STATEMENT SUBMITTED TO THE SUBCOMMITTEE ON SCIENCE, RESEARCH, AND DEVELOPMENT, BY JAMES R. GARVEY, BITUMINOUS COAL RESEARCH, INC., SEPTEMBER 19, 1966.

My name is James R. Garvey. I am president of Bituminous Coal Research, Inc., which is the research affiliate of the National Coal Association. At our research laboratories at Monroeville, Pa., we are seeking through research to improve the means by which bituminous coal is mined, prepared, shipped, and utilized. A substantial portion of our research effort is devoted to finding means for controlling the pollution resulting from the mining and use of bituminous coal.

Our organization is supported by the bituminous coal industry, through the National Coal Association, and, in addition, receives financial contributions from the coal-hauling railroads, coal mining and utilization equipment manufacturers, and a number of the leading

electric utility companies.

We believe the objective of the hearings by this committee, namely, to assess the technology for pollution abatement, to be a most laudable one. The coal industry, like many other industries, is alarmed by the rate at which legislative action commanding pollution abatement has accelerated well beyond the rate of development of feasible means for accomplishing that abatement; especially in light of the questionable need in some instances for abatement. The situation was well described by Dr. Abel Wolman of the Johns Hopkins University in his special report on pollution made to the Management Advisory Panel of this subcommittee.

A review of the present status of water, air and land pollution and proposals for abatement thereof make reasonably clear that corrective legislation has quite well outrun both factual basis for action and smooth machinery for development and regulation.

We appreciate the opportunity to present this material, and it is our intention, in line with the objectives of the hearings, to review the state of the art of abatement, primarily, of air pollution resulting from the combustion of bituminous coal, and, to a somewhat lesser extent, the abatement of water and land reclamation involved in the mining of coal. We will attempt to brief you on the research and control methods which are currently underway and the expectations we have for the attainment of improved pollution control methods which will enable a reduction in coal's contribution to air and water pollution and land reclamation problems, and at the same time, enable the coal industry to continue as a vital part of our industrial economy.

Bituminous coal is vital since it is the primary source of heat energy used in the generation of electricity and the carrying out of many industrial processes. It is estimated that during 1966 about 263 million tons will be used for electric generation, 106 million tons will be used directly by general industries, and 94 million tons will be used in the form of coke for the manufacture of steel. This 463 million tons, combined with somewhat lesser amounts used for other purposes,