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 O'REILLY, J. P. Region 2, Atlanta, Office of the Director

SUBJECT: Revised final deficiency report re unconservative loads on
 pipe support design mods, initially reported on 801217.
 Drawings w/ load discrepancies are being evaluated on
 case-by-case basis to determine if redesign is necessary.

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 TITLE: Construction Deficiency Report (10CFR50.55E)

NOTES: Standardized Plant, 1 cy: C Grimes 05000528

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1. The first part of the report discusses the general situation of the country and the progress of the work during the year. It also mentions the results of the various projects and the financial position of the organization.

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TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

April 28, 1981

SQRD-50-328/81-08



Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

SEQUOYAH NUCLEAR PLANT UNIT 2 - UNCONSERVATIVE LOADS ON PIPE SUPPORT DESIGN
MODIFICATIONS - SQRD-50-328/81-08 - REVISED FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. W. Wright on December 17, 1980, in accordance with 10 CFR 50.55(e) as NCR SON CEB 8039. This was followed by our interim reports dated January 19 and March 2, 1981. A final report was submitted April 1, 1981. Enclosed is our revised final report. We inadvertently deleted the last line of the corrective action from our final report.

If you have any questions, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety


Enclosure

cc: Mr. Victor Stello, Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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[illegible]

Trial	Group A (%)	Group B (%)	Group C (%)	Group D (%)
1	85	75	65	55
2	80	70	60	50
3	75	65	55	45
4	70	60	50	40
5	75	65	55	45

[illegible]

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The number of transformed cells was determined by the number of colonies obtained on the selective medium. The results are the mean of three independent experiments. Error bars represent standard deviation.

$\frac{1}{2} \quad \frac{1}{2}$

The map shows the northern Adriatic coastline from Trieste in the north to the Gulf of Genoa in the south. Sampling stations are indicated by numbered dots (1-15) along the coast and in the offshore waters. The map includes a coordinate grid with latitude from 44° 30' N to 45° 30' N and longitude from 12° 30' E to 14° 30' E. A scale bar at the bottom indicates distances from 0 to 100 km.

100

ENCLOSURE

SEQUOYAH NUCLEAR PLANT UNIT 2
UNCONSERVATIVE LOADS ON PIPE SUPPORT DESIGN MODIFICATIONS
SQRD-50-328/81-08
10 CFR 50.55(e)
REVISED FINAL REPORT

Description of Deficiency

Piping system analyses and support design for class 1, 2, and 3 systems inside containment were contracted out to EDS Nuclear, Incorporated. EDS tabulated design loads for the pipe supports on support drawings. EDS had design and revision responsibility for all piping reanalysis results which could have an impact on existing support designs. Load increases that resulted from piping reanalyses but did not require design modifications were not revised on the support drawings. Design control responsibility for all support drawings was subsequently turned over to TVA, and subsequent design modifications by TVA were based on the design loads tabulated on the drawings. Therefore, some design modifications by TVA may be based on unconservative loads. At the time of EDS's contract, TVA did not recognize that these load increases could have an adverse impact on subsequent support designs and therefore did not require that EDS tabulate these loads on the affected support drawings.

Safety Implications

Piping supports being based on unconservative design loads could fail during a seismic event. Failure of the supports could lead to pipe break and subsequent reduced coolant to the core which could adversely affect the safety of the plant.

Corrective Action

TVA is comparing the load values shown on the individual pipe support drawings to the corresponding loading on the revised EDS load tables. Drawings which have load discrepancies are being evaluated on a case-by-case basis to determine if supports are adequate as designed or if redesign is necessary. The complete evaluation and rework of supports, if required, will be completed, if possible, for Sequoyah before fuel loading. Any required rework not accomplished by fuel loading will be evaluated on a case-by-case basis.

11/11/11