



Credere Associates LLC

Theresa Patten, PE

President

PROFESSIONAL REGISTRATIONS

Professional Engineer:
ME #8694

EDUCATION & PROFESSIONAL ACTIVITIES

- 🏠 **M.S.**, 1993, Civil Engineering (Environmental Geotechnologies), Tufts University
- 🏠 **B.S.**, 1991, Cum laude, Civil Engineering, Rensselaer Polytechnic Institute
- 🏠 Member, American Society of Civil Engineers

HIGHLIGHTS OF EXPERIENCE

Ms. Patten is a geotechnical and environmental engineer with over 10 years of engineering experience. In September of 2007, Ms. Patten founded the women-owned business of Credere Associates, LLC. Shortly after establishing Credere, Ms. Patten and her partner acquired the Portland, Maine office of Jacobs, Edward and Kelsey. Ms. Patten currently serves as owner and President. She oversees the daily operation of the office and is principally in charge of the financial and business development of the company. Ms. Patten will serve as the senior reviewer and Principal-in-charge for various on-going projects for Credere.

Ms. Patten’s past engineering experience involved a variety of geotechnical and environmental projects including landfill design and construction, geotechnical engineering evaluations and construction, and hydrologic design and evaluations. Her project responsibilities have included managing, coordinating and conducting field work associated with geotechnical and hydrogeologic investigations; observing and documenting construction activities and providing construction quality assurance; performing calculation to support geotechnical and solid waste design projects; performing a variety of geotechnical and hydrological computer analyses; developing geotechnical and civil design recommendations; and report writing. Ms. Patten also has experience in coordinating and scheduling junior staff and subconsultants. Projects, which highlight Ms. Patten’s experience, include:

PROJECT EXPERIENCE INCLUDES:

BROWNFIELDS PROJECT MANAGEMENT:

Project Management, Eastern Fine Paper, Brewer, Maine: The project involves the “fast track” redevelopment of a mill site into a modular manufacturing facility. Ms. Patten is responsible working with the Maine DEP to meet the requirements of the No Action Assurance Letter. The deliverables include developing a groundwater and soil management plan including a long term pore water monitoring program, weekly construction reports, final closure reports. Other responsibilities included dealing with the financial complexities of a Brownfields project, responding to site/project changes, responding to Maine DEP requests, and coordinating writing, and reviewing reports

GEOTECHNICAL ENGINEERING

Project Manager/Engineer at various projects. Ms. Patten has coordinated and conducted field work associated with geotechnical evaluations at numerous sites encompassing a wide range of subsurface conditions from deep deposits of sensitive soft clay to bony till. Field work has comprised of completing test boring and test pit programs including logging subsurface conditions, classifying soils, conducting in-situ field vanes, collecting undisturbed Shelby tubes and/or bedrock core samples, installing piezometers, inclinations, and settlement plates associated with settlement monitoring programs. Ms. Patten evaluated subsurface conditions; estimated anticipated settlement based on consolidation test; evaluating clay strength and stability of embankments; calculated the allowable bearing capacity of the soil; and developed recommendations for both shallow and deep foundations, retaining walls, pavement sections, reuse of on-site soil materials, and earthwork construction. Ms. Patten provided construction quality control, coordination of soils laboratory testing; performed field moisture-density test of compacted fill. Prepared daily field reports summarizing the contractor’s activities, results of field

density test, and any additional field recommendations

GEOENVIRONMENTAL ENGINEERING/INVESTIGATIONS

Landfill Groundwater Monitoring, Auburn, Maine. The project involves long term monitoring of water quality at two land fill sites. Ms. Patten oversees the coordination of field work and report writing, evaluates and interprets water quality data, relative to data validation, general water quality trends, and applicable water quality standards.

Remediation to support Defense Fuel Supply Center Closure, Harpswell, Maine. The project involved the evaluation and remediation of a site where releases of gasoline and JP-5 jet fuel have contaminated overburden and bedrock aquifers.

Remediation of Contaminated Gasoline Station, Kennebunk, Maine. The project involved the remediation of a site where approximately 58,000 gallons of unleaded gasoline were released into the subsurface and was responsible for contaminating overburden soils and adjacent wetlands.

Landfill Supplemental Assessment and Continuing Groundwater Monitoring, Lebanon, Maine. Coordinated and conducted field work associated with a supplemental hydrologic assessment of a landfill site, including observing and logging the installation of two bedrock groundwater quality monitoring wells.

Review of Landfill Facility Groundwater Quality Monitoring Data, Lewiston, Maine. Ms. Patten evaluated and interpreted water quality data, generated during environmental monitoring of a secure and an attenuation solid waste disposal facility, relative to data validation, general water quality trends, and applicable water quality standards.

CONSTRUCTION QA/QC

Bath Iron Works, Bath, Maine. This long term design-build project involved the design and construction of three shipways on filled land in the Kennebec River, as well as new dry dock and landing facilities. Ms. Patten conducted field work associated with geotechnical evaluation including off shore drilling to support the design of a land level transfer system, evaluated subsurface conditions and performed preliminary stability calculation of underwater slopes. Ms. Patten managed and coordinating field staff to provide construction quality assurance for geotechnical aspects of construction, including bedrock probing, blast monitoring, removal of unsuitable dredge material, caisson construction, cofferdam cell construction, precast concrete pile installation, and pile driving. Ms. Patten prepared and/or reviewed daily field reports documenting contractors' activities and engineering recommendations. Ms. Patten dealt with the day to day management of this 2-year construction project which had up to 12 people covering contractors activities on a rotation schedule, 24 hours and day, 7 days a week.

Site Improvements, Rutland, Vermont. The project involved the renovation of an existing shopping plaza and associated parking areas at the site of a former railroad yard known to have contaminated soils.

Leachate Force Main and Access Road Construction, Rochester, New Hampshire. The project involved the construction of an approximately 2-mile long access road for a municipal solid waste landfill, installation of leachate force main, and construction of storm water management system.

Soil Management Program, Cambridge, Massachusetts. Ms. Patten was responsible for implementing a site soil management program which involved field screening excavated soil for volatile organic compounds and organizing stockpile areas according to contamination level.

SOLID WASTE ENGINEERING

Design Calculations to Support Construction and Closure Multiple Special Waste Landfill Units, Norridgewock, Maine. The projects involved the design of multiple secure, double-lined special waste landfills overlying deep, sensitive clay and abutting a municipal solid waste landfill which had a massive failure in 1989. Used HELP water balance model and other analytical techniques to predict head build-up on and leakage through the barrier components of the liner and cover system. Assessed anticipated capacity of the drainage system, sized leachate collection system components, and assessed filtration and clogging potential of the specified geotextiles. Performed pipe strength calculations; estimated pumping times following storm events; and estimated sump volumes and pump cycles. Performed static liner and cover stability analyses and seismic displacement analyses. Developed preliminary final grading plans based on post-cyclic static stability analysis with reduced clay shear strengths based on the earthquake induce strains. Performed static stability analyses to support recommended fill heights and to develop preliminary final grading plans. Performed calculations to support the design of a road to be constructed over the composite landfill cover system, including required subbase thickness, anticipated pressure on the geomembrane, geomembrane and GCL puncture resistance, and road stability.