

Environmental Cooperation Pilot Program

2005 PROGRESS REPORT



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The Environmental Cooperation Pilot Program: 2005 Progress Report

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More Information Available

This Progress Report and other information on the Environmental Cooperation Pilot Program are available on the Wisconsin Department of Natural Resource's website at:

<http://www.dnr.state.wi.us/org/caer/cea/ecpp/>



Environmental Cooperation Pilot Program: 2005 Progress Report

I. Executive Summary:

The Environmental Cooperation Pilot Program (ECPP) has continued to inform the development of Green Tier and continued to produce environmental results. The examples provided by the Pilot program have informed the development of both Green Tier charters and contracts while at the same time setting the bar for Tier 1 companies aspiring to the development of Tier 2 contracts. This year the program produced direct economic benefit as accelerated implementation of the 3M amendments resulted in new product lines and more rapid implementation of those product lines at the 3M facility in Menomonie. Developments in 2005 continued to affirm the dynamic nature of the Cooperative Agreements that we saw in 2004 as the companies have sought new and better ways to achieve superior environmental performance and meet ever increasing competitive pressures.

ECPP companies continue to have the excellence of their performance formally recognized. Madison Gas and Electric was recognized by the Federation of Environmental Technologists. We Energies won the award for Overall Achievement from the Coal Combustion Products Partnership in April. Packaging Corporation of America was recognized as the Brogan Award winner affording the highest honor given by DNR. They were recognized for performance that was in part enabled by their Environmental Cooperative Agreements. TOTAL, parent company to Cook Composites and Polymers (CCP), has drawn from the Saukville experience for their international sustainability initiative and the CCP model is driving new stakeholder participation in a sister facility in Virginia. One of the most gratifying forms of recognition that we are starting to hear, although only informally, is that the corporate officials outside Wisconsin are starting to take notice of the improvements that are occurring through the program.

Over the course of the past year, ECPP companies accelerated their participation as environmental leaders. The companies have been instrumental in Green Tier's implementation. The companies have been presenters and sponsors for organized events including the Wisconsin Manufacturers and Commerce forum in December 2004, the Baldwin Event in January 2005 and the Green and Growing events in October 2005. The companies have served as mentors to individual companies interested in environmental management systems, incentives and generally in program participation. The companies have served as environmental performance advocates with their trade associations, regions and supply chains. The companies have fulfilled both resource and advocacy roles for national and regional initiatives to improve performance based programming. This has all been in the context of trying new ideas, continuing to improve their performance and increasing overall value of the cooperative agreements.



II. Program Accomplishments

Now in its ninth year, the Program continues to yield environmental results. The following is a summary of the accomplishments.

Cook Composites and Polymers Co. (CCP) – Saukville

CCP requested a change in the reporting time period to accommodate changes in the company's management systems. This request was granted and, as a result, some of the metrics below will be updated in the next annual report. CCP is also in the process of considering the renewal options.

- In September 2005, CCP's Saukville facility's combined Environmental Management System, Quality and Health and Safety Systems were audited by Det Norske Veritas (DNV), an internationally recognized registrar for ISO 9001 and ISO 14001. They used an auditing protocol, AIMS, that integrates Quality, Safety and Environmental (QSE) management systems, as well as Responsible Care™ Codes and OSHA Process Safety Management requirements into a comprehensive management system and auditing framework. CCP's EMS includes substantial management commitment, an innovative approach from their environmental consultants and unprecedented community engagement. Their innovative "lesson plan approach" has brought environmental performance to all levels of the facility and engaged the community. DNV is recommending CCP Saukville for ISO 14001 certification and the facility also achieved its safety target of a LEVEL 8 according to the DNV International Safety Rating System™ (ISRS).
- CCP Saukville's model of Stakeholder involvement is being used in other CCP Facilities and is being looked at as an international model by TOTAL. CCP's French parent company is the one of the largest petrochemical companies in the world. CCP will initiate similar efforts in other plants, starting with Virginia where its plant is located near a residential community area. All CCP plant managers will receive effective community involvement training based on experiences from Saukville. Representatives from CCP's French parent company visited CCP Saukville in August, meeting with stakeholders, government officials and plant staff.
- CCP continues to take leadership in product stewardship by integrating environmental considerations into the design and development of products including commercial development of low-styrene (low hazardous air pollutant -- HAP) composite resins and gel coats as well as water-based alkyd/acrylic dispersions used in water-based coatings and stains. The development of products using the water-based dispersion technology has contributed to a substantial reduction in xylene use. CCP's low-VOC resins and low-HAP and MACT-compliant resins and gel coats are technology leaders. CCP is helping their customers meet MACT requirements using pollution prevention, rather than air pollution control. CCP continues growth and development of a profitable product line of aqueous cleaners and no-HAP and low VOC emission solvent cleaners for use in the composites fabrication industry.
- Between 2000 and 2004, CCP reduced its xylene purchased from 4,080,000 to 2,400,000 pounds per year through a combination of product changes, source reduction and solvent recycling. CCP estimated that they saved approximately \$175,000 by recycling solvents in 2004.

- CCP's Community Advisory Committee continues to meet twice a year. CCP made significant progress in addressing one of the Committee's concerns – minimizing noise from sensitive alarms that are part of the plant's safety and environmental protection systems. The company recently spent \$14,000 to relocate alarms inside all production buildings instead of outside. These were installed in February, 2005 and greatly reduced noise complaints in 2005.
- CCP recycled for reuse approximately 600,000 pounds of spent glycol generated from its scrubber system and reactor cleaning in 2004. CCP used off-site vendors for this recycling.



At the October 2005 CCP Community Advisory Committee Meeting Plant Manager Glenn Preisler presented a \$5,000 check to the Fire Department Chief.

Madison Gas and Electric -- MGE - Madison:



Through the end of 2004 (i.e., the first half of their 5-year agreement), MGE had accomplished all of the following:

- Purchased 31,805 gallons of biodiesel fuel to reduce vehicle emissions of CO, PM, SO_x, & VOC.
- Burned 31,134 tons of paper-derived fuel, displacing the use of more than 30,000 tons of coal and reducing SO₂ emissions by more than 900 tons.
- Diverted nearly 15,000 tons of fly ash away from landfill and instead to beneficial reuse.
- Achieved certification of their environmental management system to the ISO 14001 standard.
- Replaced numerous mercury-containing devices at the power plant with mercury-free alternatives, and recycled several pounds of mercury.
- Installed state-of-the-art stormwater filters to prevent lake pollution.

We Energies:



Progress continues on both the 2001 Pleasant Prairie Power Plant agreement and the 2002 Multi-Emission Cooperative Agreement. Over the course of these two agreements, We Energies has achieved all of the following:

- Virtually eliminated landfilling at Pleasant Prairie site thanks to approximately 100% beneficial reuse of ash.
- Avoided use of more than more than 1600 railroad cars of coal by recovering ash from multiple locations and reburning it at Pleasant Prairie Power Plant as a supplementary fuel.
- Won the award for Overall Achievement from the Coal Combustion Products Partnership in April 2005. This, combined with winning the *Edison Award* (the electric power industry's highest honor) last year, establishes We Energies as the top U.S. Company in this area of environmental management.

- Virtually eliminated sulfur dioxide and mercury emissions at Port Washington Power Plant by repowering from coal to natural gas.
- Reduced nitrogen oxide emissions by more than 90% from Pleasant Prairie Power Plant Unit 1 after installing 1st Selective Catalytic Reduction (SCR) Unit ever built in Wisconsin.
- Continued construction of a 2nd SCR unit at Pleasant Prairie, as well as the first flue gas desulfurization units ever to be built in Wisconsin.



The scaffolding in this picture is part of ongoing work to install new pollution controls at Pleasant Prairie.

Northern Engraving – NEC - Sparta, Holmen, West Salem and Galesville Facilities



Since the original signing of an agreement with the Department of Natural Resources on June 10, 2002, NEC has reported annually on environmental improvements and benefits as a participant in the Environmental Cooperation Pilot Program. This report reflects the environmental progress, improvements, benefits and influences, both positive and negative, at their four facilities. At the end of 2004, a DNR team visited the Sparta facility to review the results of the Agreement and toured the Sparta facility to review the improvements to date and to meet the new executive for NEC.

- Permit flexibility, reformulation, substitution, consolidation, distillation, centrifuging, recycling and reuse were incorporated by NEC.
- Incinerator shutdown resulted in a combined reduction of over 9500 MCF of natural gas at Sparta and West Salem in 2004.
- NEC continues their combined savings of over 3000 hours (approximately 2500 pages) on reporting requirements in the reporting year 2004.
- NEC has set new objectives for 2005 that include reductions in water usage, electricity, VOC reductions and Hazardous waste generation.

Sparta

- Reformulation, centrifuging, and distillation for reuse continue to help minimize HAP emissions at the Sparta Facility. The ratio of sales to hazardous air pollutant emissions improved 15% in 2004 over 2003.
- Although emissions have increased for three years, the ratio of sales to VOC emissions improved by 5% in 2004 over 2003, indicating a small increase in efficiency of use.
- An increase of 2,277 gallons of Non-hazardous waste occurred in 2004. The initial start-up of a new transfer line was the principal cause. 1,837 gallons are from oil absorbents and were recycled for reuse.
- Implemented 3 energy saving projects which included, replacing three 75 horse power air compressors, with one 100hp air compressor, completed seven projects to improve the weatherization of buildings and conversion of 50 lighting fixtures to T8 bulbs.
- Though total hazardous waste increased by 1,980 gallons due to increased sales, 1,100 of those gallons were recycled for reuse.



Holmen

- Improved sales to VOC ton ratio by 27% from 2003.
- Reduced Hazardous Waste Generation by 9%.
- Reduced Solid Waste Generation by 14%.
- Recycled 14.8 tons of wood waste.
- Reduced water use by 12%.

West Salem

- Using the performance indicator of Sales/Tons of VOC Emitted, the facilities efficiency improved more than 41% in 2004 over 2003.
- New technologies and job specifications, initially thought to reduce waste were found to be less efficient and caused an increase in solid waste generated. Objectives are set to address this in 2005.
- Implemented three significant energy saving projects.
 - Investigate the cost of blankets to insulate the barrels of molding machines. This proved infeasible since retained heat damaged barrels and burned out heaters.
 - Installed thermostats on electronic cabinet coolers.
 - Investigate the feasibility of insulating the stainless steel water tanks on washer. This study proved it to be feasible, and the tanks were insulated.

Galesville

- Respective Sales/VOC and Sales/HAP ratios improved 35% and 25%, respectively, in 2004.
- Reduced water use by 21% in 2004.

* 1996 is the baseline for the Environmental Cooperative Agreement

Packaging Corporation of America (PCA) - Tomahawk:



Since last year's report, PCA has identified by means of their Environmental Management System, seven key objectives. They include: reducing process water, optimizing recycling of secondary fiber rejects, compliance efforts associated with certain air regulations, implementing a hydroelectric project environmental management plan, executing landfill closure and expansion plans, composting residuals and implementing monitoring and management objectives for the onsite wastewater treatment plant.

- Process water reduction will have a dual effect of improving wastewater treatment efficiency and reducing biosolids carryover. PCA has implemented a number of process improvements that, through June, have reduced the average daily water use from 5.6 million gallons/day to 5.2 million gallons/day. Additional projects which will make further gains are slated for the end of 2005.
- PCA installed dewatering equipment that recycles rejected material derived from the process of post-consumer waste paper as a fuel source.
- The mill worked with the DNR on pending air rule modifications. The exercises will accommodate future paper machine modifications, enhance compliance with recent changes due to recordkeeping requirements and proactively address upcoming air regulations.



- PCA is in the process of developing a number of environmental management plans, as required by the license that they hold, that address the impacts caused by Grandmother Falls Dam. This work is a result of the reissuance of the operating license for the Dam.
- The closure of the northernmost portion of the onsite landfill is underway and will be completed during the 4th quarter of 2005. Clay has been obtained for the liner of the new landfill cell.
- PCA is working with a local business to compost wastewater plant residuals into a value-added product for the regional landscaping market.
- PCA has obtained permission from EPA for a reduction in the frequency of diagnostic tests at the onsite wastewater plant.
- Accelerated removal of biosolids from the wastewater plant has proven successful based on a June 2005 inventory at the anaerobic basins.
- PCA continues to pursue other activities that enhance their environmental performance by working with the UW-Madison and Wisconsin Paper Council to explore beneficial reuse alternatives for generated boiler ash.

3M Corporation -- Menomonie



On December 22, 2004, an amended Cooperative Agreement was signed, making changes to the original Agreement signed on October 1, 2002. The changes made to the original Agreement include operational flexibility of new and existing processes requiring air construction permits and a facility wide cap on volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). The amended Agreement includes a new facility-wide Title V air permit that replaces prior air permits. A safeguard requires 3M and DNR to meet anytime the VOCs approach 85% of the established baseline from 2000. Though emissions and waste increased overall with increased production, amount of waste generated per 1000 pounds of good output decreased.

2004 Pollution Prevention Pays (3P) Program Results

- Reduced operating hours in SF&C reduced green house gas emissions by 38 metric tons, reduced energy use by 276,000 MMBTU and saved \$2,300.
- Recycled 80 tons of coated vinyl material and saved \$12,800.
- Improving yield in raw material usage resulted in 42 tons of reduced waste and saved \$148,200
- Recycling of foam liner material reduced 93 tons from landfill and saved \$27,000.
- Extended use of plastic roll cores and eventual recycling diverted 1.7 tons of waste and saved \$5,000.
- Recycled elastics materials resulted in reduced landfilling of 1,053 tons and saved \$164,000.
- Hot melt adhesive is sold to recycler and diverts 90 tons of waste from landfill and saved \$8,000.

VOC Emissions

- 8 % reduction of VOC emissions over 2003 (measured in pounds VOC / 1000 pounds of Good Output)

TRI

- There was a 29% decrease in the ratio of reportable TRI air emissions released per pound of good output in RY 2003 as compared to RY 2002. (2004 information not available at time of 3M DNR report.)

Additional Recycling Efforts:

- Aluminum Cans = 2,515 pounds
- Office paper = 19,303 pounds
- Security Waste Paper = 3,889 pounds
- Cardboard = 230,758 pounds
- Pallets = 1,616,226 pounds
- Recycled Drums = 2,300 drums

III. USEPA Collaboration

In 2005, the US Environmental Protection Agency (USEPA) and the Department of Natural Resources successfully amended the 3M Cooperative Agreement. This work was accomplished in a way that did not require the amendment of the state implementation plan (SIP) and successfully met accelerated time frames for implementation of new process lines. This work was key to meeting the research and development efforts at the 3M facility in Menomonie.

Throughout the year senior executives at both EPA and DNR continued to strengthen the working relationship on Green Tier, informed by the pilot program and driven by a desire to establish a mutually supportive working relationship. That work has resulted in two significant actions. First, a formal memorandum of agreement (MOA) was signed on October 3, 2005. Second, both EPA and DNR have included performance based programs as a joint area of emphasis in the Environmental Performance Partnership Agreement (EnPPA) between USEPA and DNR. The combined effect is a joint effort to identify leadership companies, pursue better incentives, develop incentives faster and establish joint marketing of DNR and EPA programs.

Last year's report described work that was underway to develop a process with USEPA to "unstick" issues that would allow implementation of innovations and assure that decisions are made. The process was finalized this year and Wisconsin was one of the first two states to use the process. As a result, a Technical Advisory Document allowing flexibility for the printing industry was published. In addition, the results of the process now form the basis for initial work between USEPA and DNR to develop an even more comprehensive template for flexibility in the printing industry as a part of the Green Tier program.

Since May of 2005, Wisconsin has been in a leadership role for a national initiative to develop incentives for both state and federal leadership programs. This is a joint effort between both the USEPA and the Environmental Council of the States. The draft incentives were completed in mid September, vetted in a national public forum in mid October and presented to the Innovation Action Council at the end of October.



IV. Program Challenges

- **Renewal** – Initial work was just started to develop a renewal process that will be implemented in the next year. Since this work will involve the Legislature’s Joint Finance Committee, Stakeholders, the DNR and the Companies, careful attention is being paid to the statute and the sequencing of the various steps in the process to manage overhead, assure continuity, establish value and deliver certainty.
- **Stakeholder Participation** – Pilot companies continue to experience very different results with the “interested persons group” portion of the law. Over the course of the next year, we hope to draw lessons from those that have experienced success, initial Green Tier participation and other leadership programs to create some new models for stakeholder engagement.
- **Performance Metrics** – More improvement is needed in this area. Work was started for a consolidated set of metrics. Funding was initially hard to secure which delayed the start but a set of metrics is expected for the next year.
- **Program Resources** – The Environmental Cooperation Pilot Program has been further stretched with the implementation of Green Tier. Both the Bureau of Cooperative Environmental Assistance and the program bureaus have made adjustments but continued restriction on federal funds, limits associated with state funding sources and budget reductions restrict the scope and nature of the work under both the Environmental Cooperation Pilot Program and Green Tier. Securing “pro bono” work, self-responsibility models, reduced communications, emphasis on “one to many” agreements and reduced participation in policy development have all been employed as interim strategies to deal with resource constraints.

V. Conclusions

ECPP has continued to show an ability to expand the leadership impact of the program. The program has exerted both international and national leadership. ECPP provided a working base for implementation of Green Tier resulting in a formal working agreement with USEPA complimented by national initiatives to build value into leadership programs. ECPP companies have stepped into the role of mentor, teacher, counselor, leader and advocate as the needs arose while continuing in their roles as innovators and superior environmental performance managers. The results of their performance management are summarized within this report and can be examined in detail at the ECPP web site (<http://dnr.wi.gov/org/caer/cea/ecpp/index.htm>). The results that they have achieved are the most important part of the program.

Careful attention will be paid over the course of this next year to make sure that these companies continue to be recognized as leaders and that the capacity of the ECPP to do research and development work for Green Tier companies is maintained by renewing the ECPP agreements. In last year’s report, we recognized that ECPP companies are “in the best position to test new approaches, explore untested methods and develop innovative ideas that might otherwise be difficult to try”. ECPP companies will continue to demonstrate their environmental leadership as they have done for the last several years.

Environmental Cooperation Pilot Program Contacts

<i>Participating Company</i>	<i>Company Contact</i>	<i>DNR Contact</i>
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Cook Composites And Polymers (chemical manufacturer in Saukville, WI) Agreement 10/1/01	Mike Gromacki, CCP Gromacki@ccponline.com (816) 391-6011	Lynn Persson, DNR Lynn.Persson@dnr.state.wi.us (608) 267-3763
Madison Gas And Electric (electric and natural gas utility in Madison, WI) Agreement 9/26/02	Mike Ricciardi, MGE Mricciardi@mge.com (608) 252-5627	John Shenot, DNR John.Shenot@dnr.state.wi.us (608) 267-0802
Northern Engraving Corporation (surface coater in Sparta and Holmen, WI) Agreement 6/10/02	Randy Nedrelo, NEC nedrelo@norcorp.com (608) 269-6911	Mark Harings, DNR Mark.Harings@dnr.state.wi.us (715) 831-3263
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We Energies/ Pleasant Prairie Power Plant (electric utility, Pleasant Prairie, WI) Agreement 2/5/01	Brian Borofka, We Energies Brian.Borofka@we-energies.com (414) 221-4872	John Shenot, DNR John.Shenot@dnr.state.wi.us (608) 267-0802
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