

CORROBORATIVE DATA REDUCES WELL INSTALLATIONS

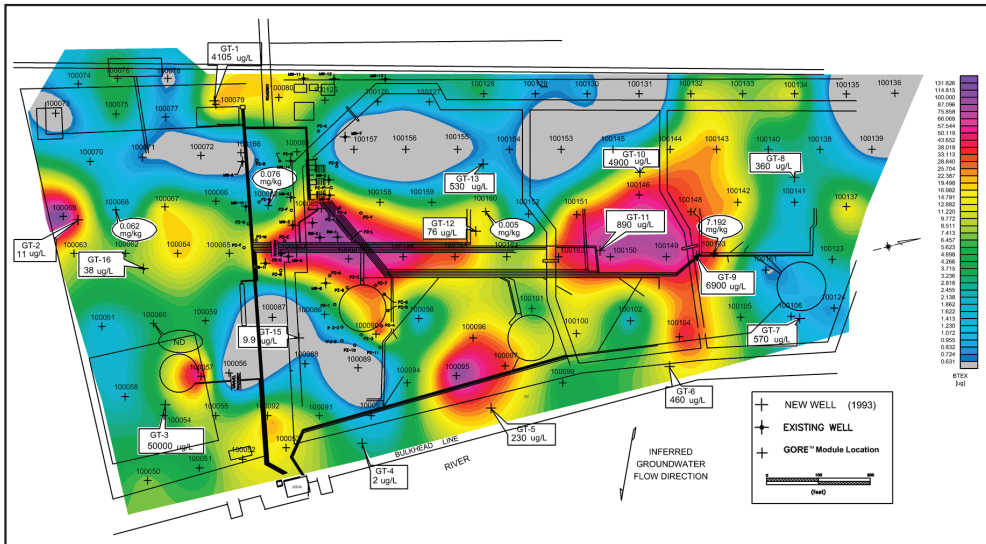


Figure 1. BTEX distribution in soil gas (μg), along with corresponding groundwater ($\mu\text{g}/\text{l}$) and soil (mg/kg) data.

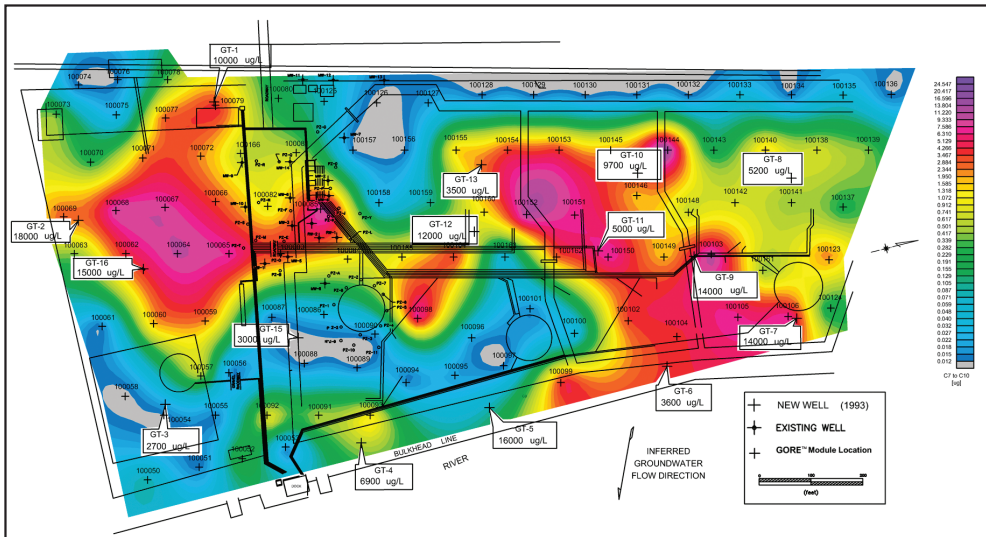


Figure 2. Light diesel range alkanes distribution in soil gas (μg), along with corresponding groundwater ($\mu\text{g}/\text{l}$) data.

Survey Summary

Location: Northeastern US

Property: Active fuel storage terminal

Objective: Optimize monitoring well site selection

- AGI Survey data delineated contamination accurately
- Excellent agreement between AGI Survey and soil and groundwater data
- Number of regulator-required wells reduced to 15, down from 33
- ROI: ~\$100K installation savings; \$100K annual O & M savings

Survey Objective

With conventional soil and groundwater data in hand, property owners were facing the hefty cost of installing 33 monitoring wells. The AGI Survey was initiated to help provide a more accurate delineation of site-related contamination, for optimized – and minimized – well installation.

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Site Background & Geology

- Active fuel storage terminal and distribution facility, Northeast US
- Fill materials, mixed silts and clays
- Groundwater depth: 4 – 20 ft., E/NE flow toward adjacent river

AGI Survey

- 100 AGI passive samplers over 33 acres
- Regular grid, 100 ft. spacing, 3 ft. deep
- 21-day exposure
- Modified EPA method 8260/8270 GC/MS analysis at Gore labs

Survey Results

The results from the module analysis are presented on the accompanying contour maps (Fig. 1 and 2). Corresponding groundwater data are also posted on each map and reveal excellent comparability between the datasets at most locations. In addition, data from soil sampling conducted during the installation of four of the AGI Modules are also presented on the map of BTEX.

Survey Conclusions

The AGI Survey was successful in delineating the overall extent of the subsurface impact at the fuel storage terminal. The groundwater and soil data compared favorably with Gore's soil gas data across the site.

Based on these correlated sets of data, the initial site characterization work plan was modified. The state regulatory agency approved reducing the number of monitoring wells from 33 to 15.

Return on Investment

The savings associated with eliminating 18 wells was estimated to be \$100,000* in construction costs alone. Long-term operation, maintenance and monitoring savings were estimated to be \$25,000 quarterly.

* Based on 1995 data.