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Floating Chemical Destroyer Ready to Sail for EPA

By Joanne Omang
Washington Post Staff Writer

The world's most controversial floating furnace heads into the Gulf of Mexico from Mobile, Ala., this weekend for a major chemical destruction mission, one that could be a pilot voyage toward the future for the nation's chemical wastes.

Although it comes amid bureaucratic "sloppiness and misunderstanding," according to an Environmental Protection Agency official, the trip of the incinerator ship Vulcanus still may prove to be historic: the proof of a waste destruction program on a scale large enough to offer hope of disposing of America's rivers of industrial poisons.

It might also be just another program requiring massive federal backing to get off the ground — or, in this case, out to sea. Critics, including competing companies who want to do the burning on land, argue that the entire concept is being pushed faster than it should be without adequate testing for environmental effects.

The purpose of the voyage is to test the Vulcanus' ability to burn a full load of some of the most toxic, durable and widespread chemical wastes now plaguing the country: oil contaminated with cancer-causing PCBs (polychlorinated biphenyls). Oil containing PCBs was extensively used to facilitate heat transfer in electrical equipment such as transformers prior to being banned in 1979.

If it works, the EPA's goal would be to expand the U.S. fleet of such ships to begin burning at sea the millions of gallons of PCBs and other wastes now being generated, or sitting in uneasy storage nationwide.

The 334-foot converted tanker, owned by Chemical Waste Management Int. of Oak Brook, Ill., will steam to a point 350 miles southwest of Mobile early next week, then move in a large oval that is 175 miles east of Houston at its closest brush with the mainland. The area is out of sea traffic lanes so there is no danger to other boat traffic in that area, the EPA says.

Double furnaces on the stern will consume the oil at about 1,600 degrees centigrade, at an average of 3,000 gallons per hour around the clock for about 10 days.

The 18 crew members plus EPA and other official monitors will wear protective clothing while keeping an eye on the gauges that tell how much carbon monoxide, hydrochloric acid and other gases are coming out of the stacks. If they don't like what they see, they can stop the burn at any time.

But the company predicts that 650,000 gallons of the stuff will be 99.95 percent destroyed in the burn, and that what little hydrochloric acid is emitted in the smoke will be neutralized once it settles in the alkaline sea water. Samples of the gas will be taken during the burn, and tests of the ship's PCB destruction efficiency will be done after it returns to Mobile.

If everything looks good, the ship will make three more voyages over the next six months, burning a total of 3.6 million gallons of PCB-contaminated oil.

The test is taking place under an EPA research permit, which is usually granted only to small-scale projects. That is part of the controversy: competing land-based firms had to prove themselves at more time-consuming and expensive levels and several are annoyed at the Vulcanus' permit.

But Steven Schatzow, EPA's deputy assistant administrator for water regulation and standards, said the large capacity of the ship and the required long, repeated sampling periods made a large burn necessary. A small burn would not have been economical for the ship either, other EPA officials said.

The permit also had no requirement at first that the PCBs be 99.9 percent destroyed, according to Gerald O. Chapman of EPA's marine protection branch, who insisted the requirement be added. Among those who issued the Oct. 23 permit, he said, "the feeling was that the Vulcanus was familiar and they assumed there'd be no problems with it."

Schatzow said that was the result of "some sloppiness and misunderstanding. It had to be changed with a clarification," an amendment to the license that ordered the company to document its work after the first burn.

Incinerator ships, in fact, seem to be the first possible solution to appear since the toxic waste problem reached national consciousness. Americans generated 57 million metric tons of hazardous chemical waste last year and production is going up. Nobody knows what to do with it all.

No one wants the waste dumped in his back yard, no matter how sincere the promises that the landfill will not leak. EPA has documented 9,600 abandoned toxic waste dump sites that need cleaning up, with many more expected to be found. Existing legal disposal sites remain largely unregulated, despite laws intended to control them.

Destroying the junk is clearly better, but burning it raises serious air and drinking water pollution control problems. Only two firms now are permitted to incinerate toxic chemicals on land, both at a relatively low rate of

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