

NOTICE OF DEVIATION

Based on the results of an NRC inspection conducted on May 21-23, 1979, it appeared that certain of your activities were not conducted in full compliance with NRC requirements as indicated below:

- A. Criterion IX of Appendix B to 10 CFR 50 states in part, "Measures shall be established to assure that special processes, including welding . . . are . . . accomplished . . . using qualified procedures in accordance with applicable codes"

Paragraph QW-201.1 in the ASME Code Section IX states in part, "The welding procedure specification (WPS) shall list in detail . . . variables described for each welding process as either essential or nonessential (See QW-252 through QW-281) . . . "Paragraph QW-201.2 states in part with respect to procedure qualification records (PQR), ". . . This form shall document the essential variables of the specific welding process or processes as listed in QW-252 through QW-281) and the test results . . . A change in any essential variable shall require requalification, to be recorded in another PQR."

Table QW-254 in the ASME Code Section IX lists an increase in maximum interpass temperature as a supplementary essential variable for the submerged arc welding process.

- Contrary to the above although measures were established for the control of welding, these measures did not assure use of qualified procedures in accordance with applicable codes, as evidenced by submerged arc WPS EAP-2343-07002, Revision 1, permitting an increase in maximum interpass temperature relative to the supplementary essential variable recorded in the supporting PQR. The PQR was qualified using a 180°C maximum interpass temperature and the WPS permitted a value of up to 300°C to be used in production welding.
- B. Criterion V of Appendix B to 10 CFR 50 states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings . . . and shall be accomplished in accordance with these instructions, procedures, or drawings"
1. WPS EAP-2527-04001, which is designated by Welding Plan No. E-151-L/1, Revision 6 to be used for performance of Weld 1 on Part No. 4128.0425. 0100.9, requires the use of a 1G rotating position with the shielded metal arc welding process (SMAW).

Paragraph 14.2.1 in Section 14.0 of the QA Manual states, "All welders and welding operators shall have current performance qualifications for the welding process they will be using to ASME Section III and IX."

1229 015
7910300 237

Contrary to the above:

- a. Weld 1 on Part No. 4128.0425.0100.9, Charge number AJW 152, was observed being deposited by the SMAW process (4mm, Inconel 182 electrode) using a 2G rotating position.
 - b. The welder did not have a required current ASME Section IX performance qualification for the 2G position.
2. Electrode Storage and Control Procedure, EP 0959015, Revision 4, requires that welding materials be maintained in storage in the Welding and Heat Treatment Department at a temperature of 65-120°C.

Contrary to the above, electrodes that had been approved for ASME Section III application (E7018, Lot Nos. 313447 and 423767; E309S, Lot No. 423645), were observed being maintained at a storage temperature of 52°C in the Welding and Heat Treatment Department.

- C. Criterion V of Appendix B to 10 CFR 50 states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings . . . and shall be accomplished in accordance with these instructions, procedures, or drawings"

Operation 9J on the traveler for body/seat subassembly (01-19-8 No. 2 Body/AJW 052 Seat) required postweld heat treatment to be performed in accordance with the requirements of WPS EAP 2343-07001, Revision 2. WPS EAP 2343-07001, Revision 2 requires maintenance of the item at 600-650°C for a period of 3 to 4 hours.

Paragraph 16.1.3 in Section 16.0 of the QA Manual states in part, ". . . Heat Treating shall be supervised by the Welding and HT Supervisor or HT Foreman . . . in accordance with an approved WPS" Paragraph 16.3 states in part, "The inspector shall verify the HT log and HT record and he shall sign or stamp the Traveler . . . for his acceptance that the HT has been executed as prescribed in the applicable procedure"

Contrary to the above, postweld heat treatment for Operation 9J was neither supervised nor verified for execution in accordance with WPS EAP-2343-07001, Revision 2, in that the operation was performed and subsequently accepted by the Inspector after use of a hold temperature range of 600-665°C for a period of 6.5 hours.

- D. Criterion XII of Appendix B to 10 CFR 50 states, "Measures shall be established to assure that tools, gages instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits."

1222 016

Paragraph 18.3 in Section 18.0 of the QA Manual states in part, "... The Calibration Engineer shall maintain a file of Calibration History Cards . . . per identification number, showing . . . next calibration due date The Calibration Engineer shall check the Calibration History Cards regularly to determine which devices require calibration in the upcoming monthly period"

Contrary to the above, although measures were established relative to calibration of measuring and testing devices, these measures did not assure performance of calibration at specified periods, as evidenced by the observation on May 22, 1979, in a production welding area of a digital thermometer, Identification No. TH 012, with a calibration due date of February 13, 1979.

- E. Criterion IX of Appendix B to 10 CFR 50 states in part, "Measures shall be established to assure that special processes, including welding . . . are controlled and accomplished . . . using qualified procedures in accordance with applicable codes"

Paragraph NB-2431.1(c) in Section III of the ASME code states in part with respect to the general test for qualification of welding materials, "The welding of the test coupon shall be performed using the preheat and interpass temperatures to be used in production welding"

Contrary to the above, although measures were established for the control of welding, these measures did not assure qualification of welding materials in accordance with applicable codes, as evidenced by the procurement of qualification of a submerged arc welding materials combination (EM 12K Wire 4mm, Heat No. 923381; P230R Flux, Lot No. 980133) in accordance with ASME Section IIC, SFA 5.23, i.e. 300-250°F minimum preheat and interpass temperatures; when production welding was to be performed using preheat and interpass temperature ranges, respectively, of 212-302°F and 212-572°F.

- F. Criterion V of Appendix B to 10 CFR 50 states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings . . . and shall be accomplished in accordance with these instructions, procedures, or drawings"

Paragraph 6.3.3 in Section 6.0 of the QA Manual states in part, "... The Engineering Manager and the QA manager shall indicate their approval for release and use on a particular project of each drawing used in manufacturing code items, of the revision number shown on that revision of the Project Engineering Index, by initialing and dating the Project Engineering Index"

Contrary to the above, approval of drawing revision numbers applicable to Contract No. 205-AJ 430, had not been indicated by the QA Manager by initialing and dating the Project Engineering Index for any revision of the Project Engineering Index up to the current revision number 07.

- G. Criterion V of Appendix B to 10 CFR 50 states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings"

Section III of ASME Code, paragraph NB-2573.2, sub-paragraph b, states in part, "For those areas where relative uniform thickness occur the minimum film density shall be 1.5 for single viewing and 2.0 for composite viewing of multiple film exposures"

RT Procedure EB-0940101, paragraph 1.6.1, states in part, ". . . the minimum film density shall be 1.5 for single viewing and 2.0 for composite viewing of multiple film exposures"

Contrary to the above, the following was observed with respect to film density of accepted radiographs for casting number 3300-3325-01, heat No. 19-37.8 serial No. 2, film No. TW 241:

1. View 9-15, 10-16, a multiple film exposure for composite viewing, had a measured minimum density of 1.2 in the area of interest.
2. View 11-17, 12-18, a single film exposure, single film viewing, had a measured minimum density of 1.2 in the area of interest.

- H. Criterion V of Appendix B to 10 CFR 50 states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings"

RT Procedure EB-0940101, paragraph 1.5.4 states in part, "A lead letter B of minimum 1/16 in. thickness shall be attached to the back of the cassette or film holder" ASME Section V requires the use of a lead letter B for ASME Section III, Class 2 work.

Contrary to the above, a lead letter B was not attached to the back of the cassette or film holder, during radiography of ASME Section III, Class 2.

- I. Criterion V of Appendix B to 10 CFR 50 states in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures or drawings"

Nuclear Quality Assurance Manual, Section 9.0, paragraph 9.2.3.h states in part, "The Receiving Inspector shall mark on the material the heat code shown on RIC. . . ."

1229 018

Contrary to the above, the receiving inspector did not mark the heat code shown on the RIC on one lot of socket head cap screws located in the accepted nuclear material hold area.

1229 019