Meet Michigan's Clean Corporate Citizens

September 2000

www.deq.state.mi.us/ead/tasect/c3/

John Engler, Governor
Russell J. Harding, Director

This report offers highlights on a number of existing Clean Corporate Citizen facilities. For complete information on the Clean Corporate Citizen criteria and application process, please contact:

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PROGRAM

To the Citizens of Michigan:

I am pleased to present our first report on Michigan's Clean Corporate Citizen Program. We are proud of this program and of each facility that has achieved the criteria necessary for designation. The Clean Corporate Citizen program was created in 1996 by Governor John Engler to encourage and recognize Michigan facilities that demonstrate strong environmental performance, and a commitment to responsible environmental management and proactive pollution prevention.

Clean Corporate Citizens show other industrial, commercial, and municipal establishments that a voluntary program leading to continuous environmental improvement adds lasting value to everyday operation and future goals. Other states have turned to Michigan's C3 program as an example of driving environmental improvements through partnership, public recognition, and incentives for responsible operation.

I look forward to adding many more of Michigan's environmentally-conscious facilities to this report in the future. Congratulations to all designated Clean Corporate Citizens, and to the individual management and associate teams that make this program a model to follow.

CLEAN CORPORATE CITIZEN PROGRAM

Russell J. Harding, Director

Michigan's Clean Corporate Citizens

- **Baker Furniture**, Holland
- **Consumers – JR Whiting**, Erie
- **DaimlerChrysler Sterling Heights Assembly Plant**, Sterling Heights
- **Delphi-E Grand Rapids**, Grand Rapids
- **Denso Manufacturing Michigan, Inc.**, Battle Creek
- **Dewitt Barrels, Incorporated**, Grand Rapids
- **Dupont – Mt. Clemens**, Mt. Clemens
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- **Ford Motor Company – Van Dyke Plant**, Sterling Heights
- **Knoll, Incorporated – Grand Rapids**, Grand Rapids
- **Parnall Road Office Complex – Consumers Energy**, Jackson
- **Presque Isle Power Plant – Wisconsin Electric**, Marquette
- **Smurfit-Stone Container Corporation – Ontonagon Mill**, Ontonagon
- **TAC Manufacturing, Incorporated**, Jackson
- **Visteon Corporation – Sheldon Road Plant**, Plymouth

Our Newest Clean Corporate Citizens

The facilities listed below were awarded Clean Corporate Citizen designation after compilation of this report. They also deserve recognition for their achievement.

Designation Date	Establishment Name	Location
11/23/99	Ford Motor Company - Romeo Engine	Romeo
12/6/99	MI Consolidated Gas Co. - Alpena Compressor Station	Harrison
12/22/99	Visteon Automotive Systems - Utica Plant	Shelby Township
12/22/99	T.E.S. Filer City Station	Filer City
12/29/99	NorthStar Print Group - Norway Operation	Norway
1/28/00	March Coatings, Inc.	Brighton
1/28/00	SERMAcoat, L.L.C.	Brighton
3/27/00	Visteon Automotive Systems - Chesterfield Plant	Chesterfield Township
8/1/00	Detroit Edison - Fermi 2	Newport
8/18/00	Mark IV Automotive	Big Rapids
8/18/00	GM Powertrain - Warren Transmission Plant	Warren

CLEAN CORPORATE CITIZEN
PROGRAM

An Innovative Concept

❖

Regulatory Relief for Environmental Commitment and Achievement

The Clean Corporate Citizen Program is built on the concept that Michigan establishments that consistently demonstrate environmental stewardship and pollution prevention can be relied upon to carry out their environmental protection responsibilities with less department oversight. These establishments have earned the benefit of greater regulatory flexibility and public recognition for their efforts.

A CLEAN CORPORATE CITIZEN DEMONSTRATES:

Responsible Environmental Management

A C3 must have a strong and effective environmental management system (EMS) in place, based on the nature and scale of their operations. Establishments certified to ISO 14001, the international standard for environmental management systems, also meet the EMS criteria for C3 designation. Some of the required EMS elements include (see the Appendix for more information on EMS):

- Comprehensive identification of operations, activities, and processes that may potentially affect (negative or positive) the environment;
- Self-initiated compliance audits;
- Procedures for emergency response and follow-up, including a system to identify, correct, and avoid future incidents;
- A system for communicating environmental information to both employees and the public;
- An environmental policy that clearly states an establishment's commitment to environmental excellence and continuous improvement; and
- Environmental training for employees.

Pollution Prevention

A C3 meets this criteria by:

- Adopting a pollution prevention (P2) policy and having an active establishment-wide P2 program.
- Regularly assessing operations to identify opportunities for waste reduction, reuse of materials, and responsible recycling;
- Setting P2 goals and work toward achievement of those goals;
- Sharing accomplishments and strategies; and
- Participating in information and technical exchange programs to share P2 success stories and encourage other establishments to chart P2 directions.

An establishment can also satisfy the P2 criteria by joining and being a member in good standing in one of DEQ's recognized P2 voluntary partnerships.

- Michigan Agricultural Pollution Prevention Program
- Michigan Automotive Project
- Michigan Business Pollution Prevention Partnership
- Michigan Great Printers Project
- Michigan Pulp and Paper Pollution Prevention Program

Environmental Compliance

A C3 demonstrates consistent compliance and has no outstanding unresolved environmental violations. Compliance with all of Michigan's environmental protection regulations is required in this program. A complete list of establishment-related permits, licenses, and binding agreements is required at the time of application. C3's must apply annually to renew their designation and DEQ staff perform a recertification of compliance each year.

A Closer Look at Several Clean Corporate Citizens

Welcome to the section of this report that holds the most important information of all—specific details about several of Michigan's Clean Corporate Citizens. This section contains information about the specific operations, policies, and achievements of our Clean Corporate Citizens.

Some Key Terms:

C3: Clean Corporate Citizen

Environmental management system (EMS): the part of an overall management system that addresses environmental concerns through the allocation of resources, assignment of responsibilities, and ongoing evaluation of practices, procedures, and processes to achieve sound environmental performance. (See Appendix for more information on EMS.)

ISO 14001: a standard adopted by the international organization for standardization to prescribe uniform requirements for the purpose of certification or registration of an environmental management system.

Pollution prevention (P2): eliminating or minimizing the initial generation of waste at the source or utilizing environmentally sound on-site and off-site reuse or recycling. Waste treatment, release, or disposal is not considered pollution prevention in the C3 program.

CLEAN CORPORATE CITIZEN
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BAKER FURNITURE — Baker, Knapp & Tubbs, Inc.

"Baker Furniture has always been proactive in the environmental, health and safety realm," said Kenneth Mason, plant manager. "The Clean Corporate Citizen designation is a very appreciated recognition of a long standing effort to move beyond compliance. We have made the environment and the health and safety of our associates part of our everyday operations." May 1998

Vital Statistics:

Clean Corporate Citizen since: May 1, 1998

Operation: Furniture Manufacturing/ Refinishing

Address:

171 East 24th Street Holland, Michigan 49423

Ottawa County

The Baker Furniture plant in Holland manufactures high-end reproduction, traditional, and contemporary wood household and office furniture. Processes at the facility include machining, cabinet making (assembly), gluing, veneering, sanding, finishing, upholstery, trim hardware application, and shipping. The plant covers approximately 203,000 square feet of manufacturing, storage, and office area on approximately six acres in an urban setting and employs approximately 170 people. Baker Furniture became a part of Kohler Company in 1986, one of the oldest and largest privately-held companies in the nation. Together with its subsidiaries, Kohler Company operates 37 manufacturing plants and employs more than 14,000 people worldwide.

Baker Furniture extends its commitment to the environment and their community by participating in the Muskegon-Ottawa Pollution Prevention Alliance, the American Furniture Manufacturers Association, the Federation of Environmental Technologists, and the National Association of Manufacturers.

Baker Furniture has converted approximately 85 percent of stains, glazes, and fillers to more environmentally-friendly water-based products. Baker has also modified its processes and equipment to reduce waste, and eliminated or reduced the use of hazardous substances. Future plans to reduce wastes and prevent pollution include:

- Investigating water based and low solvent coatings, particularly high solids sealer and lacquers.
- Replacing florescent light bulbs with low mercury florescent bulbs.
- Changing materials or processes to reduce re-work, to avoid the negative aspects of avoidable wastes.

Baker Furniture operates under the Kohler Company "Environmental Principles":

- Conserve energy and natural resources through their wise use and reuse.
- Strive to eliminate pollution at its source.
- Focus on the recycle or sale of every scrap of nonhazardous waste.
- Minimize the generation of hazardous waste.

Baker Furniture, continued:

- Dispose of remaining waste safely and responsibly.
- Enhance the land and air through careful land planning and the planting of trees and other flora.
- Design, operate, and inspect our facilities to protect the health and safety of associates and the public.
- Make health, safety, and the environment a priority in developing new products and processes.
- Recognize and respond on a timely basis to associates and community concerns regarding our products and operations.
- Participate with government and regulatory agencies in the development of responsible environmental laws and regulations.
- Anticipate prudently and comply with all applicable environmental laws and regulations.
- Periodically audit and assess compliance with these policies and submit our findings to the Board of Directors.

And Baker Furniture has gone further, by adding two additional commitments to their Holland facility environmental policy:

- We are committed to pollution prevention and continuous improvement.
- We believe that all associates can contribute to environmental, health, and safety improvements.

DAIMLERCHRYSLER — Sterling Heights Assembly Plant

Vital Statistics:

Clean Corporate Citizen since: October 10, 1997

Operation: Auto Assembly

Address:

38111 Van Dyke
Sterling Heights,
Michigan 48312

Macomb County

The Sterling Heights Assembly Plant reports:

"DaimlerChrysler Sterling Heights Assembly Plant (SHAP) is home to the JA line of family mid-size sedans, the Chrysler Cirrus, Dodge Stratus, and the Plymouth Breeze. SHAP has three million square feet of manufacturing floor on 310 acres of land in the heart of Sterling Heights, Michigan.

SHAP was originally constructed as a jet engine plant in 1953. It was converted to automobile assembly in 1980 by Volkswagen and purchased by Chrysler in 1983.

SHAP's most recent accomplishment was the completion of the Community Environmental Awareness Project (CEAP). The Community Environmental Awareness project is a voluntary cooperative effort between the Michigan Department of Environmental Quality (DEQ) and industry to improve the way environmental information is presented and made available to the public. The first automotive assembly plant to be profiled under this pilot project was none other than SHAP.

Pollution Prevention (P2) aims to eliminate and/or reduce the generation of waste at the source where practicable, environmentally acceptable, and economically feasible. Waste that cannot reasonably be prevented at the source should be reused or recycled in an environmentally sound manner. Pollution prevention activities include process or procedure changes, technology changes, input material and product changes, and good operating practices.

Some of SHAP's on-going activities to prevent waste at the plant include:

- Using more effective equipment to reduce the amount of paints and solvent used during vehicle painting.
- Replacement of refrigerants that contain chlorofluorocarbons (CFCs) with those that do not.
- Recycling of steel drums, cardboard, and other packaging materials, oils, solvents, and other waste.
- A mercury reduction program.
- A polychlorinated biphenyl (PCB) elimination program.
- In partnership with Detroit Edison, there are on-going energy efficient projects in place to promote cost savings and the lowering of energy usage.

Sterling Heights Asssembly Plant, continued:

SHAP is scheduled to roll out an Enhanced Environmental Management System (EEMS) the second quarter of 2000. Some of the key components of the EEMS are also those identified in ISO 14001.

In 1998 SHAP received the prestigious Spirit Award. The Spirit Award is the highest recognition given to businesses by the City of Sterling Heights in recognition of model corporate citizenship and enhancement of the city's exceptional quality of life.

DaimlerChrysler's SHAP has consistently given back to the community by reinvesting millions of dollars into our facility, donating funds and man hours for several local community projects, taking an active role in the Sterling Heights Community Foundation, and providing thousands of jobs for the residents and family members.

Since obtaining the Clean Corporate Citizen status we have a commitment not only to our employees, but the community as well to exemplify environmental excellence. Demonstration of our environmental stewardship has awarded our facility the capability to negotiate conventional permits. SHAP hopes to obtain a PAL (Plantwide Applicability Limit) permit in the near future. Presently SHAP has been selected to pilot the new Title V Air Permit Program.

The greatest challenge to being a C3 is the need to promote continuous improvement upon the environmental efforts at the plant. There are several opportunities to explore, and we at SHAP have stepped up to the challenge."

DELPHI-E – Grand Rapids
(Delphi Energy & Engine Management Systems)

Vital Statistics:

Clean Corporate Citizen since: September 19, 1997

Operation: Automotive Components

Address:

2100 Burlingame, SW Grand Rapids, Michigan 49509

Kent County

Delphi-E Grand Rapids reports:

"Our EMS has helped the facility identify and focus on areas of waste generation by raising employee awareness and encouraging active participation in waste reduction efforts. The successes described herein are graphically represented on the attached figure using 1996 as the baseline year.

We have continued to reclaim and reuse significant amounts of our production waste as shown in Figure 1 (see corresponding bar graphs 1-4 on following page). The 43 percent increase in materials returned to production realized in 1999 represents significant reduction in waste disposal volumes. The material reclaimed includes various oils used in production and represents dollars saved.

Figure 2 illustrates our continuous improvement in reducing liquid waste and includes a reduction in waste oil and oil sludge shipped off-site. These liquid waste reductions have contributed to the favorable results reflected in Figure 3, which depicts reductions in our waste disposal costs during this time period. The 74 percent reduction in liquid waste for 1999 was largely responsible for our 17 percent reduction in waste disposal costs that year.

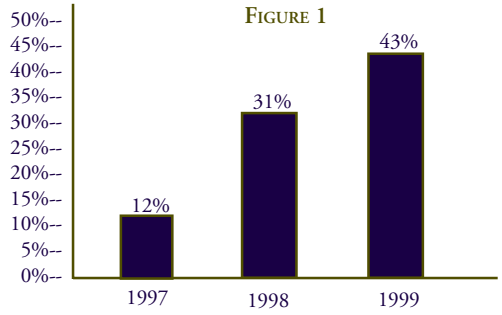
Two areas of wastewater generation were also examined, with new treatment technology applied in both cases. The decreased load at our wastewater treatment plant resulted in reduced filter cake generation, and reduced chemical and labor costs, as well as significant reductions in our waste disposal costs. Figure 4 illustrates our reductions in solid waste generation from water treatment for the years 1998 and 1999 (relative to 1997 – prior to installation of wastewater treatment technology).

In general, the consistent increase in material reclamation and continuing decrease in waste generation and disposal demonstrate every employee's commitment to continual improvement. Our efforts have proven industry and the environment can both prosper as a result of the C3 program."

Delphi-E — Grand Rapids, continued:

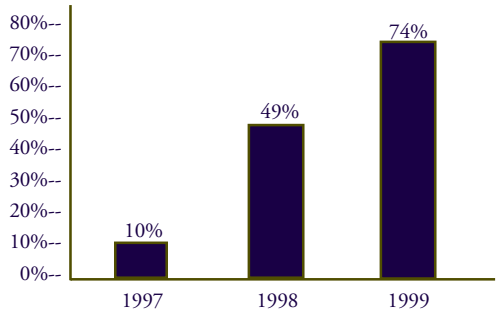
% Increases in Material Returned to Production

FIGURE 1



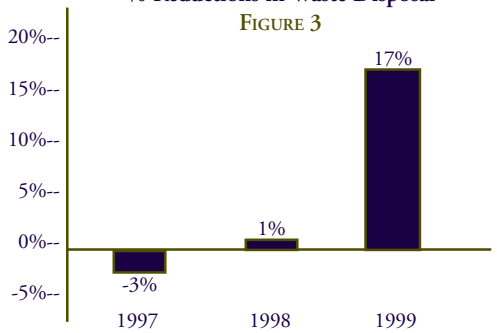
% Reductions in Liquid Wastes

FIGURE 2



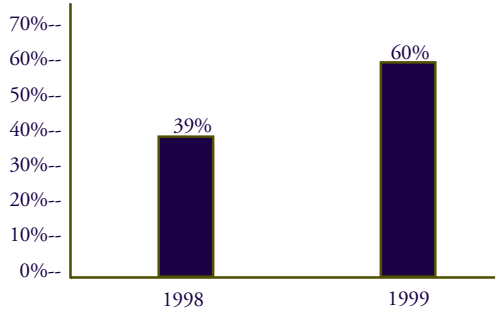
% Reductions in Waste Disposal

FIGURE 3



% Reductions in Filter Cake Wastes

FIGURE 4



DENSO MANUFACTURING MICHIGAN, INC. (DMMI)

"DENSO Manufacturing Michigan Inc. is proud to earn this distinction for our proactive approach to environmental management," said Jim Tsuboi, DMMI president. "We feel it is our responsibility to continuously improve our systems and surpass mere environmental compliance. As a community leader, we must provide a strong example and earning the Clean Corporate Citizen status demonstrates our commitment to the environment, Battle Creek, and its future." *January 1999*

Vital Statistics:

Clean Corporate Citizen since: December 18, 1998

Operation: Automotive Heating-Cooling Systems

Address:

One Denso Road
Battle Creek, Michigan 49015

Calhoun County

DMMI reports:

"DMMI began manufacturing operations in 1986 of automotive heat exchangers, including radiators, heaters, and air conditioning components. The main manufacturing processes include metal forming, brazing/soldering, degreasing, painting, and assembly of aluminum and copper/brass products. DMMI also injection molds a variety of plastic cases used in the assembly process.

For several years, DMMI has been involved in several projects to reduce and eliminate the amount of pollution generated at the facility. The company has eliminated waste in all three major pollution areas of air, water, and waste. Since 1994, DMMI has replaced a TCE [trichloroethylene] solvent degreaser first with aqueous degreasing, which eliminated VOC [volatile organic chemicals] emissions and hazardous waste from degreasing processes, and now with heat degreasing, which will eliminate water usage and wastewater generation from degreasing processes. DMMI realized a cost savings through the elimination of city water purchases, wastewater treatment, and hazardous waste disposal from the degreasing processes.

Another project was the replacement of a liquid painting booth with powder paint. The change eliminated VOC emissions and both hazardous and nonhazardous waste from that painting process, which significantly reduced waste disposal costs.

DMMI also has focused on product development changes. DMMI is focusing on changing to aluminum heat exchanger products from copper/brass. The copper/brass products required lead solder and painting, which generated both VOC emissions and hazardous waste.

DMMI has taken steps to reduce water consumption with the introduction of dry powder fluxing machines instead of wet fluxing which adds water to the flux.

Denso Manufacturing Michigan, Inc., continued:

Another project was the replacement of a liquid painting booth with powder paint. The change eliminated VOC emissions and both hazardous and nonhazardous waste from that painting process, which significantly reduced waste disposal costs.

Saving Landfill Space

Paper/Cardboard	1,265 tons
Plastics	393 tons
Various Metals	2,050 tons
Assembled Parts	90 tons

DMMI joined the Michigan Business Pollution Prevention Partnership (MBP3) in June 1998. MBP3 is a voluntary, business-focused pollution program that emphasizes measurable results. Since DMMI had implemented pollution prevention ideas before C3, and were continuing to do so as part of ISO 14000, the MBP3 program was an opportunity to share company pollution prevention successes with other Michigan businesses, and internally reinforce DMMI's commitment to pollution prevention.

All departments in some way contribute to environmental emissions and can participate in pollution prevention programs.

DMMI increased the number of pollution prevention goals in 1999:

- Eliminate electro-deposition painting machine by 12/31/99.
- Reduce radiator paint usage and VOC emissions by 40 percent by 12/31/99.
- Reduce lead solder usage by 30 percent by 12/31/99.
- Eliminate vacuum molding machine by 6/30/99.
- Since DMMI has become ISO 14000 certified and a C3, DMMI management and associates have become more involved in pollution prevention activities.

ISO 14000 certification was achieved by DMMI on June 12, 1998. ISO 14000 requires DMMI to have an effective environmental management system which includes an environmental policy, environmental procedures, and pollution prevention goals.

In 1998, DMMI formed the Wildlife & Conservation Committee. This committee is a voluntary committee of DMMI associates. In 1998, DMMI set up nesting boxes for the endangered bluebird, promoted Earth Day activities, and educated associates on the value of pollution prevention. In 1999, the committee planted a Michigan Native wildflower garden at DMMI."

DEWITT BARRELS, INCORPORATED

"We are proud to accept this award that acknowledges a commitment to the environment that has been passed down to us from our father and grandfather," said Michael DeWitt, company president. "We are teaching the next generation of DeWitts that will lead this company into the future. We are also proud to say that our entire staff shares in our commitment to the environment." October 1999

Vital Statistics:

Clean Corporate Citizen since: October 13, 1999

Operation: Reconditioning/Sales of Barrels & Drums

Address:

417 Watson, S.W.
Grand Rapids, Michigan
49504

Kent County

DeWitt Barrels, Inc. is a fifth generation, family-run firm that specializes in reconditioning and reselling steel, fiber, and plastic drums for reuse by the furniture, automotive, chemical, and other industries. The reconditioning plant located near downtown Grand Rapids operates ten hours a day and consists of a 25,000-square foot processing building and two warehouse buildings. DeWitt Barrels employs 35 associates and has operated out of its current downtown facility for 61 years.

DeWitt Barrels was the first small business in Kent County to earn the C3 designation. In its 106 years of business, the company has maintained an excellent record of environmental compliance and continued that commitment by developing a formal environmental, health and safety management system; and incorporating a formal P2 program throughout its operations. DeWitt Barrels takes their commitment to environmental improvement beyond their facility boundaries by directly training their drivers and their customers in the responsible handling of wastes and in accident prevention.

DeWitt Barrels has also established committees to work on the following pollution prevention goals:

- Reduce VOC's emitted per unit of production by 5 percent;
- Reduce chemical exposures;
- Reduce gallons of waste generated by 5 percent per production unit;
- Eliminate all leaks;
- Eliminate hazardous waste container spills through annual training to both employees and customers; and
- Eliminate all solids and soils from rinse water, increase oil reclamation, and reduce water usage by 5 percent.

The management and associates at DeWitt Barrels participate in activities to improve the environmental and business communities in which they live, through active participation in the Grand Valley State University Foundation; the Reusable Industrial Packaging

DeWitt Barrels, Incorporated, continued:

Association; the West Fulton Business Association; the Air & Waste Management Association, West Michigan Chapter; and the Environmental Affairs Committee of the Greater Grand Rapids Area Chamber of Commerce.

Some Excerpts from DeWitt's Environmental Policy:

"DeWitt Barrels, Inc., is committed to managing environmental, health, and safety issues over which it has control or over which it has the potential for significant influence as a result of its products, activities and services.

We will comply with all applicable environmental health and safety laws and regulations, seek to prevent pollution, promote the recycling of reusable industrial packaging, and maximize the reuse and recycling of waste. We will employ management systems and procedure specifically designed to continuously seek opportunities to improve our environmental health and safety performance. DeWitt Barrels, Inc. will communicate its environmental policy and performance to its employees and other internal and external stakeholders. We recognize that all of us at DeWitt Barrels have the potential to help improve our environmental, health, and safety performance."

DUPONT – Mt. Clemens

"We are very pleased by this recognition of the efforts of our people," said Robert O. Woodruff, DuPont Mt. Clemens plant manager. "We take this as encouragement as we pursue our ultimate goal of zero waste and zero emissions." March 1999

DuPont - Mt. Clemens reports:

"In March 1999, the DuPont Mt. Clemens Plant became the 11th Michigan facility, as well as the first paint manufacturer and the first in the chemical industry to earn Clean Corporate Citizen (C3) designation. The DuPont Mt. Clemens Plant manufactures automotive paints and resins and custom-blended coatings for the automotive industry. The plant safely uses millions of gallons of flammable and combustible solvents per year. In addition, the plant conducts research, development, and testing in on-site laboratories to improve the productivity, safety, and environmental compliance of its products.

'We are very pleased by this recognition of the efforts of our people. We take this as encouragement as we pursue our ultimate corporate goal of zero waste and zero emissions,' said Robert "Woody" Woodruff, DuPont Mt. Clemens Plant Manager, when receiving this honor. 'It signifies that we have strong environmental management programs here and that we consistently comply with all state and federal environmental regulations. The award also recognizes DuPont's ongoing efforts to manufacture paint from more friendly components such as waterborne finishes and higher solids coatings with less solvent emissions during application.'

For the DuPont Mt. Clemens Plant, C3 has been a part of an ongoing journey of continuous improvement, instead of an ultimate destination. The site was a member of the Michigan Business Pollution Prevention Partnership long before applying for C3 designation. In conjunction with DuPont's Process Safety Management, the chemical industry's Responsible Care and the plant's QS-9000 certification, DuPont Mt. Clemens continuously integrates Environmental Management Systems (EMS) into every phase of operations from product development through product delivery. Applying for and achieving C3 status was another opportunity for DuPont Mt. Clemens to reevaluate its EMS and to enhance its interactions with the local community through public review of the C3 application and positive local press after achieving the award.

Vital Statistics:

Clean Corporate Citizen since: February 2, 1999

Operation: Automotive Heating/ Cooling Systems

Address:

400 Groesbeck Highway Mt. Clemens, Michigan 48043

Macomb County

DuPont - Mt. Clemens, continued:

During the C3 process, the DuPont Mt. Clemens achieved 60 percent reduction in the generation of hazardous waste. The facility was one of only five facilities nationwide to receive the National Paint & Coatings Association Environmental Excellence Award. The plant installed an on-site solvent recovery unit that reduced hazardous waste generation by more than 10 million pounds per year. This also reduced by 550 per year the number of waste and reclaimed solvent tankwagons coming to and going from the plant. This significantly reduced the plant TRI off-site transfers and the potential for a transportation incident. The site also removed a UST tankfarm and replaced it with a state-of-the-art aboveground tankfarm with a remote spill containment basin. The plant is focussed on implementing additional pollution prevention projects (primarily hazardous wastewater reduction) and manufacturing HAP [hazardous air pollutant] compliant coatings."

FORD MOTOR COMPANY–
Automatic Transmission New Product Center

Fabian Gentile, manager of ATO plant engineering, said "The ATNPC team is proud to receive the Clean Corporate Citizen award. This designation is a reflection of all employees effectively deploying an environmental management system into daily operations and further supports our company's commitments to environmental stewardship and leadership." November 1999

Vital Statistics:

Clean Corporate Citizen since: November 10, 1999

Operation: Prototype Automatic Transmissions

Address:

35500 Plymouth Road Livonia, Michigan 48154

Wayne County

ATNPC Reports:

"The Ford Automatic Transmission New Product Center (ATNPC), located in Livonia, is used to manufacture, test, and develop new automatic transmissions for the Ford Motor Company. The ATNPC is ISO 14001-certified and was the 15th facility to receive the C3 designation.

Implementation of an Environmental Management System (EMS) at the ATNPC has allowed the facility to focus on waste minimization and pollution prevention efforts. The facility has implemented:

- Facility recycling programs for paper, batteries, light bulbs, packaging, steel drums, solvents, and refrigerant.
- Use of a portable coolant reconditioning unit on six machines in the FMS department. The facility has seen a 900-gallon/year reduction in the amount of coolant used as well as savings of 10,200-gallons/year of wastewater.
- Use of a deburring operation that utilizes ice instead of sand. This operation has eliminated disposal of sand as a waste stream from the facility.
- All new machinery coming into the facility is reviewed during the design stages to identify pollution prevention opportunities prior to delivery to the site.
- Parts washer cold cleaner solvent is recycled on-site, eliminating the need for shipment and treatment off-site of 1,200 gallons per year.

The C3 designation of the ATNPC is a reflection of the facility employees supporting, adopting, and employing the EMS. It is expected that this system will help the facility reach its pollution prevention and waste minimization goals."

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FORD MOTOR COMPANY– Van Dyke Plant

"Being a great company, in my mind, has several elements. You have to have great products and people, but you also have to be successful in a way that helps make the world a better place," states Ford Motor Company Chairman, Bill Ford.

Vital Statistics:

Clean Corporate Citizen since: October 21, 1997

Operation: Automotive Components & Assembly

Address:

41111 Van Dyke Road Sterling Heights, Michigan 48134

Macomb County

The Ford Van Dyke Plant reports:

"The Ford Van Dyke Plant was one of the original five Ford manufacturing facilities in North America to be certified to the ISO 14001 Environmental Standard in December 1996. Ford Motor Company can now say that all its manufacturing facilities on a global basis are certified and that each facilities' Environmental Management System is annually re-audited before being granted continued certification by an independent third party organization.

Being an environmental steward is nothing new to the Van Dyke Plant. Many of our environmental success stories were completed even before we officially developed our EMS and obtained our ISO 14001 certification. Our facility has a long history of being asked or requested to be a pilot facility for an environmental program or initiative both internal to Ford and from our suppliers and contractors. One recent success story was a partnership with Safety Kleen where we successfully substituted their aqueous cleaning stations for almost 90 percent of our previous solvent-based stations. We are still not satisfied and are looking at how we might be able to recycle and/or treat the spent aqueous solution on our site and totally eliminate the need for manifesting and off-site disposal.

Another success involved the development of an internal environmental website for the storage, easy access and control of documentation, and useful information for facility and other Ford personnel. Various water and energy conservation efforts have resulted in the Van Dyke Plant being able to launch a new transmission program, requiring a building addition, with only a slight increase in water and electricity usage and a decrease in gas usage. Many visitors are totally amazed to see all the different manufacturing processes being utilized to produce transmissions, chassis components, and assemblies and discover that the Van Dyke Plant qualified for an Opt-Out Air Permit and generates very little waste that cannot be recycled and/or reused.

What has our ISO and C3 certification done for our facility? It can best be summarized as helping to make environmental stewardship a natural part of the way that every one of our employees, contractors, and suppliers does his or her job. This stewardship is not just confined to the boundaries of the facilities, but also carries over in involvement with the local communities where we work and live."

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J.R. WHITING PLANT

Consumers Energy

"The J.R. Whiting Plant is proud to be recognized for its ongoing environmental compliance efforts by being designated a Clean Corporate Citizen," said Plant Manager John G. Gose. "The Whiting plant appreciates the opportunity to review and strengthen its environmental programs." June 1998

Vital Statistics:

Clean Corporate Citizen since: May 7, 1998

Operation: Coal-fired Power Plant

Address:

4525 East Erie Road
Erie, Michigan 48133

Monroe County

The J.R. Whiting Plant reports:

"The J.R. Whiting Plant has always viewed the Clean Corporate Citizen Program as not just another 'feel good' program. It establishes the framework to help a facility keep its environmental responsibilities in order through the use of an Environmental Management System and an established Pollution Prevention program with specific goals.

Employees' attitudes have changed also. Employees on the job are taking the extra time needed to think about the environmental aspects of their work in a similar way that they think about the safety aspects of their work. This has resulted in proactive actions such as providing spill containment at a job site prior to beginning their work. Employees have truly taken to heart the potential environmental impacts of their jobs and do what they can to minimize them.

The Clean Corporate Citizen Program has also had a positive impact on our overall environmental compliance as evidenced by a number of audit programs to which the plant is subject. Consumers Energy has maintained an internal audit program for many years that includes a rigorous audit of our compliance to company environmental procedures and their corresponding regulations. A 1996 internal audit, which was performed prior to the plant's inclusion in the Clean Corporate Citizen program, resulted in seven findings. Subsequent audits following the plant's designation as a Clean Corporate Citizen in May of 1998 have resulted in two findings in 1998 and one finding in 1999. This trend was reaffirmed by an on-site audit of the plant's compliance to the Part 75 Acid Rain requirements completed June 10, 1999 by DEQ personnel on behalf of the EPA [U.S. Environmental Protection Agency]. This audit resulted in no problems being observed involving the requirements of Acid Rain CEMS and reporting.

Although the designation as a Clean Corporate Citizen has made J.R. Whiting Plant employees 'feel good' about minimizing the impact of their work on the environment, it has also encouraged them to pursue improvements in our operations that will continue to have benefits to the environment at the plant site and beyond."

CLEAN CORPORATE CITIZEN
PROGRAM

KNOLL, INCORPORATED – Grand Rapids

"Knoll is honored to receive this distinction," said Ric Vales, vice president of operations for the Grand Rapids facility. "This award represents not only the achievements of our environmental health and safety team but also the dedication and commitment of every employee to protect and improve environmental quality." September 1998

Vital Statistics:

Clean Corporate Citizen since: July 24, 1998

Operation: Office Furniture Systems

Address:

4300 36th Street, SE Grand Rapids, Michigan 49512

Kent County

Knoll Incorporated – Grand Rapids was the first office furnishings manufacturer to receive the C3 designation. The facility designs and manufactures portable office furnishings, and completed products are distributed globally. Operations performed at the 650,000-square foot facility include steel fabrication, welding, painting, subassembly, woodworking, laminating, testing, and shipping.

Pollution prevention efforts at Knoll have included:

- Elimination of e-coat process in favor of 100 percent powder coating. Knoll reports that this change made a big difference at the facility and that they are now virtually chemical-free.
- Projects to reduce potentially-hazardous wastes related to facility lighting. The facility has been upgraded 100 percent to high energy efficient lamps. Phosphorous lights have been replaced with ALTO lights ("green lights"), which contain far less mercury. Regular lightbulbs contain about 20mg mercury; ALTO lights contain about 3mg mercury. Knoll will be working with Philips Lighting on a complete lighting study for the facility.
- Expanded use of returnable packaging, significantly reducing wooden pallet usage.
- Switching glue spray booths from solvent to water-base glue.
- Recycling program that includes fabrics, plastics, aluminum, steel, cardboard, waste oil, paper, and batteries.

As an involved member of their community, Knoll–Grand Rapids participates in a corporate-sponsored environmental art contest each year to get students interested and involved in pollution prevention. Students create original artwork based on a selected pollution prevention topic. Past topics have included clean air, clean water, and sustainable use of natural resources. Six of the students' entries are selected for special recognition and their entries are published in Knoll Corporation's widely-disseminated *Annual Environmental Health and Safety Report*.

CLEAN CORPORATE CITIZEN
PROGRAM

PARNALL ROAD OFFICE COMPLEX
Consumers Energy

"Consumers Energy's General Office Parnall Complex employees have embraced the concepts of Clean Corporate Citizen long before the program had actually been conceived. The employees of the complex and the company in general have always prided themselves in being responsible members of the communities and environment in which we live and work. The Clean Corporate Citizen Program has helped us to organize and document some of the efforts that have been part of doing business in Michigan for the past 100 years or so." *Consumers Energy, October 1999*

Vital Statistics:

Clean Corporate Citizen since: December 11, 1998

Operation: Office Complex

Address:

1945 W. Parnall Road Jackson, Michigan 49201

Jackson County

The 40-acre Parnall Complex located in Jackson includes separate office buildings and a Metering Technology Center, and employs more than 1,100 people from the Jackson-area community.

Pollution prevention efforts at the Parnall Office Complex have led to cost saving opportunities through a history of continued environmental compliance, reduction, and reuse of materials. The facility has developed and implemented an effective Pollution Prevention program, a Waste Minimization program, and is a voluntary participant in the Michigan Business Pollution Prevention Partnership. Over the past 15 or more years, the Parnall Office Complex has been continually reviewing and reengineering processes to eliminate and/or reduce waste and by-products generated from the facility. This has resulted in the elimination of halogenated solvents, lead and oil-based paints, and reduction in the use of office materials. The facility performs extensive regular environmental audits and remains committed to identifing and correcting any nonconforming items that are noted.

Communication of the environmental stewardship message is a key component of an effective Environmental Management System. Consumer's Energy promotes the message through publication of regular newsletters like the "Coordinator's Corner," which is sent to all environmental coordinators and field leaders. Parnall is a periodic contributor to the internal publication called D.E.B.R.I.S., which publicizes waste minimization success stories. Parnall's employee-management teams have developed an Environmental Policy Statement, which is posted in several locations throughout the complex. In addition, participation in community-wide Earth Day activities is an annual event.

The facility reports: "The Parnall Complex coordinator, Doug Crips, has a way of sharing a good thing with his peers and with others in the company. It was not a surprise when he used the company's 8th Annual Pollution Prevention and Waste Minimization workshop…to announce the expansion of the General Office Printer/Toner Cartridge recycling program to all company facilities.

Parnall Road Office Complex, continued:

[Mr. Crips] was aware that the recycling of cartridges at more remotely located company locations was not easily accomplished. His solution was an easy alternative for the hundreds of company facilities that wanted to have an environmentally sound alternative to landfills for these easily recycled items, but were unable to do so before. Because of his efforts, we now have a mechanism to recycle these cartridges from virtually any location throughout the state. We have seen an increase in the cartridge recycling program…as we have experienced increases in several other recycled materials through similar efforts to centralize collection points, or simply increase employee awareness of possibilities."

PRESQUE ISLE POWER PLANT - Wisconsin Electric

"The Presque Isle Power Plant is committed to continuously improving its environmental performance," said plant manager Les Kowalski. "Being designated a Clean Corporate Citizen not only reflects Wisconsin Electric's dedication to environmental stewardship, but also recognizes the outstanding efforts of our plant employees to protect and improve the environment."

Presque Isle Power Plant Reports:

"'Commitment to improve.' Those three words by Les Kowalski, Manager of the Presque Isle Power Plant, exemplify the goal of the 200+ employees at the plant, as well as the senior management of Wisconsin Electric, the plant's owner.

Since becoming a Clean Corporate Citizen facility in October 1998, Presque Isle Power Plant has realized several key environmental performance improvements, including:

- Completion and operation of a new $23 million baghouse system for Units 1-4 resulting in a measurable decrease in air emissions;
- Installation of several stormwater and paving improvements;
- Installation of new monitoring systems; and
- Enhanced training of plant staff, including specific environmental management system (EMS) and C3 Program training.

The most visible improvements were voluntary, including the installation of the baghouse to reduce air emissions. However, perhaps the most significant improvement is employee awareness and commitment. 'Operating a major power generation facility in the Upper Peninsula presents significant environmental challenges,' says Kowalski. 'By participating in the C3 Program, our employees are demonstrating their commitment to not only the environment, but also to the communities they live in, and to all the citizens of Michigan who enjoy the unique area in which we live. The C3 Program designation was recognition of work to date, but living the C3 commitment is a long-term goal for our staff.'

Vital Statistics:

Clean Corporate Citizen since: October 20, 1998

Operation:
Coal-fired Power Plant

Address:

2701 Lakeshore Blvd., North
Marquette, Michigan 49855

Marquette County

Presque Isle Power Plant, continued:

While the utility industry is undergoing dynamic business changes, attention focused on the environment becomes an even more critical factor to both employees and management.

Kristine Krause, Vice President of Wisconsin Electric's Fossil Operations business unit, views environmental issues and the plant's response to these issues as fundamental to the company's performance. 'Environmental compliance is a minimal baseline measure' says Krause. 'At Presque Isle, we constantly examine environmental performance knowing that it is integral to overall plant performance. We can't claim to have good business performance without having strong environmental performance—they are inseparable. Financial, customer, and other performance measures are directly linked to environmental performance.'

Looking forward, the plant will continue its efforts to implement both operational and physical enhancements that support continued environmental performance improvement."

SMURFIT-STONE CONTAINER CORPORATION
Ontonagon Mill

"We recently received an expedited air permit under the benefits offered by the C3 program in time to fully utilize our short construction season. It has also given us an opportunity to fine tune our environmental management system (EMS) and update our standard operating procedures through operator input. By expanding the EMS developed for the C3 program, the Ontonagon Mill became ISO 14001 registered in September of 1999. C3 certification has been a very exciting and worthwhile project for our Mill." - J.R. Richardson, Operations Manager, Smurfit-Stone Container Corporation, Ontonagon Mill

Smurfit-Stone-Ontonagon Mill reports:

"Smurfit-Stone Container Corporation (SSCC) started as a sulfur pulp mill in 1921 under the name of Northern Fiber Company and went through many changes. The mill is currently owned by SSCC and now employs 277 people. The mill produces 800 tons of brown corrugating medium daily.

Clean Corporate Citizen: The SSCC Ontonagon Mill developed an environmental management system (EMS) to increase employee participation in the mill's environmental program and demonstrate the mill's willingness to remain an environmentally conscious neighbor for the local community. Based on this effort, our environmental compliance record, and our pollution prevention activities, the Ontonagon Mill was designated as a Clean Corporate Citizen in January 1998 through MDEQ's new program. The Ontonagon Mill was the fourth company in Michigan and the first pulp and paper mill to receive this recognition.

Citizens' Advisory Panel: The Ontonagon Mill developed a Citizens' Advisory Panel (CAP) as part of the Clean Corporate Citizen program as a mechanism to communicate with the local community. Members were invited to join the CAP representing downtown businesses, village government, educational and medical facilities, environmental groups and mill neighbors. CAP meetings are scheduled quarterly, and four meetings were held in 1998 as planned. Some of the topics discussed included:

Vital Statistics:

Clean Corporate Citizen since: January 21, 1998

Operation: Pulp and Paper

Address:

One Superior Way
Ontonagon,
Michigan 49953

Ontonagon County

Smurfit-Stone Container, Ontonagon Mill, continued:

- Quarterly Mill Overview and Environmental Updates
- The Smurfit-Stone Merger
- Clean Corporate Citizen Update
- Development of the ISO 9002 and 14001 Programs
- Mill Intranet System for Environmental Management System
- Coal Pile Base Project to Direct All Facility Stormwater Runoff to the Wastewater Treatment Plant for Treatment
- Use of Wastewater Treatment Plant Sludge to Remediate and Revegetate Copper Range Company's Copper Mine Tailings Basins
- The Risk Management Plan
- Cluster Rule Compliance Updates for the Pulp Mill and Chemical Recovery Areas

ISO Status: The C3 program has encouraged the Ontonagon Mill to modify the EMS developed for C3 into an ISO 14001 system. In addition, we have also enhanced our internal quality program into an ISO 9002 program. Sixteen hourly and salaried personnel were trained as internal auditors of the ISO systems. Approximately 2,000 hours have been invested to develop the ISO policies and standard operating procedures by numerous mill employees. All employees have been trained on the EMS, which has standardized operations and improved teamwork between shifts. As a result of this monumental effort, we received our ISO 9002 registration in July 1999, and our ISO 14001 registration in September 1999.

'PCB Free' Mill: The Ontonagon Mill strives to minimize the impact the mill has on its surrounding environment. Therefore, the mill targeted all of its PCB equipment for removal. The mill achieved this goal and became 'PCB Free' on November 3, 1998 with the final disposal of one electrical substation, three pole transformers, and all remaining PCB emergency response materials.

Beneficial Reuse of Solid Waste: The Ontonagon Mill is currently participating in a reclamation project in conjunction with a local copper mine which ceased operations in September, 1995. The mill's wastewater treatment plant sludge is being utilized as a soil amendment to assist in the revegetation of the mine's 5,500 acre tailings basins. The revegetation program began in September 1998 and has applied approximately 7,891 dry tons of sludge, reclaiming approximately 425 acres, since its inception.

MDEQ Partner: Since becoming a C3 designated company, the Ontonagon Mill environmental staff has volunteered to present our C3 success story at numerous Environmental Assistance Division workshops. We feel that this program provides a mechanism for a user friendly partnership between the MDEQ and industry, with our common goal of improving the environment. This designation is utilized as a marketing tool to promote the mill's product as environmentally friendly. The C3 program has improved the Ontonagon Mill's relationship with the local public, government regulators, and its customers."

TAC MANUFACTURING, INCORPORATED

"Our efforts to become a steward of our environment have been driven by our associates," said Mike Maurer, director of TAC Manufacturing. "They have challenged us to recycle whenever possible. TAC is very honored to be among the first companies within our state to earn this certification."
October 1999

TAC Manufacturing produces steering wheels, air bags, and other components for the automotive world market at their 190,000 square-foot facility. Currently, TAC employs 225 full-time associates, and addition of a new 60,000 square-foot magnesium die casting facility will add 60 associates to their team.

TAC has been proactive in identifying opportunities to minimize waste. Their pollution prevention goals include responsible recycling and reductions in the generation of hazardous waste.

- Eliminated 100 percent of hazardous solid waste through use of a rag recycling program.
- Recycle 100 percent of mold sprues and runners (plastic) from injection molding. Ten percent of the scrap plastic is recycled in-house; 80 percent is shipped back to the plastics facility for reuse.
- Wooden pallets, 100 percent recycled, sent back to manufacturer for refurbishing and reuse.
- Changed over to reusable packaging (totes). Seventy-five percent of the products that go in and out of TAC are now in reusable totes.
- Changed to an oil waste hauler that will separate the oil from the water and recycle the oil. The quantity of oil/water processed—and waste avoided—is approximately 600 gallons/year.

TAC shares their environmental success stories with other facilities as a member of the Michigan Manufacturing Association, the Michigan and Jackson Chambers of Commerce, and the Jackson Area Manufacturers Association.

Vital Statistics:

Clean Corporate Citizen since: October 5, 1999

Operation: Automotive Parts Supplier

Address:

4111 County Farm Road
Jackson,
Michigan 49201

Jackson County

CLEAN CORPORATE CITIZEN
PROGRAM

VISTEON CORPORATION – Sheldon Road Plant

Visteon Corporation - Sheldon Road reports:

"Since receiving ISO 14001 accreditation in June of 1998 and C3 designation in July of 1999, the Visteon Corporation – Sheldon Road plant has met many milestones on the road to waste minimization and pollution prevention.

Most waste minimization and P2 activities also save money. However, it is nice to see facilities pay the extra amount for intangible rewards. This year we expanded our waste paper recycling program to include all types of colored paper, transparencies, sticky notes, magazines, etc. This program is a new cost to our plan because in previous years we recycled just white paper at no cost.

Our environmental management system has greatly impacted the approval of new projects and overall awareness on how to minimize impacts of manufacturing operations on the environment. Engineers are developing ways to reduce packaging waste – or eliminate it all together – through returnable dunnage. We currently use 90 percent returnable packaging.

One large energy saving project was the elimination of two steam boilers and installation of high efficiency hydronic water heaters for a savings of 6,930 mcf of natural gas a year. Two 30-ton air conditioning units that contained R-22 refrigerant (ozone depleting) were replaced by installing one unit containing R-134A (environmentally friendly). By replacing 400-watt light bulbs with new, high efficiency 360-watt bulbs, we are conserving 518,000 kwh/year for a cost savings of $22,000. We eliminated the use of a maintenance degreaser (spray can) which contained an ozone-depleting substance as well as a hazardous air pollutant for an emission reduction of two tons per year.

Already using 25 percent PCR – 20 percent talc-filled plastic, we will be increasing the talc content of the plastic used on some presses to 40 percent, thus reducing virgin plastic use. We currently regrind and re-use approximately 270,000 pounds per year of our own plastic scrap.

Vital Statistics:

Clean Corporate Citizen since: July 19, 1999

Operation: Automotive Heating/ Cooling Panels

Address:

14425 Sheldon Road Plymouth, Michigan 48170

Wayne County

Visteon Corporation-Sheldon Road Plant, continued:

For pollution prevention week we sponsored a 'Green Kids poster contest' to promote P2 awareness at home and in the workplace. We also sponsored activities for Earth Day, showcasing four alternative fuel vehicles and bringing in suppliers to offer their energy saving equipment for plant personnel to buy for their home use, at a discounted price. The wildlife committee bought 2,000 Norwegian spruce seedlings to hand out to all employees to plant. During bird nesting season, the wildlife committee monitored 26 bluebird houses.

Visteon's slogan is 'See the possibilities.' Sheldon Road is definitely evaluating every opportunity for pollution prevention as we continually strive for environmental improvement."

EMS Close-Up

What is an Environmental Management System (EMS)?

An EMS is a voluntary system for identifying, controlling, and monitoring the regulated and nonregulated activities at a facility that could impact the environment. The EMS concept was developed by industry as a proactive way to:

✓Improve environmental performance beyond that required by regulation;
✓Create a more "level playing field" in environmental control in the world market;
✓Provide a competitive advantage; and
✓Give credibility to environmental programs.

What does an EMS look like?

There is not one single type of EMS but there are standards or formats to follow in developing a system. The most well-known and widely used EMS standard in the United States and the world is the International Organization for Standardization (ISO) standard, ISO 14001. The C3 rules on EMS content were based on ISO 14001. Some of the elements of an EMS are:

✓Operational control through work instructions and procedures;
✓Employee environmental training;
✓Emergency response planning; and
✓Environmental recordkeeping and reporting.

Most likely, a facility already has programs and documents that satisfy most of the common elements. The facility might only need to formalize its procedures and documents so the programs can be managed in a logical and accessible manner.

What are the benefits of an EMS?

A facility can reap numerous business benefits from EMS development in addition to those provided by C3 designation. These benefits include:

- Reduced costs – Facilities that have implemented EMS report improved operating efficiency through the focus on important issues, the development of standard procedures, and through increased employee training.

- Competitive advantage – Consumers and manufacturers are giving preference to products from environmentally responsible suppliers.
- Improved image – The local community, environmental regulators, and environmental groups see EMS development as an indication of a facility's willingness to be a responsible citizen and to go beyond compliance. They will be willing to recognize and reward those efforts.
- Enhanced regulatory compliance – The adoption of procedures and work instructions and the additional training will add consistency and stability to the environmental programs and reduce a facility's liability.
- Improved environmental performance – The systematic identification of potential environmental impacts and the on-going setting and achievement of goals to control those impacts, will ultimately lead to improved performance and a cleaner environment.

For further information on how to develop an Environmental Management System specific to your facility, the Environmental Assistance Division has an *Environmental Management System Guidance Manual* available. The manual is designed in workbook format to take you step-by-step through the process of developing an EMS. Medium and large establishments can use it as a resource to learn more about the necessary elements of an EMS and its value. Contact the Environmental Assistance Center at 800-662-9278 to order a copy.