

At Seymour Johnson Air Force Base:



## Proactive Compliance with 2002 Farm Bill Provides Clean Floors, Reasonable Cost and Helps Neighbor's Water Treatment Facility

*"In 2003, we became interested in finding a biobased floor cleaner for several reasons, including that we wanted Seymour Johnson to start getting ready to comply with the preferable purchasing of biobased products provisions of the 2002 Farm Bill," says Environmental Engineer Brian Joyner of the 4th Civil Engineering Squadron, Environmental Flight.*

Joyner explains floor-cleaning detergents used in 30-gallon, walk-behind power scrubbers used on concrete floors in shop and maintenance areas were a logical place to start because Seymour Johnson Air Force Base doesn't have its own wastewater treatment facility. Seymour Johnson wastewater goes to the facility at nearby Goldsboro, North Carolina. "We want to be good neighbors and feel it is our responsibility to make sure our wastewater is as neutral as possible when it goes into the Goldsboro system," he says.



*With the biobased detergent used to scrub concrete floors, Seymour Johnson Air Force Base was able to significantly neutralize the pH and phosphate content of wastewater discharged from these processes into the sewer system and ultimately to the Goldsboro municipal wastewater treatment facility shown here.*



*Scrubbers were operated by Air Force personnel, not a professional cleaning staff, and the results were generally good in the pilot project. Results improved when operators were given specific instructions on proper use of the floor scrubbers by the manufacturer's representative.*



*Skid marks and tough-to-clean oil and grease spills are a significant challenge at Seymour Johnson. The biobased cleaner performs equally with traditional cleaners, is competitively priced and helps neutralize wastewater leaving Seymour Johnson AFB.*

Joyner contacted Cox Industries, Inc. in Wilson, N.C., which makes and sells a biobased floor cleaning product, SoyBase 2000. Cox Industries began developing water-based cleaning products in 1980 and supplies commercial and manufacturing facilities across the state. In late 1997, Cox began testing the use of natural renewable resources such as the methyl ester made from soybeans, and after stringent testing, discovered how effective this solvent could be in blending water-based cleaning products. The Tennant Company (manufactures of the scrubbing equipment) tested and approved SoyBase 2000, as a readily biodegradable product as well as safe for employees and environment.

According to Brooks Honeycutt, Cox's sales manager, the major market for their floor cleaning product is the tire manufacturing industry throughout the nation. "They've found that their manufacturing plant floors are not only cleaned well by this product but also seem to clean easier once it has been used."

Joyner says, "We started with a pilot project at several different locations including an airplane hanger floor, a supply warehouse, an engine shop and a golf course maintenance facility. Hanger and engine shop floors are usually painted white or a very light gray so that any dropped parts or debris will show up well. Each of these test facilities have concrete floors and use forklifts and other equipment that leave skid marks and tough-to-clean oil and grease spills. The scrubbers are operated by Air Force personnel, not a professional cleaning staff."

The results were generally good in the pilot project, but improved when operators were given specific instructions on proper use of the floor scrubbers by the manufacturer's representative. "If the scrubber is not set and operated properly, no detergent is going to be 100% effective," Joyner says.



With continued use Joyner and his colleagues at Seymour Johnson have found the product to be equally as good as traditional cleaners and it is competitively priced.

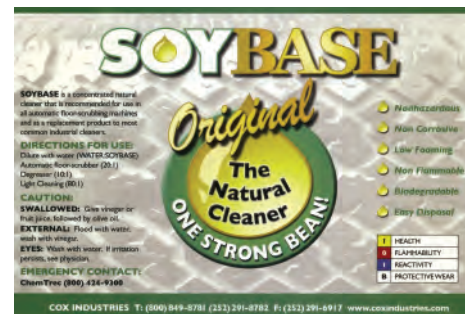
What about wastewater quality? "With the biobased detergent we were able to significantly neutralize the pH and phosphate content of wastewater discharged from these processes into the sewer system and ultimately to the Goldsboro treatment facility," Joyner says.

For this initiative, Seymour Johnson AFB was awarded an Honorable Mention in the prestigious 2005 White House "Closing the Circle" Awards for environmental stewardship. "We're actively looking at other biobased products we can add to our 'shopping list' to further comply with the preferential purchasing provisions of the 2002 Farm Bill," says Joyner.

## FACT FILE

America's farms are just beginning to tap their potential as a source for natural, renewable biobased products that offer benefits to worker health, the environment, America's economy and energy security. To learn more about the many biobased products made from soybeans such as those used at Seymour Johnson facilities go to [www.soybiobased.org](http://www.soybiobased.org).

Because of the potential for biobased products to create new markets for soybeans, U.S. soybean farmers have invested more than \$50 million to research, test and promote biobased products. Much of this work was done through the United Soybean Board (USB), which is composed of 64 U.S. soybean farmers appointed by the U.S. Secretary of Agriculture to invest soybean checkoff funds. As stipulated in the Soybean Promotion, Research and Consumer Information Act, USDA's Agricultural Marketing Service has oversight responsibilities for the soybean checkoff.



Seymour Johnson AFB looks for North Carolina suppliers whenever possible, and chose Cox Industries of Wilson as their supplier of the biobased concrete detergent, SoyBase 2000.

For more information on the use of biobased products at Seymour Johnson, contact Brian Joyner 919-722-7454 at or by email at [Brian.Joyner@seymourjohnson.af.mil](mailto:Brian.Joyner@seymourjohnson.af.mil)

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