

## PrairieIslandNPEm Resource

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**From:** Richard Plasse  
**Sent:** Tuesday, November 18, 2008 3:26 PM  
**To:** Eckholt, Gene F.  
**Attachments:** Prairie Island LRA RAI TAC MD8513 and MD8514.doc; Prairie Island 1 2 LRA Sec 2 4 RAI Nov08.doc

2 more draft RAIs

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REQUEST FOR ADDITIONAL INFORMATION  
BY THE CONTAINMENT AND VENTILATION BRANCH  
OFFICE OF NUCLEAR REACTOR REGULATION  
LICENSE RENEWAL APPLICATION FOR  
PRAIRIE ISLAND NUCLEAR GENERATING PLANT UNITS 1 AND 2  
DOCKET NOS: 50-282 and 50-306  
(TAC NOS. MD8513, MD8514)

**RAI 2.3.3.1-1**

Auxiliary and Radwaste Area Ventilation Systems

LR Drawing LR39600: At drawing coordinates D-3, the block labeled "Main Steam Penetration Area" has a supply air duct (4825 CFM) that is shown as out of scope. This duct is a branch from a duct that is shown as in scope for 10 CFR 54.4(a)(2). Also in the same area for the block labeled "General Area, Col's G,11 & 12, El. 695'-0"" the exhaust duct from this area is shown as out of scope. The supply duct to this area is shown as in scope for 10 CFR 54.4(a)(2). The out-of-scope duct is also exhausts the Machine Shop. The Machine Shop is indicated as being shown on this drawing at location B-4. The Machine Shop detail was not found at location B-4. However, all areas identified at location B-4 are shown with ductwork as being in scope for 10 CFR 54.4(a)(2). No discussion of these areas was identified in the application. Please verify that these sections of duct indicated above are out of scope.

**RAI 2.3.3.1-2**

Auxiliary and Radwaste Area Ventilation Systems

LR Drawing LR39600: At drawing coordinates D-4, the block labeled "Aux. Bldg. Sump Area, Waste Hold-up Tank Area" the supply duct for this area is shown as out of scope. This supply duct is a branch off of a duct that is shown as in scope for 10 CFR 54.4(a)(2). Please verify that this is correct.

**RAI 2.3.3.1-3**

Auxiliary and Radwaste Area Ventilation Systems

LR Drawing LR39600: At drawing coordinates D-6, inlet duct for filter 121, Hot Chem Lab Filter, the exhaust duct to this filter is shown as in scope for 10 CFR 54.4(a)(2) with the exception for a section of duct that has two dampers, HFD-14 and VFD-12, and flow element 27199. These two dampers are shown as in scope for 10 CFR 54.4(a)(1) or 10 CFR 54.4(a)(3). The section of duct in which these two dampers are located is shown as out of scope. No discussion was indentified in LRA section 2.3.3.1. Please provide a discussion that explains why this section of duct is out of scope while the dampers in this section and the ductwork/filter housing either side of this section are in scope.

**RAI 2.3.3.1-4**

Auxiliary and Radwaste Area Ventilation Systems

LR Drawing LR39600: At drawing coordinates D-7, inlet duct for filter 121, Sample Room Filter Train A, the exhaust duct to this filter is shown as in scope for 10 CFR 54.4(a)(2) with the exception for a section of duct that has two dampers, HFD-18 and VFD-16, and flow element 27200. These two dampers are shown as in scope for 10 CFR 54.4(a)(1) or 10 CFR 54.4(a)(3). The section of duct in which these two dampers are located is shown as out of scope. No discussion was indentified in LRA section 2.3.3.1. Please provide a discussion that explains why this section of duct is out of scope while the dampers in this section and the ductwork/filter housing either side of this section are in scope.

**RAI 2.3.3.1-5**

Auxiliary and Radwaste Area Ventilation Systems

LR Drawing LR39600: At drawing coordinates D-7, inlet duct for filter 121, Sample Room Filter Train B, the exhaust duct to this filter is shown as in scope for 10 CFR 54.4(a)(2) with the exception for a section of duct that has two dampers, HFD-19 and VFD-17, and flow element 27201. These two dampers are shown as in scope for 10 CFR 54.4(a)(1) or 10 CFR 54.4(a)(3). The section of duct in which these two dampers are located is shown as out of scope. No discussion was indentified in LRA section 2.3.3.1. Please provide a discussion that explains why this section of duct is out of scope while the dampers in this section and the ductwork/filter housing either side of this section are in scope.

**RAI 2.3.3.1-6**

Auxiliary and Radwaste Area Ventilation Systems

LR Drawing LR39600: At drawing coordinates B-2 and D-2, Unit 1 11&12 Auxiliary Building Make-up Air Units and Unit 2 21&22 Auxiliary Building Make-up Air Units are shown as out of scope. Dampers CD-34037, CD-34038, CD-34039, CD-34040, CD-34041, CD-34042, CD-34043, and CD-34044 are shown as in scope for 10 CFR 54.4(a)(2). LAR Section 2.3.3.1 and 2.3.3.18 indicate that the intended function for dampers/housings is as a pressure boundary. It is not clear how the dampers/housings for CD-34037 through CD-34040 can function as an effective pressure boundary if the fan housings and duct work downstream from these dampers is not intact. Please provide a discussion explaining why the air handling unit housing and the duct work between the dampers is not in scope as a pressure boundary.

**RAI 2.3.3.5-1**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39603-1: At drawing coordinates H-1, section of outside air duct upstream of damper DC-34180 is marked as out of scope. This section should probably be shown is in scope. Please verify.

**RAI 2.3.3.5-2**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39603-1: At drawing coordinates H-4, damper HFD-23 is shown as out of scope. All other dampers in this system are shown as being in scope. Please verify damper HFD-23 is out of scope.

**RAI 2.3.3.5-3**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39603-1: Control Room Air Handling Unit 1 and Unit 2, are there any condensate drains on these units that would be considered to be in scope as barriers to prevent drawing contaminated air into the air handling units? If so, are these covered under a different section of the LRA?

**RAI 2.3.3.5-4**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39603-1: Is there a toilet room and/or a kitchenette located within the control room envelope whose exhaust system penetrates the control room envelope? If so, are there sections of the exhaust system that could be considered as in scope as a barrier for steam exclusion or as part of the control room envelope?

**RAI 2.3.3.5-5**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39603-1: At drawing coordinates H-1, section of outside air duct upstream of damper DC-34180 is marked as out of scope. This section should probably be shown in scope. Please verify.

**RAI 2.3.3.5-6**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39601: At drawing coordinates E-5, battery room 21 has an exhaust duct that is marked as out of scope. This duct contains a damper that is marked as in scope. The duct connects to a duct that is marked as in scope for 10 CFR 54.4(a)(2). Provide a discussion justifying this duct being out of scope.

**RAI 2.3.3.5-7**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39601: At drawing coordinates H-5, the 121 battery room recycle fan is shown as out of scope. The ducts and cooling coil on this branch are shown as in scope for 10 CFR 54.4(a)(2). Please provide a discussion clarifying why the fan is not in scope.

**RAI 2.3.3.5-8**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39601: At drawing coordinates E-5, the 122 battery room recycle fan is shown as out of scope. The ducts and cooling coil on this branch are shown as in scope for 10 CFR 54.4(a)(2). Please provide a discussion clarifying why the fan is not in scope.

**RAI 2.3.3.7-1**

Diesel Generator and Screenhouse Ventilation System

LR Drawing LR39601: At drawing coordinates C-5 and at D-5, the 122 Diesel Outside Exhaust fan and the 121 Diesel Outside Exhaust fan are shown as out of scope. The rest of the diesel room ventilation system is shown as in scope. LRA Section 2.3.3.7 states that "components subject to an AMR begin at the Diesel Generator Rooms inlet damper, through the supply fans, and exits via exhaust fans and include the dampers, fans and duct." Please provide a discussion clarifying why these exhaust fans are not in scope.

**RAI 2.3.3.5-9**

Control Room and Miscellaneous Area Ventilation System

LR Drawing LR39601: At drawing coordinates H-5, the 121 battery room recycle fan is shown as out of scope. At drawing coordinates E-5, the 122 battery room recycle fan is shown as out of scope. The ducts and cooling coil on this branches are shown as in scope for 10 CFR 54.4(a)(2). Please provide a discussion clarifying why the fans are not in scope.

**RAI 2.3-1**

Are there any vaneaxial or propeller fans in containment, diesel rooms, screenhouse, or auxiliary building whose housing are relied upon as a barrier from fan blade missiles and are not classified as in scope? If so, please discuss why these fan housings should not be in scope for 10 CFR 54.4(a)(2)?

**RAI 2.3.3.4-1**

Containment Hydrogen Control System

LR Drawing No. LR-39251, Rev. 2: Control valves CV-31923 (in zone G-7), CV-31929 (in zone F-7), CV-31924 (in zone G-3), and CV-31930 (in zone F-3) shows pneumatic tubing of the positioner of instrument actuated operator as out of scope for license renewal. Provide justification for the exclusion of these valve positioner pneumatic tubing from the scope of license renewal. If these tubing are in the scope of license renewal, in accordance with 10 CFR 54.4(a), and subject to an aging management review in accordance with 10 CFR 54.21(a)(1), update the LRA by providing the applicable information in the appropriate LRA sections, tables, and drawings.

**RAI 2.3.3.14-1**

Primary Containment Ventilation System

LR Drawing No. LR-39602-1, Rev. 2: Containment dome air recirculation fans 13 and 14 both located in drawing coordinates G-6 are shown out of scope for license renewal. The remaining portions of the containment air recirculation sub-system are shown as in scope in accordance with 10 CFR 54.4(a)(1). Provide justification for the exclusion of these fans from the scope of license renewal. If these fans are in the scope of license renewal, in accordance with 10 CFR 54.4(a), and subject to an aging management review in accordance with 10 CFR 54.21(a)(1), update the LRA by providing the applicable information in the appropriate LRA sections, tables, and drawings.

**RAI 2.3.3.14-2**

Primary Containment Ventilation System

LR Drawing No. LR-39602-2 Rev. 2: In drawing coordinates E-3 is stated "From spent fuel pool emergency ventilation". Spent fuel pool emergency ventilation is not described in either PINGS USAR or in Section 2.3.3.14 of LRA. Please describe this system. If it is meant to be "From spent fuel pool special ventilation", please correct the drawing.

**RAI 2.3.3.14-3**

Primary Containment Ventilation System

LR Drawing No. LR-39602-1 Rev. 2: In drawing coordinates D-2, the in service purge exhaust fan ES-46311 is shown out of scope for license renewal. This fan belongs to spent fuel pool special ventilation sub-system which is required to exhaust the air in the event of high radiation and also during a fuel handling accident. The remaining portions of this sub-system are shown as in scope in accordance with 10 CFR 54.4(a)(1). Provide justification for the exclusion of this fan from the scope of license renewal. If this fan is in the scope of license renewal, in accordance with 10 CFR 54.4(a), and subject to an aging management review in accordance with 10 CFR 54.21(a)(1), update the LRA by providing the applicable information in the appropriate LRA sections, tables, and drawings.

**RAI 2.3.2.1-1**

Containment Spray System

LR Drawing No. LR-39237 Rev 3: In drawing coordinates D-5, valve CS-25-2 along with its pipe and end cap is shown out of scope for license renewal. The piping which includes this valve is attached to piping which is in scope in accordance with 10 CFR 54.4(a)(1). Provide justification for the exclusion of this valve, pipe and end cap from the scope of license renewal. If these items are in the scope of license renewal, in accordance with 10 CFR 54.4(a), and subject to an aging management review in accordance with 10 CFR 54.21(a)(1), update the LRA by providing the applicable information in the appropriate LRA sections, tables, and drawings.

**RAI 2.3.2.1-2**

Containment Spray System

LR Drawing No. LR-39237 Rev 3: In drawing coordinates D-4, at the downstream side of spray pump ES-19623 after the 4x6-inch reducer is a threaded end cap shown out of scope for license renewal. This end cap is attached to piping which is in scope in accordance with 10 CFR 54.4(a)(1). Provide justification for the exclusion of this end cap from the scope of license renewal. If this end cap is in the scope of license renewal, in accordance with 10 CFR 54.4(a), and subject to an aging management review in accordance with 10 CFR 54.21(a)(1), update the LRA by providing the applicable information in the appropriate LRA sections, tables, and drawings.

**REQUEST FOR ADDITIONAL INFORMATION**  
**SECTION 2.4: SCOPING AND SCREENING RESULTS: CONTAINMENTS, STRUCTURES,**  
**AND COMPONENT SUPPORTS**  
**PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2,**  
**LICENSE RENEWAL APPLICATION (TAC NOS. MD8513 & MD8514)**

**RAI 2.4.1-1**

Due to lack of clarity in LRA Tables 2.4.1-1 and 3.5.2-1, please confirm/clarify if the Spent Fuel Pool (SFP) Divider Gates, the SFP leak-chase channels, and the fuel transfer canal upending frame are structural components in the scope of license renewal and subject to an AMR. If yes, include their scoping, screening and AMR results, as appropriate, or clarify the location in the LRA where these components are included. If not, please provide justification for exclusion.

**RAI 2.4.3-1**

In UFSAR Section 12.2.6, the applicant states that in order to assure the stability and prevent toppling and over-travelling of the Containment Polar Crane or its components, the features incorporated in its design include: (i) up-kick lugs fastened to each truck; (ii) overturning locks fastened to each truck; (iii) positive wheel stops. Also, in UFSAR Section 12.2.9, the applicant indicates that the Spent Fuel Pool Bridge Crane, Auxiliary Building Crane and the Turbine Building Crane are protected against tipping, derailments and uncontrolled movements by features that include: (i) crane bridge and trolley being equipped with fixed, fitted rail yokes; (ii) positive wheel stops and bumpers. From LRA Section 2.4.3, Table 2.4.3-1 and Table 3.5.2-3, it is not clear if the above noted structural components and fasteners of the cranes are included in-scope of license renewal and subject to AMR. Please confirm if these crane components have been screened in as items requiring an AMR. If yes, indicate where these items have been included in the LRA. If not, provide the technical bases for their exclusion.

**RAI 2.4.7-1**

In LRA Section 2.4.7, the System Function Listing under Code RCV-04 "Reactor Containment Vessels and their internal structures provide shielding against high energy line breaks" indicates the intended function under Criterion 2 of 10 CFR 54.4(a), which corresponds to all non-safety related systems, structures and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraph (a)(1) of 10 CFR 54.4. The comment under this item on LRA page 2.4-38 states that: "Reactor Containment Vessels and their internal structures are designed to withstand the effects of high energy line breaks without loss of function. Reinforced concrete walls and steel structures inside each Reactor Containment Vessel shield safety related equipment from the effects of a HELB." The NRC staff finds that the above stated structures and structural components are generally safety-related and serve a Criterion 1 intended function and not Criterion 2 intended function. Please address the inconsistency.

ENCLOSURE

**RAI 2.4.7-2**

Because of lack of clarity in LRA Tables 2.4.2-1, 2.4.7-1, 3.5.2-2, 3.5.2-7 and the corresponding LRA sections, please indicate where in the LRA are the scoping, screening and AMR results of Structural Supports (vertical and lateral, as appropriate) for Steam Generators, Reactor Coolant Pumps and the Reactor Vessel included. If these structural components were inadvertently not included, please provide their scoping, screening and AMR results.

**RAI 2.4.8-1**

Please confirm if there are any ductbanks and manholes in the yard that are safety-related or important-to-safety or required for regulated events that may be within the scope of license renewal and subject to AMR. If there are, please provide their scoping, screening and AMR results.

**RAI 2.4.11-1**

Section 1.3.2 of the UFSAR states that the plant screenhouse houses the cooling water pumps, fire pumps, circulating water pumps, trash racks and traveling screens. Due to lack of clarity in LRA Tables 2.4.11-1 and 3.5.2-11, please confirm the inclusion or exclusion of the trash racks and traveling screens as structural components within the scope of license renewal and subject to AMR. If they were not included as an oversight, please provide a description of their scoping and aging management review. If they are included elsewhere in the LRA, please indicate the location. If they are excluded from the scope of license renewal and AMR, please provide the basis for their exclusion.