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The Nuclear Regulatory Commission  
Washington, D.C.

The following comments are submitted concerning the Draft Supplemental Environmental Impact Statement for License Renewal at Browns Ferry Nuclear Power Plants, Supplement 21.

I provided comments at the Environmental Scoping meeting for Browns Ferry held in Athens last April. At that time I raised concern about the safety of the containment structures for the three units as a result of the containment vessels being thermally shocked through repeated automatic shutdowns of the reactor units. I had previously raised this issue with TVA when it requested public comment concerning extending the life of the three reactors in 2001. I received no response from TVA concerning my comments.

As many people don't remember and TVA never advertises, TVA had such a horrible operating record in the initial 10 years of operation (1975 to 1985), that all three reactors were shut down in 1985 reportedly due to safety concerns and repeated safety violations. It took 6 years to reopen Unit 2 and 10 years to reopen Unit 3. Unit 1, in which the near disastrous fire occurred, never reopened and has been mothballed for almost 20 years. During the 10 years of initial operation, TVA was plagued by an amazingly large number of Reportable Occurrences. I went to the Athens Library during this time and reviewed some of the statistics in the Browns Ferry operating records which, at that time, were maintained in the library. Over a period of less than four months in the fall of 1980, there were 66 Reportable Occurrences at the three units or more than one every two days at the Browns Ferry facility. These events were fairly evenly distributed among all three reactors (Unit 1 had 23, Unit 2 had 21, and Unit 3 had 22). If operation during the above time period was typical of Browns Ferry operation over the first 10 years, then more than 2,000 Reportable Occurrences would have occurred at Browns Ferry in the first 10 years of operation. I couldn't determine at the time how many of the Reportable Occurrences had resulted in SCRAMS or automatic shutdowns of the nuclear reactor, but my understanding at the time was that automatic shutdowns often occurred.

During the 1980s, I read a lot about nuclear power generation. I learned that when an abnormal event triggers an automatic shutdown, it is somewhat of an emergency process. This process is designed to shut down the reactor much more rapidly than when the reactor is shut down using normal operating procedures. The faster than normal cooling of the reactor containment structure thermally shocks the structure resulting in great stresses throughout the structure with the disturbing potential of weakening it. Reportedly, this could result in "premature aging" of the containment structure.

After the meeting last April, I went to the Athens Library to try to determine how many automatic shutdowns had occurred at Browns Ferry. The historical NRC Browns Ferry files are no longer there. NRC told me that the information would be available through the on-line NRC public documentation system. I struggled to try to find the data on-line, but eventually gave up after suffering severe frustration. I then called NRC and requested that someone there find the data for me, but I never received any information.

The only response I received from the NRC relative to my comments was that the issue I raised was a safety issue and would be part of the safety review and not part of the environmental review. I was told that the safety review meetings would be conducted in Washington, and I was not able to attend these. Hopefully, this issue was dealt with during the safety review, and there is someone at today's meeting that can discuss this and explain the results of the safety review and how the above concerns have been resolved.

What has the NRC done to assure and how does the NRC know that the reactor containment vessels at the facility are structurally sound and capable of safe operation for 20 years beyond their "designed to" life?

Before approval is granted by the NRC to extend reactor life by 50% at least the following should be done as a minimum:

1. TVA should report the total number of automatic shutdowns that have occurred at each Browns Ferry reactor during its operation.
2. The NRC should investigate (and report to the public about) the Reportable Occurrences, automatic shutdowns, or other safety violations which have occurred at each reactor including the significance of these events relative to the safe operating lifetime of the reactors.
3. If there is any possibility of premature aging of any of the containment vessels as discussed above, TVA should be required to determine by scientific measurement the structural soundness of each reactor containment vessel using non-invasive techniques or whatever method is available. If these techniques do not exist, TVA should be required (before license approval) to develop the techniques and undertake the testing and analysis to determine and be able to assure the local public and the NRC that there is no danger of containment vessel failure.

I believe that there have been a significant number of automatic shutdowns of the three Browns Ferry reactors. If that is the case, and if what I read about the effects of these events is true, this is of major concern to anyone living in this area or downwind. There is the possibility that one or more of the Browns Ferry containment vessel structures have been weakened and prematurely aged. This could pose a serious threat for the people of the Tennessee Valley, especially considering that the TVA and the NRC are in the process of extending the operation of all three reactors 50% beyond their "designed to" operational life.

I have another question for the NRC regarding relicensing approval of the mothballed Unit 1 reactor. Have you already renewed the operating license of this reactor, or have you informed TVA that approval of license renewal is guaranteed? The TVA has already spent \$885,000,000 on this project, and it is beyond belief that they would have done such a thing if there may be the remotest possibility that approval might not be forthcoming. If approval has not already been granted or is not guaranteed, has the NRC encouraged the TVA to initiate work on this project under these circumstances?

Thank you for your time and attention. I appreciate the process that includes and encourages the public to comment.

Sincerely,



Stewart V. Horn