

DUAL PHASE VACUUM EXTRACTION

OVERVIEW:



DPVE is an in-situ remedial technique that involves the combined extraction of liquids, water, free phase product and vapour from contamination plumes.

Abstracted water and free phase products are separated, the water is treated and either returned to the site or disposed of to sewer. The free phase product is collected and disposed off-site to a recycling facility abstracted vapours are treated to remove VOCs.

Direct extraction – a negative pressure ‘slurping’ tube is installed in the well and LNAPL, groundwater and vapours are drawn out of the ground by the vacuum.

OUR ADVANTAGES:

- Cost effective in-situ approach
- Treatment plant has a small footprint on site
- Excellent technique for medium open textured granular soils but can be adapted to a wide variety of soil types and ground conditions
- Can address free product, vapours and dissolved phase
- Can be used to lower the water table

TECHNIQUE:

Vapour and liquid can be withdrawn together under a vacuum using a down well stinger (called slurping) or separately; extracting the liquid with a submersible pump and the vapour with a soil vapour extraction unit.

Vacuum-enhanced recovery is achieved through use of an extraction tube situated in a recovery well. Vacuum is applied to the well using a single above ground vacuum pump, and the LNAPL is removed from the well.

Free product is removed via a Knock Out chamber from where it will be pumped (using a pump built into the chamber) to a suitable container for off site disposal. Vapours are transported to an ‘off-gas’ treatment system, where volatile organic compounds are stripped out by scrubbers or a granular activated carbon filter. Vapour free air is released from the treatment system, spent filters are sent for regeneration.