Fatigue Monitoring Program.

(2) LRA Table 4.3-1 contains events other than plant transients that will be tracked by the Fatigue Monitoring Program during the period of extended operation. The applicant's Fatigue Monitoring Program does not have an enhancement to track cycles other than plant transients. It is unclear to the staff if tracking events other than plant design transients are within the scope of the applicant's Fatigue Monitoring Program.

Request:

(1a) Identify all TLAAs that will use the Fatigue Monitoring Program to ensure that any analyses or design limit other than a fatigue usage factor for crack initiation is not exceeded during the period of extended operation.

(1b) Justify using the Fatigue Monitoring Program to ensure that any analyses or design limit is not exceeded, other than a fatigue usage factor for crack initiation.

(1c) If the Fatigue Monitoring Program is being used to ensure that any analyses or design limit other than a fatigue usage factor for crack initiation is not exceeded, update the AMP as appropriate.

(2a) Identify all events and cycles that will be tracked by the Fatigue Monitoring Program during the period of extended operation that are not plant design transients.

(2b) Justify using the Fatigue Monitoring Program for tracking events and cycles that are not plant transients. State the basis for the adequacy of the Fatigue Monitoring Program's capability to track events and cycles that are not plant transients.

(2c) If events and cycles other than plant transients are being tracked during the period of extended operation, update the program elements of the Fatigue Monitoring Program to reflect the applicable events and cycles.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI B.1.17-2. The applicant understands the staff's concerns and will provide a response to the RAI when issued.

This request will be sent as a formal RAI.

DRAI B.1.22-1

Background:

The LRA states that the Inservice Inspection - IWF Program, with enhancements, is consistent with GALL Report AMP XI.S3, "ASME Section XI, Subsection IWF." The "detection of aging effects" program element in GALL Report AMP XI.S3 recommends that, for high-strength structural bolting (actual measured yield strength greater than or equal to 150 ksi) in sizes greater than 1 inch nominal diameter, volumetric examinations should be performed in addition to VT-3 to detect cracking. GALL Report AMP XI.S3 recommendations for aging management of high-strength structural bolting include the following:

- The "scope of program" program element states that the scope of the program includes high-strength structural bolting.

- The “preventive actions” program element recommends using bolting material that has an actual measured yield strength less than 150 ksi.
- The “preventive actions” program element states that molybdenum disulfide (MoS_2) should not be used as a lubricant due to its potential contribution to stress corrosion cracking (SCC), especially for high-strength bolts.
- The “parameters monitored or inspected” program element recommends that high-strength structural bolting susceptible to SCC be monitored for cracking.
- The “detection of aging effects” program element states that the volumetric examination may be waived with adequate plant-specific justification.

Issue:

LRA Section B.1.22, “Inservice Inspection-IWF,” includes enhancements to revise plant procedures to emphasize “the use of lubricants and sealants for high-strength bolting,” and to identify unacceptable conditions such as “cracked or sheared bolts, including high-strength bolts.” However, it is not clear whether there are high-strength structural bolts (actual measured yield strength greater than or equal to 150 ksi) in sizes greater than 1 inch nominal diameter within the scope of the Inservice Inspection-IWF Program. In addition, it is not clear how the applicant plans to manage aging for these components consistent with GALL Report AMP XI.S3 recommendations in the “preventive actions,” “parameters monitored or inspected,” and “detection of aging effects” program elements described above.

The LRA also states that “[p]lant procedures prohibit the use of lubricants containing molybdenum disulfide. Since the use of this type of lubricant is prohibited in plant procedures and plant procedures provide the technical guidance for installation requirements […], the potential for [SCC] for high-strength structural bolting material, i.e., ASTM A325 and A490, is not plausible.” Given that the use of molybdenum disulfide is not the only contributor to SCC of high-strength bolts; the staff has not determined that there is sufficient basis to waive volumetric examination of high-strength structural bolting (actual measured yield strength of 150 ksi) in sizes greater than 1 inch diameter.

Request:

(1) State whether or not there are high-strength structural bolts (actual measured yield strength greater than or equal to 150 ksi) in sizes greater than 1 inch diameter within the scope of the Inservice Inspection-IWF Program.

(2) If high-strength structural bolts (actual measured yield strength greater than or equal to 150 ksi) in sizes greater than 1 inch diameter are within the scope of the Inspection-IWF Program, state how the recommendations for managing degradation of high-strength bolts described in the “preventive actions,” “parameters monitored or inspected,” and “detection of aging effects” program elements will be implemented for the Inservice Inspection-IWF Program.

(3) If the above recommendations will not be implemented (i.e., an exception is being taken to the GALL Report recommendations), provide the associated technical justification. If applicable, provide additional information regarding plant-specific justification to waive volumetric examinations to address the potential of SCC for high-strength structural bolts consistent with the GALL Report AMP.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI B.1.22-1.

The applicant requested 75 days to provide a response to this RAI. The staff agreed with the applicant's request.

This request will be sent as a formal RAI.

DRAI 3.1.2.3.2-1

Background:

LRA Table 3.1.1-1, item 3.1.1-104, addresses X-750 alloy reactor vessel internal components exposed to reactor coolant and neutron flux. The GALL Report recommends that cracking due to intergranular SCC be managed for this material and environment combination. The LRA states that this item was not used and is not applicable because Fermi 2 vessel internals do not have X-750 alloy core plate components.

LRA Table 3.1.2-2 states that jet pump assembly hold-down beam and slip joint clamp adjustable bolt and ratchet lock spring; and, the jet pump assembly restrainer bracket and auxiliary spring wedge assembly are made of X-750 nickel alloy and are exposed to reactor coolant and neutron flux. The LRA references LRA Table 3.1.1-1, item 3.1.1-103, for these components.

Issue:

The staff is unclear why Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants (SRP-LR) Table 3.1.1-1, item 3.1.1-104, is not applicable to Fermi 2 when the material and environment combination is referenced in the LRA.

Request:

Provide the basis why SRP-LR Table 3.1.1-1, item 3.1.1-104, is not applicable to Fermi 2 reactor vessel internals components.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI 3.1.2.3.2-1.

The applicant stated that jet pump components are addressed under Table 3.1.1-1, item 3.1.1-103 and not under item 3.1.1-104.

This RAI will not be issued.

DRAI 3.5.2-1

Background:

Enhancement 2 in LRA Section B.1.18 states that procedures will be revised to require visual inspections of in-scope fire wrap and fire stop materials constructed of fibersil cloth, cerafoam, kaowool, Thermo-lag®, Flamemastic®, and Pyrocrete®.

Issue:

Section 54.21(a)(1) of Title 10 of the *Code of Federal Regulations* (10 CFR) requires that the integrated plant assessment identify and list the passive and long-lived structures and components subject to an aging management review (AMR).

LRA Table 3.5.2-4 includes AMR items for fire stops and fire wraps constructed from carborundum durablanket, carborundum fibersil cloth, fiberboard, silicone elastomers, and Thermo-lag®. However, LRA Table 3.5.2-4 does not appear to include AMR items for cerafoam, kaowool, Flamemastic® or Pyrocrete®.

During the AMP Audit, the staff noted that, in the AMR document for bulk commodities, the applicant uses carborundum durablankets, carborundum fibersil cloth, silicone fabric boot, silicone elastomers, and steel for fire stops and fire wraps.

There appears to be a discrepancy between the materials that are described in the enhancement and the materials apparently used at Fermi 2 for fire stops and fire wraps.

Request:

State whether cerafoam, kaowool, Flamemastic®, and Pyrocrete® are used as fire stops or fire wraps at Fermi 2. If so, state how the effects of aging of these components and materials will be managed. If AMR items for these components and materials do not already exist in the LRA, provide the appropriate revisions to the LRA.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI 3.5.2-1. The applicant understands the staff's concerns and will provide a response to the RAI when issued.

This request will be sent as a formal RAI.

DRAI 3.5.2.78-1

Background:

LRA Table 3.5.1, item 3.5.1-78, states that the "Steel components: spent fuel pool liner" is managed for loss of material and cracking by the Water Chemistry Program and monitoring of the leak chase channel drainage system in accordance with technical specifications. LRA Table 3.5.2-1 includes several stainless steel components exposed to a fluid environment that do not line the spent fuel pool and which reference item 3.5.1-78, note E, to manage loss of material. These components include the reactor cavity liner, refueling bellows, and skimmer surge tank. The staff also noted that monitoring of the leak chase channel drainage system is not performed on AMR items in LRA Table 3.5.2-1 that reference 3.5.1-78, note E.

LRA Table 3.0-2 defines a fluid environment as containing either raw water or treated water and includes the following GALL Report environments: ground water, treated water, treated water at greater than 140°F, flowing water, and standing water.

For stainless steel exposed to treated water at greater than 140°F, the GALL Report recommends AMP XI.M2, "Water Chemistry," to manage cracking due to stress corrosion cracking and AMP XI.M32, "One-Time Inspection," to verify the effectiveness of the Water Chemistry Program.

Issue:

It is unclear to the staff if appropriate activities to verify the effectiveness of the Water Chemistry Program are being performed for the components in LRA Table 3.5.2-1 that reference AMR item 3.5.1-78. It is also unclear to the staff if the aging effect of cracking is being managed for stainless steel components exposed to a fluid environment that reference AMR item 3.5.1-78.

Request:

(1) Provide clarification on how the effectiveness of the Water Chemistry Program is being verified for items that reference 3.5.1-78, note E, in LRA Table 3.5.2-1.

(2) State the basis for why the aging effect of cracking is not being managed for AMR items that reference 3.5.1-78.

Discussion:

The applicant requested the staff clarify the numbering of this draft RAI. The applicant questioned why the draft RAI is numbered 3.5.2.78-1 rather than 3.5.1.78-1. The staff provided clarification related to the numbering of the draft RAI and stated that the concern is related to LRA table 3.5.2-1.

The applicant understands and will provide a response to the RAI when issued.

This request will be sent as a formal RAI.

DRAI 4.2.5-1

Background:

In LRA Section 4.2.5, "Reactor Vessel Circumferential Weld Relief," and LRA Table 4.2-6, the applicant provides its TLAA for the calculation of the mean adjusted reference temperature value (i.e., mean RT_{NDT} value) of the limiting circumferential weld (i.e., weld 1-313, as made from Heat #10137) in the beltline of the reactor pressure vessel (RPV), as assessed to the end of the period of extended operation (i.e., 52 EFPY).

LRA Section B.1.38 provides the applicant's Reactor Vessel Surveillance Program. The LRA indicates that the AMP is based on implementation of the Integrated Surveillance Program (ISP) that was approved by the staff in Electric Power Research Institute (EPRI) Boiling Water Reactor Vessel and Internals Project (BWRVIP) Technical Report (TR) No. BWRVIP-86-A, Revision 1, and that the AMP relies on the surveillance data obtained from specific RPV surveillance materials in ISP host reactors that are representative of materials in the base metal and weld components of the Fermi 2 RPV.

Issue:

LRA Table 4.2-6 does not include a corresponding mean RT_{NDT} analysis for RPV lower shell-to-lower-intermediate-shell circumferential weld 1-313 (Heat No. 10137) that is based on ISP surveillance data for this weld component, and uses Section 5.2 of TR BWRVIP-86-A, Revision 1, for the chemistry factor (CF) and ΔRT_{NDT} values used in the mean RT_{NDT} analysis.

Request:

Clarify whether the surveillance weld materials from the host reactors representing Fermi 2 in the EPRI BWRVIP ISP (i.e., the BWRVIP-86-A, Revision 1, program) are a match to the weld heat for RPV lower shell-to-lower-intermediate-shell circumferential weld 1-313 (i.e., Heat No. 10137). If so, provide the basis why LRA Table 4.2-6 does not include an additional mean RT_{NDT} calculation for this circumferential weld using: (a) the applicable ISP surveillance weld data from the host reactors, and (b) the methodology in Section 5.2 of TR No. BWRVIP-86-A, Revision 1, for calculating the CF and ΔRT_{NDT} values in the mean RT_{NDT} calculation from the applicable ISP surveillance weld data. If the surveillance weld materials from the host reactors do not match the heat for RPV circumferential weld 1-313, clarify how the ISP surveillance weld

data from the host reactors supports the adequacy of the predicted ΔRT_{NDT} value used in the mean RT_{NDT} calculation for RPV circumferential weld 1-313.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI 4.2.5-1.

The applicant stated that the response to this request will include proprietary information. The applicant understands the staff's concerns and will provide a response to the RAI when issued.

This request will be sent as a formal RAI.

DRAI 4.2.6-1

Background:

LRA Section 4.2.6 and LRA Table 4.2-7 provide the applicant's TLAA on mean RT_{NDT} (reference temperature for nil-ductility transition) for the limiting axial welds in the beltline of the RPV, as projected to the end of the period of extended operation (i.e., 52 effective full power years [EFPY]).

LRA Section B.1.38 provides the applicant's Reactor Vessel Surveillance Program. The LRA indicates that the AMP is based on implementation of the ISP that has been approved by the staff in EPRI BWRVIP TR No. BWRVIP-86-A, Revision 1. The applicant's AMP relies on the surveillance data obtained from specific RPV surveillance materials in other reactors (i.e., ISP host reactors) that are representative of the base metal and weld materials in the Fermi 2 RPV.

Issue:

LRA Table 4.2-7 does not include a mean RT_{NDT} analysis for RPV lower shell axial welds 2-307A, B, and C (Tandem Heat No. 13253/12008) that is based on the ISP surveillance data for these weld components and is calculated (in part) using Section 5.2 of TR No. BWRVIP-86-A, Revision 1, for the CF and ΔRT_{NDT} values used in the mean RT_{NDT} analysis.

Request:

Clarify whether the surveillance weld materials from the host reactors representing Fermi 2 in the BWRVIP ISP match the weld heat for RPV lower shell axial welds 2-307A, B, and C (Tandem Heat No. 13253/12008). If so, provide the basis why LRA Table 4.2-6 does not include an additional mean RT_{NDT} calculation for these axial welds using: (a) the applicable ISP surveillance data, and (b) the methodology for calculating CF and ΔRT_{NDT} values in Section 5.2 of TR No. BWRVIP-86-A, Revision 1. If the surveillance weld materials from the host reactors do not match the heat for RPV axial welds 2-307A, B, and C, clarify how the ISP surveillance weld data from the host reactors supports the adequacy of the predicted ΔRT_{NDT} value used in the mean RT_{NDT} calculation for RPV axial welds 2-307A, B, and C.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI 4.2.6-1. The staff stated that it will revise the draft RAI to request the results of the calculations.

The applicant stated that the response to this request will include proprietary information. The applicant understands the staff's concerns and will provide a response to the RAI when issued.

This request will be sent as a formal RAI.

DRAI 4.2.2-1

Background:

LRA Section 4.2.2 addresses the applicant's TLAA on adjusted reference temperatures (ARTs). LRA Table 4.2-2 describes the ART values of the reactor vessel beltline materials and other data related to the beltline materials and ARTs (e.g., material chemistry, chemistry factor, 52-EFPY fluence, initial reference temperature for nil-ductility transition (RT_{NDT}), and RT_{NDT} shift). The LRA states that the ART values in LRA Table 4.2-2 are calculated in accordance with Regulatory Guide (RG) 1.99 Position 1.1 (i.e., by using the chemistry factor tables and fluence factor described in RG 1.99).

In comparison, LRA Table 4.2-3 describes the ART values of the surveillance plate and weld for the applicant's reactor vessel materials based on the surveillance data of the BWRVIP ISP. LRA Section 4.2.2 states that the representative surveillance plate and weld materials were evaluated for 52 EFPYs in accordance with RG 1.99 Position 2.1 (surveillance data available) to generate the ART values in LRA Table 4.2-3. The LRA and onsite documentation also indicate that the reactor vessel surveillance data are described in BWRVIP-135, Revision 2, "Integrated Surveillance Program (ISP) Data Source Book and Plant Evaluations."

Issue:

LRA Table 4.2-3 describes ART values and associated fluences of the surveillance plate and weld materials. However, LRA Table 4.2-3 is inconsistent with LRA Table 4.2-2 because it does not address other related data (e.g., material chemistry, chemistry factor, initial RT_{NDT} and RT_{NDT} shift). The staff cannot determine the adequacy of the ARTs with insufficient data for the surveillance materials.

In addition, the LRA does not clearly address whether the ART values of the surveillance materials are used in the other neutron embrittlement TLAAs (e.g., LRA Section 4.2.3 for pressure-temperature limits; Section 4.2.5 for circumferential weld inspection relief; and Section 4.2.6 for axial weld failure probability), or are provided for information only.

Request:

1. Provide the material chemistry, chemistry factor, initial RT_{NDT} and RT_{NDT} shift for the surveillance materials listed in LRA Table 4.2-3, or justify why LRA Table 4.2-3 for the surveillance materials does not contain this data.

   As part of the response, identify the specific heat of the surveillance material which was used to generate credible surveillance data, and the applicant's reactor vessel material which is represented by the credible surveillance material.

2. Clarify whether ART values based on credible surveillance data, per RG 1.99 Position 2.1, are used as the data of limiting materials in the other neutron embrittlement TLAAs (e.g., LRA Sections 4.2.3, 4.2.5 and 4.2.6). If credible surveillance data are not used, confirm whether the conclusions of these TLAAs are not affected by the use of credible ART values.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI 4.2.2-1. The staff stated that it will revise Request 1 as follows:

> Provide the material chemistry, chemistry factor, initial RT_{NDT} , RT_{NDT} shift and other related data for the surveillance materials in a consistent format with LRA Table 4.2-2, or justify why LRA Table 4.2-3 for the surveillance materials does not contain this data.

The applicant stated that the response to this request will include proprietary information. The applicant understands the staff's concerns and will provide a response to the RAI when issued.

This request will be sent as a formal RAI.

DRAI 4.2.2-3

Background:

LRA Table 4.2-2 describes the ARTs of the reactor vessel beltline components. The staff also noted that the following reference indicates that due to insufficient material information, the applicant determined the initial RT_{NDT} (i.e., unirradiated reference temperature) of N16 water level instrumentation nozzles using NRC Branch Technical Position (BTP) MTEB 5-2, paragraph B.1.1(4).

- Section 3.2 of GE Hitachi Nuclear Energy Report, NEDO-33785, Revision 1, "DTE Energy/Enrico Fermi Plant 2 Pressure and Temperature Limits Report Up To 24 and 32 Effective Full-Power Years," October 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13004A135)

The reference document above also indicates that testing for one N16 nozzle material, performed at a single temperature (10 °F), generated a minimum Charpy V-notch energy of 30 ft-lbs. This reference further indicates that the initial RT_{NDT} of the N16 nozzles was

determined to be 30 °F, which is 20 °F above the test temperature, based on NRC BTP MTEB 5-2, paragraph B.1.1(4). The NRC position, which the applicant used, is currently referred to as NRC BTP 5-3, paragraph 1.1(4), as described in NUREG-0800, Standard Review Plan, Chapter 5.

Issue:

A recent letter from the AREVA Inc. to the NRC (ADAMS Accession No. ML14038A26), dated January 30, 2014, addresses potential non-conservatism in NRC BTP 5-3, paragraph 1.1(4). The LRA and onsite documentation do not clearly address how the applicant will resolve the concern about potential non-conservatism in the initial RT_{NDT} of N16 water level instrumentation nozzles.

Request:

Explain why the initial RT_{NDT} of N16 nozzles in LRA Section 4.2.2 is adequate given the potential non-conservatism in NRC BTP 5-3, paragraph 1.1(4). As part of the response, confirm whether the applicant's ART analysis uses a potentially non-conservative BTP 5-3 position (i.e., position 1.1(3)(a), 1.1(3)(b) or 1.1(4)) to determine initial RT_{NDT} for any other reactor vessel materials.

Discussion:

The applicant requested the staff clarify its request. The staff provided clarification related to its concern in draft RAI 4.2.2-3.

The applicant understands the staff's concerns and will provide a response to the RAI when issued.

This request will be sent as a formal RAI.