

August 8, 2003

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Attn: Mr. Russell Arrighi (Mail Stop O-11F1)  
Office of Nuclear Reactor Regulation  
Washington, D.C. 20555-0001

Subject: C-RAI 4.3.7-1(a) and LRA Section B2.1.14 Updates  
R. E. Ginna Nuclear Power Plant  
Docket No. 50-244

Dear Mr. Arrighi:

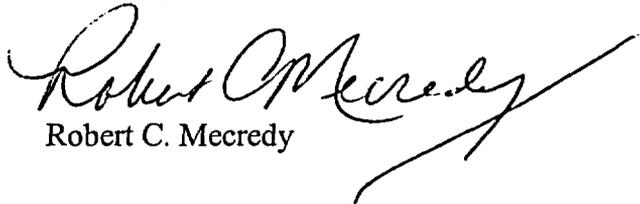
By letter dated July 16, 2003, RG&E provided a response to the subject clarification. The purpose of the enclosure to this letter is to update our response relative to the cumulative usage factor calculated for the "low head safety injection nozzles", including the period of extended operation.

Also included is an update to Section B2.1.14 of the License Renewal Application, "Fire Water System".

I declare under penalty of perjury under the laws of the United States of America that I am authorized by RG&E to make this submittal and that the foregoing is true and correct.

Very truly yours,

Executed on August 8, 2003

  
Robert C. Mecredy

Enclosure

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U.S. NRC Ginna Senior Resident Inspector

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## ENCLOSURE:

### 1. RAI 4.3.7-1(a) Clarification

The geometry of the Ginna RPV low head safety injection nozzle is identical to that of the Point Beach Unit 2 RPV nozzle geometry except for two dimensions:

	<u>Ginna</u>	<u>Point Beach</u>
RPV wall thickness	9.0 inch	9.25 inch
Nozzle counterbore thickness	2.71875 inch	2.75 inch

Thus, the Ginna RPV wall is 2.75% thinner and the nozzle counterbore thickness is 1% thinner. These are not considered significant from a stress standpoint. The materials of construction of the piping safe-end, nozzle and vessel wall for the two RPVs are identical.

The analysis of the Point Beach Unit 2 RPV safety injection nozzle includes all standard Westinghouse transients. The CUF calculated for the Point Beach Unit 2 RPV safety injection nozzle is 0.073.

The Ginna RPV safety injection nozzle is essentially identical to the Point Beach Unit 2 nozzle based on a review of geometry, materials and stresses. Thus, it is concluded that the design fatigue usage for the Ginna RPV safety injection nozzle is 0.073. This value is valid for the period of extended operation since the design basis transient set for 40 years is bounding for 60 years of plant operation. Applying the maximum environmentally-assisted fatigue  $F_{en}$  value of 2.54 (from NUREG/CR-6583) gives a maximum environmentally-assisted fatigue usage of  $0.073 \times 2.54 = 0.185$  for the period of extended operation.

### 2. LRA Section B2.1.14 Update

In the License Renewal Application, we stated that the Fire Water System Program will be consistent with NUREG-1801, Section XI.M27. Review of our program has determined that the Ginna Station program is consistent with Section XI.M27, with exceptions. The exceptions are as follows:

- Flushing of low flow areas of the sprinkler piping by full-flow testing is not performed at Ginna Station. In lieu of full-flow testing of the sprinkler piping, a representative sample of sprinkler heads will be removed at Ginna Station prior to the expiration of the current operating license and a visual or remote visual (i.e., boroscopic) inspection of the internal condition of the piping will be performed. In addition, volumetric non-destructive examinations of representative sections of the system piping will be performed using appropriate techniques to detect wall thinning, sedimentation or biofouling. Inspections of opportunity will also be performed when the fire system piping components are disassembled for maintenance to visually inspect for signs of internal degradation. Sprinkler heads with a service life of 50 years will be replaced or representative samples from one or more areas will be submitted to a recognized testing laboratory for field service tests. This replacement/testing activity will be performed at 10-year intervals following the 50-year in-service tests.

- Sprinkler system components are not specifically examined for evidence of microbiological fouling at Ginna Station. However, the required testing is performed in accordance with applicable codes and standards which are designed to ensure that the sprinkler system will perform its intended function. In addition, when fire system piping is opened for maintenance purposes, inspections of the internal condition of the piping will be performed to detect evidence of microbiological fouling.
- Visual inspections of fire water system piping and sprinkler systems are performed during windows of opportunity during maintenance activities. Additional inspections by UT or RT are performed each operating cycle on line. The selection criteria and extent of these inspections, including expansion criteria in the event that age-related degradation is found shall be defined in the fire water system program basis document prior to the end of the current license period.
- The periodicity of fire water system flushing and flow testing is established by Operating Experience and is documented in the Technical Specifications Technical Requirements Manual.