



OHI Engineering, Inc.
Engineers and Environmental Scientists

Lyons Witten, PG, LSP
Senior Project Manager

Education

University of Colorado, B.A. Geology, 1983
University of Massachusetts, M.S. Geology, 1994

Certifications

Certified OSHA 40 Hour Hazardous Waste Site Operations (CFR 1910.120), 1986
OSHA 8 Hour HAZWOPER Annual Refresher, 1987 to present
OSHA HAZWOPER Supervisor's Course, 2002 and 2012
Amtrak Contractor Employee Safety Training, Certificate No. 1456

Licensure

Professional Geologist in New Hampshire
Licensed Site Professional (LSP) in Massachusetts

Qualifications

Mr. Witten has over thirty years of professional experience in groundwater- and hazardous waste-related projects. His expertise includes: Phase I and II hazardous waste site investigations; management of Underground Storage Tank removals; site remediation including remedial system design, permitting, and installation; and permit filings under numerous state environmental statutes. He has overseen hundreds of assessment and remediation projects that included in-situ chemical oxidation, pump and treat, vapor extraction, excavation, stabilization, and bioremediation remedies. He has experience in numerous projects for both public and private clients that involve the interaction of water supply wells and hazardous waste sites.

He has served as the Licensed Site Professional (LSP) of record for numerous response situations where the release of oil and hazardous materials required the implementation of sound response actions in compliance with the Massachusetts Contingency Plan (MCP), many which also involved the Wetlands Protection Act and required authorization of local Conservation Commissions. The releases included: releases of gasoline and fuel oil from underground and above ground storage tanks at residential, commercial, and industrial facilities; historical releases of oil and hazardous materials (OHM) at industrial, commercial, and petroleum facilities; and historical releases of heavy metals at former industrial facilities.

Mr. Witten has also completed numerous water supply projects that involved field investigation and permitting for new and expanded water supply sources, pump tests, computer modeling of small-scale and town-wide aquifer systems, and Site-specific mapping of aquifer materials for various permitting needs. His expertise in this area lies in field testing, permitting, and computer modeling.

He has prepared hundreds of environmental site assessments in Massachusetts, Vermont, Connecticut, New York, New Hampshire and Maryland in compliance with ASTM standards or client specifications. The projects were completed for private parties, public entities and, small and large lending institutions.

Mr. Witten has served on a Planning Board, been a Town Meeting Member, and has extensive experience in coordinating, attending and presenting at public meetings and hearings.

Project Experience

Hydraulic Fluid Release

LSP-of-Record for cleanup of this long-term release of hydraulic oil from two industrial air compressors. The units discharged a mixture of oil and condensate to the ground surface for up to 30 years. Impacted soil was excavated and recycled into asphalt. Groundwater had not been impacted. The remediation was conducted under the Limited Removal Action clause of the MCP, allowing remediation to be completed without formal notification to the DEP.

Remedial Feasibility Investigation (RFI) Site

Conducted soil and groundwater sampling, developed new monitoring wells, conducted slug and pump tests, and assisted with waste management during a RCRA remedial feasibility investigation (RFI) at a large Connecticut defense manufacturing facility.

PCB Investigation Site

Project Hydrogeologist on a petroleum remediation site involving Underground Storage Tank removals, product recovery by pump and treat methods, and PCB contamination. This relatively simple remediation project for a private food service industry client was complicated by cross-contamination of a monitoring well with PCBs by another contractor. The project revolved around an investigation of all possible sources of the PCBs at the historically industrial Site to rule out an on-site source prior to the client seeking restitution from the responsible contractor. Restitution from the contractor was achieved.

Former Plating Facility Investigation

LSP-of-Record on this remediation project for a private landowner. Multiple field investigations lead up to the preparation of a MCP Phase II and III report for the Site that delineated the extent of contamination both along a river bank and within the boundaries of a former industrial landfill at the Site. Portions of this Site were closed using a Permanent Solution including an Activity and Use Limitation (AUL) while portions were closed using a Temporary Solution with an AUL.

Underground Storage Tank Removal Site

Project Hydrogeologist on a redevelopment project for a private developer. The project involved removal of 27 Underground Storage Tanks, five buildings including two truck garages, and the recycling of 5,000 cubic yards of petroleum- and metals-contaminated soil. Contracts were held with both the Site owner and the potential purchaser, and the project resulted in the award of the first two Form Four permits ever issued by the Connecticut Department of Environmental Protection.

Industrial Chlorinated Solvent Disposal Site

Project Hydrogeologist for a private industrial client with chlorinated solvent contamination resulting from leaking buried drums. Coordinated the quarterly sampling of private drinking water wells in the vicinity of the Site, and completed an Immediate Response Action with associated plans for the installation of point-of-entry carbon filters at several of these homes. Completed the field program for a Phase II Comprehensive Site Investigation of the Site.

Former Dry Cleaning Facility

LSP-of-Record for a private dry cleaner at a re-developed property. Chlorinated solvents were found under the new building and have been remediated using reductive dechlorination in combination with a soil-vapor extraction system and changes to the on-site HVAC system to provide positive pressure to the new building. Phase II, III, IV, and Phase V Status Reports have been prepared for this Site.

Landfill Monitoring and Expansion

Managed and designed quarterly groundwater and soil sampling programs for landfills and sewage treatment plants. Mr. Witten conducted quarterly sampling at the Ravenbrook Landfill in North Carver, Massachusetts during a four-year period, and conducted subsurface geotechnical and hydrologic investigations for two expansions of this landfill.

Septic System Mounding Analyses

Mr. Witten designed, calibrated and utilized site-specific VisualMODFLOW models to estimate the height of groundwater mounding under proposed large septic systems (>10,000 gpd). These Hydrologic Mounding Analyses are preceded by soil and groundwater sampling programs to characterize the subsurface materials, slug or pump tests to determine hydraulic conductivity, and a literature search to collect relevant published information. The groundwater flow model can also be used as a contaminant transport model to estimate concentrations of contaminants (nitrate) at the downgradient property line or nearest critical environmental resource. The Hydrologic Mounding Analysis reports are submitted in support of the Groundwater Discharge Permit Application for the system.

Site Development ESA and Geotechnical Studies

Mr. Witten has completed numerous comprehensive re-development strategy projects involving Environmental Site Assessments, geotechnical evaluations of soil for foundation and site work design, and the interaction of client's re-development goals with the limitations posed by Site permitting and contamination issues.

Water Supply Projects

Water Management Act & NPDES Permit

Mr. Witten determined the best location for additional irrigation wells for a private farmer, oversaw the installation of the new wells, and applied for and received a Water Management Act Permit for four times the farm's original WMA withdrawal. A corresponding NPDES discharge permit is currently under review by the EPA for the same project.

New Source Approval - Private

Mr. Witten supervised the installation of a proposed public water supply well for a private client in Wrentham, Massachusetts, conducted required sampling, and completed a New Source Approval submittal to the DEP. This project involved interaction with the engineer designing the proposed development and associated on-site septic system, and modeling the septic system mound on the water table using VisualMODFLOW. Mr. Witten was also on a team that prepared a New Source Approval submittal to the DEP for a series of irrigation wells for a proposed golf course in Hingham, Massachusetts.

New Source Approval - Public

Mr. Witten has supervised the installation of numerous test wells in the search for a proposed public water supply wells in the Town of Dudley, MA. He was involved in the permitting of a new water supply well for the Town of Kingston, MA, demonstrating via a computer model that this well location was outside the actual limits of the Jones River Basin, an area closed to further withdrawals by DEP.

Zone II Delineation

Mr. Witten delineated Zone II boundaries for the protection of two municipal water supply wells in the Town of Lanesborough, Massachusetts. This project involved determination of the vertical and horizontal extent of the principal aquifer using classic geologic field investigation and seismic refraction survey techniques, the installation of monitoring wells and stream-bed peizometers, and the formulation of a MODFLOW computer model to simulate the aquifer under pumping and non-pumping conditions.

Aquifer Land Acquisition Study

This study for the Towns of Easthampton and Southampton was funded under the Massachusetts Chapter 286 Aquifer Land Acquisition (ALA) Program. The study further delineated Zones II and III of the Hendrick Street and Nonotuck Park Well fields, addressed the impact of potential contaminant sources on the Easthampton Aquifer, and recommended strategic properties for acquisition in order to further protect this drinking water resource.

Water Supply Protection

Mr. Witten has employed several strategies for the protection of public and private water supplies including: delineation of Zone II boundaries for the protection of municipal water supplies, design hypothetical subdivision layouts for appraisals and the APR Farm Program, and completion of nitrogen loading analyses for proposed developments. Mr. Witten is also a member of his local town Aquifer Protection Committee.

Hydrologic Assessment of Duxbury Landfills

A hydrogeologic contaminant study was conducted to evaluate potential groundwater quality impacts from the Duxbury, Massachusetts landfill sites. The two landfills are situated directly upgradient of one of the Town's drinking water supply wells. The project objective was to define the hydrogeology and to determine the leachate plume's chemical composition, document its vertical and horizontal extent within the aquifer, and therefore to estimate its eventual impacts to the well.