"Conservation problems, including the disposal of spent shale, and the prevention of possible atmospheric and water pollution are under active study by agencies in our State, as are community problems relating to schools, highways, etc. We see no insoluble problems.[96]

The Oil Shale Corporation has also recognized the need for industry to assume its share of the conservation burden and to insure adequate protection of air, water, surface lands, wildlife, etc.[97]

In addition, TOSCO recommended to the Secretary of Interior far-thinking measures to insure proper utilization of the oil shale itself. Among these was a plan for allowing lower royalties as an incentive for the extraction of marginal and low-grade shales.[98]

One problem to be considered is the disposal of the vast amounts of waste shale left over from the retorting process. This problem sounds less imposing when one hears from the Bureau of Mines that vegetation will begin to grow on the spent shale deposits after about three years of weathering.[99]

Nevertheless, there are some who wish to prevent completely any commercial activity on the public domain. These so-called "protectionists" thus oppose the development of oil shale at any time or for any reason. But if the real problems of conservation are met and solved in a forthright manner and if Congress finds that oil shale development is in the national interest, then any continued objections by these protectionists will not be justified.

2. Water

It has long been recognized that water will be crucial in the commercial development of oil shale, and recently major oil companies have been buying up water rights adjacent to oil shale.[100]

The future of the waters of Colorado, Wyoming and Utah is inextricably tied up with the Colorado River Storage Project Act[101] and with current legislation and interstate agreements affecting the allocation of waters in the Upper and Lower Colorado River Basins. It is clearly to the advantage of Colorado, Wyoming and Utah to appropriate their unused shares in Upper Colorado River waters as soon as possible.[102] Utilization in the oil shale industry is ideally suited for such appropriation.[103]

3. Acreage limitations.

The question of acreage limitations is one of the most vexing problems confronted when one tries to prescribe fair leasing terms. Irregularity in grade and in thickness of the shale beds makes the amount of oil recoverable from under different surface acreage vary greatly. For instance, a 5,120-acre plot (the maximum allowed under the existing Mineral Leasing Act) in the richest parts of the shale formation would contain 18 billion barrels, an amount equal to nearly 60 percent of the Nation's proved reserves of petroleum.[104]

Leasing by competitive bid is one answer to this problem. The Government could specify a fixed dollar amount to be paid by the bidders and each bidder would then calculate the least number of acres he would be willing to receive for that cost. The winner would be the company bidding the lowest number of acres. Undersecretary of Interior Carver said, "I see no reason why a competitive situation could not be cranked adequately into a leasing system."[105]

Congress will not be without helpful precedents in its search for fair leasing procedures. In Part One of this paper other recent developments in domestic

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96 Statement of Governor John A. Love to the National Oil Shale Advisory Board, Dec. 1, 1964.

97 TOSCO, *op. cit. supra* note 68, at 17.

98 *Id.* at 20.

99 HANNA, *op. cit. supra* note 68, at 6.

100 See the recent excellent article: Delaney, ***Water for Oil Shale Development***, 43 DENVER L.J. 75 (1966).

101 70 Stat. 105 (1956), 43 U.S.C. § 620 (1964).

102 Legislation for the establishment of a national wild rivers system was proposed in the last session of Congress. S. 1446, 89th Cong., 1st Sess. (1965). One of the crucial implications of the bill is that future water appropriations may be foreclosed on any river to be included within the wild river system. The Green River of Wyoming is scheduled for possible inclusion in the system. This fact could foreseeably do great damage to the future development of oil shale in Wyoming.

103 In November, 1965, the Interior Department agreed to sell to Colony Development Co. up to 7,200 acre-feet of water annually at a sliding charge from $8.50 to $10.40 an acre foot. The contract will run for a term of 40 years. Wyoming State Tribune, Dec. 2, 1965, p. 3.

104 *Senate Hearings on Oil Shale, supra* note 3, at 35.

105 *Id.* at 62.