

# Missouri Coalition for the Environment

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Rules and Directives  
Branch  
USNRC

Michael T. Lesar  
Chief, Rules and Directives Branch (MS T6 - D59)  
Division of Administrative Services  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

66 FR 39803

8/1/01

(5)

**Re: Comments on UMC Research Reactor  
NRC Docket No. 50-196**

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Dear Mr. Lesar:

The Missouri Coalition for the Environment ("Coalition") submits the following comments regarding the University of Missouri-Columbia ("UMC") Research Reactor Amended Facility License No. R-103 and the NRC's Environmental Assessment and Finding of No Significant Impact. The University applied to the NRC seeking to extend the expiration date of the existing license for five years until October 2006. The reactor is located less than a mile from the University of Missouri in Columbia.

### *Inadequate Compliance with NEPA*

The Coalition requests that the NRC prepare an environmental impact statement for the proposed extension of UMC's license. Any extension that allows the continued operation of the reactor and generation of additional nuclear waste is a major federal action that significantly affects the environment. An EIS is necessary to fully investigate the effects of allowing the continued operation of the reactor and generation of additional radioactive waste. The dangers of nuclear reactors and the seemingly intractable problem posed by radioactive waste are well documented and should not require expanded discussion herein. Some of the Coalition's specific concerns relating to the UMC reactor are given below.

### *Use of Weapons Grade Uranium*

The UMC reactor uses highly-enriched uranium, which can also be used for the manufacture of nuclear weapons. For this reason, the reactor is subject to terrorist attacks and other illegal efforts to secure material for the manufacture of weapons. Federal regulations prohibit the use of highly-enriched uranium at non-power reactors unless they demonstrate an entitlement to a "unique purpose" exemption. 10 C.F.R. § 50.64. Has the UMC reactor met the criteria for the continued use of this dangerous material? What are the alternatives to continued use of highly-enriched uranium at the reactor? Are adequate

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protections in place at UMC to safeguard against the threats posed by terrorists? These are all issues that need to be more thoroughly explored in an EIS.

### ***Problem of Waste Transport and Disposal***

The federal government has been grappling with the problem of radioactive waste disposal for many years without ever finding a practical solution. Even the massive undertaking at Yucca Mountain, Nevada, has failed to find a safe place to store the country's radioactive waste. The problem of waste disposal is even more acute in Missouri because of a dispute between the state and federal government over waste shipments that nearly required the closure of the UMC reactor this summer. Allowing the research reactor to continue operation without a safe method of waste disposal is illogical and unethical. This issue must be addressed in a more comprehensive review of the application for a license extension.

Current methods of radioactive waste disposal also pose a risk to persons traveling on either automobile or rail corridors and also to those living along these routes. The transport and disposal of waste from the UMC reactor may also present a liability risk to the citizens of our state. The NRC must thoroughly characterize the risks associated with the transport of additional waste during the proposed extension period.

### ***Safety of Graphite Use in Reactor***

The history of nuclear accidents throughout the world demonstrates that the use of graphite in reactors may pose significant safety risks. Graphite stores energy during normal reactor operation, which can be suddenly released as heat if the reactor temperature rises above normal levels. Evidence indicates that it was this phenomenon that caused a fire at the Windscale reactor in England in 1957. According to past news accounts, the UMC reactor uses graphite as part of the shield around its core. Assuming UMC continues to use graphite, the problems associated with its use have not been sufficiently investigated by the NRC. These questions must be answered before any extension is granted the University.

### ***History of Operating Problems***

The Coalition encourages the NRC to thoroughly investigate the operations of the UMC reactor before granting an extension. A string of recent events at the reactor call into question the integrity of its operation: 1) in a two month time span in the year 2000 there were two separate violations in the refueling area; 2) there have been allegations of discrimination and retaliation filed by an employee who had raised safety concerns; 3) other employees have raised concerns about the level of commercial activity and related conflicts of interest; and 4) a defamation lawsuit was filed in June 2001 by the past director of the facility against two retired scientists who worked at the reactor.

These events should be cause for serious concern about the operation of the reactor. For example, one of the two violations mentioned above resulted in an NRC report that concluded: "The event brought into question the effectiveness of MURR's shift turnovers, management and staff communications, attention to detail, and general awareness of facility conditions." NRC Special Inspection Report # 2000-203. An NRC

representative found that during the other incident there was a complete lack of communication between workers performing different tasks at the reactor. These serious violations, in conjunction with the multiple personnel issues at the reactor, require careful attention from the NRC.

Thank you for considering these comments.

Very truly yours,

  
Bea Covington  
Executive Director

  
Edward J. Heisel  
Senior Law & Policy Coordinator