

WORKSHOP ON ADA: AMERICANS WITH DISABILITIES ACT

Friday, April 30, 1993

1:30 P.M.

Wick-Pollock Inn Butler 2

Robert Deitchman, Presiding

ADA: THE AMERICANS WITH DISABILITIES ACT. A BRIEF OVERVIEW FOR EDUCATORS. Robert Deitchman, The School of Social Work, The University of Akron, Akron, OH 44325-8001.

This workshop will serve as a brief overview of the Americans With Disabilities Act. There will be an introduction to the scope of the act as well as a delineation of the covered entities. Participants will leave the workshop with an understanding of what constitutes necessary compliance standards. The intent of the workshop is to discuss the spirit and intent of ADA, review the concepts of reasonable accommodation, and the "undue burden" clause. The workshop will examine the Americans With Disabilities Act from the vantage point of educators.

WOMEN IN SCIENCE PROGRAMS IN OHIO: WHERE DO WE GO FROM HERE?

THE B-WISER INSTITUTE
AND OTHER INITIATIVES

Saturday, May 1, 1993

2:00 P.M.

Cushwa Hall B085

Lois A. Cook, Presiding

For more than a decade The Ohio Academy of Science, through WISEMCO (The Women in Science, Engineering, Mathematics Consortium of Ohio), has led an effort to increase awareness of opportunities for young women in Ohio to pursue careers in science, engineering and mathematics. In part this has been accomplished through regional career workshops at more than a dozen colleges and universities and through the *EXEMPLARS* publication. In recent years, with support from The Eisenhower Program of The Ohio Board of Regents and in cooperation with The College of Wooster, the Academy has conducted the B-WISER Institute (Buckeye Women in Science, Engineering & Engineering) summer camp and follow on program for 7th grade female students. This workshop, open to all, will (1) take stock of where we are, (2) consider the ways and means of further replication of activities, and (3) explore the creation of new opportunities to meet our broad goal of discovering and fostering interest in science and math among students in grades 5-12.

SYMPOSIA

SYMPOSIUM ON STATE SPONSORED OUTREACH PROGRAMS SUPPORTING TECHNOLOGY DEVELOPMENT

Friday, April 30, 1993

1:30 P.M.

Wick-Pollock Inn Schaaf Room

W.C. Dyer, Presiding

THE COMMONWEALTH OF PENNSYLVANIA'S BEN FRANKLIN PARTNERSHIP EARLY STAGE CAPITAL AND TECHNICAL ASSISTANCE FOR TECHNOLOGY-BASED BUSINESSES. Lawrence T. McGeehan, President, The Ben Franklin Technology Center of W. PA. 4516 Henry St., Ste 103, Pittsburgh, PA 15213.

Since 1982, Pennsylvania has been in the forefront among state efforts to promote economic growth through the support of technological innovation. The Ben Franklin Partnership (BFP) Program is the cornerstone of the Commonwealth's efforts to promote the development of new technology-based manufacturing and the modernization of existing industry. These goals are pursued through a variety of programs included in the Ben Franklin Partnership. The BFP awards research & development grants through a competitive peer review process that emphasizes commercial potential; the creation of high-wage, high value-added jobs; and the amount of matching private investment. The BFP provides comprehensive commercialization services from the strategic development of the project, to follow-on services tailored to the specific needs associated with technology commercialization and business development. The BFP system encourages a personal interaction with client companies, which we consider imperative to successful business development. Commercializing advanced technology, whether for new products or improved processes, requires time, personal expertise, and financial resources. We have found that direct stewardship through peer reviews and mentoring relationships is an important factor in optimizing the state's investment. The BFP is successful because it recognizes and manages the complexities of moving technology to the marketplace.

THE EDISON TECHNOLOGY CENTERS PROGRAM

In recent years, there has been a proliferation of initiatives by states to enhance their economies by linking their academic and industrial communities. Their objectives are to provide assistance for the health and growth of existing local businesses of all sizes; help create new companies based on technologies being developed in indigenous research institutions, state and private universities, and technical and community colleges; and attract national and international companies to the state. One such initiative is Ohio's Thomas Edison Program. The Thomas Edison Program was proposed by Governor Richard F. Celeste in 1983, when Ohio had high unemployment and concerns about the long-term viability of the manufacturing sector. It has three elements; nine Edison Technology Centers, a seed development fund, and technology incubators. The program has broad-based support from Ohio's state and national elected officials of both political parties, from owners and employees of large and small companies, and from academic faculty and administrators.

Ohio's Edison Technology Centers receive 80 to 85 percent of the Thomas Edison Program's budget. Each center is a three-way partnership among industry, academe, and government. The state allows a great deal of latitude in how the centers are organized to meet the broad state goals of linking the academic and industrial communities to provide economic benefit to the state. Three center directors will discuss how their particular organization functions to meet the needs of their community.

CLEVELAND ADVANCED MANUFACTURING PROGRAM (CAMP). Stephen J. Gage, President, Prospect Park Bldg., 4600 Prospect Ave., Cleveland, OH 44103.

A not-for-profit organization, sponsored by Cleveland Tomorrow and founded by Ohio's Thomas Edison Program, CAMP promotes regional economic development by helping member companies improve profitability and companies improve profitability and competitiveness through the better use of available technologies. CAMP combines the experience and expertise of three major academic institutions to develop the advanced systems and skilled work force required for competing in the manufacturing markets. Core Research Areas: CAMP consists of four distinct resource centers: The Center for Automation and Intelligent Systems Research (CAISR), The Edison Sensor Technology Center (ESTC), The Advanced Manufacturing Center (AMC) and the Unified Technologies Center (UTC).

EDISON INDUSTRIAL SYSTEMS CENTER (EISC). Julian Gravino, President, 1700 N. Westwood Ave., Ste 2286, Toledo, OH 43607-1207.

EISC is a non-profit corporation conducting applied research and development in advanced manufacturing technologies and systems. The Center links private sector needs with the expertise and facilities available at area universities and its own development labs. The objective is to share resources and thereby enhance the competitiveness of area companies. Core Research Areas: Technical information systems, mathematical modeling, quality assessment methods, integrated information for engineering and design, flexible manufacturing systems, and integration of islands of automation.

EDISON POLYMER INNOVATION CORPORATION (EPIC). E. C. "Chuck" Galloway, President, 10235 Brecksville Rd., Brecksville, OH 44141.

EPIC is a consortium of industrial companies which sponsors and administers applied polymer research for the benefit of its members. It provides technical service and access to technical resources to processors, molders, and fabricators of polymeric products. Core Research Areas: Polymer synthesis, compounding, blends and alloys, computer modeling, processing, composites, characterization, the life cycle of polymers and their effects on our environment.

SYMPOSIUM ON WATER QUALITY IN THE UPPER OHIO RIVER DRAINAGE BASIN

Friday, April 30, 1993

1:30 P.M.

Wick-Pollock Inn Ballroom 1

Fred J. Brenner, Presiding

U.S. ARMY CORPS OF ENGINEERS WATER QUALITY MANAGEMENT ACTIVITIES IN THE UPPER OHIO RIVER DRAINAGE BASIN. Michael Koryak, U.S. Army Corps of Engineers, Pittsburgh District, William S. Moorhead Federal Building, 1000 Liberty Ave., Pittsburgh, PA 15222.

Water quality management activities of the U.S. Army Corps of Engineers in the 78,000 km² Pittsburgh Engineer District portion of the upper Ohio River drainage basin are principally related to the operation of 23 navigation dams and 16 reservoir projects. Ten of these reservoir projects are multi-purpose, and are operated individually or as systems to augment flows to control water quality along downstream target reaches. Reservoirs in the Mahoning and Shenango River portions of the Beaver River basin are operated to moderate waste heat degradation and domestic and industrial waste pollution. In the Allegheny and Monongahela River basins, reservoir operations are mainly directed toward neutralization and dilution of acid mine drainage pollution from bituminous coal mines. Outflow water temperature objectives and avoidance of outflow iron and manganese degradation problems are achieved at five of the reservoir projects by using selective elevation withdrawal outlets. Gated navigation structures are operated during low flow periods to achieve turbulent discharge reaeration. Water quality is also an important consideration in the construction and maintenance of local flood protection projects, and in the execution of the District's Section 10 and Section 404 permitting responsibilities.

WATER QUALITY IN THE UPPER OHIO RIVER BASIN - THE PENNSYLVANIA PERSPECTIVE. Richard H. Shertzer, PADER, Bureau of Water Quality Management, PO Box 8465, Harrisburg, PA 17105-8465.

Pennsylvania has had an active water pollution control program since the passage of its "Clean Streams Law" in 1937. This statute, written to abate pollution from domestic sewage and mining, has been amended over the years to address an expanded array of existing or potential sources of point and non-point pollution. Today, the Pennsylvania Department of Environmental Resources is responsible for implementing water quality management programs through five field offices within Pennsylvania's portion of the upper Ohio River Basin. Programs impacting water quality include water quality management (sewage, industrial wastes, storm water), waste management (municipal, residual and hazardous), oil and gas management, mining and erosion and sedimentation control (development, agriculture, silviculture). Routine water quality monitoring consists of a fixed station network to assess long-term trends. Aquatic surveys are also used to monitor discharger compliance. Special studies are conducted to assess toxic impacts, waste load allocation issues or antidegradation needs. Citizen monitoring is currently being employed to track the expanding range of the zebra mussel. To date, about 7,000 miles of streams have been assessed in Pennsylvania's portion of the Ohio River Basin. Mining activities are responsible for 68% of the documented problems. Other non-point sources (including agriculture) are the second ranked cause of water quality degradation.

NON-POINT SOURCE POLLUTION ABATEMENT PROGRAMS IN THE SHENANGO RIVER WATERSHED: A MULTI-COUNTY APPROACH. Fred J. Brenner, Biology Dept., Grove City College, Grove City, PA 16127.

The Shenango River Watershed comprises over 200,000 hectares in Western Pennsylvania and Eastern Ohio and is designated a high priority watershed because of its potential for non point source pollution. Approximately 32 percent of the 196,000 hectares within Pennsylvania are used for row crops or pasture with about five percent termed urban areas. The remainder of the watershed is evenly divided between woodlots, wetlands, or abandoned farm lands. For this study, the watershed was divided into 13 sub-areas with the 39 stream sampling stations distributed from urban to agricultural areas. All stations reported fecal coliform and nutrient contamination, while 32.1 percent of private water supplies showed fecal coliform and 8.1 percent nitrate contamination. This indicates that runoff from agricultural land and on-lot sewage systems are the major contributors to contamination of both surface and groundwater within the watershed. The establishment of riparian buffer zones and wetlands in conjunction with improved agricultural management practices are currently being evaluated as means of reducing non-point source pollution impacts within the watershed.

LONG-TERM TRENDS OF WATER QUALITY AND BIOLOGICAL MONITORING DATA NEAR TWO COAL-FIRED POWER PLANTS ON THE UPPER OHIO RIVER. Rob J. Reash, American Electric Power, 1 Riverside Plaza, Columbus, OH 43215 and Vince V. Conant, Ohio Edison Company, 76 S. Main St., Akron, OH 44308.

The Ohio River Ecological Research Program is a long-term study of aquatic life near coal-fired power plants, and is currently sponsored by American Electric Power, Ohio Edison Company, Ohio Valley Electric Corporation, Tennessee Valley Authority, and Buckeye Power, Inc. Trend analysis of intake water data at Cardinal Plant (RM 76) indicated significantly lowered concentrations of ammonia, nitrates, nickel, and phenolics from 1977-1991. Hester-Dendy results showed increasing total mean densities of macroinvertebrates from 1981-1989. Mean species diversity values steadily increased from 1978 (1.47) to 1989 (2.35). Larval fish studies showed significant temporal trends for various taxa. Long-term monitoring of adult/juvenile fishes indicated positive shifts in community composition between 1981-1991: At Cardinal and Sammis Plants the abundances of round-bodied suckers, smallmouth bass, and walleye/sauger increased significantly ($P < 0.05$), whereas the abundances of bullhead catfish and bluntnose minnow decreased significantly. At Cardinal Plant, species richness of adult/juvenile fishes increased significantly ($P < 0.05$) between 1981-1991. Biological communities in the upper river have clearly responded to improved water quality, due largely to regulatory control of point-source discharges.

THE OHIO RIVER VALLEY WATER SANITATION COMMISSION AND ITS ACTIVITIES. Alan H. Vicory, Jr., and Peter A. Tennant, Ohio River Valley Water Sanitation Commission (ORSANCO), 5735 Renstar Ave., Cincinnati, OH 45228.

The Ohio River Valley Water Sanitation Commission (ORSANCO) is a water pollution agency established in 1948 by execution of an interstate compact among eight states in the Ohio River Valley. The impetus for the interstate agreement was the recognized need to abate interstate water pollution in the Ohio Valley. The Compact provides ORSANCO with certain responsibilities, including evaluating pollution problems in the Valley and the setting of uniform discharge requirements for interstate streams. Enforcement powers are also provided. This presentation will serve to describe the water quality conditions and factors leading to the Compact, the makeup and operation of the Commission, and outline of the water quality achievements that have been recorded over its 45-year history.

OHIO RIVER WATER QUALITY CONDITIONS, 1990-91. Alan H. Vicory, Jr., and Peter A. Tennant, Ohio River Valley Water Sanitation Commission (ORSANCO), 5735 Renstar Ave., Cincinnati, OH 45228.

Every two years, the Ohio River Valley Water Sanitation Commission (ORSANCO) prepares a written assessment of water quality conditions in the Ohio River. The assessment is produced on behalf of the states which border the river—Illinois, Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia—who are each required to conduct similar assessments of all waters within their borders in fulfillment of Federal requirements. The 1990-91 Ohio River assessment was based on the results of monitoring programs operated by ORSANCO which include: - monthly sampling at 36 locations with analyses for 29 parameters, including conventional pollutants and metals. - daily sampling by 14 cooperating utilities who perform analyses for 22 purgeable organic compounds. - routine sampling and analysis for fecal coliform bacteria by seven cooperating water utilities; frequency varies from daily to weekly. From May 1 through October 31, ORSANCO personnel collect five samples per month at an additional seven locations. Those samples are analyzed for fecal coliform and *E. coli*. annual fish population studies are done at 15 locations, and samples of filets are analyzed for selected toxins. The assessment identified those portions of the Ohio River which fully support, partially support, or do not support the river's uses for water supply, contact recreation, aquatic habitat, and fish consumption.

DISCUSSION