

CASSELMAN WINDPOWER

Somerset, PA



- **Owner:**
PPM Energy, Portland, OR
- **General Contractor**
Wallbridge East, Pittsburgh, PA
- **Technique(s) Utilized:**
Micropiles

Nicholson installed 192, 9 5/8-inch micropiles for eight new wind turbine foundations 60 miles southeast of Pittsburgh. Each turbine foundation required 24 piles for a total of 14,400 lineal feet. Nicholson performed a compression, tension, and lateral load test on sacrificial piles. The micropiles were installed from the existing grade prior to excavation of the pile caps.

Micropiles were the ideal foundation option because the turbines were being constructed over mine spoils. In general, micropiles are applicable when there are problems with using conventional deep foundation systems like driven piles, drilled shafts, or augercast piling. These problem conditions include: natural or man-made obstructions, sensitive ground with adjacent structures, limited access/confined spaces and karst geology.