

Some of the NAPLs and DNAPLs that react with the NAPL FLUTE system

We, and our customers, have tested the following compounds with our NAPL FLUTE reactive cover:

- Motor oil, gear oil, thread cutting oil
- Gasoline
- Diesel fuel
- Creosote
- Chlorobenzene
- Dichlorobenzene
- Trichloroethylene
- Tetrachloroethylene
- Dichloroethane(also called ethylene dichloride)
- Methylene chloride (also dichloromethane)
- Carbon tetrachloride
- Benzene
- Lindane (an insecticide)
- Acetone
- Xylene
- Toluene
- Dowtherm
- PCBs

These compounds all react with the reactive cover, but in somewhat different fashion. The motor oil, gear oil, Dowtherm, PCBs, and thread cutting oils do not leach the dye from one side to the other, but they do wet the cover to a much more translucent state. It looks like oil on paper. Some oily compounds show extensive staining from the color of the compound. That is especially true for creosote.

The other compounds all leach the dye from one side to the other producing a blotch of mixed color. The trichloroethylene leaches the dye somewhat more aggressively than the tetrachloroethylene, but it is hard to tell the difference when the cover is retrieved. Acetone, xylene and toluene all evaporate very quickly and may leave a muted stain if the stain is not obtained underground and/or under water. There has been a report of the dye being entirely washed out of the cover by a massive stain of TCE, but even then the edges and striped side of the cover show the effect.

The gasoline and diesel fuel leach the dye less aggressively than the other leaching compounds. Consequently, there is extensive wetting of the cover, with wicking for long distances with the fuels, but the dye migration is slower. However, when the cover dries, there is clear evidence that the dye is leached from the front side to the back side by these fuels. Gasoline actually bleeds the red dye stripe more than the other two colors.

If a compound of interest is not listed, a sample can be obtained from FLUTE for testing with that compound. The test should be done with the NAPL FLUTE cover submerged in water to get the realistic reaction. Dripping the compound onto the cover in the air allows rapid evaporation which reduces the effect and is not realistic of the staining subsurface.

A DVD video is available upon request (carl@flut.com) showing the reaction to TCE and gasoline.

For more information on the utility of the NAPL FLUTE system, call 1-888-333-2433.