1997 Eastern PA Abandoned Mine Land and Acid Mine Drainage Conference

Agenda for Friday, July 25, 1997

8:00 Registration, Coffee & Danish, Display Area

8:15 Welcoming Remarks.

8:30 'What is a Mine Pool?"

Jim LaRegina, Senior Geologist

— Examine anthracite mine pools, their positions in the hydrologic cycle, the geologic cycle, and mining practices that created them, and how ground water occurs in them.

9:00 **"Forming a Local Watershed** Association"

Ed Wytovich, President, EPCAMR — The who what, when, where, how, and why of forming a local watershed association.

9:30 "A Future for Abandoned Mine Lands: Earth Conservancy's Land Use Plan"

Thomas Chesnick, Engineering Projects Manager, Earth Conservancy

— What can be done with thousands of acres of valley and mountain land, abandoned and in bankruptcy for 17 years, much of it ravaged by coal mining? Discussion of how one small nonprofit successfully developed a comprehensive plan for more than 16,000 acres of land in Luzerne County.

10:00 "Mine Reclamation with Wildlife Considerations"

Dennis Dusza, Land Manager, PA Game Commission

- Reclaimed mining lands offer some of the best opportunities to utilize best management practices for wildlife habitat enhancements. Learn some of the different techniques for managing wildlife on these barren landscapes. 10:30 to 11:00 **Break:** Display Area Open and finger sandwiches available

11:00 "Riparian Forest Buffers Initiative-Potential for Mined Lands Investment" Eric Jesperson, GIS Instigator, Rettew

Associates

— Description of riparian forest buffers program slated to protect over 100 miles of Susquehanna River tributaries. Maximize positive impact of the program in the Anthracite Region.

11:30 "Characterization and Remediation of Coal-Mine Drainage"

Charles Cravotta, III,

Hydrologist/Geochemist, US Geological Survey

— Evaluation of Limestone Treatment of acidic mine drainage in the Swatara Creek Basin, Schuylkill County, PA and Coal Mine Drainage in Pennsylvania...problems and remediation efforts.

12:00 Lunch at the Raceway Restaurant, menu selections available at morning registration

2:00 - 5:00 PM Field Trip A:

Tour of several sites along Swatara Creek including: Proposed Lower Rausch Creek Wetlands, Swatara Diversion Wells, USGS Monitoring Site,Proposed Polly's Run Streambank Rehab, Limestone Channel Near Swatara Headwaters, Proposed Anoxic Drain on CES Landfill Site Above Limestone Channel 11. Additional Sites,(if time permits): Martin's Run Diversion Well, Colket Tunnel Discharge, Tracey Airway Discharge, Rausch Creek Treatment Plant, Anoxic Drain Along I-81.

1997 Eastern PA Abandoned Mine Land and Acid Mine Drainage Conference

Agenda for Saturday, July 26, 1997

8:00 Registration, Coffee & Danish, Display Area

8:15 Welcoming Remarks.

8:30 "Active Biotreatment Removing Sulfate and Metals"

Andre' de Vegt, Manager of Business Development, Paques, Inc.

— Biotechnological processes for AMD treatment are presented. Pilot testing and full scale experience with various mine waters has demonstrated that the treatment process meets Federal water quality criteria.

9:00 "EPCAMR - Getting Off the Ground"

Robert E. Hughes, Regional Director, EPCAMR

— EPCAMR was organized to promote and facilitate the reclamation and remediation of land and water adversely affected by past coal mining practices in Eastern Pennsylvania.

9:30 "Use of Tannery Biosolids in Surface Mine Reclamation"

Thomas E. Herlihy Assistant Project Engineer/ Soil Scientist, Pickered & Anderson,

Environmental Engineers

— Environmental impact and feasibility of using tannery wastewater Biosolids as a fertilizer/soil conditioner in mine land reclamation: bench scale simulations, and field trial results.

10:00 "Constructed Wetland Sizing and Performance"

William J. Tarutis, Jr., Assistant Professor of Ecology, Wilkes University

-Three measures of AMD treatment performance (efficiency, area-adjusted removal, first-order removal) for evaluating constructed wetland effectiveness are compared and applied to sizing issue. 10:30 to 11:00 Break: Display Area Open and finger sandwiches available

11:30 "Possible Recovery of a Marketable Iron Product from Coal Mine Drainage" Robert S. Hedin, president, Hedin Environmental, Inc.

— Research shows possibility that recovery from alkaline mine drainage might offset the costs of treatment. The status of the project and opportunities in the Anthracite fields will be presented.

12:15 "Babb Creek Watershed Restoration"

Michael R. Silsbee, Penn State Research Lab — Overview of activities on the Babb Creek Watershed along with a more detailed view of certain aspects such as the SAPS-ALD and fly-ash grout projects.

1:00 "AMD Abatement in an Anaerobic Vertical Flow Wetland Treatment System" Jonathan M. Dietz, Gannett Fleming Inc.

— A relatively new AMD remediation technology used to remove acidity and generate alkalinity. Presents results of a field study and provides design criteria for future AMD remediation projects.

1:30 Box Lunches will be available

2:00 - 5:00 PM Field Trip B:

B: Tour sites along Catawissa Creek: West Branch of Little Schuylkill, Duncott School-Oakhill Discharge, St. Nick's Breaker, Mill Creek, Dark water- Repplier Discharge, Gilberton Power Company, Old St. Nick's Breaker- Co-Gen Project, and Schuylkill Energy Company- Fly Ash Project.

Speaker Profiles

Jim LaRegina, Consulting Geologist

Jim is a native of the "coal region" and for the past 19 years has worked in the environmental field both in government and private consulting. His interest in geology, mining, and industrial archaeology has lead him to apply his experience in the environmental field to solving the problems associated with the legacy of anthracite mining.

Thomas Chesnick, Earth Conservancy

Thomas Chesnick brings both engineering and legal expertise to his position as Engineering Projects Manager at Earth Conservancy, He joined the organization in 1995, having spent several years practicing law in Scranton. His experience as a civil engineer enables him to manage EC's many reclamation projects, as well as other construction and environmental projects.

Ed Wytovich, EPCAMR

Teacher of Environmental Science at Williams Valley High School, President of EPCAMR, Founder or Co-founder of the following Watershed Groups: Northern Swatara Watershed Association, Anthracite Region Schuylkill River Watershed Association, Catawissa Creek Restoration Association, Wiconisco Creek Restoration Association.

Dennis Dusza, Pa Game Commission

Dennis Dusza grew up in a small coal town on the Cambria-Indiana County line in Western Pennsylvania. While growing up in this area, the Dennis was able to experience most of the aftermath of pre-regulated mining activities such as rock dumps, orange water, and striped mined side hills. After earning degrees in both Forestry and Park Administration, Dennis accepted a job with the Cambria Conservation District. While working for the District, Dennis was accepted to attend the Ross Leffler School of Conservation for the purpose of becoming a Wildlife Conservation Officer. In 1978, Dennis graduated from the school and was assigned the middle district of Lycoming County. After serving as a Conservation Officer for fifteen years, Dennis took the job of Land Manager for Lycoming and Union Counties. Lycoming County has a active surface mine on State Game Lands 75 near English Center which is the focus of today's presentation.

Eric Jesperson, Rettew Associates

Mr. Jesperson has a BA in Natural Resource Management from SUNY-ESF, MS in Science Education from Syracuse University, 10 years experience in mapping systems, is a cofounder of PA Mapping and Geographic Information Consortium, and a small bio-intensive farm in Luzerne County.

Charles Cravotta III, US Geological Survey

Charles Cravotta III of the USGS-Water Resources Division received his BA in Environmental Science with Distinction from University of Virginia; MS, Ph.D. Geochemistry and Mineralogy from Penn State University. As a hydrogeologist/geochemist, current responsibilities include fields and laboratory studies on geochemical controls and treatments of drainage from coal mines in Pennsylvania. Hydrology, chemistry, mineralogy, and microbiology of subsurface and surface water environments are emphasized in studies of acid-forming/neutralizing and transport processes. During the past 10 years, studies have evaluated effects on

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limestone dissolution from metal hydrolysis and biofilms; on microbial pyrite oxidation from nutrients in sewage sludge and fertilizer used for reclamation; reduction of pyrite oxidation by alkaline addition and selective handling of pyritic materials at surface mines; and on water chemistry considering water-rock interactions along flow paths.

André L. de Vegt, Paques, Inc.

Since 1986 working for Paques, a Netherlands head quartered bioprocess technology company. In the period 1986-1990 in the function as a process engineer for BIOPAQ industrial anaerobic wastewater treatment in Canada and Europe. Joined Paques, Inc. in 1990 as manager of technology responsible for the implementation of Paques' anaerobic treatment plants in North America. Since 1995 responsible for business development of Paques' Bio Systems in the mining and refining & petro-chemical industry.

Robert E. Hughes, EPCAMR

Robert Hughes, former Assistant Director of PEC, NE Office and new Regional Coordinator of the EPCAMR as of May 1997 would like to re-introduce to you the EPCAMR. Robert will be the catalyst for accomplishing the many goals of the Coalition. Robert will be overseeing the 319 PG, providing technical and administrative support to the Conservation District, coordinating watershed association activities, establishing a public outreach program on AMD, and exploring other sources of funding to be used for the work of the Coalition.

Thomas E. Herlihy, Pickard & Anderson

Thomas E. Herlihy is an Assistant Project Engineer/Soil Scientist with Pickard & Anderson. He has a BA degree in Physics from Wittenberg University, and a MS in Agricultural and Biological Engineering from the Pennsylvania State University. He has served as an International Cooperative Extension Agent with the Peace Corps in Niger, West Africa. He has served as a Research Assistant at Penn State where he used soil erosion and non-point source pollution hydrological computer models. Since 1993 he has been the Primary Investigator of a @235,000, four year research grant to determine the environmental impact to plants, soil, surface water, and groundwater from the land application of wastewater sludge from vegetable leather tanneries. This project won the 1995 Pennsylvania Governor's waste Minimization Award, and in 1996 won a National Honor Award for Excellence in Environmental Engineering from the American Academy of Environmental Engineering. He is an Associate Director with the Lycoming County Conservation District and a member of the American Academy of Environmental Engineering. Be is an Academy of Environmental Engineering. Academy of Environmental Engineering. Be is an Academy of Environmental Engineering.

William J. Taurtis, Jr., Wilkes University

William Taurtis joined Wilkes University in 1993 as an Assistant Professor of Ecology. He received his Ph.D. in Ecology from Penn State University and is a Certified Ecologist and Professional Wetland Specialist. He has 12 years experience with mine drainage and wetland treatment.

Robert S. Hedin, Hedin Environmental, Inc.

Robert Hedin has received his Ph.D. in Ecology from Rutgers University. From 1988 to 1994 Robert has worked as a research scientist with the US Bureau of Mines Environmental Technology Group, studying passive treatment of mine water. 1994 to present president of Hedin Environmental, where he consults with mining companies about water treatment, constructs passive treatment systems for private and public groups, and conducts research.

Michael R. Silsbee, Penn State Materials Research Lab

Michael Silsbee is Senior Research Associate and Associate Professor of Materials at the Intercollege Materials Research Laboratory of the Pennsylvania State University. My area of interest is cement chemistry. Current research areas include alkali activated cements, wood fiber reinforced cements, applications of sodium silicates for cement and concrete and cementitious grouts for AMD remediation.

Jonathan M. Dietz, Gannett Fleming Inc.

Jon Dietz is an Environmental Scientist with Gannett Fleming. He has a BA in Biology and Earth Science from Clarion University and a MS in Environmental pollution Control from Penn State University. He has over 8 years experience in AMD remediation, has conducted AMD research since the late 1980's, and has presented and published a number of papers at conferences and in journals.

1997 Eastern PA Abandoned Mine Land and Acid Mine Drainage Conference Evaluation Form

- A. Where did you hear about the 1997 Eastern PA Abandoned Mine Land and Acid Mine Drainage Conference?
- B. What did you particularly like/dislike about the Conference? (too many topics, too few, more sessions, less, etc.)
- C. When is the best time to hold an event such as this one? (time of year, month, etc.)
- D. What is your overall impression of this Conference?
- E. Are there others that you would like to see at this Conference in the future?
- F. Should this Conference be an annual event?
- G If you are willing to serve on the steering committee for next year's Conference, please leave your name and number in the space provided below.
- H. If you or your organization would like to become a Co-sponsor, in the future, please indicate below.

Thank You for taking the time to fill out this evaluation form. Constructive criticism is very helpful!