

Until now, the nuclear industry had two types of dewatering systems: those that were complex and expensive, and those that were simple, but of questionable value in meeting disposal site Free-Standing Water (FSW) requirements.

Today, DTS gives you a third and superior choice -- a system that incorporates the assured regulatory compliance of the big "super suckers" with the economy and simplicity of "pump-and-wait" dewatering.

Our High Velocity Vacuum (HVV™) Dewatering System uses a vacuum to remove residual FSW from a disposal liner.

Why HVV™ Works

The Old Way

The air-operated diaphragm (AOD) pumps used for "pump-and-wait" dewatering draw a high vacuum, but a low volume of air.

Water that collects in and around dewatering internals is pulled s-l-o-w-l-y into the dewatering piping. This low volume of air is not enough to pull the water *up* and *out* of the piping unless there is a water seal on the internals. When his seal is broken (with many gallons of liquid remaining in the container) the water drops back down the piping into the container.

The HVV™ Way

In contrast, the HVV™ pulls a high volume of air through the internals.

This powerful vacuuming action pulls any water near the internals into the piping and sweeps it out of the container the same way a shop vacuum sucks water off the floor. An AOD pump given the same task would fail -- as it does trying to remove the last 20 to 40 gallons of water from a disposal liner.



HVV™ Fillhead with Camera

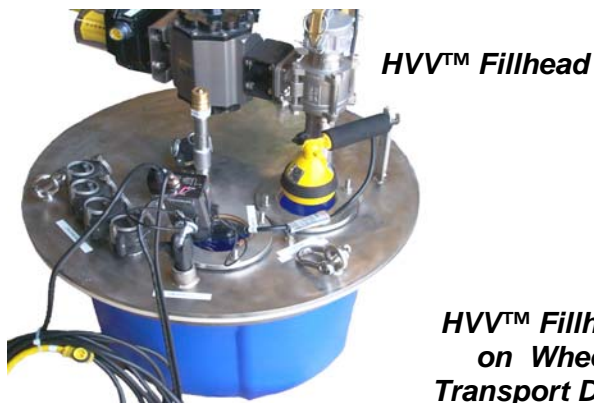


HVV™ Control Skid

Optional Fillhead

While the HVV™ is designed to operate without a liner fillhead, an optional automatic fillhead adds extra control and convenience. It includes:

- color camera and light source
- influent/effluent connection ports
- sluice isolation valve
- thermal monitor
- electronic level monitor
- lifting device (removable lifting post attaches in center of fillhead)
- wheeled transport dolly



*HVV™ Fillhead
on Wheeled
Transport Dolly*



This fillhead mates to the HVV™, or can be used as a "stand-alone" for transferring material to containers.

When the electronic level monitor senses that water/resin has risen to a predetermined point in the container, a pneumatic influent valve automatically closes. This valve can also be actuated with a hand-held pendant. With loss of air or power, the sluice valve actuates to a fail-safe closed mode.

The fillhead's remote and automatic features help reduce exposure to ALARA by making it easy for personnel at a distance from the dewatered liner to monitor and operate the unit.

Dewatering Time

Liners are ready to ship by the second day of HVV™ dewatering.

Elegant Simplicity

This single-unit vacuum has no complicated controls, control panels, blowers, heaters, rheostats, condensers, chillers or other equipment; just an ON/OFF switch. Such simple design makes the HVV™ System reliable and almost maintenance-free.

Compatibility

The basic HVV™ System, dewatering internals, and optional fillhead are compatible with any steel liner or High Integrity Container (HIC) used by the nuclear industry today.

The optional fillhead can be used with the DTS Vinyl Ester Resin In Situ (VERI™) polymer solidification process.

Regulatory Compliance

To assure compliance with disposal site FSW requirements, DTS performed extensive full-scale testing of the HVV™ with liners up to 200 cubic feet in volume.

After a road test simulating a trip to the disposal site, liners dewatered with the HVV™ were checked for FSW and found to comply with site requirements by a factor of 25 to 50 times.

Data from these tests is available for inclusion in your plant's records.

The HVV™ has been approved by the State of South Carolina Department of Health and Environmental Control (DHEC) for dewatering waste for disposal at Barnwell.