

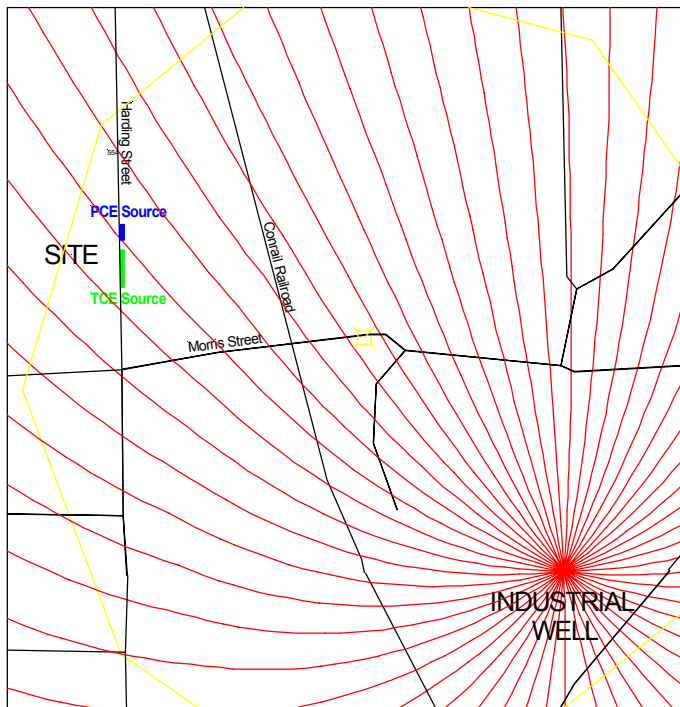
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## CASE HISTORY

### Groundwater Flow Model Used to Predict Contaminant Migration Pathway for Risk Assessment



#### **Challenge:**

An industrial property was acquired by the City of Indianapolis as a part of a roadway expansion project. The former Continental Lumber site had been used for various purposes dating back to the early 1900s. Preliminary environmental testing indicated levels of perchloroethylene (PCE) in groundwater beneath the site greater than those allowed by the State's Voluntary Remediation Program (VRP) for Nonresidential sites. The PCE in the groundwater appeared to be migrating downgradient, off-site, and impacting adjacent property owners.

#### **Action:**

MUNDELL personnel assisted the City in entering the site into the VRP and began working to establish site-specific levels of PCE in groundwater that would be protective of human health and the environment. As a part of this assessment, MUNDELL personnel performed analytic element two-dimensional analytical groundwater flow modeling and particle trace analysis to determine the potential receptors of any PCE moving off-site. Of particular concern were the potential impacts to nearby industrial pumping wells.

#### **Results:**

The results of the groundwater modeling study and particle trace analysis indicated that the PCE plume did not present a measurable risk to nearby industrial pumping wells. The site-specific risk assessment established a higher concentration of PCE in the groundwater than the standard State guideline, which would still be protective of human health and the environment. This site was approved for a "monitoring only" Remediation Work Plan and is currently under review for final approval and closure.