



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No. 50-281/79-33

Licensee: Virginia Electric and Power Company
Richmond, Virginia 23261

Facility Name: Surry Unit 2

Docket No. 50-281

License No. DPR-37

Inspection at Surry Site near Williamsburg, Virginia

Inspector: *T. E. Conlon for* *5/30/79*
W. P. Kleinsorge Date Signed

Approved by: *T. E. Conlon* *5/30/79*
T. E. Conlon, Section Chief, RCES Branch Date Signed

SUMMARY

Inspection on May 7-10, 1979

Areas Inspected

This routine, unannounced inspection involved 30 inspector-hours onsite in the area of steam generator replacement welding activities.

Results

Of the one area inspected, two apparent items of noncompliance were found. (Infraction - Failure to follow procedure in control of welding electrodes (Paragraph 6i)) and (Deficiency - Failure to maintain receipt inspection results paragraph 6k).

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DETAILS

1. Persons Contacted

Licensee Employees

- W. L. Stewart, Station Manager
- *A. L. Parrish, III, Project Manager, SGRP
- J. B. Goodson, Resident QC Engineer
- W. L. Byrd, Supervisor, Welding Construction
- *C. W. Emblar, Staff Engineer, Welding
- *D. Kildoo, Station QC

Other licensee employees contacted included five construction craftsmen and three technicians.

Other Organizations

Daniel Construction Company (DCC)

J. Latimer, Project Welding Engineer

NRC Resident Inspector

D. J. Burke

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on May 10, 1979, with those persons indicated in Paragraph 1 above. The items of noncompliance described in paragraph numbers 6(i) and 6(k) were discussed in detail. The inspector indicated that there would be three items of noncompliance. Upon discussion with regional office supervision, it was decided that two items would be cited. VEPCO was informed via the resident inspector on May 16, 1979.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Independent Inspection Effort

- a. The inspector conducted a general inspection of the auxiliary building, the containment, the refurbishment building and the fuel building to observe construction progress and construction activities such as steam generator lifting, tilting, and removal, weld joint preparation, radiation control, washdown of new fuel, material handling and control, housekeeping and storage.
- b. The inspector witnessed the radiographic examination, in accordance with ASME Section III and V, 1974 Edition with Addenda through Winter 1976, of Weld No. 1 on ISO ETA 40007-3-U2B. The inspector observed setup and exposure activities to determine if the code requirements were being met. Areas being reviewed included minimum source to film distance, type and thickness of intensifying screens, use of location markers, selection and use of penetrometers and base material and weld surface condition.
- c. (Closed) Inspection Followup Item 50-281/79-23-01. This item concerned a nonessential variable (contact tip to work distance) that had not been covered in Technique Sheet 8-8-D-13 of DCC Welding Procedure 8-8 Revision 2, as required by ASME Section IX. The inspector verified that the above procedure Technique Sheet has been revised to include the variable in question.

No items of noncompliance or deviations were identified.

6. Steam Generator Replacement Observation of Welding and Associated Activities

The applicable code as required by "VEPCO's licensee submittal (Steam Generator Project Surry Power Station Unit Nos. 1 and 2, Revision 9)," is ASME Section XI, 1974 Edition with Addenda through the Winter of 1976. Based on paragraph IWA-7000 of section XI, VEPCO is using the original construction code (USAS B31.1.0-1967) for pipe welding. Welder qualifications and procedure qualifications are being performed in accordance with the latest edition and addenda of ASME section IX in effect at the time of the qualification. All welding materials were purchased and certified in accordance with Class I requirements of the ASME code.

In connection with completed Weld No. 1 on ISO ETA 40007-3-U2B prior to final NDE the inspector observed activities and facilities in the level A and B warehouse, and welding material control issue stations and reviewed the Quality Control Manual, welding procedures, and selected procurement, certification, inspection, qualification and issue records to complete the following inspections.

- a. The inspector verified that welding personnel were qualified by DCC in accordance with the requirements of ASME Section IX and additional requirements of ASME Section XI.

- b. The inspector verified that new base material and welding filler materials were certified to meet code and other specification requirements.
- c. The inspector reviewed receiving records and certifications to assure that consumable inserts, bare wire and coated electrodes for manual welding met the applicable code.
- d. The inspector verified that suitable facilities were provided and maintained for storage of electrodes, flux and other materials for DCC and VEPCO.
- e. The inspector verified that dispensing of electrodes was controlled by DCC so that no mixups could occur and exposure of unused electrodes to moisture pickup is minimized.
- f. The inspector verified that unused welding filler material was returned and properly dispositioned to either holding or drying ovens. The inspector further verified that damaged electrodes and stubs were scrapped and removed in containers from the work area at the end of each shift. The above was verified for DCC only.
- g. The inspector verified, for DCC only, that dispensing of weld filler materials was done only by withdrawal forms, which identify the type and quantity of material. The inspector further verified that the welder was identified on this form and that an authorizing signature is required.
- h. The inspector verified the existence of an adequate DCC procedure for the identification and resolution of defects disclosed by NDE methods.
- i. As required by Criterion V of Appendix B to 10 CFR 50 and as implemented by VEPCO Topical Report VEP-1-A, amendment three, paragraph 17.2.5, requires that activities affecting quality shall be prescribed by documented procedures, and shall be accomplished in accordance with these procedures. Daniel Construction Company Construction Procedure (DCC-CP) WP-502, Revision 1, "Control of Welding Filler Material", requires that field electrode control station attendants attach a sketch to the front of each electrode holding oven specifying the size, class, lot and location of the covered electrodes in that oven. Further DCC-CP WP-502 Revision 1 requires field electrode control stations to be secured to prevent unauthorized access.

Contrary to the above, the following examples were observed:

1. On May 8, 1979 the sketch on the electrode holding oven in the refurbishment building contained an incorrect lot number. For Lot No. 02-2-B905R, 1/8 inch diameter type E-7018 electrodes, the first digit was erroneously entered as 9 vice 0. This error was propagated to eight "Field Requisition - Welding Materials" W-100 forms.

2. On May 10, 1979 the key to the above locked oven was in the possession of an individual not authorized by DCC-CP-WP-502 to possess the key.
3. On May 10, 1979 the electrode location and identification sketch for the above oven reflected no electrodes on the center shelf when in fact the center shelf contained electrodes.

This is an infraction and is identified by noncompliance number 281/79-33-01.

- j. The following corrective actions for noncompliance identified in paragraph 6(i) above were verified by the inspector:
 1. Investigation revealed there to be only one lot of 1/8 inch diameter type E-7018 electrodes on the site. In view of this fact, the eight "W-100" forms and the sketch were corrected.
 2. DCC put the electrode holding oven key into the hands of a properly authorized individual.
 3. It was determined, by printed control numbers on each electrode, that the electrodes on the center shelf of the holding oven were of the same lot as the lower shelf. in view of this fact, the location sketch was corrected to reflect the true oven contents.
- k. As required by Criterion XVII of 10 CFR 50, and as implemented by VEPCO Topical Report VEP-1-A, amendment three paragraph 17.2.17, that requires sufficient records shall be maintained to furnish evidence of activities affecting quality and that these records include results of inspections.

Contrary to the above, on May 8, 1979, five "Receipt inspection Report" forms had the following boxes not marked: "No Shipping Damage", "Properly Packaged", "Cleanliness Satisfactory", and "Properly Identified". These reports were found in the following purchase order files: SGR-12188, SGR-12391, and SGR-12609.

This is a deficiency and is identified by noncompliance number 281/79-33-02.