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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 5, 1979

Docket No. 50-267

Mr. J. K. Fuller, Vice President
Public Service Company of Colorado
P. O. Box 840
Denver, Colorado 80201

Dear Mr. Fuller:

SUBJECT: PROPOSED PLAN OF INSERVICE INSPECTION AND TESTING FOR FORT ST. VRAIN

In your letter of August 28, 1979 to Mr. Gammill, you requested NRC's concurrence with your proposed plan for inservice inspection and testing which you presented at a meeting on August 20, 1979 and later transmitted with the August 28, 1979 letter. We have reviewed your proposal and offer comments and remarks in Enclosure 1.

We trust these comments and remarks are sufficiently clarifying that you can proceed to develop the Fort St. Vrain inservice inspection and testing program as scheduled. Please do not hesitate to contact us if you need further guidance at this time.

Steven A. Varga, Acting Assistant Director
for Light Water Reactors
Division of Project Management

Enclosure:
Comments and Remarks

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Enclosure 1

Comments and Remarks

Proposed Plan of Inservice Inspection and Testing for Fort St. Vrain

1. We find acceptable your proposed plan to document your inservice inspection and testing program by modifications and additions to the surveillance section of the Technical Specifications. In using this mechanism, we desire that you take the opportunity to propose individual requirements as they are developed rather than assemble a completed package of the entire program for our review. In this way, you can formally address first the priority topics identified in our letter of January 15, 1979 and discussed in later meetings (i.e., PCRV relief and isolation valves, loop isolation valves, steam generators, PCRV monitoring, PCRV closures and penetrations, and features to prevent control rod ejection).

2. In our review of your forthcoming proposed Technical Specifications, we plan to use as a guide the proposed ASME Code, Section XI, Division 2. In order to aid us in our review and to expedite its progress, we ask that you include in the basis of each surveillance requirement you propose the identification of the related Subsection and Article of the ASME Code. Where the requirements of the proposed Technical Specifications and Code differ in substance, an explanation and justification should be provided. We also advise that reference to the Code (either Divisions 1 or 2) may be made as a means for providing details for our review of such items as inspection and testing procedures, acceptance criteria, recordkeeping, and reporting.

3. We notice that your stated philosophy, "...recognizes generic differences between light water cooled reactors and the Fort St. Vrain high temperature

gas cooled reactor, particularly, those differences which provide an inherently superior level of safety." While we, of course, consider in our reviews the many design differences of the HTGR and the inherently slower responses to transients, we are not able at this time to provide specific credits for these distinctions with regard to the inservice inspection and testing program. Generally speaking, Fort St. Vrain must have an inservice inspection and testing program which fully meets the objectives of those for light water reactors.

4. Your proposed program places a higher category of classification systems pertaining to the mitigation of Design Basis Accident No. 1, the sustained loss of forced circulation. While this is a demanding case in terms of the performance of reactor safety systems, it does not follow that this accident should necessarily be the only case which should receive emphasis in terms of a potential release of radioactivity to the environs. Thus, surveillance for insuring protection against other design basis accidents and minimizing the occurrence for all types of potential accidents that could result in significant radioactive releases should be equally rigorous. We also note that DBA No. 1 involves a sequence of events that have not been explored by testing and experiment to the extent that total confidance can be placed on a fully satisfactory performance of all the systems and structures involved. Thus, it is necessary and in accord with the "defense-in-depth" philosophy that your inservice inspection and testing program address equally the prevention of the occurrence of DBA No. 1 as well as its mitigation.

5. We notice that your proposed general surveillance requirements would limit surveillance inspections to visual examinations, observations, and measurements and that non-destructive test methods would be used on pressure boundaries only for investigative purposes. For selected accessible locations of the pressure boundary, it would appear that non-destructive methods should be considered. Also, it is foreseeable that advances in NDT techniques might eventually make possible surface and volumetric surveillance of the steam generators and some other hard-to-get-to locations. Thus, it appears that PSC is exempting itself from applying NDT techniques where they would be desirable for surveillance and from NDT advances should they occur. Rather, you should commit to utilize NDT techniques for surveillance where reasonable and to use advances in the technology if such advances would make additional NDT inspections realistically feasible. You should also make a study of the current state-of-the-art of NDT technology and justify that your reasons for certain exclusions of NDT surveillance are based on lack of equipment availability.

6. In our discussion during the meeting of August 20, 1979, it was noted that the isolation valves for the PCRV pressure relief system were manually actuated. In order to meet the objectives of General Design Criteria pertaining to containment isolation and in keeping with the purpose and functioning of the PCRV pressure relief system, we believe that these valves should be motor operated with capability for manual actuation from the control room. The surveillance program proposed for these valves should be equivalent to that for Category A valves as defined in Article 1GV in the proposed ASME Code.

7. You proposed that the Office of Inspection and Enforcement serve in place of a qualified ASME inspection agency as no safety-related systems were built to the ASME Code, Section III. We are taking this proposal under consideration and will advise you later in this matter.

8. At the August 20, 1979 meeting and in your August 28, 1979 progress report, you deferred discussion of an inservice inspection plan for structural graphites. You should plan to address this topic in the near future.