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SUITE 600
WASHINGTON, D.C. 20006
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415 421-6561

August 3, 1982

William A. Vaughan
Assistant Secretary
Environmental Protection, Safety,
and Emergency Preparedness
U.S. Department of Energy
Washington, D.C. 20585

The Department of Energy neither confirms nor denies the validity, accuracy or classification status of any DOE information contained in this document.

Dear Mr. Vaughan:

I am writing in response to your July 19, 1982, Finding of "No Significant Impact" associated with the proposed construction of a Naval Reactor Fuel Materials Facility at the Savannah River Plant. Your analysis and conclusions are in error on several counts.

First, in your July 19, 1982, Finding (p. 4), you state "Commercial production of fuel materials was eliminated as a viable alternative due to requirements by commercial firms for government funding and assumption of financial risks." In Section 2.2 (p. 2-3) of the underlying Environmental Assessment (DOE/EA-0170) (hereinafter "EA"), it is further stated that "only the current fuel materials suppliers and the naval core manufacturers have the necessary experience to build and operate the new facility at a reasonable cost and in a reasonable time frame" (EA, p. 2-3).

As you may be aware, General Atomics (GA) has an existing fuel facility for the purpose of manufacturing HTGR fuel. It is my understanding that this facility was initially designed to manufacture fuel requirements for approximately 6-8 commercial-size HTGRs. Presently it is being used to supply fuel for only the Fort St. Vrain demonstration plant (one-third commercial size). The HTGR fuel is substantially similar to naval reactor fuel -- both composed of graphite-coated highly-enriched uranium spheres. The naval fuel requirement could be readily met by constructing a separate fabrication line in the existing HTGR fuel fabrication facility. The cost of this alternative is substantially less -- an order of magnitude -- than constructing and operating a new facility at the Savannah River Plant. Furthermore, DOE's failure to seriously consider this alternative is in violation of the Executive Branch requirements set forth in OMB Circular 76.

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PDR ORG EUSDOE
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cc: 17 ERIE DRIVE • NATICK, MA. 01700 • 017 055-2050
FAC: 1720 RACE STREET • DENVER, CO. 80206 • 303 377-9740

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The EA statement that "only the current fuel materials suppliers and the naval core manufacturers have the necessary experience to build and operate the new facility" is flatly wrong. Furthermore, the GA alternative would be cheaper and could be brought on line sooner.

I would appreciate it if you would release to me the names of the two commercial firms that expressed interest in constructing and operating a second fuel materials facility (EA, p. 101) and if GA was one of these. If it was, please explain in detail why it is in the taxpayers' interest to pay several times the cost of using the GA plant in order to avoid entering into a contract with GA that would cover part or all of their front-end economic risks.

The EA and your Finding also fail to discuss two other important alternatives to the proposed action. The first of these would be to rely on one fuel facility (either the proposed SRP facility or the GA alternative) and to stockpile fuel to provide the necessary "contingency against unforeseen events" (EA, p. 101). This new facility would of course have a higher throughput than the existing NFS-Erwin plant. This alternative would eliminate the need to continue to rely on the NFS-Erwin facility, which cannot be adequately safeguarded for lack of adequate material control and accounting. There are clearly different significant environmental impacts between this alternative and the proposed alternative of relying on both the NFS-Erwin facility and the proposed facility at SRP.

The second of these other alternatives would be to rely on a new facility at SRP and the GA plant, and phase out work at NFS-Erwin. This again would represent an improvement in the quality of safeguards over highly-enriched uranium based in naval fuel fabrication. I believe the Nuclear Regulatory Commission (NRC) Staff would confirm that the GA facility provides and could provide in the future a higher degree of assurance that highly-enriched uranium is not diverted than can be provided using the NFS-Erwin plant.

The inadequacy of the EA goes beyond the treatment of alternatives. The discussion of safeguards in the EA, p. 3-6, is virtually nonexistent. Material control and accounting (MC&A) at the only existing naval fuel materials facility -- NFS-Erwin -- are totally inadequate, and in fact the NRC had to relax its MC&A requirements in order to permit it to continue operation to meet naval fuel needs. This is the subject of ongoing litigation between NRDC and NRC. To casually dismiss this problem by citing DOE regulations and one paragraph that says in effect stringent controls will be

William A. Vaughan
July 30, 1982
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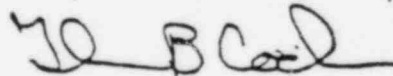
employed at the new facility hardly complies with NEPA. Similarly, there is no discussion in the EA comparing the environmental releases from the SRP plant (EA, p. 5-10) with releases from NFS-Erwin. The environmental releases at NFS-Erwin have exceeded NRC requirements on several occasions in the recent past. It is ludicrous for DOE to conclude that the environmental releases from the SRP facility will not be significant.

Furthermore, some of the most important assumptions in the analysis of radiological effects in Section 5.2 of the EA are not supported by analysis, e.g., the source terms for process incidents appearing on pp. 5-12 and 5-13. These postulated source terms are orders of magnitude less than actual (historical) accidental releases from NFS-Erwin. There has been no attempt to reconcile these differences. There is no comparison of the projected occupational exposure dose (at the proposed SRP facility -- 0.28 rem average and 78 man-rem per year total, p. 5-12) with the exposures at the NFS-Erwin plant. Also, since substantial exposure is likely to be internal, one should examine the 50-year committed dose rather than the annual dose.

Finally, with regard to the timeliness of these comments, I recognize that the 30-day comment period has expired. I have been swamped by other commitments, principally related to the Clinch River Breeder Reactor licensing proceeding. I did communicate many of my concerns, e.g., the GA alternative and my problems with the MC&A discussion, directly to Mr. Robert Stern of your office. Since these concerns were apparently not considered, I am taking this opportunity to restate them in writing and formally requesting that you reconsider your finding of "No Significant Impact." I would remind you that the fact that these written comments are received outside of your comment period does not relieve DOE of its NEPA responsibility to prepare and circulate an environmental impact statement prior to any major federal action. I feel sure that no significant action has taken place in the past two weeks to preclude such reconsideration.

Please let me hear from you on this matter.

Sincerely,



Thomas B. Cochran, Ph.D.
Senior Staff Scientist