

December 14, 2001

LICENSEE : Duke Energy Corporation

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

SUBJECT: TELECOMMUNICATION WITH DUKE ENERGY CORPORATION TO DISCUSS
INFORMATION IN THEIR LICENSE RENEWAL APPLICATION ON THE
CHEMISTRY CONTROL PROGRAM

On December 3, 2001, after the staff reviewed information provided in Section B.3.6 of the license renewal application (LRA), a conference call was conducted between the NRC and Duke Energy Corporation to clarify information presented in the application pertaining to the Chemistry Control Program.

The questions asked by the staff, as well as the responses provided by the applicant, are as follows:

1. In the Chemistry Control Program the applicant specified four chemistry environments for aging effects controlled by the program: borated water, closed cooling water, treated water, and fuel oil. However, in Tables 3.1-1 through 3.4-9 of the LRA, specifying aging management review results, no distinction is made between the components exposed to treated water and closed cooling water. The applicant should specify the difference between these two chemistry environments and explain why these differences were not recognized in the LRA.

The applicant indicated that the distinctions between the chemistry environments for borated water, closed cooling water, fuel oil and treated water are discussed under Monitoring and Trending on pages B.3.6-2 and B.3.6-3 of the LRA. In the Chapter 3 aging management review tables, treated water is defined on page 3.3-3 to cover any demineralized water that may be deaerated, treated with a biocide or corrosion inhibitors or a combination of these treatments, but not to cover borated water. The distinctions between treated and closed cooling water environments is made in the discussion of the Chemistry Control Program in Appendix B of the LRA. The staff is satisfied with this response and the information provided in the Chemistry Control Program description and has no additional questions on this issue.

2. In the description of the Chemistry Control Program in the LRA two aging effects were specified: loss of material and cracking. However, in addition to these two effects, water chemistry environment could cause fouling of the heat transfer surfaces in heat exchangers. Tables 3.1-1 through 3.4-1 of the LRA show that this could occur in the following heat exchangers:

Component Cooling (KC) System: heat exchanger KC, heat exchanger containment spray (NS) pump motor cooler, heat exchanger chemistry and

volume control system (NV) centrifugal charging pump bearing oil cooler, and heat exchanger safety injection (NI) pump bearing oil cooler.
Control Area Chilled Water System: control room area chiller (evaporator tubes)
Control Area Ventilation System: air handling units heat exchangers
Diesel Generator (D/G) Cooling Water: D/G engine cooling water heat exchanger, D/G engine cooling water turbocharger intercoolers, and D/G engine jacket water coolers
Spent Fuel Cooling System: heat exchangers
Waste Gas System: hydrogen recombiner heat exchangers

The applicant should explain why fouling of the heat transfer surfaces in the above listed heat exchangers are not classified as an aging effect managed by the chemistry control program.

The applicant acknowledged that the Chemistry Control Program is credited for managing the effects of fouling and noted that a similar question arose during the staff's review of the aging management review tables in Section 3.3 of the LRA. As such, the staff will consider the information provided but may request additional information to complete its review of Section B.3.6 of the LRA.

3. In the LRA the applicant stated that the Chemistry Control Program is controlled by the site program manuals, which are based on the guidance contained in several sources including the Electrical Power Research Institute (EPRI) chemistry guidelines. The applicant should specify to what extent the procedures in the site program manuals deviate from the EPRI guidelines for secondary water chemistry.

The applicant and staff agreed that a request for additional information should be issued to provide the applicant an opportunity to submit this information in their written response.

4. The applicant should specify the acceptance criteria for fuel oil and specify the standards used in developing these acceptance criteria.

The applicant stated that technical specifications (TS) and selected licensee commitments (SLCs) contain the acceptance criteria for the Chemistry Control Program. However, the staff could not determine from the TS and updated final safety analysis report references provided in the acceptance criteria discussion of Section B.3.6 (on page B.3.6-4) and Section B.4, References (on page B.4-2), of the LRA which TS and SLCs apply. As such, the staff will request additional information to complete its review of this item.

5. The applicant should specify the typical parameters monitored for each of the four chemistries specified in the LRA.

The applicant indicated that the typical parameters monitored are listed in the LRA on page B.3.6-2, under parameters monitored or inspected, and include concentrations of halogens, dissolved oxygen, conductivity, biological activity, and corrosion inhibitors. The staff will consider the information provided in the LRA, but may request additional information to complete its review of this issue as it pertains to the third question from this conference call summary (i.e., the site program manuals and the extent to which they conform to the EPRI guidelines for secondary water chemistry control).

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/

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Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

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

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