Kraton Supplies Innovation at an Eco-friendly Price (Belpre, OH)

The mission of Kraton Polymers US, LLC is to give their customers the edge in innovation, so it follows that Kraton’s manufacturing facility in Belpre, Ohio, has focused on gradual improvements that Technical Manager Tom Mahlberg says will give the company its own competitive edge and help protect the environment.

“As the opportunity arises to replace equipment, we do go to the energy efficient device,” he said in an interview.

Some of the upgrades Kraton has made include motors with variable frequency drives for their compressors and blowers, energy efficient lighting, and improving steam traps. In addition, a new project is underway that will replace the company’s 50-year-old coal boilers with more energy-efficient natural gas-run boilers. This project will also include a turbine that allows the company to generate its own power.

“There is a huge benefit in the switch to natural gas because we are going to be able to generate more of our own power with the new gas boilers, and we’ll be more energy efficient than the old coal boilers,” he said. This will also result in an emissions reduction from a “green perspective,” he continued. Hazardous Air Pollutant (HAP) emissions from the site will be reduced by more than 96% with this new gas boilers project.

Kraton will be taking advantage of Ohio’s shale energy development in-state to source their natural gas. The change in fuels complies with federal regulations from the U.S. Environmental Protection Agency for greenhouse gas emissions (GHG), but Mahlberg says the changes just make sense.
“The main driver for us as a business is the cost savings. There are a lot of factors that go into it, but if you want to add them all up, we’re looking at an $8-10 million per year cost savings [by switching to natural gas],” he said.

Not only has Kraton saved millions of dollars by improving operational efficiency, they have more than tripled their emissions reductions goals.

“We had a goal to reduce our hazardous emissions by 20% from a 2005 baseline and meet those targets by 2015. The new gas boilers are the project that easily accomplishes all that,” he said. Mahlberg says that although he has served as the point person for energy at the Belpre site, he has not forgotten about protecting the environment as well. Under his leadership, Kraton was able to eliminate the use of harmful chemicals in their production processes.

“We had a goal to get rid of our hazardous materials on site, and the two we had used on site were chlorine for water treatment and anhydrous ammonia as an additive in one of our polymer processes—those are highly toxic air-borne materials. We displaced use and no longer have those hazardous chemicals on site,” he said. The gaseous chlorine was replaced with a much less hazardous liquid bleach solution, and the gaseous ammonia was replaced with a much less hazardous liquid form.

Kraton exemplifies a strategic partnership between industry innovation and environmental stewardship. Their Belpre site will help provide cutting edge polymer products to their customers providing an industry model of environmental protection in the years to come.

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-Seaira Christian-Daniels, Voinovich School Scholar, Ohio University Voinovich School (February 2014)