



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

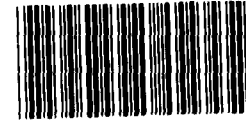
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ENERGY AND MINERALS  
DIVISION

JANUARY 22, 1979

B-159687



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The Honorable James R. Schlesinger  
The Secretary of Energy

Dear Mr. Secretary:

During a review of the issues surrounding the availability of uranium for the Nation's nuclear power needs, we evaluated the Department of Energy's (DOE) uranium reserves estimation methodology. Part of this work was done under our authority to conduct verification examinations of the accuracy, reliability, and adequacy of energy information provided to the Government by private companies. (Title V, P.L. 94-163.)

Under a program started in 1947 by the former Atomic Energy Commission, uranium companies voluntarily provide DOE with raw source data (e.g., drilling logs and maps) generated during their uranium exploration and development activities. DOE uses this data to estimate uranium reserves and potential resources on a property-by-property basis and consolidates these estimates into its overall assessment of the Nation's uranium resources. DOE presents its assessment in several resource and cost categories. "Reserves" is the most well defined resource category and quantities of uranium estimated to have a forward cost (i.e., production costs not yet incurred) of \$30 or less a pound are currently considered to be economical to produce.

We analyzed and compared estimates prepared by 8 uranium companies for a sample of 26 of their properties with the reserve estimates prepared by DOE for these properties. We selected the five companies with the largest uranium reserve holdings and randomly selected three others. These 8 companies owned over 50 percent of the reserves included in DOE's 1977 estimate at a forward cost of \$30 or less a pound. The 26 properties we selected contained about 28 percent of these reserves. Although some individual property estimates varied considerably, in total, the DOE and company estimates for these properties varied by about 3 percent.

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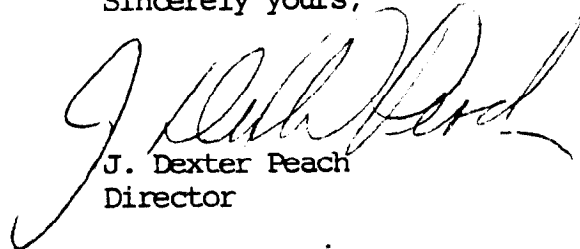
When discussing DOE's reserves estimation methodology and the reasons for differences in the estimates, all of the companies told us that DOE's procedures are reasonable and some of the companies said they use the same procedures. Several companies said that differences in uranium estimates for individual properties are common even within a company because of the considerable amount of professional judgment involved in interpreting available data.

Although the verification aspects of our work were not exhaustive, we found little or no indication that the companies withhold significant source data from DOE. Our analyses and comparisons indicated to us that DOE's estimates are a fair assessment of the current state of knowledge of the Nation's uranium reserves which could be produced at a forward cost of \$30 or less a pound.

Before we completed this review, the Nuclear Non-Proliferation Act of 1978 (P.L. 95-242) was passed giving GAO responsibility for evaluating the implementation and impact of the Act's policies, purposes, and objectives. In carrying out this responsibility, we are reviewing the international supply of and demand for uranium. Consequently, other aspects of our study on uranium availability will be incorporated into our non-proliferation work.

Copies of this letter are being sent to the eight companies we visited, the Office of Management and Budget, and selected congressional committees.

Sincerely yours,



J. Dexter Peach  
Director