

January 15, 2002

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  
VENTILATION SYSTEMS IN SECTION 2.3.2 AND 2.3.3

On November 28, 2001, after the staff reviewed information pertaining to ventilation systems provided in Sections 2.3.2 and 2.3.3 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 scoping of those systems. Participants in the November 28, 2001, conference call are provided in an attachment.

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

2.3.2.1 Annulus Ventilation (VE) System

1. Components identified on the VE system flow diagrams referenced in Section 2.3.2.1 of the LRA or within scope based on intended function are not included in Table 3.2-1 of the LRA. Table 3.2-1 of the LRA lists the components subject to an AMR for the VE system. Identify whether the following components are subject to an AMR, and if so, provide the relevant information about the components to complete Table 3.2-1 of the LRA. If a component is not considered subject to an AMR, provide a justification for its exclusion.
  - A. Fan housings are highlighted on McGuire VE and auxiliary building ventilation systems flow diagrams (MC-1577-1 at H-11 and G-11; MC-2564-1 at I-7 and F-7; MC-2577-1 at G-12 and F-12).
  - B. McGuire and Catawba damper housings meeting the intended function of ventilation pressure boundaries are not identified on either VE flow diagrams or Table 3.2-1 of the LRA.
  - C. Return air grilles are specifically highlighted on a McGuire VE system flow diagram (MC-1577-1 at D-5 and D-9).
  - D. Supply and return ventilation air grilles are shown highlighted on the McGuire and Catawba VE flow diagrams identified in Section 2.3.2.1 of the application.
  - E. Wire mesh is identified on the McGuire system flow diagrams (MC-1564-1 at H-5; MC-2564-1 at H-5).

The applicant indicated that requests for additional information should be issued to provide them an opportunity to address questions A. and B. pertaining to fan and damper housings. The applicant stated that the supply and return air grilles (questions C. and D.) and wire mesh (question E.) are shown highlighted on the drawings because they are within the evaluation boundaries of the portion of the system that is within scope. The applicant also stated that the return air grilles (question C.) should have been highlighted on drawing MCFD 2577-1. The applicant further explained their scoping and screening process as follows: during component screening when the components within the evaluation boundaries and their intended functions are identified, it was revealed that the component does not perform a component intended function to support the system intended function. The component is therefore not subject to aging management review. It is not Duke's convention to go backwards in the process to revise the evaluation boundaries and remove such a component from the evaluation boundaries. These components are therefore considered within scope because they are within the evaluation boundaries of the portion of the system within scope, but not subject to aging management review because they have no component intended function in support of a system intended function. The staff will consider the information provided, but may request additional information to verify that the scoping and screening process applied by the applicant is accurately described in the LRA.

2. McGuire and Catawba air flow monitors identified in Table 3.2-1 of the LRA as within the scope of license renewal are not highlighted on the VE system flow diagrams referenced in Section 2.3.2.1 of the LRA. Table 3.2-1 of the LRA lists the components subject to an AMR for the VE system. Identify whether the identified air flow monitors are subject to an AMR, and if so, provide the relevant information to clarify the discrepancy between the table and diagrams (e.g. MCFD 1564-1 at F-6, H-6, G-9 and H-9) in order to complete Table 3.2-1 of the LRA. If air flow monitors are not considered subject to an AMR, provide a justification for their exclusion.

The applicant indicated that the air flow monitors were within the scope of license renewal as evidenced by the absence of boundary flags and highlighting through the components. The applicant further indicated that the convention of tracing in-scope components with the blue highlighting was not always followed for instrumentation associated with the piping and referred the staff to Section 2.1.2.1.4, which provides a discussion of flow diagram highlighting conventions for instrument lines normally open to the process system. The staff is satisfied with the information provided during the conference call and in the LRA and has no additional questions on this item.

3. Clarify whether sealant materials used to maintain the annulus between containment and the reactor building at a negative pressure are included in the scope of the LRA and subject to an AMR. In particular, provide information on sealant material use in the McGuire modification to containment personnel access hatches and pipes penetrations installed to remove potential bypass leak paths. If included in the LRA, provide the relevant information to complete Table 3.2-1 of the application. If the sealants are not considered subject to an AMR, provide justification for their exclusion.

The applicant suggested that the staff review the information provided in Section 2.1.2.2 (on page 2.1-24) of the LRA. The staff has reviewed this section of the LRA and determined that the reference section and page of the LRA addresses (1) sealants,

caulking and waterstops for fire and flood barriers, and (2) the reactor building divider barrier seal. As such, elastomer seals and flexible collars used in ventilation systems are not addressed in the LRA. The staff will request additional information to complete its review of this item as it applies, in general, to elastomer components in all ventilation systems.

4. Associated ductwork components are not identified as within scope of license renewal or subject to an aging management program. Associated ductwork components include passive items corresponding to ductwork turning vanes, component flexible connections, and ductwork test connections. Identify whether these passive components are subject to an AMR, and if so provide relevant information about the components to complete the aging management review result tables. If a component is not considered subject to an AMR, provide a justification for its exclusion.

The applicant indicated that this question is a good candidate for a formal request for additional information. As such, the staff will issue the request to allow the applicant an opportunity to provide an explanation in their written response.

5. Based on information submitted in the application, an intended function of the McGuire VE system is to prevent leakage of radioisotopes following a LOCA, while the intended function of the Catawba VE system is to limit operator and site boundary doses following a DBA to within the guidelines specified in Title 10 of the Code of Federal Regulations (10 CFR), Part 100. Specifically, the McGuire VE system does not call for conformance with the guidelines of 10 CFR 100 limits in the application. Clarify the differences between intended functions for these VE systems.

The applicant responded that the information requested related to the current licensing basis of the plants and, therefore, appeared to be beyond the scope of license renewal. The staff did not specify a nexus between the information requested and the ability to complete its review of the scoping and screening evaluation for the VE system. As such, the staff will forward this question to the operating project manager for further review. The staff has no additional questions pertaining to this issue.

#### 2.3.3.1 Auxiliary Building Ventilation (VA) System

1. Components identified on the auxiliary building ventilation system flow diagrams referenced in Sections 2.3.3.1 and 2.1.2.1.4 of the LRA or within the scope of license renewal based on intended function are not included in Table 3.3-1 of the LRA. Table 3.3-1 of the LRA lists the components subject to an AMR for the auxiliary building ventilation system. Identify whether the following components are subject to an AMR, and if so, provide the relevant information about the components to complete Table 3.3-1 of the LRA. If a component is not considered subject to an AMR, provide a justification for its exclusion.
  - A. Fan housings are highlighted on VA system flow diagrams for McGuire (MC-1577-1 at H-11 and G-11; MC-1577-2 at F-2, F-13, H-2, and H-13; MC-2577-1 at G-12 and F-12) and Catawba (CN-1577-1.2 at F-3, F-5, F-10 and F-12; CN-1577-1.8 at H-9, H-12, K-9 and K-12).

- B. McGuire and Catawba damper housings meeting the intended function of ventilation pressure boundaries are not identified on either VA flow diagrams or Table 3.3-1 of the LRA.
- C. McGuire radiation monitors meeting the intended function of ventilation pressure boundaries are not highlighted on either VA flow diagrams (MC-1577-1 at H-10; MC-2577-1 at G-9) or identified in Table 3.3-1 of the LRA.
- D. Smoke detectors are identified on Catawba VA flow diagrams (CN-1577-1.0 at H-3, H-6, H-9 and H-11).
- E. Supply and return air grilles are identified on VA system flow diagrams for McGuire (MC-1577-1 at D-5 and D-9; MC-2577-1 at C-4 and D-9) and Catawba (CN-1577-1.8 at G-11, G-14, I-11, I-14, J-11, J-14, L-11 and L-14).
- F. Moisture eliminators are identified on Catawba flow diagrams (CN-1577-1.3 at J-2, J-7, J-8 and J-13).
- G. Instrument line highlight conventions are stated in Section 2.1.2.1.4 of the LRA, but tubing is not identified as subject to an AMR in Table 3.3-1 of the LRA. Tubing is identified in other ventilation aging management review results tables in the application.

The applicant indicated that requests for additional information should be issued to provide them an opportunity to address questions A., B. and F. pertaining to fan and damper housings and moisture eliminators, respectively. McGuire radiation monitors (question C.) and associated tubing are within the scope of license renewal and should have been highlighted to reflect this; however, only the tubing is subject to an aging management review because the radiation monitors are active components. Similarly, the Catawba smoke detectors (question D.) are within the scope of license renewal but not subject to an aging management review because the smoke detectors are active components. The staff will consider the information provided but may request additional information to determine which of the screening criteria apply to, radiation monitor housings and smoke detector housings such that they are not subject to an aging management review. The applicant stated that the supply and return air grilles (question E.) are within the scope of license renewal but are not subject to an aging management review (see the response to question 2.3.2.1-1 C., D. and E.). The staff will consider the information provided, but may request additional information to verify that the scoping and screening process applied by the applicant is accurately described in the LRA. With respect to question G., the applicant indicated that, contrary to the staff's assertion, tubing is specified in the Table 3.3-1 (page 3.3-9) of the LRA. The staff is satisfied with the information provided in the LRA and had no additional questions pertaining to question G.

- 2. Components identified in Section 2.3.3.1 of the LRA and in Table 3.3-1 of the LRA as within the scope of license renewal are not included in the referenced VA flow diagrams. Table 3.3-1 of the LRA lists the components subject to an AMR for the VA system. Identify whether the following components are subject to an AMR, and if so, provide the relevant information about the components to coordinate between the table and

drawings and complete Table 3.3-1 of the LRA. If a component is not considered subject to an AMR, provide a justification for its exclusion.

- A. Air flow sensors identified in Table 3.3-1 of the LRA are not highlighted on either McGuire or Catawba VA system flow diagrams.
- B. The ductwork connection from the VA system to Catawba's unit vent is shown within scope and highlighted (CN-1577-1.2, F11) but is not highlighted on the Catawba interface drawing to the unit vent (CN-2577-3.0, E7).

The applicant indicated that, for question A., the convention of not highlighting all instrumentation associated with in-scope piping was followed for the air flow monitors. However, the staff referred to drawing CN-1577-1.0 and found that the air flow monitors at G-8 were not located in runs of ductwork that was highlighted as within the scope of license renewal. As such, the staff may request additional information to determine if some other VA air flow monitors are reflected in Table 3.3-1. For question B., the applicant indicated that the ductwork connection should have been highlighted on CN-2577-3.0 at E-7 to reflect that it is within the scope of license renewal and attributed the drawing highlighting error to an administrative oversight. The staff is satisfied with this explanation and has no additional questions on this item.

- 3. Three VA system flow diagram drawings referenced in Section 2.3.3.1 of the LRA were not included in the package provided by the applicant for the McGuire unit (MC-1577-4, MC-1577-5, and MC-1577-9). Further review indicates the referenced drawings were deleted from the McGuire license renewal drawing index. Identify if the referenced drawings are still part of the application package and will be submitted in the future or they are not currently considered as application reference drawings.

The applicant indicated that they were aware of these errors in the LRA and had submitted editorial changes to the NRC in June to correct them (ADAMS Accession Number ML011980527). The staff retrieved this document from ADAMS and verified that these editorial corrections were reflected therein. As such, the staff has no additional questions on this item.

- 4. Sealant materials are not identified as being within the scope of license renewal and its component category is not included in Table 3.3-1 of the LRA. Verify whether the sealant materials are used to control the unfiltered out-leakage to the outside environment. Provide justification for the exclusion of the sealant materials or provide information about the sealants to complete Table 3.3-1 of the LRA.

The applicant suggested that questions pertaining to the treatment of elastomer components can be addressed generically (see question 3. from Section 2.3.2.1, Annulus Ventilation System [VE], of this summary).

- 5. Associated VA ductwork components are not identified in Section 2.3.3.1 of the LRA as within scope of license renewal or subject to an aging management program. Associated ductwork components include passive items relating to ductwork turning vanes, component flexible connections, and ductwork test connections. Identify whether these passive components are subject to an AMR, and if so provide relevant information

about the components to complete the aging management review result tables. If a component is not considered subject to an AMR, provide a justification for its exclusion.

The applicant indicated that this question is a good candidate for a formal request for additional information. As such, the staff will issue the request to allow the applicant an opportunity to provide an explanation in their written response.

#### 2.3.3.8 Control Area Ventilation (VC) System

1. Components identified on VC system flow diagrams referenced in Section 2.3.3.8 of the LRA as being within the scope is not included in Table 3.3-11 of the LRA Table 3.3-11 lists the components subject to an AMR for the VC system. Identify whether the following components are subject to an AMR, and if so, provide the relevant information about the components to complete Table 3.3-11 of the LRA. If a component is not considered subject to an AMR, provide a justification for its exclusion.
  - A. Fan housings are highlighted on VC system flow diagrams for McGuire (MC-1577-1 at H-11 and G-11; MC-1578-1 at I-6, G-7 and E-6; MC-1578-3 at B-8 and C-9; MC-1578-4 at C-2, C-9, E-2, E-9, I-2, I-9, K-2 and K-9) and Catawba (CN-1578-1 at E-10 and H-10).
  - B. Air handling unit housings are highlighted on VC system flow diagrams for McGuire (MC-1578-1 at H-10 and E10; MC-1578-1.1 at I-8 and D-8) and Catawba (CN-1578-1 at H-7 and E7; CN-1578-1.1 at I-5 and I-10; CN-1578-1.3 at C-4, C-10, E-4, E-10, H-4, H-10, K-4 and K10).
  - C. McGuire and Catawba damper housings meeting the intended function of ventilation pressure boundaries are not identified on either VC system flow diagrams or Table 3.3-11 of the LRA.
  - D. Radiation monitors are highlighted on a McGuire VC system flow diagram (MC-1578-1 at I-1 and F-1). Radiation monitors are shown but not highlighted on a Catawba VC system flow diagram (CN-1578-1 at J-13 and C-13).
  - E. McGuire and Catawba ventilation supply and return air grilles are highlighted on VC system flow diagrams identified in Section 2.3.3.8 of the LRA.
  - F. Moisture eliminators and pre-filters are highlighted on a Catawba VC flow diagram (CN-1578-1 at E-12 and H-12).

The applicant indicated that requests for additional information should be issued to provide them an opportunity to address questions A., C. and F. pertaining to fan and damper housings, moisture eliminators and prefilters, respectively. The applicant stated that air handling unit housings (question B.) were included in Table 3.3-11. However, in reviewing Table 3.3-11 again, the staff concluded that air handling unit heat exchanger shells were listed in the table. The staff may request additional information to confirm that the air handling unit heat exchanger shells are the air handling unit housings. The applicant indicated that McGuire radiation monitors (question D.) were correctly highlighted as within the scope of license renewal and that these components are within

scope at Catawba and should have been highlighted on the Catawba drawing to reflect this. The applicant stated that these components are not, however, subject to an aging management review because they are active components. The staff will consider this information but may request additional information to determine which of the screening criteria apply to radiation monitor housings such that they are not subject to an aging management review. The applicant stated that the supply and return air grilles (question E.) are within the scope of license renewal but are not subject to an aging management review (see the response to question 2.3.2.1-1 C., D. and E.). The staff will consider the information provided, but may request additional information to verify that the scoping and screening process applied by the applicant is accurately described in the LRA.

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/***

Rani L. Franovich, Project Manager  
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Office of Nuclear Reactor Regulation

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

Attachment: As stated

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- F. Moisture eliminators and pre-filters are highlighted on a Catawba VC flow diagram (CN-1578-1 at E-12 and H-12).

The applicant indicated that requests for additional information should be issued to provide them an opportunity to address questions A., C. and F. pertaining to fan and damper housings, moisture eliminators and prefilters, respectively. The applicant stated that air handling unit housings (question B.) were included in Table 3.3-11. However, in reviewing Table 3.3-11 again, the staff concluded that air handling unit heat exchanger shells were listed in the table. The staff may request additional information to confirm that the air handling unit heat exchanger shells are the air handling unit housings. The applicant indicated that McGuire radiation monitors (question D.) were correctly highlighted as within the scope of license renewal and that these components are within scope at Catawba and should have been highlighted on the Catawba drawing to reflect this. The applicant stated that these components are not, however, subject to an aging management review because they are active components. The staff will consider this information but may request additional information to determine which of the screening criteria apply to radiation monitor housings such that they are not subject to an aging management review. The applicant stated that the supply and return air grilles (question E.) are within the scope of license renewal but are not subject to an aging management review (see the response to question 2.3.2.1-1 C., D. and E.). The staff will consider the information provided, but may request additional information to determine, on a generic basis, if the applicant appropriately applied scoping and screening criteria to identify components that are within the scope of license renewal and to determine which of those components were subject to an aging management 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/*

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

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