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## ENVIRONMENTAL UPDATE

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### FORT BLISS PUTS OIL/WATER SEPARATOR MAINTENANCE ON WHEELS

By David Jevons

*Fort Bliss Wastewater Program Manager*

Oil/water separator (OWS) maintenance literally hit the road on Fort Bliss, Texas, in an effort to save water, minimize waste generation, maintain compliance and support the military mission.

In spring 2002, Fort Bliss initiated a contract to use an onsite treatment technology developed in Australia and also used in the United States and Thailand. The process uses a “plant on wheels” to separate oil from water using centrifugal, gravitational and inertial forces, like water spinning down a drain.

The program was designed to address recurring complaints by units regarding lack of maintenance of OWS through routine cleaning, inspection and proper maintenance of these structures.

Oil separation is achieved through a five-stage process without using disposable filters. The patented filter is made from the ash of burned sugar cane stalks. A 24-foot truck carries the unit, and an additional smaller vehicle holds equipment to complete the cleaning process. The result meets drinking water standards. The unit can handle 100,000 gallons of contaminated water in an eight-hour day. The treatment process also includes a wash cycle for OWS sediments collected during the process, capturing more oil for later recycling. The cleaned sediments are used for landfill cover.

In addition, the process returns clean treated water to the separator. Previously, the installation recharged the OWS with fresh water and sent the dirty wastewater and sludge offsite. This state-of-the art program contributes directly toward the Defense Department goal of continuous reduction of waste. Moreover, it allows each OWS to be inspected during the treatment process.

The contractor is piloting a way to produce adobe paving tiles from clean sediments. If the test is successful, these pavers could be used in xeriscape landscaping and post beautification projects at Fort Bliss.



*Photo Courtesy Fort Bliss*

Mobile oil-water separator maintenance plant

In addition, the maintenance contractor is integrating site-specific training for proper separator operation based on recently developed maintenance manuals. The U.S. Army Environmental Center OWS train-the-trainer education program led to this initiative.

## BENEFITS OF THE FORT BLISS PROGRAM

- Clean and recycle the wastewater back to the OWS (eliminating the need for OWSs to be recharged with fresh tap water)
- Recover the waste for recycling (oily water is not recyclable)
- Treat the removed sludge to landfill standards (for onsite disposal)
- Clean OWS at least once a year, but as often as required (for one fixed cost)
- Inspect OWSs quarterly and maintain operational status
- Report to Department of Energy (DOE) all volumes of waste removed, recycled, treated and disposed
- Report OWS maintenance and repair problems (to be corrected by DOE)
- Reduce waste disposed offsite, with reduced transportation and disposal liabilities

## WASTE MINIMIZATION

- Water cleaned: 159,650 gallons (previously sent as waste)
- Recycled oil and fuel: 3,350 gallons (previously sent as waste)
- Sediment cleaned: 15,350 gallons (previously sent as waste)
- Oil sludge sent as waste: 150 gallons
- Waste minimization: 99.9 percent

*Note: This data reflects the cleaning of 33 out of 56 OWSs to date.*



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