

ENCLOSURE

YELLOW CREEK NUCLEAR PLANT UNITS 1 AND 2  
CONSTRUCTION QA AUDIT - SIGNIFICANT DEFICIENCIES  
YC-C-80-03  
10 CFR 50.55(e)  
FIRST INTERIM REPORT

Description of Deficiency

The following are Construction Quality Assurance audit deficiencies which are considered significant conditions adverse to quality.

1. Sampling and Reduction of Sample - The central mixing plant was found not to have provisions for procuring representative samples of the material being batched as required by General Construction Specification G-2 directly from the scale discharge. Therefore, the sample was being obtained by opening the discharge gates and catching some of the discharged material in a shovel. This sampling method is contrary to ASTM D-75. Also ASTM C-702 establishes approximate minimum mass of field samples and requires that the field sample be mixed and reduced by quartering. Noncompliance to these requirements was also observed.
2. Gradation - Observations indicate that gradation, including weighing, is being performed in accordance with the requirements of QCI C-204. Review of form TVA 10141 - Sieve Analysis of Concrete Aggregates, form TVA 10249 - Screen Analysis of Aggregate Combination, and Sieve Analysis of aggregates revealed that during the period February 19, 1980, through March 26, 1980, the 3/8" aggregate in the mixing plant storage bins was out of specified limits numerous times. This review and subsequent investigation revealed six areas of noncompliance with the QA program requirements.
3. Tests of Cylindrical Concrete Specimens - The auditors observed concrete test cylinder molding, curing, unit weight determination, verification of diameter and perpendicularity, capping, and compressive strength determination. With the exception of compressive strength determination performed on March 24, 1980, using equipment number TVA 40970, all observed activities appeared to be in accordance with the applicable portions of the QA program. On March 24, 1980, the load was applied to the cylinders in excess of the 20-50 psi/s limits, and no special note of the type of failure and the appearance of the concrete was taken.

Interim Progress

1. QC-M&C employees have been instructed to obtain the material correctly. At present, a pan is being used to collect the full cross section of the flow until a permanent method is installed. Sample size has been increased to the correct amount.
2. This item is still being evaluated.
3. QC-M&C employees have been instructed of the requirements. A sign reminding employees of the requirements has been attached to the test equipment.