



With pipeline systems expanding, it can seem difficult to keep up with both day-to-day operations and expansion projects. Barr's multidiscipline professionals can help, whether you need an environmental investigation and cleanup, wetlands assistance, air and water permitting, or structural, geotechnical, electrical, and piping design. Our more than 700 engineers, scientists, and support staff can make expanding your business a less formidable challenge.

route permitting

Obtaining the necessary permits to site and construct a new pipeline can involve jumping through numerous regulatory hoops. To make this process manageable, you need a consultant who knows the ins and outs of working with regulators. Our expertise in numerous areas related to permitting and regulatory approvals means we can help you quickly obtain the permits needed for new pipeline corridors:

- site and route selection
- GIS analysis
- coordination with regulatory agencies
- environmental impact statements and environmental assessment worksheets
- negotiations with landowners
- wetland permitting
- vegetation management plans
- public meetings
- evaluations, surveys, and permitting for threatened and endangered species

engineering, procurement, and construction

Barr assists pipeline companies with engineering procurement and construction services. In particular, we provide geotechnical, civil, structural, mechanical, and



At a pipeline client's terminal, Barr provided project management and electrical, mechanical, and structural design for a custody-transfer manifold.

electrical engineering. We also help procure materials and contractors, typically as an agent of the owner; our services include construction observation and coordination, contract management, and construction documentation. In short, we can take your project from project conception to construction completion. Our staff members routinely assist pipeline clients with project implementation within operating terminals, coordinating with internal asset owners such as terminal managers and operators. Barr's experience encompasses:

- structural design for foundations and catwalks
- on-site and off-site drafting
- cost estimates and funding-request documentation
- design of secondary-containment systems
- stormwater management
- construction management and observation
- pipeline and tank inspection and integrity testing
- evaluation and excavation of pipeline network anomalies
- review of third-party right-of-way encroachments
- design of pipe-support systems and pipe relocations

environmental investigation and remediation

If a pipeline release occurs, Barr can help you plan and implement investigations that tell you what you need to know about soil and groundwater conditions, including the nature and extent of contamination, contaminant fate and transport, and potential exposure pathways and receptors. Our investigations produce answers, not questions, and we provide solutions that take into account naturally occurring biodegradation and other attenuation processes, as well as current or intended land and water use. We can help you with:

- product recovery assistance
- soil excavation
- water treatment and discharge
- groundwater monitoring and sampling
- regulatory coordination
- soil management plans
- soil and groundwater remedial design
- site restoration
- natural-resource damage assessments

air quality permitting

Pipeline construction and expansion projects often require air quality permitting. Barr can assist with obtaining new construction permits and modifying existing operating permits. We'll work with you to get it right the first time, and develop permit applications that minimize regulatory back-and-forth. We provide:

- compliance-management systems
- dispersion modeling
- air toxics emission inventories and risk assessments
- permitting assistance

wetlands assistance

When wetlands are affected by pipeline operations, a number of state and federal regulatory agencies may get involved. Barr's wetland specialists know the issues and

the regulators, and we can help you develop effective ways to solve your wetland issues. We use advanced evaluation techniques and modeling tools, giving you answers that will help convince regulators. We integrate engineering, environmental, and community relations expertise to provide you with a total solution that meets your needs, including:

- wetland delineation
- wetland mitigation
- permitting assistance



Barr provided next-day assistance on a crude oil release (top) at a wetland and helped restore the site (below, five years later).