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SUBJECT: Forwards responses to NRC request for addl info re 3rd 10-yr interval,inservice insp program.

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January 16, 1990

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Allen R. Johnson
Project Directorate I-3
Washington, D.C. 20555

Subject: Third Ten-Year Interval, Inservice Inspection Program
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Johnson:

Enclosed are the responses to the NRC's Request for Additional Information (TAC No. 74099) provided in the November 16, 1989 letter from Allen Johnson to Dr. Robert C. Mecredy.

We trust these responses will allow the completion of the Ginna Station Third Ten-Year Inservice Inspection Program interval in a timely fashion. Page 12 of the Enclosure provides the prioritization of ISI Relief Requests.

Very truly yours,

Robert C. Mecredy
General Manager
Nuclear Production

GJW\080
Enclosure

xc: Mr. Allen R. Johnson (Mail Stop 14D1)
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Ginna Senior Resident Inspector

Cert No P340957175

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14 December 1989

INFORMATION REQUESTED

Question: Provide a list of Ultrasonic calibration standards that will be used during the third interval as stated in item 2A in your letter.

Answer: The following Ultrasonic calibration standards will be utilized during the third interval ISI program for R.E. Ginna.

Identification Number	Description	Material Spec.
6-SS-10S-.134-1A-REG	6" D-SCHEDULE 10-SS-PIPE	SA 312
6-SS-40S-.280-2-REG	6" D-SCHEDULE 40-SS-PIPE	SA 312
8-SS-10S-.148-3-REG	8" D-SCHEDULE 10-SS-PIPE	SA 312
8-SS-40S-.322-4-REG	8" D-SCHEDULE 40-SS-PIPE	SA 312
8-SS-160-.906-5-REG	8" D-SCHEDULE 160-SS-PIPE	SA 312
10-SS-10S-.165-6-REG	10" D-SCHEDULE 10-SS-PIPE	SA 312
10-SS-40S-.365-7-REG	10" D-SCHEDULE 40-SS-PIPE	SA 312
10-SS-140-1.0-8-REG	10" D-SCHEDULE 140-SS-PIPE	SA 376
12-SS-5S-.156-9-REG	12" D-SCHEDULE 5-SS-PIPE	SA 312
14-SS-10-.250-10-REG	14" D-SCHEDULE 10-SS-PIPE	SA 312
14-CS-30-.375-11-REG	14" D-SCHEDULE 30-CS-PIPE	SA 106
PL-1.187-SS-12-REG	1.187 THICK-SS-PLATE	SA 240
PL-.30-SS-13-REG	.30 THICK-SS-PLATE	SA 240
PL-3.5-CS-14-REG	3.5 THICK-CS-PLATE	SA 533
9-CSCL-15-REG	9" THICK-CS-CLAD-VESSEL BLOCK	SA 508
7-CSCL-16-REG	7" THICK-CS-CLAD-VESSEL BLOCK	SA 508
5-CSCL-17-REG	5" THICK-CS-CLAD-VESSEL BLOCK	SA 508
PL-3.0-SS-18-REG	3" THICK-SS-PLATE	SA 479
6-SS-160-.719-19-REG	6" D-SCHEDULE 160-SS-PIPE	SA 312
4-SS-160-.531-20-REG	4" D-SCHEDULE 160-SS-PIPE	SA 376

Identification Number	Description	Material Spec.
3-SS-160-.438-21-REG	3" D-SCHEDULE 160-SS-PIPE	SA 376
8.5-6-8-CS-22-REG	REACTOR PRESSURE VESSEL NUT	SA 320-L43
6-1-8-CS-23-REG	REACTOR PRESSURE VESSEL STUD	SA 320-L43
IR-CSCL-24-REG	O.D. INNER RADIUS BLOCK	SA 533
6-SS-120-.562-25-REG	6" D-SCHEDULE 120-SS-PIPE	SA 312
FS/NS-CSCL-26-REG	FLANGE AND NOZZLE SHELL BLOCK	SA 533
IR-CSCL-27-REG	NOZZLE INNER RADIUS BLOCK	SA 553
CRD-SS/IN-.656-28-REG	SS-CONTROL ROD DRIVE BLOCK	SA 182
10-SS-140-1.0-29-REG	10" D-SCHEDULE 140-SS-PIPE	SA 312
3.5-.625-8-CS-30-REG	REACTOR COOLANT PUMP STUD	ACTUAL STUD
5.375-3.5-8-CS-31-REG	REACTOR COOLANT PUMP NUT	ACTUAL NUT
1.187-S-7-CS-32-REG	1.187" DIA. X 7 THREADS/ IN-CS-STUD	SA 193
1.187-N-7-CS-33-REG	1.187" DIA. X 7 THREADS/ IN-CS-NUT	SA 194
1.125-S-12-CS-34-REG	1.125" DIA. X 12 THREADS/ IN-CS-STUD	SA 193
1.125-N-12-CS-35-REG	1.125" DIA. X 12 THREADS/ IN-CS-NUT	SA 194
1.250-S-7-CS-36-REG	1.250" DIA. X 7 THREADS/ IN-CS-STUD	SA 193
1.250-N-7-CS-37-REG	1.250" DIA. X 7 THREADS/ IN-CS-NUT	SA 194
10-SS-160-1.147-70	10" D-SCHEDULE 160-SS-PIPE	SA 312
6-SS-X-1.1-38-REG	6" D-1.1" WALL-SS-PIPE	SA 182
29-SS-X-2.5-39-REG	29" ID-SS-PIPE	SA 182
SI/N-CSCL-40-REG	SAFETY INJECTION NOZZLE BLOCK	SA 508

Identification Number	Description	Material Spec.
27.5-CSS-X-2.4-41-REG	27.5" ID-CLAD-CS-PIPE	SA 351
29-CSCL-X-2.5-42-REG	29" ID-CLAD-CS-PIPE	SA 508
5.437-SS-X-1.0-43-REG	5.437" DIA. 1" WALL-SS-PIPE	SA 182
PL-1.5-CS-44-REG	1.5" THICK-CS-PLATE	SA 285
14-CS-100-.938-45-REG	14" D-SCHEDULE 100-CS-PIPE	SA 106
18-CS-100-1.156-46-REG	18" D-SCHEDULE 100-CS-PIPE	SA 106
4-SS-80-.337-47-REG	4" D-SCHEDULE 80-SS-PIPE	SA 312
3-SS-80-.300-48-REG	3" D-SCHEDULE 80-SS-PIPE	SA 312
4.25-R-CS-N/RB-49-REG	REACTOR PRESSURE VESSEL NUT REFERENCE BLOCK	SA 516
1.250-B-6-A490-50-REG	S/G SECONDARY MANWAY BOLT	ASTM A 490
1.375-S-17-A490-51-REG	1.375 DIA. X 17" LONG-STEEL-STUD	ASTM A 490
1.375-S-24-A490-52-REG	1.375 DIA. X 24" LONG-STEEL-STUD	ASTM A 490
1.375-S-33-A490-53-REG	1.375 DIA. X 33" LONG-STEEL-STUD	ASTM A 490
3-SP-14-A514-GRF-54-REG	COLUMN PIN	ASTM A 514
2-IC600-80-J-NOZ-55-REG	S/G "J" NOZZLE	INCONEL 600
1.875-9-8N-CS-56-REG	S/G AND PRESSURIZER MANWAY BOLT	SA 193
1.0-4-8N-CS-57-REG	S/G HAND HOLD BOLT	SA 193
1.875-S-8-CS-58-REG	S/G PRIMARY MANWAY STUD	SA 193
2.89-1.87-8-CS-59-REG	S/G PRIMARY MANWAY CLOSURE NUT	SA 193

Question: With regard to limitations due to metallurgical properties of cast stainless steel, discuss the ISI examination procedures for the ultrasonic examination of the Primary Coolant System as stated in item 2B of your letter.

Answer: The examination of cast stainless steel components at R. E. Ginna consists of the examinations of two loops, Loops A and B. In each loop of the recirculation system there exist five (5) cast stainless elbows. In the second interval, the longitudinal seams in four(4) elbows in each loop between the steam generators and pumps were examined. A total of eight examinations were completed as well as other cast fittings-to-pipe examinations. These examinations were performed by Southwest Research Institute. The examinations utilized two refracted longitudial-wave transducers mounted in modules that converge the ultrasonic beams at the inner surface. Upon review of the activity in the industry to develop techniques for the examination of cast stainless components, the dual search unit refracted longitudial-wave tranducer technique produces the most effective proven examination method to date. Rochester Gas and Electric has in the past and is continuing to search for and utilize new methods, techniques and technologies to provide more effective examinations.

Question: For Relief Request Numbers 1 and 2, detailed technical information is requested that demonstrates that the Code requirement is impractical as stated in item 2C of your letter.

Answer: The request for additional information incorporated two comments for clarification concerning relief requests one (1) and two (2) submitted in the third interval ISI program. Rochester Gas and Electric received relief for R. E. Ginna for the second interval (1979-1989) allowing deferral of all vessel mechanized examinations including category B-A and B-D to the end of the second interval. Full examinations of the reactor pressure vessel (RPV) shell-to-flange weld (Category B-A), and nozzle-to-vessel welds (Category B-D) were performed from the flange surface, nozzle bores and from the vessel shell during the end of interval March-April 1989 refueling outage. All Reactor Pressure Vessel nozzle inside radius section examinations were also performed at this time. All examinations were performed in accordance with the 74S75 Edition of the ASME Code.

Indications were recorded and analyzed during the series of examinations performed at the 1989 outage. Comparisons of their size to the same indications recorded during the preservice examination and the 1979 end of the first interval inservice examination led to no indications of growth of defects. The indications were sized utilizing both conventional beam spread techniques and specially developed focused beam sizing techniques. No evidence of growth was detected by utilizing these extensive techniques of examination. These examinations were witnessed by the NRC and their consultants during the 1989 outage.

The results of the 1989 examinations, with comparative sizing calculations and fracture mechanics evaluation were submitted to the Nuclear Regulatory Commission (NRC) on 4 May 1989. The data provided was accepted by the NRC on 5 June 1989 with no requirements for augmented examinations. We have therefore, scheduled the next series of Category B-A and B-D RPV examinations for the 1999 time frame (end of this 10 year interval). Examination Category B-A in Table IWB-2500 Item number B1.30 already allows examination deferral as indicated in footnote five (5) of the notes. The Category B-D welds and inside radius sections for all vessels other than the reactor vessel have been scheduled for examination during the three periods of the third interval. By following the 1986 Code criteria, the Code would require a nozzle examination from the bore and a vessel-to-flange examination from the flange seal surface during the first period of the third interval. Since all reactor vessel examinations including nozzle-to-shell from both the bore and shell, vessel-to-flange from flange surface and wall, and nozzle IRS were accomplished in 1989, the prescribed B-A, B1.30 and B-D, B3.90 and 3.100 Code criteria would allow another 10 years before the reexamination.

Since the examinations were accomplished completely in 1989, we propose to reexamine them at the end of the third interval. We also believe that the results obtained from an examination performed during the first period of the third interval would not provide the best data to insure additional safety and system reliability. Also, by performing this type of examination at a constant frequency rather than a year or two following a major examination of that same component will produce more meaningful results.

Question: Additional information was requested concerning Relief Request Number 6 for R.E. Ginna third interval program to obtain relief from performing the Code-required hydrostatic test of the radioactive waste holdup tank in the waste disposal system as specified in item 2D of your letter.

Answer: This request is specific to the Code hydrostatic test requirements concerning the waste hold-up tank. Liquid waste from various locations in the plant including the reactor coolant drain tank, chemical drain tank, intermediate and auxiliary building sumps, floor, laundry and shower drains are diverted to the waste hold-up tank. During cold shut down and refueling outages, the level in this tank varies depending on the activities performed during an outage. If required to perform the Code examination when the tank is full, there is a possibility of a hazardous situation occurring. Liquid waste could be diverted to the waste hold-up tank while performing the required Code static head examination. This action could result in a liquid radioactive waste spill at one of various locations.

It was the intent of this relief request to prevent a hazardous event from occurring. Upon review of your inquiry, we have concluded that it is possible to perform the required examination on this component. It will require greater coordination with Operations and plant outage activities than is normally expected, but it can be performed. Therefore, Relief Request Number 6 is no longer required.

Question: Additional information was requested concerning Relief Request Number 9 pertaining to the Main Steam Secondary side of the Steam Generator and Downstream piping hydrostatic testing. What is the technical impracticality of heating up the primary side of the Steam Generator to maintain the 800 psig differential and the Code-required test pressure on the secondary side as stated in item 2E in your letter?

Answer: The 800 psi differential pressure limitation was established early in the plant life of R. E. Ginna. This limitation was initiated after several Westinghouse Steam Generators with explosively welded tubesheet cladding experienced primary side tubesheet cladding seperation. The hydrostatic test causes the Steam Generator tubesheet to deflect due to reverse loading (in the direction opposite to normal operation). The pressure limitation of 800 psi is an attempt to limit tubesheet deflection and the potential for cladding failure.

To maintain an 800 psi differential pressure across the tubesheet while performing a Code acceptable hydrostatic test of 1356 psi (1.25 x 1085 psi), the required primary system pressure would be 556 psi (1356psi - 800psi).

During the period of time that a hydrostatic test and associated examination would be performed, the plant is operating with the Low Temperature Overpressure Protection System (LTOP) set points in effect. The LTOP set points are used to limit primary system pressure to 400 psi or less. In order to pressurize the primary system to 556 psi (a value greater than 400 psi) the LTOP set points must be changed to higher values and additionally the steam generators are required to be functional due to primary system pressure. When the steam generators are functional, safety valves and level instrumentation are also required to be functional. Safety valves can not be functional during a hydrostatic test due to gagging requirements and level instrumentation can not be functional since the steam generators are water solid and therefore level readings would be off scale.

LTOP set points are changed when the primary system temperature reaches 350 degree F., thus there is the potential of a Technical Specification violation if the primary system is pressurized to 556 psi. Technical Specification 3.1.1.2 limits the tubesheet differential temperature to 100 degree F. while the potential for a differential temperature of 290 degree F. (350 deg.F. -60 deg.F.) exists.

In order to alleviate these problems, the Steam Generator and downstream piping, to the class boundary, will be pressurized to 1194 psi (1.1 x 1085 psi) instead of 1356 psi (1.25 x 1085psi). This action will minimize the potential for tubesheet problems while fulfilling the intent of a hydrostatic test to insure the integrity of the pressure boundary.

In addition to the above test, system pressure tests will be performed each period at system operating pressure and temperature to assure system integrity. The steam generator and associated systems are also subjected to volumetric and surface (Section XI) examinations. The Feedwater and Main Steam piping is also included in an augmented inservice inspection program to provide additional assurances of the systems integrity.

Question: Relief Request Number 11: Discuss the "full operational pressure" of the Boric Acid Filter and associated piping and the "safe working pressure" of the Boric Acid Filter housing flange gaskets versus the Code-required hydrostatic test pressure as stated in your letter item 2F.

Answer: The flange gasket was reviewed with new technical information that eliminated concerns over the safe working pressure of the Boric Acid Filter housing flange gasket.

Upon review of your inquiry, it has been concluded that the Hydrostatic test is possible and will be incorporated into the plan. Therefore, Relief Request Number 11 is no longer required.

Question: Additional information was requested for Relief Request Number 13 regarding hydrostatic testing of non-ISI classified systems that contain lines penetrating primary containment and do not carry radioactive gases or fluids. List the specific lines for which the relief is requested and provide justification as stated and indicated in item 2G.

Answer: A listing of specific lines are provided below for which this relief is requested.

Penetration	Description	P&ID No.
120	Nitrogen Fill to Safety Injection Accumulators; 1-SI-903	33013-1262 Sheet 1&2
121	Nitrogen Supply to Pressurizer Relief Tank; 3/4-RC-151	33013-1258
121	Reactor Makeup Water to Pressurizer Relief Tank; 2-RC-151	33013-1258
124	Post Accident Test Point Containment Atmosphere	33013-1863
124	Post Accident Test Point Containment Recirculating Filter & Cooling Unit C Discharge	33013-1863
132	Containment Depressurization and Mini-Purge Exhaust	33013-1870
202	Hydrogen Supply to Recombiner B Main Burner	33013-1275 Sheet 1&2
202	Hydrogen Supplu to Recombiner B Pilot Burner	33013-1275 Sheet 1&2
203	Post Accident Test Point Containment Atmosphere	33013-1863
203	Post Accident Test Point Containment Recirculation Filter & Cooling Unit D Discharge	33013-1863
210	Recombiner Oxygen Makeup to Containment	33013-1275 Sheet 1&2
301	Heating Steam Supply to Containment; 2-HS-150-4	33013-1915
303	Heating Steam Condensate Return from Containment	33013-1915
304	Hydrogen Supply to Recombiner A Main Burner	33013-1275 Sheet 1&2
304	Hydrogen Supply to Recombiner A Pilot Burner	33013-1275 Sheet 1&2
305	Post Accident Test Point Containment Atmosphere	33013-1863

Penetration	Description	P&ID No.
305	Post Accident Test Point Containment Recirculating Filter & Cooling Unit A Discharge	33013-1863
305	Post Accident Test Point Containment Recirculating Filter & Cooling Unit B Discharge	33013-1863
305	Containment Air Sample Inlet	33013-1866
305	Containment Air Sample Outlet	33013-1866
307	Fire Service Water	33013-1991
309	Containment Mini-Purge Supply	33013-1865
310	Instrument Air Supply to Containment 2-IA-125-8	33013-1887 33013-1893
310	Service Air Supply to Containment	33013-1886 Sheet 2
313	Containment Leakrate Test Connection Depressurization	33013-1882
317	Containment Leakrate Test Connection Supply; 6-AT-150-4	33013-1882
324	Demineralized Water	33013-1908 Sheet 3
332	Hydrogen Monitor A Inlet	33013-1278 Sheet 1
332	Hydrogen Monitor B Inlet	33013-1278 Sheet 1
332	Hydrogen Monitor Outlet	33013-1278 Sheet 1

Due to the vintage of the R.E. Ginna Plant, the piping within these penetration boundaries was not constructed to Class 2 requirements. Regulatory Guide 1.26 does not require these penetrations to be classified as Quality Group B or Class 2. However, Rochester Gas & Electric has optionally classified these lines Class 2. For optionally classified piping, IWA-1320(e) allows the Owner the option to apply the Section XI rules. In the case of these lines,

Rochester Gas & Electric has concluded that Appendix J testing and a VT-2 examination once per period during normal system operation will provide testing commensurate with the safety function. In addition, these lines are now subject to ASME Section XI rules for Repairs and Replacements.

Question: Relief Request Number 15 requires clarification on table IWC-2500-1 examination Category C-F-1 and Category C-F-2 Items C5.10 and C5.50 respectively as stated in the letter for item 2H.

Answer: Relief Request Number 15 is not required by the Code. In the Class 2 allocations tables, the welds concerning this relief are included in the tables and in the program plan tables. Since the relief request is not required to meet the code, this relief request will be deleted. Changes to the allocation tables and in the program plan tables will be made to insure correct accountability.

Question: Relief Request Number 16 requires clarification concerning surface examinations on integral attachments on Class 1 and Class 2 piping once per interval in accordance with IWB-2500-1, Examination Category B-K-1 and IWC-2500-1, Examination Category C-C, respectively as indicated in item 2I of your letter.

Answer: Relief Request Number 16 is not required by the Code. The associated program plan tables will be corrected and updated to assure accurate accounting. This activity will be performed to reflect the "non-requirement" code status since the associated thicknesses are < 5/8" for class 1 and < 3/4" for class 2. Relief Request Number 16 is not required and will be deleted.

RELIEF REQUEST PRIORITIES

This list is the prioritization for Rochester Gas and Electric submitted relief requests for the third interval ISI program. An "A" identifies a high priority with acceptance required before the March 1990 outage, "B" identifies items requiring action post 1990 outage.

Relief Request Number	Priority Number
1	B
2	B
3	A
4	A
5	B
6	B *
7	B
8	B
9	B
10	B
11	B *
12.1	B
12.2	B
12.3	B
13	B
14	B
15	B *
16	B *

(note: * = relief will be deleted from the third interval submittal.)

:Response.2

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