

LNAPL SKIMMING/ D-12-01

CATENOY (FR)

Origin of the incident

Historical pollution: leakage in tanks of a chemical plant.

Pollution description

- The product has a high viscosity (honey or semi liquid tar type) and crystallizes in cold weather.
- On a surface of a few acres, a floating layer of chemicals and hydrocarbons with a free phase thickness of up to 7 m originally.

Geography and nature of the terrain

- Agricultural zone
- Limestone (chalk)

Variability of the groundwater

- Average depth of aquifer 22 m below ground level
- Seasonal variability of aquifer between 2.5 and 3.0 m over the year

Solution implemented

- ODSI's solution was implemented after encountering many difficulties using other methods of skimming.
- ODSI installed a pumping unit DS 500-12D (specially equipped for skimming at a depth greater than 8.5 m – practical limit for vacuum pumping) linked to skimmers SKIM 2-25 and SKIM 4-25. A settling and storage unit was later added in order to reduce handling and treatment costs for the pumped product.

Results

- The dynamic vacuum suction technique allowed for the skimming of the viscous free phase to the point of discharge, and reduced the free phase to a thickness of less than 10 cm in all wells.
- Over a period of more or less three years, recovery of 11 m³ of pure product, with an average pure product pumping of 9.5 L/day.



Key words

Pollutant
Hydrocarbons
BTEX
Phenols
Chlorobenzenes
VOC

Nb of Wells
8 wells

Depth
22 m

Pumping Unit
DS 500-12D

Skimmers
SKIM 2-25
SKIM 4-25

Location
Catenoy, France

Client
Chemtura/Addivant/AECOM

Date
2012