Central Files

Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. Box 968 3000 Geo. Washington Way Richland, Washington 99352 Phone (509) 375-5000

July 24, 1980

Chief
Fuel Process Systems Standards Branch
Division of Engineering Standards
Office of Standards Development
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Sir:

Subject: Comments on "Technology, Safety and Costs of Decommissioning a Reference Boiling Water Reactor Power Station - NUREG/CR-0672"

We appreciate the opportunity to review this report in the draft stage. Our review has necessarily concentrated on the economic analysis contained in the report because of the size and detail of the total report. However, in passing, we find that the technical analysis is generally complete and has proceeded in an apparently competent manner. We were somewhat puzzled as to the advisability of moving this plant to a Midwest site for generic analytical purposes when the specific plant has been designed for a particular non-Midwest site with specific climatic and seismic characteristics.

We find the results of the economic analysis misleading. The analysis of immediate dismantling versus entombment indicates that these two approaches have virtually identical costs. Indeed, for the entombment option with removal of core internals, they apparently differ only by the cost of disposing of extra contaminated material. The historical data, based on actual decommissioning cases, does not support this result. In 1978 dollars, the dismantling to entombment costs from actual field experience, in roughly equivalent sized machines, is a factor of two or more. This coincides with the results of, for instance, the AIF study referenced in this report (AIF/NESP-009,009SR).

Generally, a line-by-line comparison of the two cases indicates virtually identical costs for each activity, even in the face of radically differing amounts (in tons) of radioactive material being removed from the site for the two approaches. Our interest was first drawn to the labor costs because they were nearly identical (indeed larger for entombment) and they constitute the largest single cost item. A line-by-line breakdown of the costs of labor for each approach indicates close agreement with entombment supervision/engineering running some 7% higher and dismantlement craft costs some 10% higher (craft here means laborers, carpenters, etc.). After examination, we find this near identity in labor costs is due to the nearly identical project times assigned to the two methods. This is also not supported by comparable data (at least in terms of the time the full labor force was on site). In this regard, one might consult the above AIF report.

A clue as to what may have gone wrong with this analysis can be found by careful examination of an apparently small line item in the cost summary. In the case of the disposal of neutron activated waste, both methods call for disposal of identical amounts of waste (an anomaly in itself in that dismantlement would include disposal of the neutron activated pressure vessel). However, the entombment method calls for a cost of 2.394 million versus a cost of 2.300 million in the case of dismantlement. Examination of this discrepancy indicates that the analysts who examined entombment included an extra cost of .094 million for lead shielding of this material whereas the dismantlement team did not. However, the material, which is the same amount in both cases, would presumably be shipped over the same route and would be disposed of in the same manner.

This instance, along with the staff labor cost situation, indicates that there is an apparent disparity between the ground rules used in the two analyses. A review of the authors in the appendix indicates that there is only one author in common between the two analyses. It is possible, and indeed indicated by the Neutron Activated Material Account and the labor accounts, that dissimilar approaches may have been utilized in these analyses. If this is true, this is of fundamental importance because of the possible impact that this document may have on both electric utility and NRC decision making.

Again, we appreciate the opportunity to comment on this document and we would be pleased to discuss these comments further with any interested parties. We regret that the press of other activities does not allow us time to review in detail the technical aspects of the report.

Very truly yours,

W. C. Wolkenhauer
Principal Special Studies Engineer

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