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Generation Group

January 29, 2009

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: **R.E. Ginna Nuclear Power Plant**
Docket No. 50-244

Relief Request No. 23: R. E. Ginna Nuclear Power Plant – Fourth Interval ISI Program Category B-P Exams – 10 Year Class 1 Leakage Exam

Pursuant to 10 CFR 50.55a(a)(3)(ii), R.E. Ginna Nuclear Power Plant, LLC (Ginna LLC) hereby requests Nuclear Regulatory Commission approval of the following proposed alternative for the Fourth Ten-Year In-Service Inspection interval to perform the system pressure test examination on selected portions of Class 1 component pressure boundaries at plant conditions other than those required by American Society of Mechanical Engineers, ASME Section XI Code, 1995 Edition with the 1996 Addenda. Relief is requested on the basis that hardship and unusual difficulty exists in establishing a pressurized system configuration extending to the second normally closed valve that will subject all Class 1 components to Reactor Coolant System operating pressure during the required system pressure test, without a compensating increase in the level of quality and safety. The details of the 10 CFR 50.55a Relief Request No. 23 are contained in the enclosure to this letter.

The Ginna LLC proposed alternative from code requirements for selected Class 1 piping and valves will continue to provide an acceptable level of quality and safety. Ginna requests approval of the proposed alternative by August 7, 2009 to support the 2009 Fall Refueling Outage.

If you should you have any questions regarding this submittal, please contact Mr. David Wilson at (585) 771-5219 or David.F.Wilson@constellation.com.

Very Truly Yours,

PQM Sept for J. Pacher

Joseph Pacher

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NRR

1002082

JP/MR

Enclosure: Relief Request No. 23

cc: S. J. Collins, NRC
D.V. Pickett, NRC
Resident Inspector, NRC (Ginna)
P.D. Eddy, NYSDPS
J. P. Spath, NYSERDA

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Proposed Alternative
In Accordance with 10 CFR 50.55a (a)(3)(ii)
-Compliance with the Specified Requirements Would Result in Hardship or Unusual Difficulty without a Compensating Increase in the Level of Quality and Safety -

1. ASME Code Component(s) Affected

The ASME Boiler and Pressure Vessel (BPV) Code Section XI (Reference 1) Examination Category and Item Number of Table IWB-2500-1 are:

Examination Category	Item No.	Description
B-P	B15.50	Piping – Pressure retaining boundary
	B15.70	Valves – Pressure retaining boundary

See Attachment 1 for identified items.

2. Applicable Code Edition and Addenda

The R. E. Ginna Fourth Interval Inservice Inspection (ISI) Program Plan is prepared to the ASME Section XI Code, 1995 Edition with the 1996 Addenda.

3. Applicable Code Requirement

ASME Section XI, IWB-5222(b) requires, "The pressure retaining boundary during the system leakage test conducted at or near the end of each inspection interval shall extend to all Class 1 pressure retaining components within the system boundary."

4. Reason for Request

Pursuant to 10 CFR 50.55a(a)(3)(ii), R. E. Ginna Nuclear Power Plant, LLC (Ginna LLC) requests relief from applying a system leakage test to Class 1 components at full Reactor Coolant System (RCS) pressure for those components normally isolated from RCS pressure.

Ginna LLC has concluded that compliance with Code requirements to apply RCS pressure to test components and piping beyond the first isolation valve imposes significant hardships without a compensating increase in the level of quality and safety.

Hardships associated with testing performed in accordance with the referenced Code

requirements are as follows:

- Special valve lineups and/or the use of temporary high pressure hoses/piping containing RCS pressure required for these tests add unnecessary challenges to the system configuration.
- The associated components and piping are located inside containment. Tests performed inside the radiologically restricted area increases the total exposure to plant personnel while modifying and restoring system lineups, as well as contamination of test equipment.
- Use of single valve isolation from systems with lower design pressures could result in over-pressurization of these systems and damage to permanent plant equipment.
- Pressurization of some double valve isolation pipe segments would require the use of temporary high pressure hoses/piping containing RCS pressure or hydrostatic test pressure hoses. These hoses would run throughout containment and is a significant personnel safety hazard should they burst and may also damage permanent plant equipment. Hoses on the floors are also a tripping hazard for all workers in containment.
- Use of a single closure device past the first isolation valve is a significant personnel safety hazard and may damage permanent plant equipment.
- Leakage past isolation valves to the RCS during special tests could affect the RCS boron concentration and complicate the task of maintaining homogeneous boron concentrations.

5. Proposed Alternative and Basis for Use

Class 1 System Leakage Test will be conducted at or near the end of each inspection interval, prior to reactor startup. The segments of Class 1 piping between the inboard isolation valve and outboard isolation valve/closure device including the valves/closure devices and components in the system boundary will be visually examined for evidence of past leakage and/or leakage during the system leakage test conducted with the isolation valves/closure devices in the position required for normal reactor startup.

Pressurization of components above their normal alignment at normal operating temperature and pressure in order to detect leakage during the VT-2 visual examination is not necessary. Piping with two isolation valves/closure devises is designed to operate with the first isolation valve closed. Piping between the inboard isolation valve and the outboard isolation valve/closure device during normal operating pressure and temperature is normally pressurized, but at a lower pressure.

The temperatures and pressures present in Class 1 components during a system leakage test at a pressure associated with normal system operation is sufficient to qualify as a System Pressure Test. The pressure boundary integrity of these components is validated and documented using identical VT-2 visual examination requirements each refueling outage. The

requested relief will apply VT-2 inspections of the Class 1 boundary beyond the first isolation valves at a stabilized pressure based on seat leakage from the first isolation valve.

Ginna LLC performs other surveillance (i.e. Local Leakage Rate Tests, Contaminated Leakage Rate Tests, Pressure Isolation Check Valve Leak Tests and Inservice Leak Rate Tests) to monitor these components for leakage. Leakage is identified using normal operating temperatures and pressure conditions. In addition to leakage testing, boric acid inspections performed during refueling outages will also identify leakage from these components.

Attachment 1 contains a listing of segments (valves and piping) that this relief request pertains to. The Attachment 1 listing is divided between two groups. "Group A" identifies "Double Valve Isolation Segments" and "Group B" identifies "Vent, Drain and Test Connection Double Isolation Segments".

"Group A - double valve isolation segments" identifies piping segments between an inboard isolation valve and an outboard isolation valve in the system boundary that provides double-isolation of the RCS. Under normal plant operating conditions, the subject pipe segments would see RCS temperature and pressure only if leakage through an inboard isolation valve occurs. With the inboard isolation valve closed during the system leakage test, the segment of piping between an inboard valve and the outboard valve would not be pressurized to the required test pressure during a system leakage test. In order to perform the ASME Code-required test, it would be necessary to manually open each inboard isolation valve to pressurize the corresponding pipe segment, or keep the inboard and outboard isolation valves closed and utilize temporary high pressure hoses/piping, or perform a hydrostatic test using temporary high pressure hoses/piping to these pipe segments. Pressurization by these methods would preclude double isolation of the RCS. Single valve isolation is a significant personnel safety hazard to plant personnel performing the visual (VT-2) examination for leakage, testing personnel who install/remove the temporary high pressure hoses/piping, and to the operators during manual valve manipulation and restoration. When temporary high pressure hoses/piping are used to pressurize associated segments or used in connection with a hydrostatic test, the numerous hoses run throughout containment are a significant personnel safety hazard due to potential hose separation. Also, single valve isolation between interface systems with lower design pressure could result in over-pressurization of the lower pressure systems and cause damage to permanent plant equipment.

The isolation valves associated with double valve isolation segments are located inside containment. The total exposure to plant personnel will increase when installing and removing temporary high pressure hoses/piping and performing valve manipulations. In accordance with 10 CFR 20.1003, radiation exposure is to be maintained as far below the dose limits in 10 CFR Part 20 as is practical consistent with the purpose for which the activity is undertaken. This is having the dose for the required system pressure test as low as reasonably achievable (ALARA).

"Group B - vent, drain and test connection double isolation segments" are segments of piping between an inboard isolation valve and an outboard isolation closure device in the system boundaries that provides double-isolation to the RCS. Under normal plant operating conditions, the subject pipe segments would see RCS temperature and pressure only if leakage through an inboard isolation valve occurs. With the inboard isolation valve closed during the system leakage test, the segment of piping between an inboard valve and the outboard closure device would not be pressurized to the required test pressure during a system leakage test. In order to perform the ASME Code-required test, it would be necessary to manually open each inboard isolation valve to pressurize the corresponding pipe segment. Pressurization by this method would preclude double isolation of the RCS. A single isolation of associated drains, vents and test connections is a significant personnel safety hazard to the personnel performing the visual (VT-2) examination for leakage and to the operators during manual valve manipulation and restoration process.

The inboard isolation valves associated with vents, drains and test connection segments are located inside containment. The total exposure to plant personnel will increase when performing the valve manipulation and restoration process for the currently required test. In accordance with 10 CFR 20.1003, radiation exposure is to be maintained as far below the dose limits in 10 CFR Part 20 as is practical consistent with the purpose for which the activity is undertaken. This is having the dose for the required system pressure test as low as is reasonably achievable (ALARA).

Therefore, Ginna LLC proposes that in lieu of the 10 year Class 1 System Leakage Test that extends to all Class 1 pressure retaining components within the system boundary, a normal system leakage test be performed with isolation valves in their position for normal reactor startup. The VT-2 visual examination for leakage for the alternative will extend to, and include the second closed valve or closure device at the boundary extremity.

6. Duration of Proposed Alternative

Ginna LLC requests permission to implement the system leakage test modified as described above for the tests to be performed in the current 10-year in-service inspection interval. The interval ends December 31, 2009.

7. Precedents

Letter to Edwin D. Halpin (STP) from Michael T. Markely (NRC), Subject: South Texas Project (STP), Units 1 and 2 – Authorization of Relief Request No. RR-ENG-2-51 on System Pressure Test of Class 1, 2 and 3 Systems. (TAC NOS. MD8951 AND MD8952), Dated November 12, 2008.

8. References

1. *ASME Boiler and Pressure Vessel Code,* Section XI, 1995 Edition with the 1996 Addenda

RELIEF REQUEST NO. 23

R. E. Ginna Nuclear Power Plant – Fourth Interval ISI Program
Category B-P Exams – 10 Year Class 1 Leakage Exam

Attachment 1

Group A - Double Valve Isolation Segments

V700 (Gate) to V701 (Gate)	10" RHR
V721 (Gate) to V720 (Gate)	10" RHR
V853B (Check) to V852B (Gate)	6" RCS
V853A (Check) to V852A (Gate)	6" RCS
V878G (Check) to V842A (Check) To V867A (Check) to V839B (Globe)	2" & 10" SI
V878J (Check) to V842B (Check) To V867B (Check) to V840B (Globe)	2" & 10" SI
V877A (Check) to V878F (Check)	2" SI
V877B (Check) to V878H (Check)	2" SI
V383A (Check) to V392B (Globe)	2" CVCS
V9315 (Check) to V393 (Check)	2" CVCS
V9313 (Check) to V297 (Check)	2" CVCS
V513 (Globe) to V563 (Globe)	3/4" RCS
V514 (Globe) to V564 (Globe)	3/4" RCS
V503 (Gate) to V541 (Gate)	2" RCS
V507 (Globe) to V540 (Globe)	2" RCS
V524 (Gate) to V523 (Gate)	2" RCS
V998 (Gate) to V997 (Gate)	3/8" Nuclear Sample
V504A (Gate) to V504B (Gate)	3/8" Nuclear Sample

Group B - Vent, Drain and Test Connection Double Isolation Segments

V535 (Globe) to Blind Flange	3/4" RCS.	Vent
V9318 (Globe) to Blind Flange	3/4" CVCS	Drain
V9317 (Globe) to Blind Flange	3/4" CVCS	Drain

Attachment 1

Group B - Vent, Drain and Test Connection Double Isolation Segments - Continued

V9316 (Globe) to Blind Flange	3/4" CVCS	Drain
V9304 (Globe) to Cap	3/4" CVCS	Test Connection
V2217 (Globe) to Blind Flange	3/4" CVCS	Drain
V302A (Globe) to Blind Flange	3/4" CVCS	Vent
V9302 (Globe) to Cap	3/4" CVCS	Test Connection
V2216 (Globe) to Cap	3/4" CVCS	Vent
V302B (Globe) to Blind Flange	3/4" CVCS	Vent
V206A (Globe) to Blind Flange	3/4" CVCS	Vent
V2221 (Globe) to Blind Flange	3/4" CVCS	Vent
V2221A (Globe) to Blind Flange	3/4" CVCS	Vent
V206B (Globe) to Blind Flange	3/4" CVCS	Vent
V2211 (Globe) to Cap	3/4" CVCS	Test Connection
V2210 (Globe) to Blind Flange	3/4" CVCS	Vent
V311C (Globe) to Cap	3/4" CVCS	Drain
V2204 (Globe) to Cap	3/4" CVCS	Vent
V2764 (Globe) to Blind Flange	3/4" RHR	Vent
V2765 (Globe) to Blind Flange	3/4" RHR	Drain
V2747 (Globe) to Blind Flange	3/4" RHR	Vent
V2746 (Gate) to Blind Flange	3/4" RHR	Drain
V852D (Globe) to Blind Flange	3/8" RCS	Test Connection
V852C (Globe) to Blind Flange	3/8" RCS	Test Connection
V2843 (Gate) to Blind Flange	3/4" SI	Vent
V2844 (Gate) to Blind Flange	3/4" SI	Drain
V2834 (Gate) to Blind Flange	3/4" SI	Drain
V2835 (Gate) to Blind Flange	3/4" SI	Drain