

January 23, 1984

Docket Nos. 50-259
50-260
and 50-296

Mr. Hugh G. Parris
Manager of Power
Tennessee Valley Authority
500 A Chestnut Street, Tower II
Chattanooga, Tennessee 37401

Dear Mr. Parris:

SUBJECT: REACTOR VESSEL PRESSURE-TEMPERATURE CURVES

Re: Browns Ferry Nuclear Plant, Units 1, 2, and 3

Your submittals of July 21, 1983 (TS 178 Sup. 1) and September 22, 1983 (TS 191) requested changes to the Browns Ferry technical specifications to provide reactor vessel pressure-temperature curves for six effective full power years and for the vessel end-of-life, respectively. Additional information regarding the predicted end-of-life neutron fluence, the chemical composition and charpy impact test results for the reactor vessel surveillance materials was provided in your letter of October 19, 1983. This subject was also discussed with your staff in a telecon on November 30, 1983.

The length of time a pressure-temperature curve is effective depends upon the amount of neutron irradiation damage that is predicted to occur for the limiting reactor vessel beltline material. The surveillance material data provided by your submittals is not sufficient to determine pressure-temperature curves for the Browns Ferry pressure vessels because you have not provided the necessary materials data to verify that the surveillance material is representative of the beltline material.

Your proposed pressure temperature curves are based upon the predicted increase in reference temperature for the reactor vessel surveillance material. Therefore, we request that you either revise the pressure temperature curves using conservative assumptions for reactor vessel beltline material fracture toughness and chemical composition or demonstrate that the predicted neutron irradiation damage for the reactor vessel beltline materials will be less than that predicted for the reactor vessel surveillance material. If you choose the latter, you must provide for each reactor vessel beltline material:

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- a. the heat and lot identification for each weld material,
- b. the heat identification for the plate material,
- c. the drop weight and/or charpy V - notch test results for each weld and plate material,
- d. the copper, nickel and phosphorus chemical composition for each weld and plate material, and
- e. the predicted end-of-life neutron fluence for each material.

This request for additional information is specific to one licensee. The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore OMB clearance is not required under P.L. 96-511.

Sincerely,

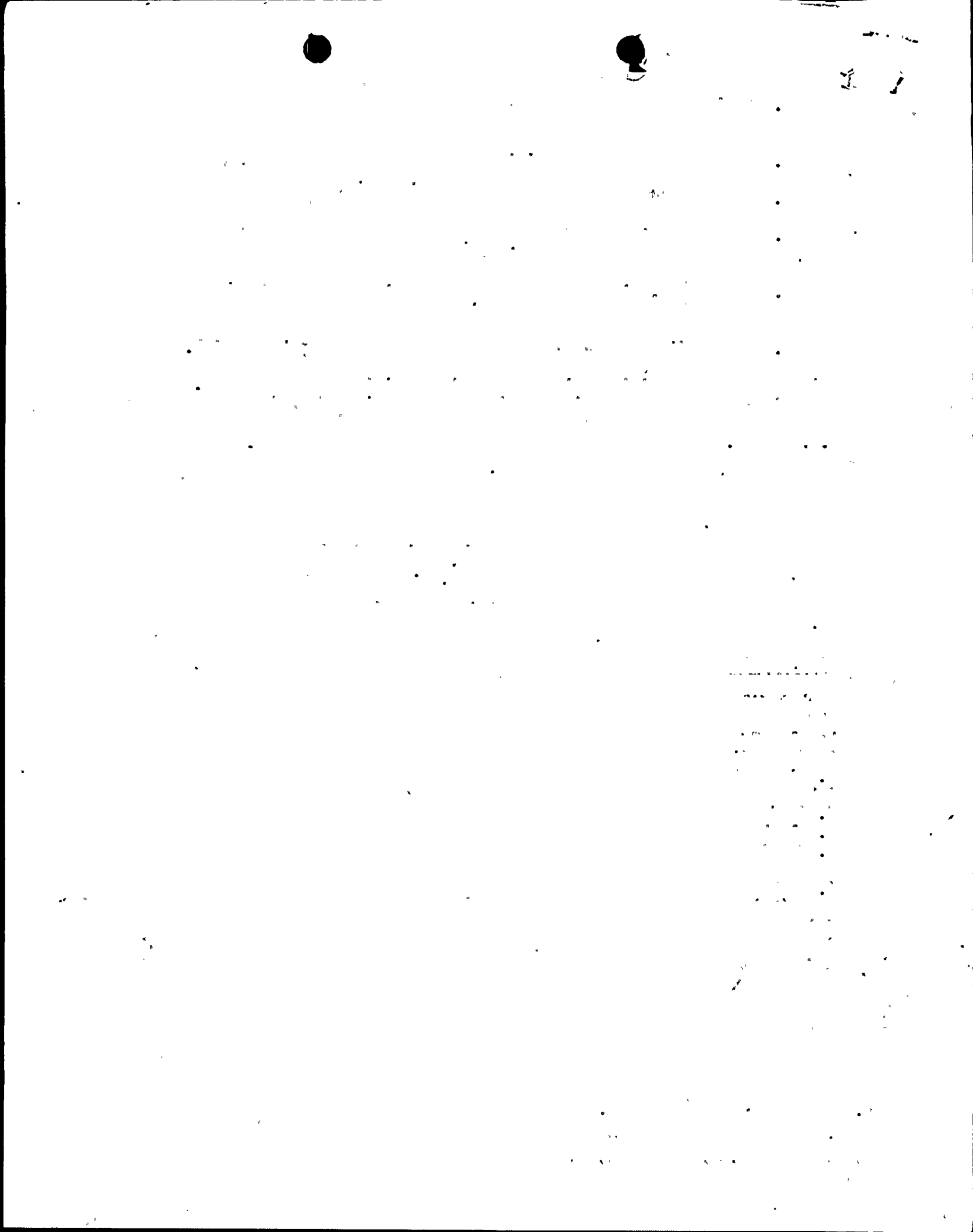
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Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

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Mr. Hugh G. Parris
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Browns Ferry Nuclear Plant, Units 1, 2 and 3

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