UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, DC 20555 - 0001

May 7, 2004

William D. Travers
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: USE OF MIXED OXIDE LEAD TEST ASSEMBLIES AT THE CATAWBA NUCLEAR STATION

Dear Dr. Travers:

During the 512th meeting of the Advisory Committee on Reactor Safeguards, May 5-8, 2004, we met with representatives of Duke Power, the Union of Concerned Scientists, the Nuclear Energy Institute, and the NRC staff to discuss Duke Power's application to irradiate four mixed oxide fuel lead test assemblies using weapons-grade plutonium dioxide in the core of one of the reactors at the Catawba Nuclear Station. Our Subcommittee on Reactor Fuels reviewed this matter during its meeting on April 21, 2004. We had the benefit of the document referenced.

The application and the staff review of the application considered the irradiation of the four mixed oxide lead test assemblies in a core of 193 assemblies with no other lead test assemblies present in the core. Irradiation of the lead test assemblies is intended to provide data needed to support the development and the review of a future application to make more extensive use of mixed oxide fuel at the Catawba or the McGuire Nuclear Stations. We conclude that, under the restricted circumstances considered in both the Duke Power application and the NRC staff's safety evaluation, the four mixed oxide lead test assemblies in nonlimiting core locations that do not contain control rods can be irradiated in either of the Catawba reactor cores with no undue risk to the public health and safety.

Sincerely,

**/RA/**

Mario V. Bonaca
Chairman

Reference:
Letter from R. Martin to H. Barron, "Safety Evaluation For Proposed Amendments to The Facility Operating License And Technical Specifications to Allow Insertion of Mixed Oxide Fuel Lead Assemblies," April 5, 2004.