



ENCOURAGING
Environmental
EXCELLENCE

Encouraging Environmental Excellence Achievement Level Recognition

September 5, 2017

The Ohio EPA Encouraging Environmental Excellence Program targets those who reduce waste, improve efficiency and work to continuously improve as an environmental steward. The program has a four-level approach to provide recognition to Ohio businesses and other organizations completing environmentally beneficial activities. Higher levels of recognition are for those who exceed regulatory requirements or commit to future environmental stewardship efforts. The Achievement Level recognizes any applicants completing environmentally beneficial activities. Any business, trade association, professional organization or local government in Ohio may apply. Achievement Level participants must demonstrate significant progress in one of eight environmental stewardship criteria: Impact to the environment; pollution prevention; energy efficiency; renewable energy; renewable, recovered or recycled materials; green building; recycling programs or organics diversion. Achievement Level participants must also demonstrate some level of progress in at least six additional environmental stewardship criteria and indicate they are in compliance with environmental laws and regulations.

Ohio EPA is recognizing the following organization that successfully met the criteria for the Achievement Level of the Encouraging Environmental Excellence Program. Below is a summary of their efforts.

PRO-TEC Coating Company (Leipsic) – U.S. Steel Corporation and KOBE Steel of Japan established PRO-TEC Coating Company (PRO-TEC) as a 50/50 joint venture partnership in 1990. PRO-TEC currently employs 300 associates and operates a 730,000 square foot continuous hot-dip galvanizing facility. The facility has two continuous hot-dip galvanizing lines providing zinc-coated, advanced high-strength steel sheet products to the automotive and appliance industries. PRO-TEC also has an adjacent 545,000 square foot facility with a continuous annealing line, which also provides ultra and advanced high-strength steel sheet products to the automotive industry. PRO-TEC has operated from the beginning of its existence with an environmental management system (EMS), and chose to formalize its EMS by adopting the ISO 14001 standard in year 2000.

Senior management is committed to environmental performance through its support of PRO-TEC's Environmental Policy. Their environmental goals are to prevent and reduce pollution through established measurable environmental targets and objectives. PRO-TEC is committed to continually improve environmental management activities and processes and evaluate technologies to meet or exceed environmental compliance with all relevant laws, regulations and other requirements, as well as promote conservation of natural resources. PRO-TEC's management supports Putnam County's Medication/Recycling Collection Event that occurs in the autumn each year both financially and through supplying volunteer workers. This event affords residents of Putnam County the opportunity to properly dispose or recycle household hazardous waste.

All associates and nested contractors participate in PRO-TEC's onsite recycling program. Associates make sure that waste materials such as cardboard, paper, aluminum cans and plastic beverage containers are

placed in the proper containers. PRO-TEC has a number of satellite locations in which these materials are accumulated and then transferred to larger boxes for shipment to the recycler. Through this aspect of the recycling program, PRO-TEC diverted over 23 tons of these waste materials from being landfilled in 2015.

PRO-TEC uses significant amounts of water to produce coated sheet steel products and has implemented a number of water conservation measures in addition to recovering, recycling and reusing water. PRO-TEC uses reverse osmosis technology to recycle treated process-generated wastewater so that it can be reused as source water for their processes. Recycled wastewater provides more than half of the galvanizing lines' water needs. To further alleviate the demand for supplied drinking water from the Village of Leipsic, PRO-TEC uses reservoir surface water as its primary source water at one of its facilities. PRO-TEC installed variable speed fan motors to replace constant speed fan motors on its cooling towers to efficiently evaporate heat containing water based upon process cooling demands. PRO-TEC works with a water management consulting company to maximize the number of cycles to reduce the number of cooling tower water blow downs thus conserving water. Wastewater treatment processes recycled approximately 129 million gallons of process wastewater and recovering close to 99 million gallons of water to be reused during 2015.

In 2010, PRO-TEC invested more than \$400 million to build its Continuous Annealing Line to produce strong, highly formable steel that enables automakers to fabricate lightweight parts with increased strength to help meet the upcoming 2025 Corporate Average Fuel Economy standards. They were one of the first facilities in the region to use membrane technology to treat industrial wastewater using ultrafiltration membranes that remove suspended solids, oil and metal complexes from the wastewater to reclaim the source water. This wastewater and water treatment process reduces chemical consumption when compared to conventional wastewater treatment. In 2010, PRO-TEC worked with a vendor to investigate and develop a process using ceramic membranes to recycle and reuse spent alkaline cleaner solution from its cleaning processes. In 2015, PRO-TEC recovered over 2,200 tons of spent alkaline cleaner solution for reuse back in the cleaning process resulting in a calculated savings of almost \$466,000. Since 2010, PRO-TEC has recovered and reused almost 18,000 tons of alkaline cleaner solution for a savings of almost \$3 million dollars.

Molten zinc of the hot-dipped galvanizing process becomes contaminated with metal oxides and iron. PRO-TEC utilizes practices that allow the metal oxides to rise to the top of the zinc pot that are skimmed from the molten zinc surface and placed in molds to solidify. The zinc "dross" is sent to a zinc recycler that processes the material to reclaim the zinc metal. In 2015 PRO-TEC shipped over 4,000 tons to be recycled, which helped reduce the amount of zinc ore that is mined to produce zinc metal.

PRO-TEC has eliminated toxic chemicals such as antimony and hexavalent chromium from its manufacturing process. PRO-TEC used to add antimony bars to its molten zinc bath to produce coated products for certain customers. Also, some customers needed chromium passivation on their galvanized steel products. PRO-TEC made a business decision in the mid 2000's to stop manufacturing these products and therefore eliminated the use of antimony and hexavalent chromium. Previously, PRO-TEC used a petroleum distillate product in its parts washers to remove grease and oil from parts that needed rebuilt. In 2015, PRO-TEC worked with a parts washer vendor to switch to a heated aqueous solution. PRO-TEC thus substituted a non-hazardous chemical product for its parts washing needs.

Motion and occupancy sensing devices are used to control lighting in the office and plant areas on newer buildings while existing buildings have been retrofitted with energy efficient lighting. PRO-TEC continuously investigates how to effectively reduce natural gas consumption. During 2016, PRO-TEC systematically reviewed all roof and wall ventilation louvers to verify that they are effectively closed to prevent heat loss/cold infiltration. In addition, PRO-TEC standardized the thermostat setting for plant environment and comfort makeup air handlers to prevent manual control adjustments. Through September 2016, PRO-TEC has realized an almost 58% reduction in natural gas consumption when compared to the same period in 2015.

For more information about the Encouraging Environmental Excellence Program and the four levels of recognition, visit www.epa.ohio.gov/ohioE3.aspx or call (800) 329-7518.