

Encouraging Environmental Excellence:

Examples of Environmental Excellence

Ohio EPA

Office of Compliance Assistance & Pollution Prevention

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Presentation Summary

- Environmental Stewardship
- What is the ***Encouraging Environmental Excellence Program?***
- E3 Bronze Level Case Study
- E3 Silver Level Case Study
- E3 Gold Level Case Study



Environmental Stewardship

- Beyond Compliance
- Based on Pollution Prevention
- Moving towards Sustainability



Environmental Stewardship Defined

*The goal of **environmental stewardship** is to reduce the impact of business activities on the environment beyond measures required by any permit or rule, producing a better environment, conserving natural resources and resulting in long-term economic benefits.*



Encouraging Environmental Excellence Program

- Started in 2011
- Three Levels: Bronze, Silver and Gold
- Currently being revised to be:
 - More clear and straight-forward
 - To focus on key environmental criteria
 - More flexibility for applicants
- Goal is to increase participation



E3: Case Studies

- Bronze Level: Industry Products Company (IPC), Piqua
- Silver Level: MillerCoors LLC, Trenton
- Gold Level: Crown Equipment Corp., New Knoxville



E3: Bronze Level Case Study

Industry Products Company, Piqua

- Family owned business
- Manufacture truck floors, cargo covers, gaskets and other auto related items
- Recognized for recycling, energy efficiency, reuse, EMS and employee participation



E3: Bronze Level Case Study

Industry Products Company, Piqua

- Recycled 70 % of their waste
- Increased energy savings by 36% while expanding
- Alerts customers of potential hazards by providing chemical breakdown information



E3: Bronze Level Case Study

Industry Products Company, Piqua

- Encourage employee participation
- Reuse scrap/waste for production parts
- ISO 14001 certified Environmental Management System



E3: Bronze Level Case Study

Industry Products Company, Piqua

- Annual recycling rates:
 - 42 tons of cardboard
 - 0.3 tons of paper & plastic bottles
 - 43.4 tons of steel & 1.7 tons of aluminum
 - 1.4 tons of copper & 0.3 tons of brass
 - Over 3,300 batteries
 - 610 gallons of hydraulic fluid & 40 tubes of grease
 - Reduced 1,047 MT of CO₂



E3: Silver Level Case Study

MillerCoors LLC, Trenton Brewery

- 2nd largest in brewery network
- Largest in Ohio
- Recognized for:
 - Focused on water use reductions
 - Reduced nutrient discharges
 - Reduced toxic emissions



E3: Silver Case Study

MillerCoors LLC, Trenton Brewery

- Sustainability Assessment Matrix (SAM)
 - Energy & carbon, water, packaging and waste
- Energy & Carbon
 - Reduced air emissions by 34%
 - Saved 1.5 million kWh (\$84,000)
 - VFDs, compressed air audits & lighting upgrades



E3: Silver Case Study

MillerCoors LLC, Trenton Brewery

- Water
 - Record beer ratio of 2.93 hl per hl
 - 3.23 hl per hl in 2013
 - Optimized CIP/SIP steam systems
 - Gray water reuse project
- Water and energy savings more than \$200,000



E3: Silver Case Study

MillerCoors LLC, Trenton Brewery

- Packaging
 - Installed new packaging line (plastic vs. glass)
 - Lowered transport cost and emissions
 - Reduced aluminum can weight
- Waste
 - Recycles/reuses 99% of co-products and waste
 - Converts WW sludge to fish meal
 - Met landfill-free goal in 2 yrs.



E3: Gold Level Case Study

Crown Equipment Corporation, New Knoxville

The logo for Crown Equipment Corporation, featuring the word "CROWN" in a stylized, blocky font with a grey-to-white gradient, set against a dark grey rectangular background.

- Manufactures electric motors and plastic injection-molded parts for new forklifts, replacement parts, and Encore line.
- Crown **ecologic**[™] – environmental policy
Clean Environment. Smart Business.
- ISO 14001 Certified
- Zero landfill facility



E3: Gold Level Case Study

Crown Equipment Corporation, New Knoxville

Pollution Prevention at Crown

- Updating injection molding machines
- Moving from solvent-based to water-based resins
- Re-engineering blow off guns
- Detecting and repairing compressed air leaks
- Energy Efficiency Improvements



E3: Gold Level Case Study

Crown Equipment Corporation, New Knoxville

Looking at the impact of business

- Life Cycle Analyst
-  **encore**[®]
Renewed Lift Trucks
- Returnable dunnage
- Environmentally friendly cleaners
- Purchasing 100% recycled paper materials
- Future commitments



Thank You



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