UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW. SUITE 23T85
ATLANTA, GEORGIA 30303-8931

February 18, 2000

[redacted] 7C

SUBJECT: ALLEGATION REPORT RII-2000-A-0013

[redacted] 7C

This letter is in response to two concerns you raised [redacted] 7C Your first concern related to the number of emergency sirens around the Harris Nuclear Plant and their capability for local citizens to hear them. The second concern you raised related to system pipe wall thickness at Harris. Both of these concerns were open issues that were addressed at the time of Shearon Harris Nuclear Plant licensing.

The adequacy of the emergency sirens was addressed during licensing with a full participation emergency exercise on May 17, 1985. The on-site portion of the exercise was evaluated by the NRC with no significant deficiencies in on-site emergency preparedness identified. The offsite portion of the emergency preparedness exercise was evaluated by the Federal Emergency Management Agency (FEMA) who concluded that the state and local emergency plans were adequate and the exercise demonstrated that off-site emergency preparedness was adequate.

The emergency sirens are part of the Harris Alert and Notification System (ANS) which has a testing program consisting of biweekly silent tests, quarterly growl tests, and an annual full-volume (or full-cycle) test. The most recent full-volume test was conducted on October 25, 1999. As of September 30, 1999, the consolidated Harris success rate for all ANS tests over the previous year was 98.2%. The applicable acceptance criterion established by FEMA is 90%.

The licensee's emergency preparedness ANS met initial licensing requirements and the ongoing test results meet current FEMA requirements and therefore the NRC is not aware of any current problem with the Harris ANS at this time. If you are aware of any specific problem with any portion of the Harris ANS which you can identify to us we would review your specific concern.

By letter dated January 12, 1987, Facility Operating License NPF-63 was issued for Shearon Harris Nuclear Plant. As noted in Item (4) of Table 1.2, "Outstanding Issues", the issue of Control of Minimum Wall Thickness in American Society of Mechanical Engineers (ASME) Class 1, 2, and 3 Piping Systems was resolved to the satisfaction of NRC.

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The pipe wall thickness concern was related to using nominal wall thickness in the piping stress analyses in ASME Class 1, 2, and 3 piping systems and possible locations in these systems with wall thicknesses less than nominal. The use of nominal wall thickness in piping stress analyses (rather than minimum wall thickness) could result in the under-prediction of piping stress at specific locations. In the piping specification a minimum wall thickness was specified: (1) at weld end preparations; (2) after machining or grinding the pipe wall; (3) in trimming the pipe inside diameter; and (4) after counterboring the pipe ends. The NRC staff found that the piping fabricator utilized 87.5% of nominal wall thickness as minimum wall thickness and performed weld metal buildup to ensure wall thickness was never less than 87.5% of nominal. Thus the piping fabricator appeared to provide assurance that the minimum wall thickness permitted in the design specification based on ASME Code equations would not occur.

To provide the NRC staff with added assurance that the condition permitted in the design specification did not actually occur, the NRC staff requested an examination, on a sampling basis, of several girth butt welds on the most susceptible piping systems. The results of the in-situ examinations of 20 girth butt welds for piping in the residual heat removal and component cooling water systems showed no cases where wall thickness was less than the minimum wall thickness used by the piping fabricator (87.5% of nominal wall thickness).

Based on the review of the criteria used by the piping fabricator to ensure that the minimum wall thickness would not result in a thickness below the minimum specified (i.e., 87.5% of nominal wall thickness) and the sample of welds actually measured in the plant, the NRC staff concluded that the use of nominal wall thickness in the piping stress analysis (rather than the minimum wall thickness permitted in the design specification) was acceptable. The NRC considered the issue closed.

Subsequent to issuance of the Operating License, the applicable Code for inspection and maintenance of ASME Class 1, 2 and 3 piping has been the applicable Edition and Addenda of the ASME Boiler and Pressure Vessel Code, Section XI. The NRC has periodically performed on-site inspections to verify compliance with this Code. Examples are detailed in NRC Inspection Reports 50-400/97-03, 50-400/97-04 and 50-400/98-09. The inspections have not identified any problems with thin piping. In addition to ASME Section XI controls for inservice inspection of class 1, 2, and 3 piping, the licensee controls pipe thinning due to erosion/corrosion with their flow accelerated corrosion (FAC) program. Activities under this program are monitored by the NRC (See NRC Inspection Reports 50-400/94-01 and 50-400/94-12).

The ASME class 1, 2, and 3 pipe wall thinning issue was satisfactorily resolved during licensing and inspections of the inservice inspection and flow accelerated corrosion programs have not identified any problems at Harris with thin piping and therefore the NRC is not aware of any current problem with pipe wall thinning at this time. If you are aware of any ASME class 1, 2, and 3 system piping minimum wall thickness problem which you can identify to us we would review your specific concern.

Should you have any questions concerning this letter please contact me at (404) 562-4560.

Sincerely,

Brian R. Bonser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

cc: O. DeMiranda

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/RA/

Brian R. Bonser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

cc: O. DeMiranda

OFFICE	DRP/RII	EICS/RII	EICS/RII				
SIGNATURE	GMacDonald:vg	ODeMiranda	ABoland				
NAME		ODM					
DATE	2/17/00	1/17/2000	1/ /2000	1/ /2000	2/ /2000	2/ /2000	2/ /2000
E-MAIL COPY?	(YES) NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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