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

Report Nos.: 50-280/79-24 and 50-281/79-42

Licensee: Virginia Electric and Power Company
Richmond, Virginia 23261

Facility Name: Surry Power Station

License Nos.: DPR-32 and DPR-37

Inspection at Surry site, Surry, Virginia

Inspector: S. C. Ewald — Date Signed: 6/20/79

Approved by: G. R. Jenkins, Acting Section Chief, FF&MS Branch — Date Signed: 6/20/79

SUMMARY

Inspection on May 29-31, 1979

Areas Inspected

This routine unannounced inspection involved 24 inspector-hours onsite in the area of radiation protection including qualifications of health physics personnel; review of submitted personnel exposure reports; facility tours; and review of previous items.

Results

Of the four areas inspected, no apparent items of noncompliance or deviations were identified in three areas; one apparent item of noncompliance was found in one area (Infraction - Failure to follow RWP requirements - paragraph 7).

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DETAILS

1. Persons Contacted

Licensee Employees

*W. L. Stewart, Station Manager
*T. A. Peebles, Superintendent, Technical Services
*R. M. Smith, Health Physics Supervisor
P. P. Nottingham, IV, SGRP Assistant Supervisor, Health Physics
C. E. Foltz, Assistant Supervisor, Health Physics
H. F. McCallum, Assistant Supervisor, Health Physics
S. Sarver, System Health Physicist
O. A. Vogtsburger, Jr., Training Coordinator

Other licensee employees contacted included ten technicians and three operators.

NRC Resident Inspector

*D. J. Burke

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on May 31, 1979 with those persons indicated in Paragraph 1 above. Items discussed included one item of noncompliance and the status of several previously identified items. With regard to the item of noncompliance concerning RWP instructions, Maintenance Request procedures, and evaluation of radiological hazards (paragraph 7), the Station Manager stated consideration was being given to having the health physics section enter the RWP number and sign the MR form as a means of assuring adherance to RWP requirements and evaluations of radiological hazards for any given job.

3. Licensee Action on Previous Inspection Findings

a. (Closed) (281/79-28-01) (Unresolved Item) Failure to record information as per SGRP T6-1-3.C.8. This item concerned the failure to record various data in conjunction with SGRP radiation work permits (RWP). A review of the licensee committments and their safety significance revealed portions of the data are recorded but not on the RWP. In addition, the inspector determined that failure to have accurate data for exposure times and doses, for each RWP, had little impact on limiting Man-Rem exposures. The licensees Man-Rem Report, submitted May 8, 1979, is discussed further in paragraph 5.

b. (Closed) (280/79-21-01; 281/79-32-01) (Unresolved Item) Adequacy of Lock on a high radiation area access hatch. This item concerned the adequacy of the lock on a trap door in located on the 6 foot 10 inch

elevation of the fuel building. The trap door provided access to the spent resin catch tank and associated piping with measured radiation levels as high as 40 Rem/hr. Concerns relative to the trap door serving as an entrance to a Vital Area (Fuel Building) are discussed in Region II Report No. 50-280/79-25 and 50-281/79-37. The security concerns about the trap door were identified in a plant memo dated April 5, 1979 that stated the trap door was to be welded shut. Failure to implement this corrective action until May 8, 1979 and/or provide interim compensatory measures is discussed in detail in the above referenced report. The inspectors concerns relative to the RWP control associated with cutting a hand hole in the trap door are discussed in paragraph 7.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Exposure Reports

a. The inspector reviewed summary exposure data for 1978 submitted in accordance with 10 CFR 20.407 and Technical Specification 6.6.1.b(3). The total Man-Rem for 1978 of 1734 is approximately 25% lower than 1977, however, the largest fraction of exposure (45%) is still the result of Steam Generator maintenance.

b. The inspector reviewed the SGRP Progress Report submitted May 8, 1979 as required by condition 3.G.(2)(d), specified in amendment no. 46 to the Unit 2 operating license. General observations relative to effluents include: 1) liquid activities released are substantially lower than during normal operations; 2) airborne activity released shows a decrease in halogens and nobel gases with a slight increase in particulate activity. The most significant change, however, is in the volume of solid waste generated and disposed of. Total volume increased by more than a factor of 10 but the total activity involved remained about the same, indicating lower specific activity.

c. A review of Man-Rem expended for the period February 3 to March 31 indicates the total exposure is approximately 25-30% lower than the predicted Man-Rem. The breakdown of Man-Rem data to specific tasks raised several questions as to the bases for apportioning the total Man-Rem to these various jobs. As discussed in the licensees report, difficulties were encountered obtaining accurate worker-task data from the project contractors to correlate with exposure records. The licensee, rather than submit the report based on inaccurate data chose to apportion the total Man-Rem to specific tasks by correlating man-hour estimates for each task, and survey data taken during task activities and, using these parameters, ratio the actual Man-Rem to each task. The inspector discussed in detail licensee plans to improve the data obtained from project contractors. The revised scheme calls for daily input of worker-task data by contractor foreman with special training and auditing programs to help assure the accuracy of the data.

6. Qualifications

a. Technical Specification 6.1.B.1 specifies qualification requirements for key supervisor personnel. ANSI 18.1, "Selection and Training of Nuclear Power Plant Personnel" also contains guidance relative to technician qualifications (two years previous experience).

b. A large number of new personnel have been added to the Health Physics Staff to cover the SGRP. In general, these persons do not have two years experience, however, their job functions are limited by the station Health Physics Step Program. This program involves eight steps (six months/step) with exams for progressing to each step. This step training program helps assure that technicians performs only those tasks they have been trained and qualified for. The inspector verified all Assistant Health Physics Supervisors meet the ANSI qualification criteria. The inspector had no questions relative to Health Physics staff qualifications.

7. Radiation Work Permits (RWP)

a. The Station Health Physics Manual (HPM) Section 2.1 defines the RWP system as implemented including areas where RWPs are required, Standing vs. Special RWPs, and procedures for initiating, filling out, and terminating an RWP. Standing RWPs (SRWP) are written for routine jobs where a radiological hazard may exist but the workers familiarity with the job and H.P. knowledge of the situation indicate repeated H.P. checkouts are not necessary. Special RWPs must be used for tasks not authorized by a Standing RWP. HPM Section 1.3.F.5 states a standing or special RWP will have listed the protective measures to be taken and must be followed. Regardless of the type of RWP, the responsibility for assessment of radiological hazards rests with the Health Physics staff as discussed in HPM section 2.1.C.3. The inspector reviewed the seven Standing RWPs currently in effect and noted the instructions on the SRWP's call for prior notification of Health Physics and the protective clothing and equipment requirements are indicated "as required by H.P.".

b. Maintenance tasks on site are controlled thru a Maintenance Report (MR) system described in the Station Quality Assurance Manual section 16.6. Paragraph 6.6 references the RWP system discussed above. Instructions for completing the MR form 888.26B and the structure of the form indicate the decision as to whether an RWP is required or not is made by the Maintenance Foreman or Shift Supervisor. In addition, the entry of an RWP number is also made by one of these individuals.

c. The inspector questioned whether it was appropriate for these individuals for make these determinations since the are not members of the HP staff. The inspector noted that if a Special RWP is used, the HP staff is assured of having reviewed the job and performed appropriate surveys. However, the MR procedures allow a Foreman or Shift Supervisor

to determine applicability of a Standing RWP and allow the maintenance to be performed under that SRWP, in which case no HP review would necessarily happen. Licensee representatives agreed that decisions relative to RWP requirements should be made by Health Physics and stated a modification to the MR procedures would be investigated.

d. As discussed in RII Report Nos. 50-280/79-21 and 50-281/79-32, the inspector had expressed concern that a worker had cut a hand hole in a trap door in the fuel building under a SRWP. A review of the SRWP (No. 79-SWP-7), indicates the worker was to notify Health Physics prior to working in the Restricted Control Area and determine what protective clothing and equipment requirements were necessary. Discussions with the Health Physics Staff revealed this was not done. The only notification involved was the workers indicating they were going to the fuel building when they received the pocket dosimeters from dose control.

e. Technical Specification 6.4.D states procedures required by Specification 6.4.B, including health physics procedures, must be followed. The inspector informed licensee representatives that failure to follow SRWP directions, as required by HPM Section 1.3.F.5, was in noncompliance with Technical Specification 6.4.D (50-280/79-24-01, 50-281/79-42-01).