

Gulf storms put Koch's water filters to the test

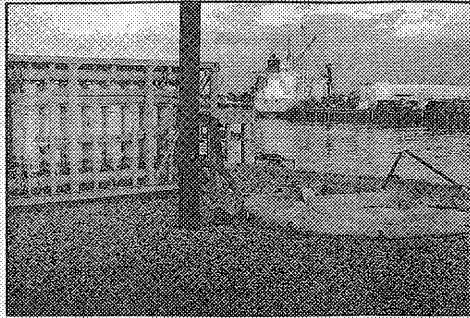
BY PHYLLIS JACOBS GRIEKSPoor
The Wichita Eagle

The patients and staff at Biloxi Regional Medical Center — as well as some residents of hurricane-ravaged Mississippi — have fresh, clean water, thanks to the U.S. military's newest mobile water purification system.

The system — the Expeditionary Unit for Water Purification — turns contaminated water, even sea water, into drinkable water. It uses polymer membrane filters developed by a subsidiary of Wichita's Koch Industries.

Koch Membrane Systems, based in Wilmington, Mass., developed the ultrafiltration cartridges under a contract with the Office of Naval Research Expeditionary Warfare Operations Technology Division. MTC Technologies and Village Marine Tec were awarded contracts to supply the completed systems.

"The idea is to be able to take water with



Courtesy of Village Marine Tec

The storage bladder for the Expeditionary Unit for Water Purification, right, stores polluted water before it is run through a purification unit, left.

most any kind of contaminant and make it into potable water," said John McArtle, director of commercial development for

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Koch Membrane.

"The project was funded by the military and designed to be suitable for deployment to a war front. But it is also useful in emergency situations like we now have on the Gulf Coast."

The system was a pilot project undergoing testing at the Tularosa Basin National Desalination Research Facility in Alamogordo, N.M., when Hurricane Katrina struck.

Within days, a request came from the Federal Emergency Management Administration to send the unit to Biloxi.

"The address we had was, 'Behind the Hard Rock Cafe, Biloxi, Miss.,'" McArtle said.

The unit arrived in Biloxi on Sept. 9 and was treating water from the Intracoastal Waterway two days later.

The purification system has

two main parts. The first uses a polymer filtration material that allows water to flow through but removes all types of dirt, silt, bacteria, and even large viruses. The second part uses a reverse osmosis process to remove the salt from sea water.

Contaminated fresh water can be cleaned at the rate of 200,000 gallons per day, enough to provide drinking water for 40,000 to 50,000 people a day. Salt water treatment is slower, McArtle said, but the system can still purify 100,000 gallons a day.

The new unit can deliver 60 percent more clean water than its predecessor. At the same time, it is smaller, needing 50 percent less floor space. A unit can be airlifted by a C-130 cargo plane or placed on a semi-trailer.

The system can be set up in as little as eight hours and is completely self-contained, needing only diesel fuel to run power generators.

Koch Membrane Systems has been in business for more than 30 years and is a global leader in separation and filtration products. Food processing, life sciences and general manufacturing industries use its products. The company also supplies filtration technology to municipal wastewater treatment plants.

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