



## Encouraging Environmental Excellence (E3) — Gold Level Member Crown Equipment Corporation, New Knoxville

On April 22, 2014, Crown Equipment Corporation, New Knoxville became the first member of Ohio EPA's Encouraging Environmental Excellence (E3) Gold Program.

The Gold Program recognizes businesses that exceed regulatory compliance obligations and commit to long-term strategies to reduce waste, lower emissions and improve environmental performance. Facilities interested in pursuing E3 Gold have passed a comprehensive compliance check, implemented and maintain an environmental management system (EMS), have demonstrated a long standing practice of environmental stewardship, and are committed to continuous environmental improvement pursuing annual goals related to waste/emission reductions and other environmental improvements.

Each gold-level participant completes an annual performance report that demonstrates to Ohio EPA and the public its environmental accomplishments over the year, its continued high level of environmental performance and its maintenance of the E3 Gold membership criteria.

### Crown Equipment Corporation, New Knoxville Facility

The Crown Equipment Corporation is a large international corporation that designs, manufactures, distributes and services forklifts, material handling equipment and their components. The company's world headquarters are located in New Bremen, Ohio. The Crown New Knoxville facility (Crown) manufactures electric motors and plastic injection-molded parts for new forklifts and dealer replacement parts. Crown also produces vehicle components for its Encore line of remanufactured lift vehicles. "Crown's goal is to always provide the user with the safest, most efficient and ergonomic lift truck possible to lower total cost of ownership and increase uptime."

### A Tradition of Environmental Stewardship

The Crown Equipment Corporation has been previously recognized in Ohio for its outstanding performance receiving Governor's Awards for Outstanding Achievement for Pollution Prevention in 1993 and the Governor's Awards for Outstanding Achievement in Environmental Stewardship in 2010 for the New Knoxville facility. The facility continues to demonstrate leadership in its environmental activities through its acceptance for membership in the E3 Gold program.

Crown's Environmental Policy, *Crown Ecologic™*, establishes a commitment to conducting business in a way that protects the environment for future generations while complying with environmental regulations and rules. Crown is committed to continually reviewing its manufacturing processes, reducing and eliminating environmental impacts of its business



*Ohio EPA Director Craig W. Butler tours Crown Equipment Corporation's New Knoxville plant and presents flag and plaque to Crown Equipment president, Jim Dicke III.*



### For more information

Crown Equipment Corporation – New Knoxville, 07587  
State Route 219, New Knoxville, OH 45871, Tonja Rammel, EHS Manager, (419) 629-2311,  
[tonja.rammel@crow.com](mailto:tonja.rammel@crow.com).

For more information about Ohio EPA's Encouraging Environmental Excellence program, contact the Office of Compliance Assistance and Pollution Prevention (OCAPP) at 800-329-7518, or visit  
[epa.ohio.gov/ocapp/ohioe3.aspx](http://epa.ohio.gov/ocapp/ohioe3.aspx).

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activities, recycling waste, purchasing environmentally sustainable products, promoting pollution prevention and communicating these principles to its employees, customers and contractors.

Crown has been ISO 14001 certified since January 2010. ~~It has a robust EMS that has identified environmental aspects and procedure guidelines for completing projects that meet the goals and priorities established by the EMS.~~ Crown regularly reviews EMS there goals and has regular audits to identify areas with opportunities for improvement. These reviews help Crown establish their annual environmental goals and objectives.

Through the Encore Program, the facility remanufactures lift truck components including the electrical, structural, drive units, hydraulics, brakes and exterior components to help extend the life of their product. Crown's Life Cycle Analyst helps with the design of their products to help reduce their end-of-life impact.

Crown has been a zero landfill facility since 2009, driving it to continuously work on reducing its waste generation and eliminating wastes from being sent to landfills, saving the facility \$18,000. Helping achieve this goal is a 5 percent reduction in the use of solvent-based cleaners from 2011 to 2012, at times finding that vinegar and water-based solutions worked effectively to clean areas.

Source reduction efforts include operating a parts repair program for their lift trucks, moving to water-based resins from solvent-based resins, using returnable containers for injection-molded and final assembly parts, using 100 percent recycled paper materials and replacing paper towel dispensers in the rest rooms with more sanitary hand dryers.

Crown has a robust recycling program that is prioritized in its ISO 14001 objectives and the Zero Landfill goals. The facility recycles metals, plastics and many other items. ~~scrap steel, copper, aluminum (generated at the facility), plastic bags, plastic bottles, banding, bubble wrap, shrink wrap, injection molding hard plastic scrap, wire ties, unusable parts sent in for remanufacturing, toner and inkjet cartridges and paper.~~ Crown recycled more than 600,000 pounds of material and saved more than \$159,000 for 2012.

Energy efficiency improvements are regularly pursued. Compressed air use was reduced through leak identification, repair and re-engineering blow off guns (10 percent reduction from 2011 to 2012). Lighting upgrades in high bay areas from high pressure sodium to T5 fluorescent lighting systems and in the office from T12 to T8 lighting systems have helped the facility save more than \$9,500. Turning off equipment when not in use has saved more than \$9,000 in energy costs. ~~The largest savings are expected to come with the current project: updating the ejection molding equipment to more efficient models.~~ In 2013, Crown completed a comprehensive energy assessment to help identify new opportunities to improve the facility's energy efficiency and save the facility money.

Employees are encouraged to participate in cross functional teams and through its environmental sustainability team (with participation of top management through line staff) to identify practices that can improve the occupational and environmental safety of the facility. A *SafeSteps* program has also been established to encourage employees to consider environmental and safety opportunities on a daily basis. Employees also have provided many recommendations to help the facility pursue its zero landfill status.

### Environmental Improvement Commitments under the Gold Program

Companies pursuing E3 Gold commit to implementing and reporting on additional environmental improvement activities to supplement the existing environmental stewardship activities. Crown has committed to replace all of its existing

#### Crown Equipment Corporation, New Knoxville is recognized for:

- Having a strong and active EMS that identifies environmental aspects and helps establish annual environmental goals and objectives.
- Being a zero landfill facility since 2009 and saving \$18,000.
- Reducing energy use through compress air reduction, re-engineering blow off guns, lighting upgrades and turning off equipment when not in use.
- Replacing five hydraulic/electrical injection mold machines with four new energy-efficient injection molding machines.
- Implementing an industrial recycling program and switching from solvent-based resins to water-based resins.
- Committing to replacing all of its existing injection molding machines with more energy-efficient models through 2015 and reducing water usage by updating restrooms and sink faucets throughout the facility.

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injection molding machines with more energy efficient models through 2015 and reduce water use through updating the restrooms and sink faucets throughout the facility. These projects are being tracked using 2013 water and energy use numbers as the baseline and will be reported upon annually.