Ivey International Inc.

Case Study: Monroe, Connecticut, USA

Monroe Facts:

- Former heating oil terminal from the mid-1950's to the late 1970's
- No. 2 fuel oil was stored at the site
- Multiple releases occurred over time
- Site and surrounding area are wetlands, with the former terminal area elevated with fill material for commercial use
- Irregular fill consisting of sand, silt, gravel and boulders with some timbers and metal buried throughout the site
- Sensitive receptors are adjacent stream and down-gradient potable wells
- High vacuum (dual phase) extraction system in use at the site since late 1999
- Selective Phase Transfer Technology (SPTT) system installed in May 2002
- Monthly SPTT injections commenced in May 2002

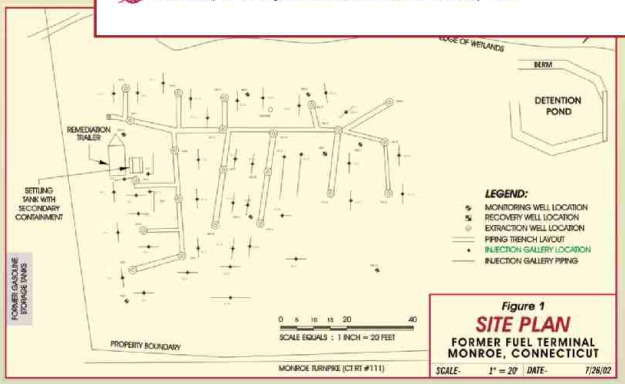
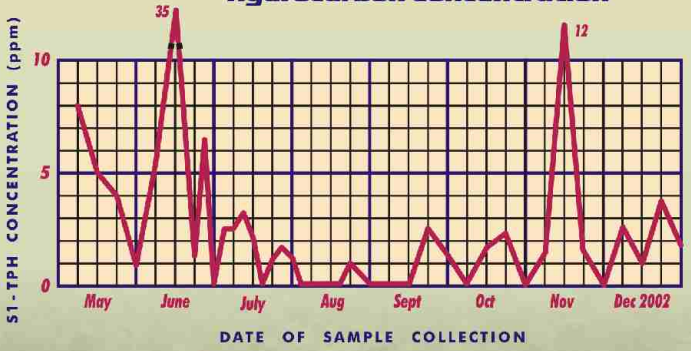


Figure 1
SITE PLAN
FORMER FUEL TERMINAL
MONROE, CONNECTICUT

Site Images

Influent Total Petroleum Hydrocarbon Concentration



Conclusions:

- Mass Recovery = Flow Rate x Concentration
- Mass Recovery (pounds per day) = gallons per minute (gpm) x mg/l X 0.012
- 3.785 l/gal x 1 lb/454,000 mg x 1440 minutes/day = 0.012
- Mass Recovery prior to the injection period is based on an average influent concentration of 0.75 mg/l
- 8 gpm x .075 mg/l x 0.012 = 0.072 lbs/day = 3.269 x 10^4 mg/day (prior to SPTT use)
- Mass Recovery during the injection period is based on a concentration average calculated using the post injection peak concentrations of 3.07 mg/l
- 8 gpm x 3.07 mg/l x 0.012 = 0.29472 lbs/day = 13.38 x 10^4 mg/day (during SPTT use)
- **Pre vs. post injection mass removal rates show an increase of 409.3%**

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