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GNRO-2012/00093

August 15, 2012

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

SUBJECT: License Renewal Application 2012 Annual Update
Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

REFERENCE: Letter to Nuclear Regulatory Commission, "License Renewal Application Grand Gulf Nuclear Station, Unit 1," dated October 28, 2011 (GNRO-2011/00093)

Dear Sir or Madam:

The purpose of this letter is to provide the Nuclear Regulatory Commission (NRC) an annual update to the referenced Grand Gulf Nuclear Station (GGNS) License Renewal Application (LRA), in accordance with 10 CFR 54.21(b). During NRC review of the GGNS LRA, GGNS is required by 10 CFR 54.21(b) to provide an annual report of changes to the GGNS current licensing basis (CLB) that materially affects the contents of the GGNS LRA, including the Final Safety Analysis Report supplement. GGNS has completed the annual CLB review and is providing, in the Attachment, the changes to the LRA required by this review

This letter contains no new commitments. If you have any questions or require additional information, please contact Christina L. Perino at 601-437-6299.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 15th day of August, 2012.

Sincerely,

MP/jas

Attachment: (see next page)

Attachment: CLB Changes to LRA

cc: with Attachment

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cc: without Attachment

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Attachment

GNRO-2012/00093

CLB Changes to LRA

The following changes are required for the Grand Gulf Nuclear Station (GGNS) License Renewal Application (LRA) in accordance with 10 CFR 54.21(b) as a result of current license basis changes that have occurred at GGNS since the submittal of the license renewal application. This includes changes made during the recent extended power uprate outage. Changes are shown with strikethroughs for ~~deletions~~ and underlines for additions.

Table 2.3.3-6
Fuel Pool Cooling and Cleanup System
Components Subject to Aging Management Review

Component Type	Intended Function
Bolting	Pressure boundary
Diffuser	Pressure boundary
Flow element	Pressure boundary
~~Heat exchanger (bonnet)~~	~~Pressure boundary~~
~~Heat exchanger (shell)~~	~~Pressure boundary~~
~~Heat exchanger (tube sheets)~~	~~Pressure boundary~~
~~Heat exchanger (tubes)~~	~~Pressure boundary~~ ~~Heat transfer~~
Heat exchanger (end covers)	Pressure boundary
Heat exchanger (plates)	Pressure boundary Heat transfer
Neutron absorber	Neutron absorption

Table 3.3.2-6: Fuel Pool Cooling and Cleanup System								
Component Type	Intended Function	Material	Environment	Aging Effect Requiring Management	Aging Management Programs	NUREG-1801 Item	Table 1 Item	Notes
~~Heat exchanger (bonnet)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Air – indoor (ext)~~	~~Loss of material~~	~~External Surfaces Monitoring~~	~~VII.I.A-77~~	~~3.3.1-78~~	~~A~~
~~Heat exchanger (bonnet)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Water Chemistry Control –Closed Treated Water Systems~~	~~VII.A4.AP-189~~	~~3.3.1-46~~	~~A~~
~~Heat exchanger (shell)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Air – indoor (ext)~~	~~Loss of material~~	~~External Surfaces Monitoring~~	~~VII.A-77~~	~~3.3.1-78~~	~~A~~
~~Heat exchanger (shell)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Water Chemistry Control -BWR~~	~~VII.E3.AP-106~~	~~3.3.1-21~~	~~C, 301~~
~~Heat Exchanger (tube sheets)~~	~~Pressure boundary~~	~~Stainless Steel~~	~~Treated water (ext)~~	~~Loss of material~~	~~Water Chemistry Control –Closed Treated Water Systems~~	~~VII.E3.AP-191~~	~~3.3.1-47~~	~~C~~
~~Heat Exchanger (tube sheets)~~	~~Pressure boundary~~	~~Stainless Steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Water Chemistry Control -BWR~~	~~VII.A4.AP-111~~	~~3.3.1-25~~	~~A, 301~~
~~Heat Exchanger (tubes)~~	~~Heat transfer~~	~~Stainless Steel~~	~~Treated water (ext)~~	~~Fouling~~	~~Water Chemistry Control -BWR~~	~~VII.A4.AP-139~~	~~3.3.1-17~~	~~A, 301~~
~~Heat Exchanger (tubes)~~	~~Heat transfer~~	~~Stainless Steel~~	~~Treated water (int)~~	~~Fouling~~	~~Water Chemistry Control –Closed Treated Water Systems~~	~~VII.C2.AP-188~~	~~3.3.1-50~~	~~C~~
~~Heat Exchanger (tubes)~~	~~Pressure boundary~~	~~Stainless Steel~~	~~Treated water (ext)~~	~~Loss of material~~	~~Water Chemistry Control -BWR~~	~~VII.A4.AP-111~~	~~3.3.1-25~~	~~A, 301~~
~~Heat Exchanger (tubes)~~	~~Pressure boundary~~	~~Stainless Steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Water Chemistry Control –Closed Treated Water Systems~~	~~VII.E3.AP-191~~	~~3.3.1-47~~	~~C~~

Table 3.3.2-6: Fuel Pool Cooling and Cleanup System								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Programs**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Heat exchanger (end cover)	Pressure boundary	Carbon steel	Air - indoor [ext]	Loss of material	External Surfaces Monitoring	VII.I.A-77	3.3.1-78	A
Heat exchanger (end cover)	Pressure boundary	Carbon steel	Treated water [int]	Loss of material	Water Chemistry Control -BWR	VII.E3.AP-106	3.3.1-21	C, 301
Heat exchanger (end cover)	Pressure boundary	Carbon steel	Treated water [int]	Loss of material	Water Chemistry Control - Closed Treated Water Systems	VII.A4.AP-189	3.3.1-46	A
Heat exchanger (plates)	Pressure boundary	Stainless steel	Air - indoor [ext]	None	None	VII.J.AP-123	3.3.1-120	C
Heat exchanger (plates)	Heat transfer	Stainless steel	Treated water [int]	Fouling	Water Chemistry Control -BWR	VII.A4.AP-139	3.3.1-17	C
Heat exchanger (plates)	Pressure boundary	Stainless steel	Treated water [int]	Loss of material	Water Chemistry Control -BWR	VII.A4.AP-111	3.3.1-25	A, 301
Heat exchanger (plates)	Heat transfer	Stainless steel	Treated water [int]	Fouling	Water Chemistry Control - Closed Treated Water Systems	VII.C2.AP-188	3.3.1-50	C
Heat exchanger (plates)	Pressure boundary	Stainless steel	Treated water [int]	Loss of material	Water Chemistry Control - Closed Treated Water Systems	VII.C2.A-52	3.3.1-49	C

Table 2.3.3-8
Component Cooling Water System
Components Subject to Aging Management Review

Component Type	Intended Function
Bolting	Pressure boundary
Flow element	Pressure boundary
Piping	Pressure boundary
Strainer Housing	Pressure boundary
Strainer	Filtration
Tubing	Pressure boundary
Valve body	Pressure boundary

Table 3.3.2-8: Component Cooling Water System								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Strainer housing	Pressure boundary	Carbon steel	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VII.I.A-77	3.3.1-78	A
Strainer housing	Pressure boundary	Carbon steel	Treated water (int)	Loss of material	Water Chemistry Control – Closed Treated Water Systems	VII.C2.AP-202	3.3.1-45	A
Strainer	Filtration	Stainless steel	Treated water (int)	Loss of material	Water Chemistry Control – Closed Treated Water Systems	VII.C2.A-52	3.3.1-49	A
Strainer	Filtration	Stainless steel	Treated water (ext)	Loss of material	Water Chemistry Control – Closed Treated Water Systems	VII.C2.A-52	3.3.1-49	A

Table 3.3.2-7: Standby Service Water System								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Piping	Pressure boundary	Stainless steel	Condensation (ext)	Loss of material	External Surfaces Monitoring	--	--	G
Piping	Pressure boundary	Stainless steel	Raw water (ext)	Loss of material	Service Water Integrity	VII.C1.A-54	3.3.1-40	A
Piping	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	Service Water Integrity	VII.C1.A-54	3.3.1-40	A
Piping	Pressure boundary	Stainless steel	Soil (ext)	Loss of material	Buried Piping and Tanks Inspection	--	--	G

Table 2.4-2
Water Control Structures
Components Subject to Aging Management Review

Component	Intended Function[1]
Steel and Other Metals	
Cooling tower drift eliminators	Heat sink Support for Criterion (a)(2) equipment

Table 3.5.2-2
Water Control Structures
Summary of Aging Management Evaluation

Table 3.5.2-2: Water Control Structures								
Structure and/or Component or Commodity	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Cooling tower drift eliminators	HS, SNS	Stainless Steel	Exposed to fluid environment	Loss of material	Structures monitoring	III.A8.T-23	3.5.1-52	E

Table 2.3.1-3
Reactor Coolant Pressure Boundary
Components Subject to Aging Management Review

Component Type	Intended Function
Thermowell	Pressure boundary
~~Thermowell (non-Class 1)~~	~~Pressure boundary~~

Table 3.1.2-3
Reactor Coolant Pressure Boundary
Summary of Aging Management Evaluation

Table 3.1.2-3: Reactor Coolant Pressure Boundary								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
~~Thermowell (non-Class 1)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Air – indoor (ext)~~	~~Loss of material~~	~~External Surfaces Monitoring~~	~~V.E.E-44~~	~~3.2.1-40~~	~~C, 103~~
~~Thermowell (non-Class 1)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Water Chemistry Control – BWR~~	~~IV.C1.RP-158~~	~~3.1.1-79~~	~~A, 101~~

Table 2.3.4-2-13
Seal Oil System
Nonsafety-Related Components Affecting Safety-Related Systems
Components Subject to Aging Management Review

Component Type	Intended Function(s)[1]
Bolting	Pressure boundary
Filter housing	Pressure boundary
~~Heat exchanger (bonnet)~~	~~Pressure boundary~~
~~Heat exchanger (shell)~~	~~Pressure boundary~~
Heat exchanger (end covers)	Pressure boundary
Heat exchanger (plates)	Pressure boundary

Table 3.4.2-2-13
Seal Oil System
Nonsafety-Related Components Affecting Safety-Related Systems
Summary of Aging Management Evaluation

Table 3.4.2-2-13: Seal Oil System, Nonsafety-Related Components Affecting Safety-Related Systems								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Programs**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
~~Heat exchanger (bonnet)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Air – indoor (ext)~~	~~Loss of material~~	~~External Surfaces Monitoring~~	~~VIII.H.S-29~~	~~3.4.1-34~~	~~A~~
~~Heat exchanger (bonnet)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Treated water (int)~~	~~Loss of material~~	~~Water Chemistry Control – Closed Treated Water Systems~~	~~VIII.E.S-23~~	~~3.4.1-25~~	~~C~~
~~Heat exchanger (shell)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Air – indoor (ext)~~	~~Loss of material~~	~~External Surfaces Monitoring~~	~~VIIIH.S-29~~	~~3.4.1-34~~	~~A~~
~~Heat exchanger (shell)~~	~~Pressure boundary~~	~~Carbon steel~~	~~Lube oil (int)~~	~~Loss of material~~	~~Oil Analysis~~	~~VIII.A.SP-29~~	~~3.4.1-40~~	~~C, 402~~
Heat exchanger (end cover)	Pressure boundary	Carbon steel	Air - indoor [ext]	Loss of material	External Surfaces Monitoring	VIII.H.S-29	3.4.1-34	A
Heat exchanger (end cover)	Pressure boundary	Carbon steel	Lube oil (int)	Loss of material	Oil Analysis	VIII.A.SP-91	3.4.1-40	C, 402
Heat exchanger (end cover)	Pressure boundary	Carbon steel	Treated water [int]	Loss of material	Water Chemistry Control - Closed Treated Water Systems	VIII.E.S-23	3.4.1-25	C
Heat exchanger (plates)	Pressure boundary	Stainless steel	Air - indoor [ext]	None	None	VIII.I.SP-12	3.4.1-58	C

Table 3.4.2-2-13: Seal Oil System, Nonsafety-Related Components Affecting Safety-Related Systems								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Programs**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Heat exchanger (plates)	Pressure boundary	Stainless steel	Lube oil (int)	Loss of material	Oil Analysis	VIII.G.SP-79	3.4.1-44	C, 402
Heat exchanger (plates)	Pressure boundary	Stainless steel	Treated water [int]	Loss of material	Water Chemistry Control - Closed Treated Water Systems	VIII.E.S-25	3.4.1-26	C
Pump casing	Pressure boundary	~~Carbon steel~~ Gray cast iron	Lube oil (int)	Loss of material	Oil Analysis	VIII.A.SP-91	3.4.1-40	C, 402
Pump casing	Pressure boundary	~~Carbon steel~~ Gray cast iron	Air – indoor (ext)	Loss of material	External Surfaces Monitoring	VIII.H.S-29	3.4.1-34	A

Table 2.3.3-19-19
Plant Service Water System
Nonsafety-Related Components Affecting Safety-Related Systems
Components Subject to Aging Management Review

Component Type	Intended Function[1]
Bolting	Pressure boundary
Ejector	Pressure boundary
Flow element	Pressure boundary
Piping	Pressure boundary
Pump	Pressure Boundary
Sight glass	Pressure Boundary
Strainer housing	Pressure boundary
Tank	Pressure boundary
Thermowell	Pressure boundary
Tubing	Pressure boundary
Valve body	Pressure boundary

Table 3.3.2-19-19
Plant Service Water System
Nonsafety-Related Components Affecting Safety-Related Systems
Summary of Aging Management Evaluation

Table 3.3.2-19-19: Plant Service Water System [10 CFR 54.4(a)(2)]								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Piping	Pressure boundary	Stainless steel	Condensation (ext)	Loss of material	External Surfaces Monitoring	--	--	G
Piping	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	Service Water Integrity	VII.C1.A-54	3.3.1-40	A
Pump casing	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	Service Water Integrity	VII.C1.A-54	3.3.1-40	A
Pump casing	Pressure boundary	Stainless steel	Condensation (ext)	Loss of material	External Surfaces Monitoring	--	--	G
Sight glass	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	Service Water Integrity	VII.C1.A-54	3.3.1-40	A
Sight glass	Pressure boundary	Stainless steel	Condensation (ext)	Loss of material	External Surfaces Monitoring	--	--	G
Sight glass	Pressure boundary	Plastic	Raw water (int)	Change in material properties	Internal Surfaces in Miscellaneous Piping and Ducting Components	--	--	F
Sight glass	Pressure boundary	Plastic	Condensation (ext)	Change in material properties	External Surfaces Monitoring	--	--	F
Tank	Pressure boundary	Carbon steel	Raw water (int)	Loss of material	Service Water Integrity	VII.C1.AP-183	3.3.1-38	C

Table 3.3.2-19-19: Plant Service Water System [10 CFR 54.4(a)(2)]								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Tank	Pressure boundary	Carbon steel	Condensation (ext)	Loss of material	External Surfaces Monitoring	VII.I.A-81	3.3.1-78	A
Valve body	Pressure boundary	Stainless steel	Condensation (ext)	Loss of material	External Surfaces Monitoring	--	--	G
Valve body	Pressure boundary	Stainless steel	Raw water (int)	Loss of material	Service Water Integrity	VII.C1.A-54	3.3.1-40	A

Section 2.3.4.2

Condensate Cleanup

The purpose of the condensate cleanup system (system code N22) is to maintain the required purity of feedwater flowing to the reactor. Normally, demineralizers are in operation processing full condensate flow. The condensate cleanup system consists of eight units of deep-bed-type demineralizers (with two units as spares) that operate in parallel, and ~~three precoat filters (with one unit as spare)~~ a condensate full flow filtration system used for startup. The system also includes the associated piping, ultrasonic resin cleaner, the advanced resin cleaning subsystem, and all necessary valves, instrumentation and controls.

Table 3.4.2-2-4
Condensate Cleanup System
Nonsafety-Related Components Affecting Safety-Related Systems
Summary of Aging Management Evaluation

Table 3.4.2-2-4: Condensate Cleanup System, Nonsafety-Related Components Affecting Safety-Related Systems								
Component Type	**Intended Function**	**Material**	**Environment**	**Aging Effect Requiring Management**	**Aging Management Program**	**NUREG-1801 Item**	**Table 1 Item**	**Notes**
Flow element	Pressure boundary	Stainless steel	Air – indoor (ext)	None	None	VIII.I.SP-12	3.4.1-58	A
Flow element	Pressure boundary	Stainless steel	Treated water (int)	Loss of material	Water Chemistry Control – BWR	VIII.E.SP-87	3.4.1-16	A, 401