

ENCLOSURE  
TO  
SOUTHERN NUCLEAR OPERATING COMPANY  
LETTER LCV-1222-A

CORRECTED PAGES<sup>1</sup>  
FOR  
VEGP-2 ISI SUMMARY REPORT  
FOR  
SPRING 1998 MAINTENANCE/REFUELING OUTAGE

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<sup>1</sup> Enclosure includes pages 2-6, 2-7, 6-6, 6-8, and 6-9 only.

examinations as currently required by ASME Section XI. For this reason, the RPV examinations conducted during the 2R3 outage were performed again during the 2R6 outage in order to "re-zero" the RPV examinations thus keeping an approximate 10 year interval between examinations.

Details on the RPV examinations performed by WesDyne, procedures utilized, equipment, material and personnel certifications, etc., may be found in the WesDyne "Examination Report of the Reactor Vessel 10 Year Inspection for Vogtle Electric Generating Plant Unit 2". The WesDyne report is available at the plant site for review upon request.

In addition to components already identified in current requests for relief, seven piping welds had limited volumetric coverage during their ultrasonic examinations because of physical limitations due to the geometric configuration of the welded areas. In order for adequate ASME Section XI Code-required examination coverage to be attained, more than 90% of the required volume must be examined as addressed in ASME Code Case N-460. The subject Code Case has been approved for use in NRC Regulatory Guide 1.147. It is impractical to achieve the ASME Section XI Code-required coverage due to the geometric configuration of the welded areas. Relief from the ASME Section XI Code requirements will be requested from the NRC for the affected welds during a future ISI program revision for VEGP-2 as allowed by 10 CFR 50.55a. The applicable welds are indicated by "Relief Required" in the Class 1 weld tables.

The Eddy Current (ET) examinations of steam generator tubing, as required by VEGP Technical Specification 5.5.9, were performed by Westinghouse and are discussed in the "Class 3 and Augmented Examinations" portion of this document.

### **Class 1 Pressure Test**

ASME Section XI, Table IWB-2500-1, Examination Category B-P requires that a system hydrostatic test (IWB-5222) be performed at or near the end of each inspection interval. This test is identified as the Class 1 hydrostatic test (HT-1) and it extends to the Class 1 pressure boundary extremity (i.e., second isolation valve) and also includes selected adjacent Class 2 components which are typically isolated from the Class 1 boundary by check valves. As an alternative to ASME Section XI requirements, Code Case N-498-1 which has been approved by the NRC for use at VEGP was used. Code Case N-498-1 deleted the 10-year elevated pressure requirement for hydrostatic tests but retained the requirement to extend the boundary subject to test pressurization to include each of the Class 1 pressure-retaining components. To assure that all Class 1 pressure-retaining components and selected adjacent Class 2 pressure-retaining components are pressurized requires that valves be aligned to positions other than their normal position required for normal reactor operation startup and for some isolated boundaries requires the use of a hydrostatic test pump to achieve pressure. These normally isolated Class 1 and 2 pressure-retaining components were pressurized and visually examined during 2R6. These visual examinations revealed minor leakage and boron residue at mechanical connections. These leaks were either corrected or evaluated and determined acceptable for continued system operation.

ASME Section XI, Subparagraph IWA-5242(a) requires removal of insulation from pressure-retaining bolted connections for VT-2 examination during system pressure testing for systems borated for the purposes of controlling reactivity. Relief was requested (RR-26) from this Code requirement by SNC letter LCV-1016-A dated September 10, 1997, to the NRC. By letter dated October 24, 1997, the NRC granted approval from this Code requirement. The approved alternative was to remove the insulation from bolted connections while they are at either atmospheric or static pressures, perform a VT-2 examination of the bolted connections for evidence of leakage. This approved alternative was implemented during 2R6.

## **Class 2 Examinations**

Selected Class 2 components were examined utilizing MT, PT, and UT, as applicable. Specific components and examination areas are itemized in the applicable portions of this report document. A summary of those components examined are listed below:

- Steam Generator 3 Shell Welds,
- Residual Heat Removal Heat Exchanger Train "B" Nozzle Welds,
- Centrifugal Charging Pump Nozzle Weld,
- Piping Welds, and
- Integral Attachment Support Welds.

During the scope of VEGP-2 manual examinations conducted, no Class 2 components were observed to have either reportable ultrasonic, liquid penetrant, or magnetic particle indications.

In addition to components already identified in current requests for relief, two equipment welds and five piping welds had limited volumetric and/or surface examination coverage during their ultrasonic and/or surface examinations because of physical limitations due to the geometric configuration of the welded areas. It is impractical to achieve the ASME Section XI Code-required examination coverage of more than 90% due to the geometric configuration of the welded areas. Relief from the ASME Section XI Code requirements will be requested from the NRC for the affected welds during a future ISI program revision for VEGP-2 as allowed by 10 CFR 50.55a. The applicable welds are indicated by "Relief Required" in the Class 2 weld tables.

## **Class 2 Pressure Tests**

ASME Section XI, Table IWC-2500-1, Examination Category C-H requires system pressure testing each inspection period. The specific system pressure tests performed are itemized in the "System Pressure Tests" portion of this report document. The visual examinations performed during these system pressure tests found only minor leakage at mechanical joints such as valve stem packing and at flanged connections. These leaks were either corrected or evaluated and determined acceptable for continued system operation.

## **Class 1 and 2 Component Supports**

Visual examinations were performed on supports for the following Class 1 and 2 components :

- Steam Generator 1,
- Reactor Coolant System Piping (1201),
- Nuclear Service Cooling Water System Piping (1202),
- Safety Injection System Piping (1204),
- Residual Heat Removal System Piping (1205),
- Containment Spray System Piping (1206),
- Chemical and Volume Control System Piping (1208),
- Main Steam System Piping (1301),
- Auxiliary Feedwater System Piping (1302),
- Containment Heat Removal System (1501), and
- Containment Heat Removal System (1515)

Visual examinations resulted in one support having unacceptable conditions. The support is as follows:



VEGP-2 SIXTH MAINTENANCE REFUELING OUTAGE  
CLASS 1 PIPING EXAMINATIONS

ASME SECT XI ITEM NO/CAT.	AUGMENTED EXAMINATION REQUIREMENT	COMPONENT OR WELD NO./ DESCRIPTION	EXAM METHOD	EXAM PROCEDURE NO. /REV.	CALIBRATION BLOCK (S)	EXAM SHEET NO (S).	RESULTS	REMARKS
B12.50 B-M-2	-	21201PSV8010B - IS VALVE INTERNAL SURFACES	VT-3	VT-V-735	-	N/A S98V2V144	- SAT	EXAMINED WHILE DISASSEMBLED. RESULTS - SAT.
B9.11 B-J	-	21204-024-15 6" PIPE TO VALVE	PT UT	PT-V-605 UT-V-404	304A	S98V2P089 S98V2U164 S98V2U165	NRI NRI RI	UT RI / GEOMETRY. UT SCANS LIMITED / RR-20
B9.11 B-J	-	21204-024-16 6" VALVE TO PIPE	PT UT	PT-V-605 UT-V-404	304A	S98V2P090 S98V2U166 S98V2U167	NRI NRI RI	UT RI / GEOMETRY. UT SCANS LIMITED / RELIEF REQUIRED.
B9.11 B-J	-	21204-024-21 6" PIPE TO BRANCH CONNECTION	PT UT	PT-V-605 UT-V-404	304A	S98V2P091 S98V2U168	NRI NRI	N/A
B9.11 B-J	-	21204-025-21 6" PIPE TO VALVE	PT UT	PT-V-605 UT-V-404	304A	S98V2P066 S98V2U152 S98V2U153	NRI NRI RI	UT RI / GEOMETRY. UT SCANS LIMITED / RELIEF REQUIRED.
B9.11 B-J	-	21204-025-22 6" VALVE TO PIPE	PT UT	PT-V-605 UT-V-404	304A	S98V2P075 S98V2U150 S98V2U151	NRI NRI NRI	UT SCANS LIMITED / RELIEF REQUIRED.
B9.11 B-J	-	21204-025-27 6" PIPE TO BRANCH CONNECTION	PT UT	PT-V-605 UT-V-404	304A	S98V2P070 S98V2U149	NRI NRI	N/A

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B9.11 B-J	-	21204-044-1 6" VALVE TO PIPE	PT UT	PT-V-605 UT-V-404	304A	S98V2P128 S98V2U221 S98V2U222	NRI NRI NRI	UT SCANS LIMITED / RELIEF REQUIRED.
B9.32 B-J	-	21204-044-2 6" PIPE TO 2" BRANCH CONNECTION	PT	PT-V-605	-	S98V2P129	RI	PT RI / CODE ACCEPT.
B9.11 B-J	-	21204-044-12 6" ELBOW TO PIPE	PT UT	PT-V-605 UT-V-404	304A	S98V2P076 S98V2U154	NRI NRI	N/A
B9.11 B-J	-	21204-044-13 6" PIPE TO TEE	PT UT	PT-V-605 UT-V-404	304A	S98V2P077 S98V2U155 S98V2U156	NRI NRI NRI	UT SCANS LIMITED / RELIEF REQUIRED
B9.11 B-J	-	21204-045-1 6" VALVE TO PIPE	PT UT	PT-V-605 UT-V-404	304A	S98V2P012 S98V2U120 S98V2U121	NRI NRI RI	UT RI / GEOMETRY. UT SCANS LIMITED / RELIEF REQUIRED.
B9.32 B-J	-	21204-045-2 6" PIPE TO 2" BRANCH CONNECTION	PT	PT-V-605	-	S98V2P013	NRI	N/A
B9.11 B-J	-	21204-045-27 6" ELBOW TO PIPE	PT UT	PT-V-605 UT-V-404	304A	S98V2P109 S98V2U178	NRI NRI	N/A

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ASME SECT XI ITEM NO/CAT.	AUGMENTED EXAMINATION REQUIREMENT	COMPONENT OR WELD NO./ DESCRIPTION	EXAM METHOD	EXAM PROCEDURE NO. /REV.	CALIBRATION BLOCK (S)	EXAM SHEET NO (S).	RESULTS	REMARKS
B9.11 B-J	-	21204-045-28 6" PIPE TO TEE	PT UT	PT-V-605 UT-V-404	304A	S98V2P110 S98V2U179 S98V2U180	NRI NRI NRI	UT SCANS LIMITED / RELIEF REQUIRED
B9.11 B-J	-	21204-125-15 10" PIPE TO VALVE	PT UT	PT-V-605 UT-V-404	306A	S98V2P088 S98V2U158 S98V2U161	NRI RI NRI	UT RI / GEOMETRY. UT SCANS LIMITED / RR-12.
B9.11 B-J	-	21204-125-16 10" VALVE TO PIPE	PT UT	PT-V-605 UT-V-404	306A	S98V2P086 S98V2U159 S98V2U162	NRI RI NRI	UT RI / GEOMETRY. UT SCANS LIMITED / RR-12.
B9.11 B-J	-	21204-125-17 10" PIPE TO ELBOW	PT UT	PT-V-605 UT-V-404	306A	S98V2P087 S98V2U160 S98V2U163	NRI RI RI	UT RI / GEOMETRY.
B9.11 B-J	-	21204-125-18 10" ELBOW TO BRANCH CONNECTION	PT UT	PT-V-605 UT-V-404	306A	S98V2P096 S98V2U191 S98V2U195	NRI RI RI	UT RI / GEOMETRY.
B9.11 B-J	-	21204-126-9 10" PIPE TO ELBOW	PT UT	PT-V-605 UT-V-404	306A	S98V2P111 S98V2U188 S98V2U192	NRI NRI NRI	N/A
B9.11 B-J	-	21204-126-11 10" PIPE TO TEE	PT UT	PT-V-605 UT-V-404	306A	S98V2P094 S98V2U189 S98V2U193	NRI NRI NRI	N/A