



## **Case Study: IL Gas Station**

### **Project Summary**

In-situ biological was applied at a former gasoline service station in Central Illinois. The geology consisted of a largely excavated area filled with pea gravel, underlain with a clay layer. The bulk of the contamination was sorbed phase material in this layer as well as the aquifer directly underneath. Contaminants including benzene, toluene, ethyl benzene and xylenes (BTEX) were found in the both of these zones as well as outside the property boundaries. Slight amounts of free product were observed during the initial injection event.

This site utilized a 4-phase in-situ biological injection program. This program targeted the predominant sand between 8-10 feet. IET's liquid petroleum degrader, oxygen sources and nutrient blend were utilized during these phases. This was both to inoculate the site with the necessary pseudomonas as well as to prevent oxygen depletion. The injection process began down gradient moving toward the source area in an effort to reduce plume migration and to act as a passive barrier. These phases were conducted approximately 100 days apart.

### **Outcome**

Over a period of 24 months, the plume on this site has contracted back to the immediate source area, total BTEX concentrations have been reduced from over 61 mg/l to levels under detection limits. This site is closed.

“A resource for environmental professionals seeking innovative remedial alternatives.”