Stabilization of Contaminated Oil

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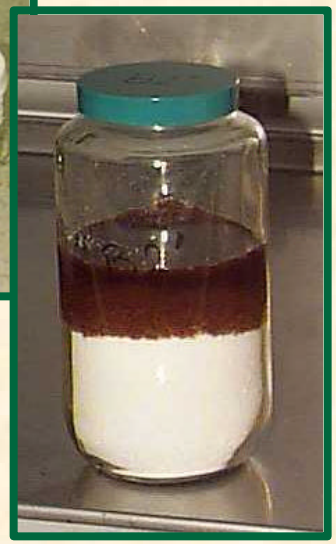
- **A new stabilization method for oils contaminated with high concentration of mercury have been developed by ORNL.**
- **The stabilization technique was demonstrated with contaminated oil from Sandia National Laboratory.**
- **U.S. EPA is evaluating the method as an alternative for incineration.**
- **This was a collaborative effort between three national laboratories and private industry.**

Blending of stabilization agents



Oil penetrating stabilization agent

First Article Tests of a stabilization method for greater than 260 mg mercury/kg oil were performed under a treatability study. This alternative treatment technology to incineration that will address treatment of U.S. Department of Energy organics (mainly used pump oil) contaminated with mercury and other heavy metals. Some of the oil is also co-contaminated with tritium, other radionuclides, and hazardous materials.

The technology is based on blending a heavy metals sorbent powder with an oil stabilization agent to create a shredded-Styrofoam-like material that soaks up oil and stabilize the oil and heavy metals compounds dissolved in the oil. The stabilized oil pass waste acceptance criteria for at some of the waste disposal sites available to the Department of Energy for radioactive waste.