

Great Lakes 1998 Expansion Project

Great Lakes Gas Transmission Company

In July 1996, Great Lakes Gas Transmission Limited Partnership filed a FERC application for the construction of segments of pipeline loop and additional compression. The expansion would permit the transport of an additional 126 Mcf/d of natural gas between Emerson, Manitoba, Canada and St. Clair, Michigan.



The project included the construction of three 36-inch mainline loop segments totaling 71.5 miles, the installation of two 7,400 hp, Solar Taurus 70 compressor units, replacement of an aerodynamic assembly and the construction of aboveground ancillary facilities. As the project progressed, the reconditioning of 31 miles of main and loop line was added to the scope.

In May 1996, Willbros began their support of the FERC application by providing preliminary engineering for the compressor station additions.

- Plot plans for the existing and planned facilities, indicating the size and location of new compressor and MCC buildings, high-pressure piping and other prominent features
- Facility gas piping pulsation analysis for the suction and discharge systems
- Geotechnical information
- Individual station power studies to determine adequacy of existing electrical support systems
- Evaluation of pre-turbine noise suppression enclosures versus building acoustical enhancements
- Specifications for turbo compressors, project schedules and cost estimates

*Project Award
June 1996*

*Project Completion
June 1999*

United States

In addition to providing engineering, procurement and construction management for the pipeline expansion and reconditioning, services also included route reconnaissance and aerial photography, survey, mapping, drafting, right-of-way acquisition, preparation of hydrostatic test plans, development of construction bid drawings, environmental permit assistance and construction inspection.

Detailed design, procurement, construction management and inspection services were provided for the horsepower additions and facility upgrades. The design for Compressor Station 12 included the innovative use of bridge grating for the floor over the basement. The design not only saved money, it allowed more headroom in the basement to assist in the placement of piping.

The pipeline portion of the project required numerous river crossings, including the Mississippi, the Schoolcraft and the Necktie. The North, Middle and South Branch of the Two Rivers were crossed and multiple crossings of the Pokegama River and the Nemadji River were installed.