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April 22, 1988

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Docketing and Service Branch

The National Bureau of Standards (NBS) supports the petition for rulemaking by the University of Missouri published in the Federal Register, Vol. 53. No. 40 dated March 1, 1988. NBS also concurs with the need and supporting arguments presented by the University of Missouri.

Historically, when it was determined that non-power reactors operating at powers of 10 MW or more would be classified as testing reactors, most proposed reactors were associated with the development of nuclear power in one way or another. Thus, it was anticipated that reactors of sufficient power (10 MW or more) would be used to test reactor concepts, new fuels, and nuclear materials. Because such reactors might contain sizeable loops for materials testing or fuel development, it was thought that more extensive regulatory surveillance would be desirable and the class of "Test Reactor" was established. In fact, it turned out that much larger reactors are required for this type of work and now there remains only one reactor licensed as a test reactor, the NBS research reactor, and it was never intended to be used as a materials or fuel testing reactor. It is strictly a research reactor, used for neutron beam research, activation analysis, and limited isotope production and has no sizeable loops for fuel and materials testing. Therefore, we recommend that the arbitrary 10 MW criteria for establishing the "Test Reactor" category be eliminated and the definition of "Research Reactor" used in the ANSI American National Standards be adopted by NRc (See the University of Missouri petition). The official NRC definition could then be modified, as suggested by the University of Missouri, to include only those reactors that are truly intended to test reactor materials and concepts and contain the necessary loops, etc. to do so.

We believe that the current regulations for research reactors of less than 10 MW when applied to true research reactors (as defined in the American National Stanards) of greater power will continue to provide the necessary assurance that the health and safety of the public is well protected.

Sincerely,

Robert S. Carter

Robert S. Carter
Chief, Reactor Radiation Division

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