



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DEC 06 1989

Mr. William H. Young
Assistant Secretary for Nuclear Energy
U.S. Department of Energy
Washington, D.C. 20545

Dear Mr. Young:

I am responding to the letter of November 13, 1989, from Mr. Jerry D. Griffith, Acting Assistant Secretary for Nuclear Energy, which requested that the Nuclear Regulatory Commission (NRC) review and comment on the Department of Energy's (DOE) final report, which was enclosed with the letter, of the study of the costs associated with licensing the existing gaseous diffusion uranium enrichment plants at Portsmouth, Ohio, and Paducah, Kentucky. The Energy and Water Development Appropriations Bill for 1990, required that DOE conduct the study of licensing costs under the provisions of Senate Bill 83, 101st Congress, in consultation with NRC, and that the study be accompanied by the comments of the NRC. During the planning stage, an NRC staff member met with your study project manager to review the outline of the study. Later, NRC staff discussed various aspects of the study with DOE contractors assisting on the study. However, we did not provide written comments directly to DOE on any working drafts of the study report. Mr. Robert M. Bernero, Director of NRC's Office of Nuclear Material Safety and Safeguards, notified your office on November 16, 1989, that we would not be able to provide comments on the final report by November 27, 1989, as requested, but that we would provide the comments by December 8, 1989. This letter provides NRC comments on DOE's final report.

The report appears to be complete in identifying the categories of potential activities that might be necessary and that would have costs associated with NRC licensing of the gaseous diffusion plants. The costs are separated into those for facility modifications and those for licensing application documents, licensing reviews, and hearings. For the former, the indication is, that in addition to some \$90 million already being spent by DOE for facility modifications under the Secretary of Energy's policy to achieve new standards of excellence, an additional \$60 million to \$110 million, plus an open-ended amount for seismic upgrades, might be required for uranium accountability and uranium hexafluoride containment and handling. These costs are remarkably high, without bases, and imply that significant facility modifications may be necessary to meet NRC's licensing requirements. During the licensing process, we would expect the U.S. Enrichment Corporation (USEC) to present, and NRC to consider, alternatives for accountability and containment improvements, and their bases, to provide appropriate levels of safety, environmental, and safeguards protection. At that time, we may be able to determine whether the facility modification costs are reasonable.

As for the costs for licensing application documents, licensing reviews, and hearings, the report states that some \$23 million to \$35 million might be required, although \$18 million of that appears to have already been estimated by DOE for preparation of Safety Analysis Reports and Operational Safety Requirements, in connection with the Secretary's new policy. It may be appropriate that the reported costs which would be attributable to direct DOE and NRC licensing actions should range from about \$5 million to \$7.5 million.

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Although the NRC staff has little experience in the licensing of uranium enrichment plants, as pointed out in the report, we do have considerable safety, environmental, and safeguards experience with the regulation of facilities that process and handle enriched uranium hexafluoride, the same material utilized in the gaseous diffusion plants. It is this wealth of experience, as well as that acquired from regulating other elements of the nuclear fuel cycle, under materials licensing regulations, that we have some degree of confidence in commenting on the cost estimates of licensing actions in the report. With some exceptions, the lower end of the range of costs appears to be reasonable. Although the NRC safety review costs may be too high, the NRC environmental review costs appear too low. These differences could cancel each other out. The estimated DOE cost for preparing material control and accounting plans may be too low. It could be \$400,000 to \$500,000 for the Portsmouth plant, and \$200,000 to \$300,000 for the Paducah plant. Similarly, the NRC cost for reviewing material control and accounting plans may also be too low. It could be \$300,000 to \$400,000 for the Portsmouth plant, and \$200,000 for the Paducah plant. Although we agree that the estimated costs for hearings are reasonable, hearings are not mandatory in materials licensing proceedings. Thus, if hearings are not requested, none would be held, and there would be no associated costs. The 50 percent uncertainty factor in the DOE cost estimate should more than cover all these differences.

Costs for DOE preparation and NRC review of decommissioning funding plans were not specifically identified in the licensing cost study. Such costs could reasonably be expected to be included in the safety and environmental licensing costs. While not an initial licensing cost, the cost of decommissioning, including disposition of depleted uranium hexafluoride tails accumulated by the USEC could be significant and should be addressed in the license applications.

Throughout the DOE report, reference is made to the lack of licensing criteria for existing uranium enrichment plants being the principal reason for the significant uncertainty in determining licensing-associated costs. In 1988, the Commission published an Advanced Notice of Proposed Rulemaking (ANPR) on regulation of uranium enrichment. Although the Commission decided, in April 1989, not to proceed with rulemaking, it was stated in the ANPR that NRC would use the general design criteria in the ANPR for licensing all types of uranium enrichment plants, whether existing or new, and under current or future regulations. Although licensing pursuant to 10 CFR Parts 40 and 70 was not contemplated at that time, we believe that there should be no difference in criteria or degree of safety required because of the procedural mode that is used. In fact, I have informed the Commission (in SECY-89-347) that, after consideration of the ANPR comments and other developments, no changes in the ANPR general design criteria are being considered. Furthermore, it is unlikely that any further criteria and guidance documents will be needed, with the exception of those on material control and accounting, and the chemical toxicity

