

NOTICE OF DEVIATION

Based on the results of an NRC inspection conducted on May 19-23, 1980, it appeared that certain of your activities were not conducted in full compliance with NRC requirements as indicated below:

Criterion V of Appendix B to 10 CFR 50 states,

"Activities affecting quality shall be prescribed by documented instructions, procedures or drawings, or a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

Deviations from these requirements are as follows:

- A. QA Manual Section 14, paragraph 2.1 states in part, "Process Engineering shall: . . . Initiate the Welding and Examination Instruction Sheet (WEIS) identifying the weld joints for each component (and) Generate Manufacturing Process Sheets specifying by reference to the WEIS the welding and NDE methods to be used."

Paragraph 2.2 states in part, "Weld and Materials Engineering shall: . . . Develop Detailed Welding Procedures (DWP) incorporating all requirements necessary to: transmit to the shop all the information necessary to weld a complete joint."

Paragraph 2.6 states in part, "Manufacturing shall: . . . Perform welding fabrication and implement welder/welding operator joint identification in accordance with shop traveler instructions. "

Contrary to the above, welding fabrication was not in accordance with shop traveler instructions in that:

1. A DWP (WMC 10-5 revision 1) was used on two separate occasions without its being specified on the WEIS on Job No. 0158-1116, a reactor coolant pump casing.
2. A welder was observed performing an overlay cladding operation using GMAW on Job No. 229-0121, a Nozzle for a safety injection tank, with an arc voltage of 24-25 while DWP WMC 25-1, revision 01 required the use of an arc voltage range of 20-23. The voltage is an essential variable for this process.

3. A welder was observed performing GTAW on Job No. 145-1025-345, an Upper Guide/Tube Sheet Assembly, using an amperage of 230 while DWP RP 35-2 revision 01 required the use of 50-200 amps. The amperage is a nonessential variable for this process.

F. QA Manual Section 14, paragraph 2.8 states in part, "Quality Assurance shall: . . . Perform weld surveillance in accordance with approved Quality Assurance Inspection procedures"

Procedure QA-I 1022 revision 01, paragraph 4.1 states in part, "Quality Assurance shall monitor each type of welding process being performed on any given shift. Quality Assurance Inspector shall verify compliance to the DWP parameters utilizing the Weld Surveillance Check List. The Quality Assurance Inspector shall check and record all applicable attributes on the Weld Surveillance Check list"

Contrary to the above, a Quality Assurance inspector did not verify compliance to the DWP with respect to developed arc voltage on Job No. 145-1025-345 as a result of incorrect arc voltage measuring technique. (See Detail Section I, paragraph C.3.a.(2))

C. Paragraph 3.9.4 in Section 13 of the QA Manual states in part, "All operations, e.g. inspection. . . fabrication. . . welding. . . shall be specifically referenced in the Manufacturing Process Sheet." Paragraph 4.0 in Section 13 of the QA Manual states in part, "Changes to Manufacturing Process Sheets to facilitate production may be made to methods and operational sequences by complying with the following conditions: . . . 4.2 All changes are typed or written in ink and are authorized by Manufacturing Support Services, Process Engineering and Quality Assurance, or by use of 'Engineering Instructions'"

Contrary to the above;

1. Base metal weld repair operations were performed on Job No. 139, Envelope No. 0154, without being referenced in the Manufacturing Process Sheets.
2. Changes were made to methods and operational sequences without entering the changes in the Manufacturing Process Sheets and receiving the required authorizations.
(See Details II, B.3.a.)

D. Paragraph NB-2410 in the ASME Section III Code states in part with respect to welding materials used in the construction and repair of components, "In addition, welding material shall conform to the requirements stated in this Subarticle. . . ."

Paragraph NB-2431.1(c) in the ASME Section III Code states in part with respect to the general test requirements for weld metal, "Coupons shall be tested in the as-welded condition, or they shall be tested in the applicable postweld heat treated condition when the production welds are to be postweld heat treated. . . ."

Contrary to the above, 1/8 inch E-8018C2 electrodes (Lot No. 02-2-D813E) were procured with testing performed only in the postweld heat treated condition, although used in an application not receiving a subsequent postweld heat treatment, i.e. temper bead repairs after final postweld heat treatment on a reactor coolant pump casing (Job No. 158, Envelope No. 136090, Serial No. 9).

- E. Paragraph NB-4122 in the ASME Section III Code states in part, "Welding and brazing material shall be identified and controlled as that they can be traced to each component or installation of a piping system, or else a control procedure shall be employed which ensures that the specified material is used."

Contrary to the above, certain coated electrodes used in the performance of temper bead repairs to a reactor coolant pump casing (Job No. 158, Envelope No. 136090, Serial No. 9), were not controlled to allow tracing of identity to the component.
(See Details II, C.3.a(2))