



2008 Environmental Leadership Program Governor's Awards

Louisiana Facilities Recognized by Governor Bobby Jindal for Projects Demonstrating Leadership in Pollution Prevention, Environmental Management Systems, and Community Environmental Outreach

2006 Pollution Prevention Project Category

(Achievement)

**Cytec Industries Inc.
Fortier Manufacturing Facility
Westwego, LA**

For implementation of a landfill gas recovery project that reduced carbon dioxide and other greenhouse gas emissions by 17,793 tons and saved 306,778 MMBtu/yr of annualized energy in 2006. This project reduced Cytec's energy costs and generated a new revenue stream for the Jefferson parish government from gas royalties.

Cytec's Sulfuric Acid Regeneration Plant began burning "Land Fill Gas" (LFG), a renewable bio-fuel derived from decomposing organic material, in a process air pre-heater on January 24, 2006. The Land Fill Gas, received from the Jefferson Parish landfill through a partnership with Renovar, displaced an equivalent amount of natural gas that would have been burned at Cytec to meet process heating requirements for the pre-heater vessel. Additionally the usage prevented the need for the gas to be burned in a process flare at the landfill. The annualized energy saved in 2006 at Cytec was 306,778 MMBtu/Yr. The annualized net carbon dioxide and other greenhouse gas emissions reduction was approximately 17,793 tons. This emission reduction is equivalent to:

- Removing emissions equivalent to 4100 vehicles.
- Reducing oil consumption by 49,700 barrels or
- Planting 5,800 acres of forest

Overall this project reduced the area's carbon and nitrogen emissions and provided an economic benefit to Cytec and the local parish government.

(Recognition)

**Motiva Enterprises LLC
Norco Refinery
Norco, LA**

For the reuse of 3900 tons of spent alumina catalyst as feedstock to a cement kiln, resulting in a reduction of solid waste disposal to landfills.

This project accomplished the reuse of spent non-hazardous alumina catalyst material. The material was utilized as raw material feed to a cement kiln rather than being landfilled. The amount of this material recycled in 2006 was 3900 tons. The mineralogical value was thereby established. Accordingly, LDEQ has concurred that, when this material is recycled, it meets the criteria as a feedstock (not a solid waste). Managing as a product makes recycling this material a more sustainable practice in the future.

(Recognition)

**Valero St. Charles Refinery
Norco, LA**

For facility equipment upgrades that improve the separation process and further reduce fine particulates. This installation reduces particulate matter emissions by 76 tons/ year helping to improve Louisiana's air quality.

The selected project involved a nozzle design upgrade to the refinery's BELCO® scrubber of the Millisecond Catalytic Cracking Unit (MSCCU) from Electric Dynamic Venturi (EDV) 5000 to EDV 6000. The 6000 design nozzles improve the separation process and further reduce fine particulates from flue gas resulting in a reduction of particulate matter emissions of 76 tons per year. The upgrades demonstrate the refinery's pledge to manage environmental issues while optimizing process controls for its programs and facilities.

2006 Community Environmental Outreach Category

(Recognition)

**Marathon Petroleum Company LLC
Louisiana Refining Division
Garyville, LA**

For assisting the neighboring community with management of an underground storage tank closure and property remediation to reduce the risk to public health and the environment.

Through LDEQ's Voluntary Remediation Program (VRP), Marathon partnered with a local commercial property owner to successfully clean and close two underground storage tanks (USTs). The investigation and closure of the USTs eliminated the potential for future contamination within the community. This also allowed resolution of an outstanding enforcement action between the property owner and LDEQ. Marathon also evaluated the surrounding residential properties and determined that any remaining contaminant concentrations were below LDEQ's Risk Evaluation Correction Action Program (RECAP) non-industrial standards.

2007 Pollution Prevention Project Category

(Achievement)

East Baton Rouge City-Parish DPW Environmental Division Baton Rouge, LA

For converting hurricane debris to clean, cost-efficient energy for local industry, thereby saving approximately 550,000 cubic yards of landfill space and avoiding environmental impacts from open burning.

Over an eight week period the Baton Rouge City-Parish Department of Public Works collected approximately 550,000 cubic yards of woody waste debris resulting from Hurricanes Katrina and Rita and processed it into wood chips for boiler fuel for local industries. Without this project this waste would have been placed in a landfill or burned openly. The City-Parish was thus able to save landfill space and get a beneficial use from the burning of the waste debris material.

(Achievement)

Formosa Plastics Corporation, LA Baton Rouge, LA

For the beneficial reuse of polyvinylchloride wastewater sludge material resulting in a 20% waste reduction saving approximately two million pounds of waste from entering the environment as a waste stream to the landfill.

As a manufacturer of polyvinyl chloride (PVC), Formosa Plastics Corporation - Louisiana was innovative in its approach to effectively reduce its waste. This project allowed approximately 2 million pounds of PVC wastewater sludge material to be recovered and sold as product ideally suited as a component for electrical conduit. This resulted in a **20% reduction** of material that otherwise would have been sent to a landfill. Additionally, this project installed improvements to the upstream part of the Formosa PVC manufacturing process and yielded a **70% source reduction of the waste stream generation, or about 5 million pounds per year**. The efforts of this project, combined with the Environmental Leadership Program subscription to the EPA's waste management hierarchy, actively involved team members from a broad spectrum, including Formosa departments, regulatory agencies, and its customer base.

(Achievement)

**Monsanto Company
Luling Plant
Luling, LA**

For the reduction of 450,000 lbs of waste sent annually to onsite non-hazardous injection wells and the reduction of 6,000,000 gallons of water used annually in the production of Glyphosate Intermediate.

Through a thorough review of its processing steps, Monsanto was able to reduce the volume of water used to wash impurities from centrifuge wet cake in its manufacture of a Roundup[®] herbicide intermediate. This modification reduced the facility's water consumption by about 6,000,000 gallons per year without adversely impacting product quality. Additionally, by reducing the amount of this wash water, the project also reduced the amount of product dissolved in this wash water and subsequently lost to the site's waste treatment facility.

(Recognition)

**Marathon Petroleum Company LLC
Louisiana Refining Division
Garyville, LA**

For the beneficial reuse of concrete and asphaltic roadbed debris for new roads and parking lots associated with construction during the Garyville Major Expansion project. By keeping this material onsite, Marathon prevented several thousand tons and over 1000 loads from being shipped to a landfill.

Marathon successfully recycled and reused approximately 21,000 tons of concrete and 2,500 tons of asphalt in 2007. This material was crushed and used as road sub-base onsite. The crushing costs were offset by the reduction in the quantity of aggregate that would have otherwise been purchased for use onsite. Also, by keeping this material onsite, Marathon prevented over 1,000 loads of material from being shipped via highway and into a non-hazardous waste landfill.

(Recognition)

**DuPont Performance Elastomers LLC
Pontchatrain Site
LaPlace, LA**

For finding an alternative use for coagulated polychloroprene and eliminating the disposal of approximately 800,000 lbs/year of this material. The elimination of this waste stream improves the quality of the environment and conserves landfill space.

The DuPont Performance Elastomers Pontchartrain Site employees successfully implemented the Coagulated Polychloroprene Project to totally eliminate approximately 800,000 lbs/year of waste neoprene rubber from land disposal. The site initiated a project team to eliminate the waste stream and find a beneficial end-use. The project team determined there was a potential market for the waste neoprene rubber and created a list of requirements for buyers to participate. Bids were accepted from interested parties, a buyer was selected, and the purchase of Coagulated Polychloroprene began in June 2007. The Coagulated Polychloroprene project demonstrates DuPont Performance Elastomers commitment to Pollution Prevention and environmental footprint reduction.

2007 Pollution Prevention Program Category

(Recognition)

**Monsanto Company
Luling Plant
Luling, LA**

For implementing the Energy Conservation Team Program to identify ways to reduce total energy consumption within the plant. Through a variety of efforts the project resulted in the reduction of natural gas consumption by 27 percent, steam loss by 58 percent and nitrogen consumption by nearly 200,000 kscf/year plant wide.

The Monsanto Luling Energy Conservation Team was formed to reduce the site's total energy usage and costs, to share ideas, techniques and systems, and to ensure that conservation is maintained in the plant. Through these efforts, the team was able to reduce steam losses by about 4,000 lbs/hr through a comprehensive steam trap survey; reduce nitrogen consumption by almost 200 million cubic feet per year through leak detection walk-throughs and process modifications; and reduce natural gas consumption by 27% in one unit through process optimizations. These efforts collectively have reduced greenhouse gas emissions from the plant's boilers by about 2,800 tons/year.

(Recognition)

**Valero St. Charles Refinery
Norco, LA**

For improvements in environmental performance through implementation of innovative leak detection technology and supplementation of regulatory leak detection programs. Enhanced identification of fugitive emissions promotes pollution prevention and reduces hazards to public health and the environment.

A GasFindIR infrared camera was purchased to detect fugitive volatile organic compounds (VOC) leaks at that may not be visible to workers or detected by Method 21. The GasFindIR

allows for supplemental leak identification in-between monitoring periods which exceeds regulatory compliance requirements. Also, the risks to human health are greatly reduced by the ability to identify leaks and plumes not visible through sight. By utilization of the GasFindIR, Valero prevents several annual tons of VOCs from entering the environment through leaking fugitive components.

2007 Environmental Management Systems Category

(Achievement)

Marathon Petroleum Company LLC
Louisiana Refining Division
Garyville, LA

For demonstrating outstanding achievement in addressing, implementing and certifying the Health, Environment, Safety, and Security Management System (HESS MS) Policy. This policy establishes commitments for building trust in the community, reduction of pollution, and accident prevention.

Marathon's commitment to continuous improvement was evidenced by the enhancements made in their existing Environmental Management System (EMS) in 2007:

- Received third-party certification of its management system in August 2007 and became certified to Responsible Care® Management System standard;
- Implemented a voluntary infrared camera monitoring program to proactively aid in the prevention of unpermitted releases having a potential to affect the adjoining community; and
- Successfully conducted a HESS perception survey of all employees and fixed-base contractors with a greater than 75% participation rate.

(Recognition)

Monsanto Company
Luling Plant
Luling, LA

By attaining dual certifications to the RC 14001 and ISO 14001 programs at the Monsanto Luling Plant, the Environmental Management System moved from a primarily compliance-focused program to include an environmental "footprint" program. Also, with rigorous implementation of the "Plan-Do-Check-Act" model, continuous improvement to the facility's environmental performance is better assured.

In 2007, the Monsanto Luling Plant attained dual certifications to the RC 14001 and ISO 14001 programs. Prior to these certifications, the facility had a mature, robust EMS; however, with the rigorous implementation of the "Plan-Do-Check-Act" model, the EMS was enhanced so that

continuous improvement to the facility's environmental performance is better assured. Through this process, all of the site's environmental aspects were prioritized, so that appropriate goals and objectives could be established. Additionally, with the use of internal and external auditing, progress towards achieving these goals, and the continued environmental improvements provided by the program, are assured.

2007 Community Environmental Outreach Category

(Achievement)

Monsanto Company Luling Plant Luling, LA

For educating the local community and employees about the preservation, protection, and enhancement of area wildlife, as well as maintenance of the native habitat through a series of various educational activities and projects.

The goal of the Monsanto Luling Plant Wildlife Enhancement Committee is to educate employees and the local community about the preservation, protection, and enhancement of area wildlife and maintenance of the native habitat through various educational activities each year. By including the community and employees in these efforts to sustain wildlife, not only within the plant grounds but other local habitats, Monsanto is broadly sharing its environmental values, and providing avenues for community involvement. These efforts culminated with Monsanto receiving Corporate Lands for Learning Certification from the Wildlife Habitat Council (WHC) in 2007.

(Recognition)

Plum Creek Timber Company Project Located in Morehouse Parish, LA

For proactively relocating and managing the habitat of the red-cockaded woodpecker in north Louisiana and creating an interactive group of stakeholders that will work together for the long term conservation of the species and its environment.

Plum Creek Timber Company manages over 500,000 acres in Louisiana. Plum Creek property supports a large population of the federally endangered red-cockaded woodpecker (RCW). In 2006, the company implemented a 20-year plan to create a 12,000 acre habitat conservation area in Morehouse Parish, LA, with the capability to support a minimum of 60 groups of RCWs. Isolated groups of RCWs from Louisiana, Arkansas and Mississippi were caught and relocated to the conservation area. Working with LSU, Plum Creek funded research to determine how the relocated birds assimilate into the conservation area and the existing RCW population. Plum

Creek's RCW management program is an innovative effort that goes well above-and-beyond the minimum requirements set forth by the US Fish & Wildlife Service.

(Recognition)

**Valero St. Charles Refinery
Norco, LA**

For the reduction of e-waste into Louisiana landfills by reusing refurbished computers and distributing them to local organizations for education.

Valero St. Charles employees partnered with several charitable organizations to donate reformatted and refurbished computers as an alternative to landfill disposal. Not only were the electronics a valuable addition to the recipients, but waste generation was avoided altogether. Valero's goal was to fill the needs of local community organizations and encourage education and experience in computer-based skills, while preventing pollution, promoting reuse/recycling and voluntarily exceeding regulatory responsibility.

2007 Special Recognition Category: Mercury Reduction

**PPG Industries
Lake Charles, LA**

For a two year conversion process from Mercury Cell production to a Membrane Cell Unit that provides for the elimination of mercury use, the virtual elimination of mercury emissions, reduced energy consumption and reduced greenhouse gas emissions due to operations. This project supports the Louisiana Department of Environmental Quality's Mercury Reduction Initiative for a cleaner environment and healthier future.

The Membrane Cell Unit is a technologically advanced facility for production of chlorine and caustic. It converts the process from the use of mercury and virtually eliminates mercury emissions, reduces energy consumption by 25%, and significantly reduces greenhouse gas emissions due to operations.