

Groundwater Monitoring Network – Gas Plant Facility

Project Summary

Baseline Water Resource Inc. (Baseline Water) coordinated the installation of a plant-wide groundwater monitoring well network at a gas plant facility. The monitoring wells were installed to satisfy the terms and conditions for groundwater outlined in the approval process required by the Alberta Environmental Protection and Enhancement Act (EPEA).

Based on a review of existing hydrogeological information, Baseline Water coordinated the installation of eight additional groundwater monitoring wells throughout the site. During drilling, soils were continuously logged and sampled, and organic vapour concentrations were measured. Once static water levels were established, hydraulic conductivity testing was performed and water levels were used to identify the local groundwater flow regime. Baseline Water supervised all contractors and ground disturbance activities.

Baseline Water conducts semi-annual groundwater monitoring at all plant monitoring wells. During each event, groundwater samples are submitted for laboratory analysis. A detailed geochemical analysis was performed to assess the source of groundwater chemical constituents. The results of the analyses are compared to Canadian water quality guidelines and exceedances are noted.

Outcome

- Site-wide groundwater monitoring well network to satisfy licence approval
- Identification of potential site contamination
- Development of temporal water chemistry data for future comparison
- Assessment of the source of groundwater chemical constituents

