

J. T. Beckham, Jr.
Vice President - Nuclear
Hatch Project



April 12, 1996

Docket No. 50-321

HL-5146

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Edwin I. Hatch Nuclear Plant - Unit 1
Inservice Inspection of
Reactor Pressure Vessel Welds

Ladies and Gentlemen:

By letter dated December 4, 1995, Georgia Power Company requested that the Nuclear Regulatory Commission (NRC) staff reinstate a previous relief request concerning inspection of the reactor pressure vessel (RPV) shell welds. The relief allowed deferral of the augmented RPV examinations for Unit 1 to the first period of the third inspection interval. Also, the relief described GPC's anticipated scope of alternative examinations which included welds of the same type within and outside of the beltline region such that the equivalent examination lengths of 100 percent of one circumferential and axial beltline weld would be achieved. The anticipated scope is shown on sketch ISI-SK-154.

In recognition of as-low-as-reasonably-achievable (ALARA) principles, GPC's letter dated December 4, 1995, stated that the inspection scope was subject to revision relative to the extent to which any particular weld would be examined. The final specific scope would be determined based on ALARA. Consequently, during the Unit 1 Spring 1996 refueling outage, the inspection scope was redefined, as shown on Sketch ISI-SK-153. Based on health physics assessments of projected dose exposures for the original scope, GPC formulated an inspection scope that resolved the ALARA concerns and provided for appropriate inspections. GPC has evaluated the redefined scope and determined that the alternative examinations are acceptable. Specifically, the redefined scope results in an increase in the amount of weld examined, incorporates recent advances in technology for assessing RPV welds, and allows improved inspection techniques. Additional details are as follows:

1. The previous scope included welds which were accessible for manual examination only. The revised scope allows all examinations, circumferential and axial, to be performed using automated equipment, thereby producing more repeatable results by allowing for the electronic storage of signal data for later comparisons.
2. The amount of circumferential weld examined was equal to the equivalent length of one circumferential weld.

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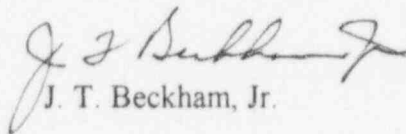
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3. The revised scope provided a significant increase in amount of axial weld examined. This was accomplished by examining three entire axial welds as opposed to examining the equivalent length of one axial weld. This is an improvement in safety based on the BWR Vessel and Internals Project, BWR Reactor Pressure Vessel Shell Weld Inspection Recommendations (BWRVIP-05), EPRI TR-105697, dated September 1995. This analysis indicates that circumferential welds are less likely to encounter problems than axial welds.
4. Although a beltline weld was not examined, embrittlement is not an issue for Unit 1 since it has only 22 years of operation. The amount of fluence is equivalent to that of 2-3 years on a PWR. No adverse effects due to irradiation is anticipated at this point in the life of the plant.
5. The RPV contact dose rates at the three beltline inspection doors is 1.5 Rem/hr. to 1.7 Rem/hr. The configuration is such that only manual examinations could be performed and lead shielding could not be effectively used to reduce the radiation levels. In comparison, automated examinations were performed in the non-beltline area with a RPV contact dose rate of 35 mRem/hr. It is estimated that dose savings of approximately 15 Man Rem were achieved by making this change.

The change in scope for RPV shell welds inspection was based on the excessive radiation exposure to be received by performing the original examinations. The selection of these other welds has a positive impact on the safety and operation of the plant based on ALARA principles, permits the use of automated vs. manual examinations, and permits a larger sample of longitudinal welds to be examined to correspond to the findings of the BWRVIP report. Also, an RPV examination will be performed within the next forty-month period which will consist of the examination required by the NRC Augmented rule or the scope agreed to between the BWRVIP and the NRC.

Should you have any questions in this regard, please contact this office.

Sincerely,


J. T. Beckham, Jr.

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Enclosures: Sketches ISI-SK-153 and ISI-SK-154

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cc: Georgia Power Company

Mr. H. L. Sumner, Jr., Nuclear Plant General Manager
NORMS

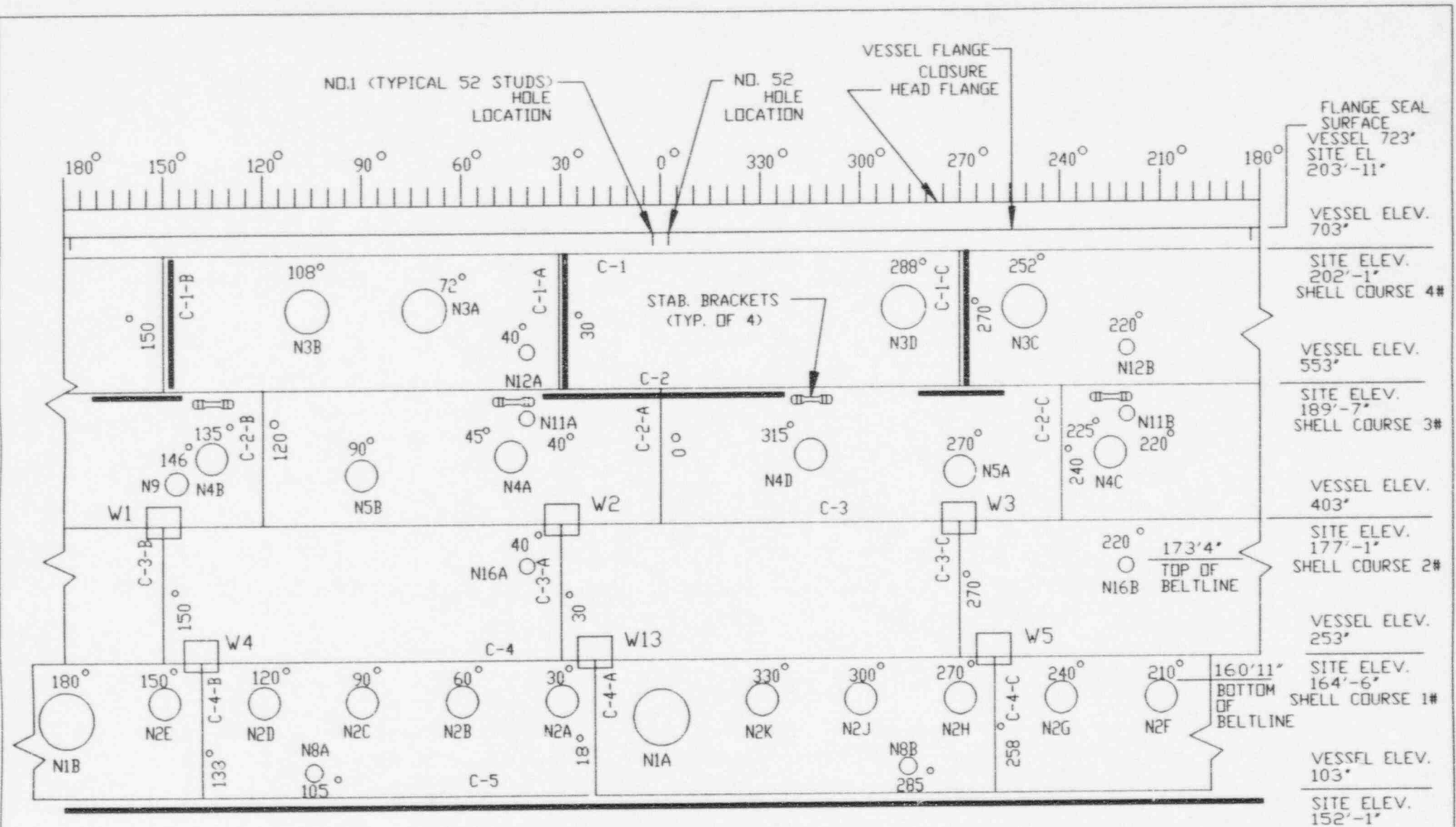
U. S. Nuclear Regulatory Commission, Washington, D. C.

Mr. K. Jabbour, Licensing Project Manager - Hatch

U. S. Nuclear Regulatory Commission, Region II

Mr. S. D. Ebnetter, Regional Administrator

Mr. B. L. Holbrook, Senior Resident Inspector - Hatch



OUTSIDE VIEW

LEGEND

EXAMINED SPRING 1996 OUTAGE.

DATE	4-5-1996
REV	0

SOUTHERN NUCLEAR COMPANY

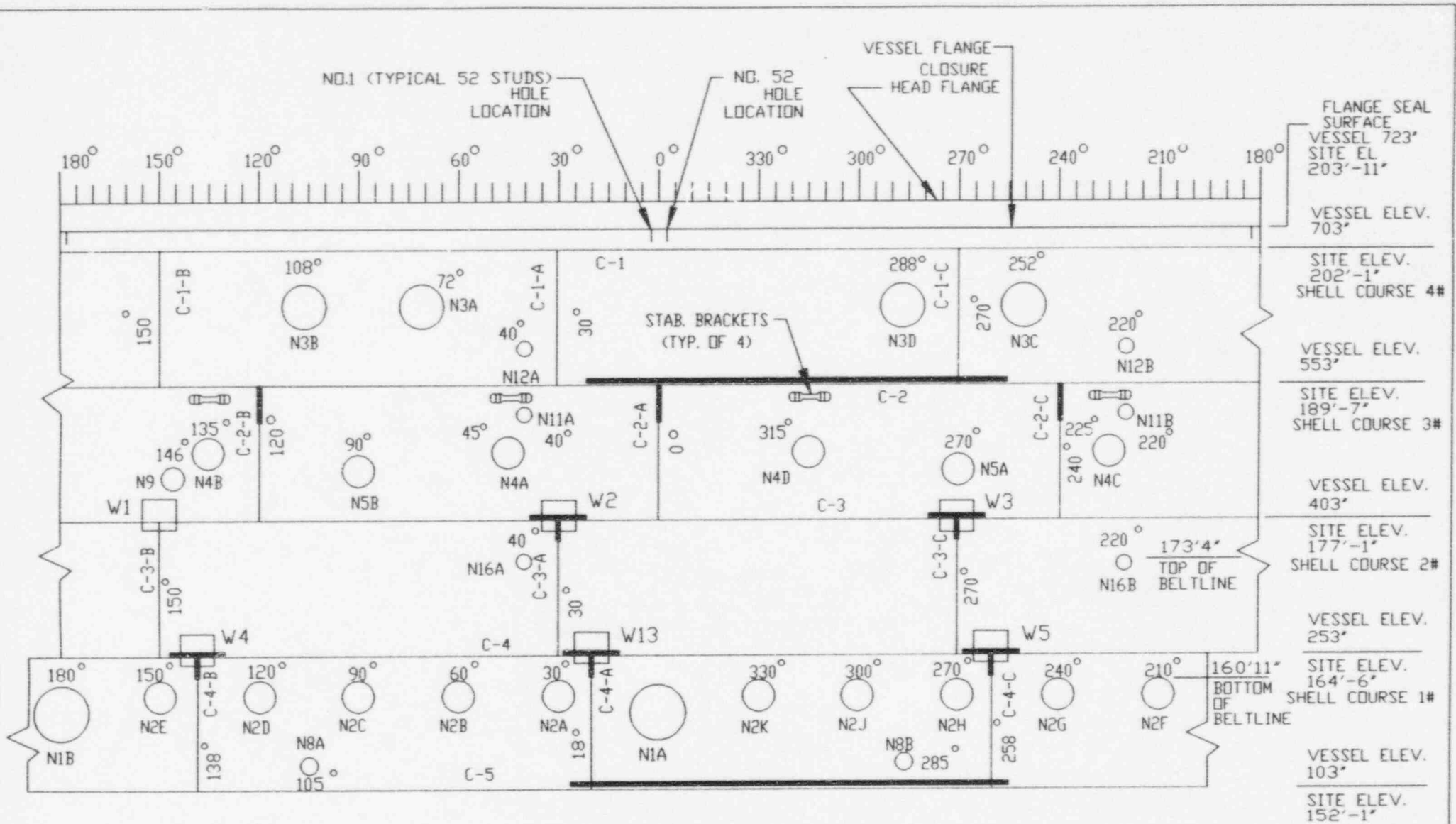
REFERENCE DRAWINGS
CE-234-271 REV 0
CE-234-272 REV 5
CE-234-273 REV 6

CE-234-777 REV 1

PROJECT	E I HATCH UNIT 1
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TITLE	SCOPE OF RPV EXAMINATIONS PERFORMED DURING 1996 OUTAGE.
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SCALE	DRAWN BY	SKETCH NUMBER
NOT TO SCALE	WS	ISI-SK-153



OUTSIDE VIEW

LEGEND

PROPOSED TO BE EXAMINED IN RELIEF REQUEST 2.1.1

DATE	4-5-1996
REV	0

REFERENCE DRAWINGS

CE-234-271 REV 0
CE-234-272 REV 5
CE-234-273 REV 6

CE-234-777 REV 1

SOUTHERN NUCLEAR COMPANY

PROJECT	E I HATCH UNIT 1
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TITLE	SCOPE OF RPV EXAMINATIONS PER RELIEF REQUEST 2.1.1		
SCALE	DRAWN BY	SKETCH NUMBER	
NOT TO SCALE	WS	ISI-SK-154	