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October 30, 1980

Mr. Gaston Fiorelli, Chief  
Reactor Construction & Engineering Support Branch  
US Nuclear Regulatory Commission  
Region III  
799 Roosevelt Rd.  
Glen Ellyn, IL 60137

ULNRC-394

Dear Mr. Fiorelli:

INSPECTION REPORT NO. 50-483/80-22

This is in response to your letter of September 29, 1980 reporting results of an inspection at Union Electric Company's Callaway Plant Site on August 18-28, 1980 and as detailed in inspection report number 50-483/80-22.

None of the material in the inspection report or in this response is considered proprietary by Union Electric Company.

The following is in response to the items in Appendix A, Notice of Violation, of the inspection report.

Infraction (483/80-22-01)

10 CFR 50, Appendix B, Criterion II states, in part, that "The applicant shall identify the structures, systems and components to be covered by the Quality Assurance Program."

The PSAR Section 17.1.2 states, in part, "The Quality Assurance Program is to be applied to those structures, systems, equipment and components that are necessary to assure the integrity of the reactor coolant pressure boundary, the capability to shutdown the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures..."

Contrary to the above, the rip-rap on the ultimate heat sink is not listed in Table 3.2-1 of the PSAR as safety related. Furthermore, material test results could not be located while on site. The rip-rap appears to be placed improperly, in that it is not graded and there are pockets of fine material on the surface.

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Response

Our decision that the natural stone riprap on the slopes of the Ultimate Heat Sink Pond is non safety-related was based on the following considerations:

- a. The pond is a dug pond (dug below existing ground surface) with no man-made dikes or dams whose failures, due to failure of riprap, would result in a detrimental loss of UHS pond water. The failure of the riprap in a catastrophic mode, even if that is possible, would not affect the availability of water to the plant in an emergency.
- b. The presence of a sill at the pump intake forebay should prevent small-size riprap, that could wash out from the slope, from entering the pump house. Thus blockage of the pump intake is precluded.
- c. The riprap serves the passive function of long-term slope protection. Any significant deterioration of the riprap with time is mitigated by the in-service inspection program committed to in the FSAR. If gradual deterioration is observed over the years, repair of the riprap would be done as a maintenance item without affecting plant safety.

The use of riprap at Union Electric's Callaway plant should not be confused with the use of riprap on the face of a dam. A dam has a limited crest width. Loss of riprap on a dam can lead to erosion through the crest width with an eventual loss of water inventory.

Our geotechnical consultant, who inspected the completed riprap installation, identified in a preservice inspection report some areas of riprap that were considered either unacceptable or marginally acceptable. These areas were reinspected by the constructor and reworked as necessary. The consultant reinspected the riprap installation and the reworked areas and with Union Electric's concurrence accepted the riprap and deemed it adequate.

The material test results that could not be located during the NRC's inspection have now been located and will be made available for the inspector's review.

Infraction (483/80-22-02)

10 CFR 50, Appendix B, Criterion X states, in part, that "...Tests of material...shall be performed for each work operation where necessary to assure quality."

The SNUPPS Project Quality Assurance Manual in Section 8.2.3 states, in part, that "...An inspection and test program shall be established to assure that structures, systems and components perform satisfactorily."

Contrary to the above, approximately 800,000 tons of granular material has been placed since 1975, without performing a modified proctor test. Gradation changes have been observed in the material.

Response

Our previous discussion with the NRC inspector regarding unresolved item 483/80-11-09 indicated that we felt that the compaction specifications for granular fill and backfill were adequate. Although modified proctor tests were performed initially to establish the necessary compaction controls we are not committed to performing subsequent modified proctor tests. It is our continued belief that they are not required based on the uniformity of the granular structural backfill material and the considerable data which resulted from the initial field and laboratory investigations performed in 1975.

However, in order to relieve any concern regarding the acceptability of the presently specified density requirement, we will arrange to have a modified proctor test performed on a sample taken at each end of the gradation spectrum as determined by a review of granular fill and backfill technical specifications.

The results of this testing will be made available for the inspector's review.

Infraction (483/80-22-03)

10 CFR 50, Appendix B, Criterion II states, in part, that "...The program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained."

The SNUPPS Project Quality Assurance Manual in Section 7.2 states, in part, that "...Indoctrination and training shall be provided for personnel involved in quality activities...Records shall be maintained for indoctrination and training activities."

Contrary to the above, the inspector determined that there is no formal indoctrination and training of concrete vibrator personnel. The licensee stated that only in response to an NRC finding is there a training session for the crafts.

Response

CORRECTIVE ACTION TAKEN AND THE RESULTS ACHIEVED:

Formal indoctrination of all concrete vibrator operators will be assured by presentation of a film by the Daniel Project Training Department covering adequate instruction in concrete vibrating practice. The Daniel foreman will be responsible to assure that before a craft person is assigned to a concrete vibrating crew, that person shall have received the indoctrination.

CORRECTIVE ACTION TO BE TAKEN TO AVOID FURTHER NONCOMPLIANCE

On the job training will be accomplished through routine day to day instruction and guidance of craft personnel by the foreman.

THE DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance is expected to be achieved by November 7, 1980.

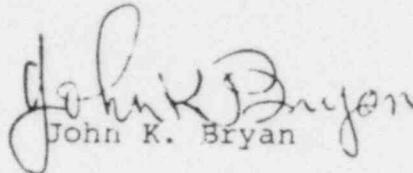
Mr. Gaston Fiorelli

- 5 -

October 30, 1980

If you have any question regarding this response or if additional information is required, please let me know.

Very truly yours,

  
John K. Bryan

WSS/jds

cc: Mr. H. M. Wescott, NRC Region III  
Mr. W. A. Hansen  
(NRC Resident Inspector, Callaway Plant)  
Missouri Public Service Commission