

MEISER & EARL, INC.
2730 CAROLEAN INDUSTRIAL DRIVE
SUITE 100
STATE COLLEGE PA 16801

ROBERT M. HERSHEY, P.G.

EDUCATION

- M.E.P.C. The Pennsylvania State University. 1974. Masters of Environmental Pollution Control
- B.S. The Pennsylvania State University. 1973. Geological Sciences

Master's Paper: "The Identification of Heterotrophic Bacteria Isolated from Acid-Mine Water." Twelve strains of bacteria were isolated from trickling filter media treating acid-mine water. An extensive series of bio-chemical tests was performed. From the compiled data the bacteria were identified to the genus level.

Continuing Education:

- The Pennsylvania State University. 1975. "Fundamentals of Water Pollution Control in Coal Mining" (20 hours).
- Pennsylvania Department of Environmental Resources (PA DER). 1975. Training Course for Sewage Enforcement Officers (40 hours).
- Professional Education School of Engineering / Applied Science, Princeton University. 1977. "Introduction of Ground-water Pollution and Hydrology" (40 hours).
- National Ground Water Association. 1986. "Practical Karst Hydrology with Emphasis on Ground Water Monitoring" (40 hours).
- Pennsylvania Department of Environmental Protection (PADEP). 1998. "Workshop on Pennsylvania's Land Recycling Program, Act 2."

Certification:

- NUS Corporation. "Fundamentals of Hazardous Waste Site Activities-Health, Safety, and Operations Training Course" (40 hours). July, 1987. Pittsburgh, Pennsylvania.
- Waste Site Worker Supervisory Training in Accordance with 29CFR 1910.120(e)(4). April 27, 2001.
- Hazardous Waste Site Worker Refresher Training (8 hours annually) in accordance with 29CFR 1910.120(e)(8). State College, PA.
- Mine Safety Training in Accordance with MSHA 30CFR Part 46, Training/Retraining of Miners. May 31, 2002, plus annual Miner Refresher Course.
- American Safety and Health Institute Approved Basic First Aid and Adult CPR Certification, plus re-certifications.
- Permit-Required Confined Space Training, Including Entrant, Attendant, and Supervisor Non-Entry Rescue. August 2, 2004.

EXPERIENCE

April 2001 to Present: *Principal Hydrogeologist, Meiser & Earl, Inc., State College, Pennsylvania.* Same as below.

May 2012 to December 2020: *Vice-President and Principal Hydrogeologist, Meiser & Earl, Inc., State College, Pennsylvania.* Same as below.

April 2001 to May 2012: *President and Principal Hydrogeologist, Meiser & Earl, Inc., State College, Pennsylvania.* Same as below.

November 1976 to April 2001: *Senior Hydrogeologist, Meiser & Earl, Inc., State College, Pennsylvania.* Completed projects including:

- overseeing the investigation and the completion of the hydrogeologic portion of the municipal waste landfill application of seven successfully permitted sites;
- developing ground-water monitoring systems for the beneficial use of coal ash in complex anthracite mining settings;
- evaluating the sampling and analysis of rock samples for the potential acid drainage, both at coal and non-coal settings;
- evaluating coal-mine pools, both in the anthracite and bituminous coal fields as potential water sources;
- obtaining PADER approval for land disposal of industrial sludges;
- performing hydrogeologic studies for proposed developments to determine the suitability for on-site sewage disposal;
- developing coal refuse disposal regulations for Maryland Department of Natural Resources (DNR);
- evaluating hydrogeologic impact of strip mines in Pennsylvania, Maryland, and West Virginia;
- developing ground-water monitoring systems for several waste disposal sites and reviewing the monitoring analysis data to determine if ground-water contamination occurred;
- defining the extent of hydrocarbon contamination and supervising the recovery process at several spill sites;

- evaluating ground-water quality and quantity data from long-term and short-term pumping tests on commercial and municipal wells;
- supervising the hydrogeologic field investigation activities of a 55-acre Superfund site;
- performing pumping tests and data interpretation for Lock Haven University students as part of their hydrogeologic course work;
- speaking as guest lecturer at The Pennsylvania State University for a Solid Waste Seminar and Civil Engineering class concerning ground-water monitoring and a continuing education course on Hydrogeological Design for Surface Coal Mining;
- participating in the definition of ground-water flow systems for PADER study of Kepone contamination;
- reviewing numerous mining permit applications and evaluating the hydrogeologic impact of mining as a consultant to the Maryland DNR Bureau of Mines;
- performing the hydrogeologic evaluate for several non-coal mining permits, including one in a high quality watershed; and
- testifying as an expert witness before the Pennsylvania Environmental Hearing Board, Pennsylvania Township Zoning Hearing Boards, Pennsylvania and Maryland County Courts, Pennsylvania Board of Claims, and British Columbia, Canadian Provincial Hearing Board.

March 1974 to November 1976: *Hydrogeologist, Todd Giddings and Associates, State College, Pennsylvania.* Supervised and coordinated a major study (budget exceeding \$120,000) of the ground water and geology of a seven-county watershed comprising essentially the Northern Susquehanna River Basin in Pennsylvania (COWAMP IV Basin). Testified as an expert witness in a coal mining permit hearing. Participated in the following projects: analysis of high-yield, water-supply wells; site suitability studies for municipal and industrial solid-waste disposal, spray irrigation of industrial wastes and sewage sludge disposal; leachate movement analysis around various waste disposal sites; collection of water samples from degraded ground-water areas and interpretation of the resulting quantitative analysis of low-yield monitoring wells; and design and installation of a cofferdam to restore water levels in dewatered colluvial wells.

PROFESSIONAL AFFILIATIONS

- National Ground Water Association, Association of Ground Water Scientists and Engineers, Active Member
- Pennsylvania Mining Professionals
- Pennsylvania Council of Professional Geologists

PUBLICATIONS

Hershey, R.M., N.W. Hedrick, and E.W. Meiser, Jr. 1984. Backfilling techniques and alkaline addition to control acid mine drainage in a coal strip mine. Proceedings of Seventh National Ground-Water Quality Symposium. Las Vegas, Nevada. National Ground Water Association. September 26-28, 1984.

Hershey, R.M. and R.W. Pollok. 1995. Site Development Issues Related to the Geologic and Hydrogeologic Investigation of the Clinton County Solid Waste Authority Site, Wayne Township Landfill, Clinton County. Sixtieth Annual Field Conference of Pennsylvania Geologists. Williamsport, PA. October 5-7, 1995.

PROFESSIONAL REGISTRATION

Commonwealth of Pennsylvania Registered Professional Geologist, No. PG-0377-G.