

LSS COST BENE. ANAL./10/7/88

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MEMORANDUM FOR: Francis X. Cameron, Senior Attorney  
Rulemaking and Fuel Cycle  
Office of General Counsel

OCT 07 1988

FROM: Philip M. Altomare, Section Leader  
Systems Engineering and CNWRA  
Management Section  
Engineering and CNWRA Branch  
Division of High-Level Waste Management, NMSS

SUBJECT: REVIEW OF DOE LSS COST BENEFIT ANALYSIS

Per your request, I have reviewed the subject document and find it quite informative. I find that the conclusions reached are, in general, reasonable although there are a few conclusions, as noted below, that I question. The review conducted was not, however, detailed in nature in that the present work commitments did not allow sufficient time to thoroughly check out assumptions such as quantities of documents required to be processed, cost factors, or the mathematics of their cost benefit process.

It should be noted that an assumption of the cost benefit analysis was that searchable full text and the volume of documents to be processed were essential elements in achieving the statutory requirement of NRC reaching a licensing decision in three years. They have, however, performed sensitivity studies on the volume of documents processed and converted to full text and have examined less sophisticated alternatives such as microform. The microform option did not significantly reduce cost and did not have the benefits of an optical disk system. Their analysis of cost to store spent fuel for each year of delay that the repository is not completed were equal to the total cost (approximately \$200 million) of the Licensing Support System (LSS). A many years delay, as has been predicted if the LSS is not in place, would pay for the total system many times over. Although one might question a direct comparison of these costs in the cost benefit study performed, the advantage of reducing the hearing process by more than one year is obvious. Further, DOE has given no credit to the cost savings (present cost) of the system it will replace. If one could measure the cost of delays due to the present system record management problems in various DOE ongoing court cases and apply them to the cost benefit study, the benefits would be more directly delineated. However, cost of this type are very difficult to quantify.

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Conclusions, or positions, that I particularly question in the DOE study are (1) that it is not cost effective to provide text and image capability at primary user sites, i.e., DOE Headquarters, DOE Nevada, State of Nevada, and NRC; and (2) that it is not worthwhile to provide image capability at remote (telephone connection) personal computer locations. The first item is very much dependent upon the assumptions of time use for system access through telecommunications, the number of image copies that will be requested, the acceptable time delay until receipt, and the type of equipment that would be available at different sites. There is sufficient flexibility and uncertainty here that I believe the decision could be made to go in either direction dependent on the assumptions made. I do not have the time to perform an analysis now; however, this should be undertaken before DOE firms up its design. This could be an important factor in the operating cost of the system (the part NRC will be responsible for). I question the second item since the technology is moving towards 9.6 kb data transmission through common carriers. Also the transmission sensitivity is much less for images than for text. At 9.6 kb, it is conceivable that an average page (graph type) image could be transmitted in under one minute. While transmission of a large number of images by this approach is not recommended, it does have application for special cases.

The above is a summary of the key points of my review. If a more detailed point-by-point analysis is desired, please inform me.

**Original Signed By**

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