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DEPARTMENT OF ENVIRONMENTAL RESOURCES

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September 7, 1972

The Honorable Maurice K. Goddard, Secretary
Department of Environmental Resources
Commonwealth of Pennsylvania
Harrisburg, Pennsylvania

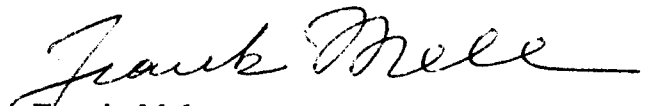
Dear Dr. Goddard:

We transmit herewith, our Final Report on the Youghiogheny River Basin Mine Drainage Pollution Abatement Project, Operation Scarlift Project No. SL-103. This is in compliance with your Service Contract dated January 22, 1969.

Your department's cooperation during our studies is greatly appreciated.

Very truly yours,

GIBBS & HILL, Inc.


Frank Mele
Vice President - Operations

FM:cmf

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

YOUGHIOGHENY RIVER BASIN
MINE DRAINAGE
POLLUTION ABATEMENT PROJECT

SEPTEMBER, 1971

Gibbs & Hill, Inc.

A SUBSIDIARY OF DRAVO CORPORATION

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES

YOUGHIOGHENY RIVER BASIN
MINE DRAINAGE POLLUTION ABATEMENT PROJECT

FINAL REPORT

I INTRODUCTION

Purpose of this project was to define extent and degree of mine drainage pollution in the Youghiogheny River basin, locate sources of mine drainage pollution, provide conceptual plans and recommendations for abatement works, and provide order of magnitude cost estimates for recommended works.

Project work consisted of four phases:

-phase I, reported on in January 1969, involved gathering old information on mine drainage pollution and pollution sources in the basin;

-phase 2 was an extensive stream survey including gauging and sampling of streams and mine drainage discharges, and chemical analyses, to provide an updated definition of degree and extent of mine drainage pollution and identify pollution sources;

-phase 3 included field inventory of surface features and searches for mine maps and geologic information on the pollution source areas, review of known mine drainage pollution abatement methods, and development of general concepts of abatement works applicable for the various sources; and

-phase 4 was the collation of pertinent information gathered in earlier phases, development of conceptual plans for abatement works and order of magnitude cost estimates, all of which are presented in this report.

Records of mine drainage pollution in the basin go back at least to 1916 and the Indian Creek flume system was constructed as a result of litigation on mine drainage pollution in the 1920's.

Bituminous coal was extensively mined throughout the Youghiogheny basin beginning in the 1800's and peaking around World Wars I and II. Production within the basin has fallen from estimated peaks in the order of 20-30 million tons/yr around 1916, to 3 million tons in 1970. Most of the mining was done in underground mines which are now long abandoned and which are the sources of most of the mine drainage pollution in the basin.

A greater part of the recommended abatement work involves sealing long abandoned underground mines where existing internal conditions are largely unknowns. Also, some of the recommended seals might cause new discharges due to higher mine water levels. For these reasons the recommended abatement works are considered partly investigative. Costs for initial works could vary widely from the order of magnitude estimates presented herein and costs for possible later follow up work cannot be estimated at this time.

A monitoring program should be instituted to check the effectiveness of abatement works to be installed and to determine needs for later work.