50-160

Georgia Department of Natural Resources

205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334

Reply To:
Georgia Geologic Survey
Room 400
19 Martin Luther King, Jr., Dr., S.W.
Atlanta, Georgia 30334

(404) 656-3214

Joe D. Tanner, Commissioner
Harold F. Reheis, Director
Environmental Protection Division
(404) 656-4713

May 11, 1995

Mr. Marvin Mendoca
Mail Stop 011-B20
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Mendoca:

I have reviewed the letters from a petition to shut down the Georgia Tech Research Reactor. The letters suggest (1) that the reactor overlies the Wahoo Creek Formation, which is not a suitable nor a stable foundation material; (2) that there is an earthquake risk, particularly from the Brevard Zone; (3) that unique geologic fractures, particularly horizontal fractures, might cause large quantities of ground water to seep into the reactor and cause problems. My review indicates that the petition's suggestions are specious.

The Wahoo Creek formation is one of many geologic formations of the Piedmont Physiographic Province. The fact that the Wahoo Creek Formation weathers into "slabs" is not relevant; in situ, it is a competent rock adequate to provide suitable foundation for the reactor. Comparison of the foundation characteristics of weathered and in situ rock materials is not reasonable nor appropriate.

Georgia is a relatively aseismic state and earthquakes are rare. The Brevard Zone should not be considered as an "earthquake fault". The proximity of the Brevard Zone to the reactor is not relevant.

Fractured rock, which is ubiquitous to the Piedmont, underlies the reactor. There are no data to suggest that horizontal fractures having high water yielding characteristics underlie or are even near the reactor. From a hydrogeological point of view, there are no known unique features of reactor site to suggest that ground water would affect reactor safety.

A020 1/0

The Piedmont extends from Alabama to New Jersey and occupies many tens of thousands of square miles. The comments made in the petition would apply at virtually any location in the Piedmont. In addition, the petition cites several reports published by the Geologic Survey Branch of the Georgia Environmental Protection Division. The reports cited were prepared under my direction; I personally reviewed and approved them. There are no data in these reports that indicate the reactor at Georgia Tech is not safe or poses an environmental threat.

If you need additional information, please let me know.

Sincerely,

William H. McLemore

William H. McLemore
State Geologist

WHM:lg

cc: Jim Setser
Technical Files