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Application Note #4

Free Product Well Development

Historically, Free Product Recovery Wells have been designed with Total Fluids recovery in mind. The recent implementation of the RBCA regulations (Risk Based Corrective Action) has given the Environmental Consultant the opportunity to focus on recovering ONLY the Free Product LNAPL) on many sites. The historical problem with Free Product ONLY recovery is very low production rates and limited range of influence. The purpose of this Application Note is to address one of the causes and its remedy for low production rate. If you are planning to recover ONLY Free Product (LNAPL), the location where well development is to be performed must focus on the vertical zone where the Free Product is going to enter the well.

Vacuum Assisted Well Development of LNAPL

This method of well development is accomplished by applying a strong vacuum to the recovery well to lift the static water level up several feet in the well. While the vacuum holds the water level at an elevated height in the well, place a surge block in the area just above the static water level to loosen the smeared well boring and remove the silts from the well annulus. The amount of time to develop a well can vary from 10 minutes to 30 minutes depending on the soil type. This method will require a vacuum source (e.g. 50cfm @ 80 inches of water) and a special well cap for the surge block cable.

Vacuum Assisted Well Development

