1 ASME Code Component(s) Affected

Nuclear Service Water (RN) System ASME Class 3 components listed below:

1.1 The 3 inch drain piping between valve 1RN-883 and its associated 8" diameter header as shown on MCFD-1574-03.00. This piping is a low point system drain on the supply side of the '1B' Diesel Generator Cooling Water Heat Exchanger. The associated 8" header ties into the 36" diameter '1B' Essential Supply Header.

1.2 The 3 inch drain piping between valve 1RN-884 and its associated 8" diameter header as shown on MCFD-1574-03.00. This piping is a low point system drain on the discharge side of the '1B' Diesel Generator Cooling Water Heat Exchanger. The associated 8" header ties into the 36" diameter '1B' Essential Discharge Header.

1.3 Design data applicable to the above piping is provided below from Duke Energy Specification MCS-1206.00-02-0002 and McGuire Flow Diagram MCFD-1574-03.00:

1.4 Design data applicable to the above piping is as follows:

Nominal Wall Thickness: 0.216 inches

Design Pressure: 135 psig

Design Temperature: 150 degrees, F

Material of Construction: Carbon Steel

Internal Coatings: None

2 Applicable Code Edition and Addenda

ASME Code, Section XI, 2007 Edition with the 2008 Addenda.

3 Applicable Requirements

3.1 IWA-4400 specifies requirements for welding, brazing, metal removal, fabrication, and installation.

3.2 IWA-4420 specifies requirements for defect removal, evaluation, and examination.

Relief is requested from the requirement of IWA-4400 that defective portions of components be removed prior to performing a repair/replacement activity by welding.

4 Reason for Request

4.1 Relief is requested from the requirement of ASME Code, Section XI, 2007 Edition with the 2008 Addenda, IWA-4400 to remove defects on the piping identified in this request, prior to performing repair/replacement activities by welding.

4.2 This request is submitted to allow the installation of pressure retaining parts that will be used to encapsulate locally thinned areas of the 3 inch RN piping between: 1) valve 1RN-883 and the 8" supply header to the '1B' Diesel Generator Heat Exchanger, and 2) valve 1RN-884 and the 8" discharge header from the '1B' Diesel Generator Heat Exchanger.

4.3 Duke Energy believes that requiring removal of defective portions of this piping prior to performing repair/replacement activities represents a hardship or unusual difficulty without a compensating increase in the level of quality and safety for reasons identified in this request.

5 Proposed Alternative and Basis for Use

5.1 In lieu of the requirement of IWA-4400 to remove the defective portion of the component prior to performing repair/replacement activities by welding, the following alternative is proposed:

5.1.1 The defective area shall be encapsulated with reinforcing sleeves on the O.D. of the pipe using pressure retaining parts that comply with the Construction Code and Owner's requirements. Figure 1 illustrates an example of an acceptable encapsulation configuration.

(More details will be provided later)