TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

October 23, 1979

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:

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2 - NRC-OIE REGION II LETTER RII:BJC 50-390/79-33, 50-391/79-28 - INSPECTION REPORT - RESPONSE TO INFRACTION

The subject letter dated July 10, 1979, cited TVA with one infraction in accordance with 10 CFR 2.201. Enclosed is our response to that infraction.

If you have any questions concerning this matter, please get in touch with D. L. Lambert at FTS 854-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

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

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ENCLOSURE

WATTS BAR NUCLEAR PLANT UNITS 1 AND 2
RESPONSE TO INFRACTION 390/79-33-04 AND 391/79-28-04

Infraction

As required by Criterion V of Appendix B to 10 CFR 50 and as implemented by paragraph 17.1A.5, "Activities affecting quality shall be prescribed by documented instructions, procedures. . .and shall be accomplished in accordance with these instructions, procedures. . ." Watts Bar Quality Control Procedure, WBNP-QCP-3.6 Rev. 6, Paragraph 6.1.18 states, in part, that a device be used to verify that the maximum allowable pull tension is not exceeded.

Contrary to the above, on September 7, 1979, a dynamometer device was installed in the cable run to measure the pulling force on the cable. The dynamometer was installed in a manner in which it could not monitor the cable pulling force on the 4/1 (300 MCM) conductors being pulled. This is an infraction.

Corrective Action Taken and Results Achieved

The cables involved in this infraction were 0-4L-228-437 and 0-4L-228-438. They provide the power supply for lighting cabinets LC-180 and LC-181 inside unit 1 reactor building. According to the project Final Safety Analysis Report (FSAR) and design criteria, lighting is not considered safety-related, and therefore the cables involved are not safety-related. The licensee was informed by the inspector that the primary reason for the infraction was statements made by the electrical foreman, supervisors, and crew members indicated that it was common practice to locate the dynamometer in a similar fashion for safety-related system cable pulls.

An investigation was conducted to determine facts and details for the response to this infraction. The following was found.

1. The applicable procedure for cable pulling methods and inspection procedures is WBNP-QCP-3.5 Rev. 10 which was in use on September 7, 1979, and not WBNP-QCP-3.6 Rev. 6 as stated in the NOTICE OF VIOLATION.

2. After the incident, it was determined by electrical engineering unit employees that there had been superficial jacket damage to one of the single conductor 300 MCM cables which required a portion of the cables to be pulled back and be repulled. During this operation, the pull tension was limited by the preferred method of rope pull devices as outlined in Procedure WBNP-QCP-3.5 Rev. 10. Using this method, the rope pull device did not break, which verified that the original method did not exceed the maximum allowable pull tension. There were no nonconformance reports written for these cables because such reports are not required for nondivisional (nonsafety-related) cables.

3. This incident was not a case of failing to follow the applicable procedure. The only discrepancy was the fact that the dynamometer was incorrectly located in the cable pull in such a manner that the total pulling force was not exerted on the dynamometer. The crew members, foreman, and supervisors made a statement which was incorrect, and they did not have sufficient information to know whether or not this was a common practice for other cable installations.

The foreman involved had been engaged in nonpower-assisted cable pulling activities for a considerable period of time and was therefore adequately trained and thoroughly familiar with the requirements of the applicable procedure. This crew was utilized before this incident to pull cable by hand for short pulls which did not require the use of a dynamometer to monitor the pull tension exerted. Power or mechanically assisted cable pulls had been reserved for other more experienced crews. There is no reason to believe that any safety-related cables were incorrectly pulled.

4. This incident did, however, identify a need to train certain foremen, supervisors, and inspectors on methods of rigging, engineering principles involved, and other considerations to properly pull cable using mechanically assisted methods and to ensure that the maximum allowable pull tension is not exceeded. Procedure WBNP-QCP-3.5 does not provide detailed methods of rigging nor specifics of the engineering considerations involved, and for practical reasons, the location of the dynamometer is presented only in general terms. It was therefore determined that classroom instruction should provide the needed information to the craftsmen performing the work.

Action Taken to Avoid Further Noncompliance

The Electrical Engineering Unit, assisted by the Assistant Electrical Construction Superintendent, designed and prepared a training class for presentation to all electrical supervisors, foremen, dual-rate foremen, and inspectors involved in cable pulling activities. The class was held on October 2, 1979. It consisted of a lecture presentation followed by practical exercises and demonstrations designed to solve typical cable installation problems encountered daily at the project. This activity was documented according to applicable project procedures, and copies of the materials and documentation are available in project files.

In addition to the training class, a Field Instruction is being written to provide details on the use of a dynamometer.

Date When Full Compliance Will Be Achieved

The additional training determined to be needed was completed on October 2, 1979. We are now in full compliance.