

November 15, 2002

LICENSEE: Duke Energy Corporation

FACILITIES: McGuire, Units 1 and 2, and, Catawba Units 1 and 2

SUBJECT: SUMMARY OF TELECOMMUNICATION WITH DUKE ENERGY CORPORATION TO DISCUSS MATTERS RELATED TO THE NRC STAFF REVIEW OF THE MCGUIRE AND CATAWBA LICENSE RENEWAL APPLICATION

On August 14, 2002, the NRC staff issued its safety evaluation report (SER) for the license renewal application (LRA) for McGuire and Catawba Nuclear Stations. By letters dated October 2, 2002, and October 28, 2002, Duke Energy Corporation (Duke) provided its response to open items identified in the SER. In preparing the SER on the McGuire and Catawba LRA the staff identified the need for additional clarification regarding several responses to the SER open items (OIs) Duke provided in its October 2 and 28, 2002, letters. On October 31, 2002, the staff held a conference call with the applicant to obtain clarification. A list of participants is included in Enclosure 1.

The staff asked for additional information regarding the management of concrete aging. To reflect the commitment made in response to OI 3.5-1 and 3.5-3 to manage concrete aging for cracking, loss of material, and change in material properties, the staff determined that a few changes to the final safety analysis report (FSAR) supplement for aging management program (AMP) B.3.2.1, "Inspection Program for Civil Engineering Structures and Components," were needed. The staff provided the requested changes to the applicant, electronically (Enclosure 2). Subsequent to the meeting, the staff indicated to Duke, in letter dated November 13, 2002, that the response was incomplete because aging effects had not been specified in the aging management review results tables.

The staff asked for clarification concerning the introduction and operating experience of the new one-time inspection AMP, "Ventilation Area Pressure Boundary Sealants Inspection" concerning OI 2.3-3. The staff asked for a revised introduction to the AMP to resolve some confusing typographical errors. The applicant provided the requested revised introductory paragraph to the staff electronically (Enclosure 3). Subsequent to the meeting, by letter dated November 13, 2002, the staff conveyed this and other concerns with the applicant's response to this OI. The staff also asked the applicant if there was any operating experience concerning this AMP. The applicant stated that it had not identified any degradation or failure resulting from aging, and that there is currently no formal program to inspect these sealants. The AMP would be a new program with which they have no operating experience.

The staff asked the applicant about Appendix A of the "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," Section A.1.2.3.10, concerning providing operating experience in the future for new programs to confirm their effectiveness. The applicant stated that, even though there is no current operating experience, if any were

obtained, it would be submitted available for inspection. The applicant also reminded the staff that the NRC will conduct inspections prior to the extended period of operation to verify such issues.

The staff also asked the applicant to clarify the intended function of the fire protection jockey pump strainer referenced in Duke's response to OI 2.3.3.19-2. The applicant stated that the intended function is to protect the pump, and that a standard generic filtration definition was specified in the AMP, "Fire Protection Program - Jockey Pump Strainer Inspection." The staff acknowledged this clarification.

The staff asked the applicant to clarify the risk-informed method for inservice inspection (ISI) of small bore piping at Catawba (Catawba UFSAR 18.2.15). The applicant stated that the risk-informed method for ISI has been completed for use at McGuire and a similar review will be done for Catawba. The staff requested, in electronic correspondence (Enclosure 2), that the applicant clearly state, in the updated FSAR, that the review will be completed before the current license expires. Subsequent to the conference call, the staff questioned the lack of specifics for this similar review at Catawba. By letter dated November 13, 2002, the staff conveyed this and other concerns with the applicant's response to this OI. The applicant also stated that it is currently in the process of submitting a relief request on risk-informing ISI for Catawba. The staff stated that it would review this relief request and get back to the applicant with its findings outside the license renewal review process.

The staff asked the applicant for clarification of the response to OI 3.1.3.2.2-1 provided in its October 28, 2002, letter, concerning the surveillance capsule schedules in Tables B.3.26-1 and B.3.26-2 of the LRA. The staff asked if Capsule W for McGuire, Unit 1, which was designated for use at a sister plant, is not needed for its own surveillance. The applicant stated that the end of life (EOL) predicted shift is less than 200 °F; therefore, only four capsules are required (capsules U, X, V, and Y). The staff subsequently verified that this information was correct and that Capsule W was not needed for McGuire, Unit 1.

The staff asked for the actual data report from the fourth Diablo Canyon, Unit 2, surveillance capsule that was referenced in Duke's response to OI 4.2-1 (provided to the staff by letter dated October 28, 2002). The applicant stated that it would fax a copy of the cover letter from Pacific Gas and Electric Company, owners of Diablo Canyon, in which the data was provided (Enclosure 4). The staff received the fax and was then able to locate both the letter and the data report in ADAMS under Accession Number ML010180447 (package). The staff stated that it would review and independently verify the impact of the data from Diablo Canyon, Unit 2, on the McGuire, Unit 1, time-limited aging analyses.

Finally, the applicant asked for clarification concerning the staff's request for additional information about the condenser circulating water system expansion joints addressed in OI 3.3.6.2.1-1 (Enclosure 5). The staff asked for justification as to why this expansion joint will last for 60 years. By letter dated November 13, 2002, the staff conveyed this and other concerns with the applicant's response to this OI. The applicant clarified that this joint is on the neck of the condenser and below the turbine. The expansion joint on the CCW pumps are exposed to an internal environment of raw water at 100-115 °F and a low pressure and an external ambient environment of one of the pits in the yard. Based on its operating experience, there has been no evidence of degradation. The applicant stated that they would provide the internal and external environments of the expansion joint for staff's review.

A draft of this telecommunication summary was provided to the applicant to allow them the opportunity to comment prior to the summary being issued.

/RA/

Kimberley A. Corp, Project Manager
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Office of Nuclear Reactor Regulation

Docket Nos.: 50-369, 50-370, 50-413, and 50-414

Enclosures: As stated

cc w/enclosures: See next page

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From: Kimberley Corp
To: Robert L Gill Jr
Date: 10/31/02 2:23PM
Subject: Changes to B.3.21 AMP FSAR for OI 3.5-1, 3.5-3

Bob-

Here is the information that Cliff Munson wanted to relay concerning the above AMP:

To reflect the commitment made in response to OI 3.5-1 and 3.5-3 to manage concrete aging for cracking, loss of material, and change in material properties, a few changes need to be made to the UFSAR Supplement for AMP B.3.21 "Inspection Program for Civil Engineering Structures and Components."

On Page B.3.21-1 before "Scope" is discussed there is a list of aging effects that are covered by this AMP. For concrete, only change in material properties is listed. Cracking and loss of material need to be added to this list.

Scope - the applicant needs to check if any additional structures are now part of the scope as a result of the commitment made in OI 3.5-1 and 3.5-3.

Preventive Actions - OK

Parameters Monitored or Inspected - For concrete, the application lists some manifestations of aging effects (spalling, delaminations, discoloration, ...), an aging effect (cracking), and an aging mechanism (chemical leaching). The aging effects loss of material and change in material properties should be added to this list.

Detection of Aging Effects - OK

Monitoring and Trending - OK

Acceptance Criteria - OK

Corrective Action and Confirmation Process - OK

Administrative Controls - OK

Operating Exp. - OK

We received your fax. It was very help. I was able to located the entire package in ADAMS.

Jim Medoff came to me with a concern with the Small Bore Piping ISI AMP. In the first and last paragraphs of the Small Bore Piping section. You state that "Duke plans to...". We can not accept "plans". In other sections you use standard language similar to "will be implemented prior to the end of the initial operating license terms...". So this part of the UFSAR will need to be revised to reflect this new language.

This is all I have for the moment. If I get anything else, I will relay it to you.

- Kimberley

CC: Rani Franovich; Samson Lee

Enclosure 2

From: "Robert L Gill Jr" <rlgill@duke-energy.com>
To: <RLF2@nrc.gov>, <kar1@nrc.gov>
Date: 10/31/02 11:10AM
Subject: Revised Purpose Statement for Ventilation Area Pressure Boundary Sealants Inspection

Apparently we had some word processing glitches that caused incomplete sentences to be left in the text that were not identified by our final reviews. Here is a completely revised Purpose paragraphs. If this needs to be docketed I suggest that this email be attached to the staff's telecon summary for the call that we had today.

The purpose of the Ventilation Area Pressure Boundary Sealants Inspection is to enhance existing surveillance requirements to characterize any cracking or shrinkage of structural sealants due to exposure to the ambient conditions. Uncertainty exists as to whether exposure of pressure boundary structural sealants to the ambient conditions within the Auxiliary Building, Annulus and Fuel Handling Building could cause cracking or shrinkage and result in a loss of function of the sealants. The visual inspection will provide additional assurance that the structural sealants installed in the ventilation pressure boundary of the Control Room, ECCS Pump Room, Annulus, and Fuel Handling areas will continue to maintain the differential pressure required by the current licensing basis. The visual inspection will identify cracking and shrinkage of the structural sealants that would result in loss of intended function and an inability of the sealants to maintain the differential pressure required by the current design basis. Corrective actions may then be taken to repair or replace the structural sealants. The Ventilation Area Pressure Boundary Sealants Inspection is a one-time inspection.

From: "Robert L Gill Jr" <rlgill@duke-energy.com>
To: <RLF2@nrc.gov>, <KAR1@nrc.gov>
Date: 10/23/02 9:43PM
Subject: New Open Item 3.3.6.2.1-1 (Request for Clarification)

Rani, Kimberly

By letter dated October 19, 2002, the staff amplified its previous request contained in New Open Item 3.3.6.2.1-1. The third paragraph of portion of the 10/19/2002 letter concerning New Open Item 3.3.6.2.1-1 reads as follows:

The aging of condenser expansion joints is normally monitored by durometer readings obtained during inspections of the inside surface of the condenser seals during refueling outages. This test measures characteristics of the synthetic rubber material to identify reduction in resiliency. Durometer readings are trended over time, and the condenser seals are replaced when a minimum performance threshold is reached. Industry operating experience indicates that a typical main condenser seal, which is constructed of the same or a similar woven synthetic fabric with a rubber coating, may have a service life of 20 to 30 years.

Within this one paragraph, the staff names three components: condenser expansion joints, condenser seals, and main condenser seal. The use of three different component names in one paragraph is confusing. Duke assumes that the specific component type that the staff is referring to throughout this paragraph is the condenser seals that are located between the low pressure main turbines and the condenser hotwell. However, we are not sure. Please have the staff verify Duke's assumption. If Duke's assumption is incorrect, please advise.

It would also be helpful for the staff to confirm that the interior environment associated with the condenser seals described above is saturated steam with a temperature of greater than 200F and at some pressure greater than ambient. If this is not correct then please identify the specific interior environment for the specific component discussed in the above paragraph. It would also be helpful to Duke for the staff to describe the exterior environment of these components. The associated environmental conditions (both internal and external) materially affect the aging of the component.

Bob

CC: "Gregory D Robison" <gdrobiso@duke-energy.com>, "Michael G Semmler" <mgsemmler@duke-energy.com>

Enclosure 5