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

Report Nos. 50-259/83-44, 50-260/83-44 and 50-296/83-44

Licensee: Tennessee Valley Authority
500A Chestnut Street Tower II
Chattanooga, Tennessee 37401

Facility Name: Browns Ferry Nuclear Plant

Docket Nos.: DPR-33, DPR-52 and DPR-68

Inspection at Browns Ferry Site near Athens, Alabama

Inspectors: _____ 11/17/83
G. L. Paulk Date Signed

_____ 11/17/83
R. C. Butcher Date Signed

Approved by: _____ 11/17/83
F. S. Cantrell, Section Chief, Date Signed
Division of Project and Resident Programs

SUMMARY

Inspection on October 25-28, 1983

Areas Inspected

This special inspection involved 50 inspector-hours in the area of exposure control.

Results:

In the one area inspected, one violation was identified due to a sub-contractor overexposure.

DETAILS

1. Persons Contacted

   Licensee Employees

   G. T. Jones, Power Plant Superintendent
   J. E. Swindell, Assistant Power Plant Superintendent
   J. R. Pittman, Assistant Power Plant Superintendent
   T. L. Chinn, Plant Compliance Supervisor
   J. H. Miller, Field Services Supervisor
   A. W. Sorrell, Supervisor, Radiation Control Unit BFN
   J. Cory, Assistant Supervisor, Health Physics

2. Management Interviews

   A management interview was conducted on October 28, 1983, with the Power Plant Superintendent. The licensee was informed of the violation identified during this report period. The licensee stated that corrective actions were being implemented to prevent recurrence.

3. Licensee Action on Previous Inspection Findings

   Not inspected during this report.

4. Unresolved Items

   There were no new unresolved items during this report period.

5. On October 18, 1983, the licensee identified that an employee of Welding Services Incorporated had received a whole body dose of 3,059 mrem during the third quarter of this year (July 1, 1983 thru September 30, 1983) while working at the Browns Ferry Nuclear Plant. The Health Physics Dose Tracking (HPDT) computer system showed a third quarter dose total of 2,496 mrem for the employee. The discrepancy of 563 mrem was the month of August Thermoluminescent Dosimeter (TLD) badge reading which was deleted through an error in a HPDT computer system program. This error was recognized on September 12, 1983, during a monthly TLD program update and was listed on a TLD reject report. Due to a personnel error, the correct information failed to get entered in the computer and the August TLD reading of 563 mrem was shown as zero. Details of this overexposure are as follows:

   a. The employee originally processed in at Browns Ferry on July 21, 1983. His TLD badge was processed at the end of the month and since it read less than 10 mrem, it was recorded as 0 mrem.

   b. The employee returned to Browns Ferry on Friday, August 19, 1983, and entered through the main gate and was assigned a TLD badge (#91546). Being a contractor employee, he was instructed to re-enter the plant in the future through another gate used by field services employees. On

Monday, August 22, 1983, he entered the field services gate and was issued a second TLD badge (#81426).

c. At the end of the month both badges were processed. The first badge (#91546) was recorded as 0 mrem. The second badge (#81426), which had been used throughout the remainder of the month of August, recorded 563 mrem.

d. On September 12, 1983, the HPDT program was run which normally would have recorded the exposures but a program software error entered an incorrect ending date for badge #81426. As a result, the file was rejected and listed on the TLD reject report so the error could be corrected and data manually re-entered into the file.

e. A licensee employee failed to enter the data as previously identified and therefore the employee's August exposure was reflected as zero.

f. A subsequent quarterly review of TVA and subcontractor employee exposure records revealed that the employee's total exposure for the third quarter was the August dose of 563 mrem plus the September dose of 2,496 mrem for 3,059 mrem total whole body.

A review of the licensees exposure control program revealed that the manually entered corrections (as noted in 5.e above) are not subsequently reviewed for correct entry. If exposure data requires reentry, which is a very common occurrence, the data entered is not checked for accuracy. If the data entered were incorrect, it would not be detected unless it subsequently resulted in an overexposure which would be identified. This appears to be a problem in the exposure control program which should be corrected. This will be carried as inspector followup item (83-44-02).

The licensee has reviewed their records for the employee's exposure history at Browns Ferry for the time period in question. The Special Work Permits (SWPs) were reviewed to ensure all of the employee's exposures has been recorded and to verify their computer records were current. This review has been completed and all records were accurate and up-to-date. Also, the licensee verified the TLD badges were within tolerance limits. The employee's total previous exposure as of July 21, 1983 was 1,830 mrem which was received during the period March 23, through April 1, 1983, while working at another licensee's facility. The licensee has also reviewed their exposure record data base in the computer and no other employees have exceeded their exposure limits.

The following chart shows the TLD dose (official record) for the employee versus the pocket chamber readings. The results were approximately the same.

TLD/POCKET CHAMBER DATA COMPARISON

TLD Badge Number	Date Issued	Date Pulled	TLD Dose (mrem)	*Pocket Chamber Readings (mR)
91425	07/21/83	07/31/83	0	0
	July Exposure Totals		0	0
91546	08/19/83	08/31/83	0	0
81426	08/22/83	08/31/83	563	563
	August Exposure Totals		563	565
81426	09/01/83	09/12/83	768	785
61248	09/12/83	09/20/83	800	954
61431	09/20/83	09/22/83	503	557
61494	09/22/83	09/23/83	69	65
61526	09/23/83	09/24/83	179	190
61557	09/24/83	09/26/83	166	140
91817	09/26/83	09/30/83	11	0
	September Exposure Totals		2496	2691
	Quarter Exposure Total		3059	3256

The licensee was informed that the failure to prevent a subcontractor employee from exceeding 3 rems total whole body during the third quarter of 1983 was a violation (83-44-01).