

## 1st Annual Report 1997

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A Partnership Between the Michigan Pulp & Paper Environmental Council and the Michigan Department of Environmental Quality.

Pollution prevention makes sense environmentally and economically," DEQ Director Russell Harding said. "There are no losers when the quality of our resources is protected and job providers maintain their competitive edge." - DEQ Press Release, May 21, 1996.

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### INTRODUCTION

Announced during Michigan Week on May 21, 1996, the Michigan Pulp and Paper Environmental Council (MPPEC) and the [Michigan Department of Environmental Quality](#) (MDEQ) formally embarked on a new voluntary pollution prevention partnership called the Pulp and Paper Pollution Prevention Program (P5). P5 is designed to encourage the incorporation of pollution prevention activities at pulp and paper mills in Michigan. Management of P5 is a cooperative effort between the MDEQ Environmental Assistance Division and MPPEC. MPPEC is an association that represents Michigan member mills on environmental issues affecting the industry. This Partnership is charged with publication of the Annual Report.

**This cooperative effort recognizes that the pulp and paper industry has made great strides in reducing the environmental impact of its operations and in many cases has gone beyond federal and state requirements.** By participating in P5, the mills have made a voluntary commitment to further enhance the environment and their respective communities through increased pollution prevention efforts.

The P5 Partnership is multimedia in scope, encompassing the management of air emissions, wastewater discharges, solid and hazardous waste generation, and other areas of potential environmental impact. The Partnership recognizes that pollution prevention is an economical and technically practical method for enhancing environmental quality and business sustainability.

This Annual Report highlights the key elements of the P5 Partnership, reviews the development of P5, documents the historical pollution prevention trends of the pulp and paper industry participants, and most importantly, presents the consolidated short and long term pollution prevention goals and areas of focus for the participating mills in Michigan. The appendix of this report includes the individual mill commitments and policy statements developed for this partnership. A compendium of individual mill P2 information is also provided.

### P5 PARTICIPATING MILLS

Fifteen mills in Michigan announced their commitment to the P5 Partnership during the initial year of the program. The P5 mills represent almost 75 percent of the total pulp and paper production in the state. The following mills are P5 participants:

- ABT Co., Inc., Alpena
- Champion International corporation, quinnesecc
- Consolidated Papers, Inc., Niagara Division (Dickinson County, MI)
- EB Eddy Paper, Port Huron
- Fletcher Paper, Alpena
- Georgia-Pacific Corporation, Kalamazoo
- James River Corporation, Kalamazoo
- Manistique Papers, Inc., Manistique

- Mead Corporation, Escanaba
- Menasha Corporation, Otsego
- Menominee Paper Company, a Division of Bell Packaging Corporation, Menominee
- Rock-Tenn Company, Battle Creek
- S.D. Warren Company, Muskegon
- Stone Container Corporation, Ontonagon
- Tenneco Packaging, Filer City

### **MICHIGAN PULP AND PAPER POLLUTION PREVENTION PROGRAM –P5**

P5 is a voluntary program that identifies environmental substances of concern and establishes priorities and goals for the reduction of their use, generation, discharge, or emission. P5 utilizes the waste minimization hierarchy of source reduction, recycling, reuse, treatment/control, and disposal, including actions implemented in response to regulations. Environmental impact, and economic and technical practicality are central to the determination of pollution prevention activities selected for this program. Technology transfer and identifying and addressing regulatory impediments to pollution prevention are also integral parts of P5. The overall goal of this initiative is environmental improvement in concert with sustainable economic growth.

#### **Waste Reduction Pyramid**

Source Reduction  
Reuse  
Recycling  
Treatment  
Disposal

### **P5 SPECIFIES THE FOLLOWING KEY ELEMENTS FOR PARTICIPATION:**

- **Commitment to P5 by a responsible company official.** This written commitment is reviewed and renewed on an annual basis by each participating mill.
- **Development of a written pollution prevention policy.** The Partnership has developed the following recommendations for implementing the pollution prevention policy:
  - Adoption of the P5 definition of pollution prevention;
  - Active mill management support for pollution prevention activities;
  - Integration of pollution prevention into the mill's routine activities;
  - Communication of the pollution prevention policy to employees;
  - Incorporation of the pollution prevention policy into the mill's environmental management system;
- **Establishment of mill specific pollution prevention goals.** The Partnership has adopted the following criteria as guidance for selection of P5 goals:
  - Potential environmental impacts;
  - Future regulated substances;
  - Aesthetic considerations;
  - Volume or quantity of release;
  - Amenable to pollution prevention techniques
- **Record keeping on pollution prevention activities.** Records are maintained by the participants to track progress related to mill-specific and industry-wide P5 goals.
- **Development of annual reports.** Each participant prepares an annual report that includes the following:
  - Recommitment to P5;
  - Progress towards meeting established pollution prevention goals;
  - Update of existing and/or establishment of new mill-specific goals;
  - Identification of technology transfer opportunities and barriers to pollution prevention.
- **Promotion of non-proprietary technology transfer.** The Partners recognize there is great benefit in sharing learning experiences related to pollution prevention activities. This non-proprietary technology transfer is promoted through the development of case

studies, and through education and outreach activities. During 1997, five mills are participating in a pollution prevention internship program sponsored by the Partnership. Case studies of the interns' projects will be shared as part of the P5 commitment to technology transfer.

**HISTORICAL PERSPECTIVE (TRENDS)**

Participating mills have submitted historical data to establish the baseline for assessing cumulative environmental trends for the industry. The data covers the years 1987, the first year of required Toxic Release Inventory (TRI) reports, through 1995. This historical data was compared, supplemented, and confirmed using existing DEQ data bases (AQD Emissions Inventory, Toxic Release Inventory, and Hazardous Waste Inventory). A compilation of the mill data is provided on the Table attached to this report.

Data collected for P5 shows continuous improvement in environmental performance. In the period from 1987-1995, production increased by 33 percent. During this same time frame combined air and water discharges stayed essentially the same. Hazardous waste generation decreased by 54%. Expressed on a production basis (per ton of production), total air emissions have declined by 21% and total water discharges have declined by 38%. The Figures attached to this report provide historical emission and release trends.

The amount of solid waste landfilled, expressed on a production basis, remained essentially the same. The actual tonnage of solid waste generated during the period increased due in part to the increased production of recycled paper. Many of the P5 participants are actively pursuing beneficial reuse of landfilled materials including sludge, ash and wood waste.

**GOALS**

For this first year, participating mills committed to short and long term goals that are both quantitative and qualitative in nature. The mill-specific quantitative goals are consolidated into overall P5 goals for this report. These short and long term goals, established for the 1997 program, are expected to achieve quantitative reductions and will be updated annually (see tables below).

Qualitative goals from some participants include efforts such as enhanced environmental training, outreach activities, and commitments for further P2 projects and programs. Some participating mills have provided reports on their P2 efforts, which are included in the Appendix.

**Some of the mill-specific short term goals include:**

- implementation of recycling programs for batteries
- fluorescent bulb recycling programs
- raw material substitutions specific
- environmental awareness training programs

**Examples of mill-specific long term goals include:**

- evaluations of water usage
- further wastewater load reductions
- beneficial reuse efforts to avoid the landfilling of solid waste
- develop an energy minimization plan

**Short Term Goals (1 year)**

The following P5 goals represent the reduction commitment for 1997.

TARGET AREAS	PROJECTED REDUCTIONS
AIR EMISSIONS:	
WASTEWATER DISCHARGES:	

Solids Discharged in Effluent	12 tons/year
<b>HAZARDOUS MATERIALS:</b> Hazardous Waste Generation PCB Transformer Removal	5,800 tons/year 12 transformers
<b>SOLID WASTE LANDFILLED:</b> Boiler Ash Generation Beneficial Use of Sludge Utilization/Recycling of Mill Refuse	5,800 tons/year 20,000 tons/year 300 tons/year

### Long Term Goals (2 - 5 years)

The following P5 goals represent the 1997 reduction commitment for the years 1998 through 2001

TARGET AREAS	PROJECTED REDUCTIONS
<b>AIR EMISSIONS:</b> Sulfur Dioxide (SO <sub>2</sub> ) Nitrogen Oxides (NO <sub>x</sub> ) Carbon Monoxide (CO) Particulate (TSP and PM <sub>10</sub> ) Hydrochloric Acid (HCl) Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> ) Chloroform Ammonia	800 tons/year 350 tons/year 125 tons/year 120 tons/year 90 tons/year 10 tons/year 9 tons/year 5 tons/year
<b>WASTEWATER DISCHARGES:</b> BOD and Solids* AOX in Effluent	see note 20 tons/year
<b>HAZARDOUS MATERIALS:</b> Hazardous Waste Generation Chlorine Usage PCB Transformer Removal	5 tons/year 8,100 tons/year 2 transformers
<b>SOLID WASTE LANDFILLED:</b> Beneficial Use of Boiler Ash Beneficial Use of Sludge Beneficial Use/Recycling of Pulp Rejects	3,900 tons/year 26,900 tons/year 15,300 tons/year

\*Note: Long term wastewater discharge goals reflect reductions in loading to and discharge from the treatment plant. These goals are not readily quantifiable for this report.

### Areas of Focus for Future Goal Setting

Based on the goal setting criteria established for P5, the Partnership has defined Areas of Focus for future goal setting.

- Nonylphenol Ethoxylate
- Recycling
- Mercury
- PCB's
- Chlorine
- Environmental Management Systems
- Water Usage
- Solid Waste Reduction to Landfill
- Hazardous Waste Generation
- Air Emission Reductions
- Expand P5 Participation

It is the consensus of the Partnership that these areas reflect opportunities for pollution prevention. Participants will be using these Areas of Focus as guidance in developing future mill-specific pollution prevention goals.

#### **ACKNOWLEDGMENTS**

**NCASI:** Individual facility specific data and goals were submitted to the National Council for Air and Stream Improvement (NCASI). NCASI is an environmental technical organization that has been associated with the pulp, paper and wood products industry for over 50 years. NCASI's role in P5 is to consolidate the individual facility goals into industry wide goals for this report as well as maintain the historical environmental database on the participating facilities.

**U.S. Environmental Protection Agency and the Department of Environmental Quality.** Department of Environmental Quality staff and resources have been provided for development and implementation of P5 through a two year Pollution Prevention Incentives for States (PPIS) U.S. EPA grant. The grant funds are matched in kind by state contributions.

The Partnership would also like to acknowledge the assistance of the **Wisconsin Paper Council**, **the Michigan Manufacturers Association**, and the **American Automobile Manufacturers Association** in the development of P5.

For more information about the partnership, contact [Wendy Fitzner](#), Michigan Department of Environmental Quality, Environmental Assistance Division, P.O. Box 48909-7957, 517-373-8798 or 1-800-662-9278 or contact the Michigan Pulp and Paper Environmental Council, Suite 187, 2843 East Grand River, East Lansing, MI 48823.