Alcoa Davenport Works

Reducing environmental impacts through conservation

By Courtenay Wolf

Sustainability is a major focus for Alcoa worldwide and that’s certainly true at the Davenport Works. “Aluminum is one of the most recycled products in the world, so sustainability is a natural fit for us,” says John Riches, manager of Alcoa’s Davenport Works. “We’ve been recyclers since the beginning of the industry.”

Aluminum is one of the most available materials in nature; it comes from bauxite, which is refined to create alumina powder. The alumina then goes through a smelting process to produce aluminum. Unlike plastics, aluminum can be 100 percent recycled. That means it can be recycled into the same items—for instance aluminum cans—over and over.

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Alcoa’s Davenport plant is 128 acres of high-tech manufacturing, all located under one roof on the banks of the Mississippi River. In the last decade, Alcoa has focused on reducing its impact on the environment. Since 1988 the plant has reduced toxic air emissions by more than 95 percent. “Back then we had 4.6 million pounds of air emissions,” says Riches. “Now we have 200,000 pounds of air emissions.”

Another big focus is water conservation. It takes 30,000 to 40,000 gallons of water a minute to run the plant. In the past the water came out of the Mississippi River and then went directly back into the river. Now Alcoa has a closed loop system. The water is recycled and reused in the plant and very little water goes back into the river. The plant also has a system to remediate ground water contamination. The

The process of recycling aluminum also includes a process that takes chemicals and other things out of the water so that they can be reused. One by-product of that cleanup is a filter material, which is now being used by the Scott County Solid Waste Commission as a cover material in their landfill. Another project at the plant involves the reuse of a refractory material used to line the ingot plant furnaces. In the past that material went to the landfill; now it is ground up and used as road base.

The Davenport Works is an ISO 14001 facility, meaning it has received an environmental certification. One of the steps the plant took was to convert its diesel vehicles to B20 soy diesel. The plant partnered with Deere and Company to share expertise on the effects of this product on engine use and wear.

In addition to an emphasis on being good stewards of air and water, Alcoa has reduced paper waste and works to educate employees on environmentally sound practices at work and at home. The plant works with local environmental groups such as Living Lands and Waters, an organization dedicated to the protection, preservation, and restoration of the nation’s rivers and watersheds, to provide funding and volunteers for local projects.