A. Select a small working committee representing the oil and gas and mining industries to meet and work with a comparable Government committee for the purpose of drafting regulations designed to promote in an equitable manner development of the Federal oil shale deposits.

B. Cancel existing as well as pending proposed regulations and substitute therefor new regulations based on a competitive leasing system similar to that used for OCS lands but modified to the extent necessary to conform to the provisions of the mineral leasing laws. Such regulations should contemplate and provide for: (a) a call for nominations by industry of the lands they would like to have offered for lease; (b) a pre-prescribed lease form that is specific as to the contractural obligations of a lessee with respect to term, rental, royalty and minimum development requirements, and (c) a flexible form of bidding that will permit bidding on more than one tract under a single advance cash deposit.

Cancel existing regulations and issue non-competitive leasing regulations pursuant to which: (a) leases would be awarded under a simultaneous drawing procedure with an applicant having a choice of tracts if successful in drawing top priority for more than one tract; (b) leases would bear a relatively high advance annual rental; (c) lease applications must cover specific parcels (5,120 acres if available in compact form) as described by public notice in advance of opening an area; (d) leases would bear a royalty of 3% of the aggregate value of the minerals extracted from oil shale at the point of shipment to market, or not less than 121/2% of the value of oil shale production if marketed prior to extraction of the minerals, and (e) the form of lease would be prescribed by the regulations and be available for review prior to issuance of the regulations in final form.

In rewriting the regulations, whether for competitive or non-competitive leasing. I do not feel that the Government should attempt to control or manage future research work by private industry through the leasing system or otherwise.

## III. J. W. Smith, Laramie, Wyoming

Objections to effects generated by the proposed regulations:

1. Existing oil-shale technology developed privately and independently can produce shale oil on a commercial or major pilot scale right now.

2. Completion of the research phase is deterred and impeded by the proposal's severe limitation of reward to the researchers. Upon development of a successful technology the non-researcher leases production land on the same basis as the risk taker.

Patents could be granted successful researchers with rights of federal government application reserved at no fee.

The graduated royalty structure applied to product value rewards mediocrity and penalizes efficiency.

3. The onerous and involved requirements imposed on the researcher by the proposed regulation impede applications for leases.

4. Subordinating mineral research to the oil-shale research requirement delays and discourages development of Colorado's oil-shale minerals into a domestic alumina source. Rapid development of a domestic alumina supply is much more important to United States welfare than rapid development of shale-oil production. The proposed regulation contains no provision overcoming the legal impediments posed by the sodium exploration permits and mining claims.

## VI. Michael E. Parrish, New Haven, Connecticut

The pending regulations are lacking a concern for the welfare of the people, dictated by expediency, and designed ultimately to perpetuate monopoly.

The leasing guidelines set forth by the Department of the Interior embrace conflicting principles. We are told that the basis of awarding research and development leases will include: (1) enhancing opportunities for maximizing multiple mineral recovery; (2) the financial and technical capabilities of the applicant; and (3) enhancing the competitive opportunities of smaller companies. This is utter nonsense. According to a report of engineers from the Bureau of the Mines: "The cost per barrel of producing shale oil by mining and retorting will be substantially lower for an operation on the order of 50,000 barrels per day than it would for a small operation such as 5,000 barrels a day. Accordingly, it is doubtful that small scale operations would be economic or practical. The capital requirement for an economic-scale shale-oil production facility in the 50,000 barrel-per-day range would be as great as \$3,000 per barrel of daily capacity, which is out of the reach of most small operators."