

PHILLIP E. GEARING, PE

Education

B.S., Geological Engineering, University of Wisconsin-Madison, 2006
B.S., Geology and Geophysics, University of Wisconsin-Madison, 2006



Professional Licenses

Professional Engineer, Wisconsin
Professional Engineer, Iowa

Training and Certificates

40-hour OSHA HAZWOPER Training
Troxler Nuclear Gauge Safety Training

Professional Affiliations

Solid Waste Association of North America

Professional Experience

Mr. Gearing is a Professional Engineer with over 15 years of experience working on solid waste landfills, ash disposal facilities, and geotechnical related projects. He has experience in permitting/reporting and construction design for landfill expansions and CCR pond closures. His CQA knowledge and experience includes installation of various geosynthetics, gas extraction systems, clay liner construction, and drainage system construction. Phil's project experience also includes groundwater and air monitoring and various geotechnical related analyses including slope stability and settlement.

Landfill Liner and Final Cover CQA

Whitelaw, Wisconsin, Ridgeview RDF. Project manager leading CQA activities for an approximate 3-acre landfill cell. The project consisted of oversight of subgrade preparation, liner quality clay investigation, 4-foot clay liner construction, 60 mil high-density polyethylene (HDPE) geomembrane, 12-inch thick leachate drainage layer, and leachate collection system. Project coordination and management included review of contractor material quantities, review of documentation surveying, full-time construction oversight, laboratory testing result review, geomembrane testing coordination and review, and documentation report preparation and certification.

Portage, Wisconsin, Columbia Ash Disposal Facility Liner. Project engineer and project manager leading CQA activities for multiple approximate 4-acre dry ash disposal modules. The projects consisted of grading and testing of subgrade, placement of clay liner, installation of polymer enhanced geosynthetic clay liner (GCL) and 60 mil high-density polyethylene (HDPE) geomembrane, placement of leachate drainage material, installation of leachate collection system, construction of access roads, restoration, and storm water features. Project coordination included review of contractor submittals, documentation surveying, full-time construction oversight, laboratory testing results, and documentation report preparation.

Wisconsin Rapids, Wisconsin, Cranberry Creek Landfill, Final Cover. Performed construction observation and documentation for an 8.5-acre final cover system at a landfill in Wisconsin Rapids, Wisconsin. Oversaw the installation of a compacted clay cap, geomembrane, sand drainage layer, toe-drain system, rooting soil, and topsoil. Also oversaw the installation of gas extraction wells and gas lateral piping related to final cover construction.

Sheboygan, Wisconsin, Edgewater I-43 Ash Disposal Facility, Final Cover. Project engineer that coordinated construction documentation of a 4.75-acre landfill final cover system. The final cover consisted of grading the existing ash material, installation of 2 feet of compacted clay, installation of 40 mil linear low-density polyethylene (LLDPE) geomembrane, installation of geocomposite drainage layer, installation of rooting zone and topsoil, restoration activities, and storm water features. Project coordination included review of contractor submittals, documentation surveying, full-time construction oversight, laboratory testing results, and documentation report preparation.

Sheboygan, Wisconsin, Edgewater I-43 Ash Disposal Facility, Liner/Cover. Project engineer that coordinated construction documentation activities for a new 5.6-acre module, 2.9 acres of final cover, and 5 acres of contact water swale/basin. The final cover consisted of grading the existing ash material, installation of 2 feet of compacted clay, installation of 40 mil LLDPE geomembrane, installation of geocomposite drainage layer, installation of rooting zone and topsoil, restoration activities, and storm water features. The liner consisted of grading and testing of subgrade, placement of clay liner, installation of GCL in the sump, installation of 60 mil HDPE geomembrane, placement of leachate drainage material, installation of leachate collection system, construction of access roads, restoration, and storm water features. The contact water swale work consisted of removal of soft soils and contaminated material, preparation of subgrade, installation of 60 mil HDPE geomembrane, installation of geotextile cushion, and placement of drainage aggregate. Project coordination included review of contractor submittals, documentation surveying, full-time construction oversight, laboratory testing results, and documentation report preparation.

Ottumwa, Iowa, Ottumwa Midland Landfill, Liner. Project engineer that coordinated construction documentation for a 9-acre dry CCR landfill liner expansion. The project involved the expansion of a Subtitle D composite liner and leachate collection system, as well as all supporting infrastructure. Site improvements included new access roads, storm water management features, construction of approximately ¼ mile of rerouted streambed for mitigation of an existing stream eliminated by the expansion, and construction of 2.4 acres of mitigation wetland. Construction activities spanned approximately 80 acres and involved a total of 1 million cubic yards of earthwork. Project coordination included review of contractor submittals, documentation surveying, full-time construction oversight, laboratory testing results, and documentation report preparation.

Wisconsin Rapids, Wisconsin, Cranberry Creek Landfill, Gas System. Observed and documented the various construction phases of gas extraction system components. Oversaw the installation of vertical gas extraction wells, gas system lateral piping, geomembrane repairs, horizontal gas extraction wells, and leachate recirculation piping.

Portage, Wisconsin, Columbia Ash Disposal Facility, Final Cover. Performed construction observation and documentation of final cover construction activities for a 3-acre closure area. Oversaw the installation and construction of geosynthetic clay liner, geomembrane, drainage layer, rooting zone, and topsoil.

Sheboygan, Wisconsin, Edgewater I-43 Ash Disposal Facility, Liner Evaluation. Performed nuclear density gauge testing on an existing constructed cell in order to determine the effects of freeze thaw on the clay liner system. Assembled drawings and report of the documentation.

Campbellsville, Kentucky, Campbellsville Landfill. Field engineer at a previous company of employment. Performed construction observation and documentation of environmental remediation activities at a 32-acre closed landfill to minimize leachate releases to the environment at a landfill in Campbellsville, Kentucky. Worked directly for the Kentucky Department of Environmental Protection to oversee the movement and consolidation of off-site waste, direct push drilling for bedrock elevations, installation of the final cover geomembrane and geocomposite, installation of final cover soils, construction of a passive venting gas system, and installation of a perimeter drainage system.

Kentucky, Duke Energy Ash Landfill. Field engineer at a previous company of employment. Oversaw construction observation and documentation of liner construction activities for a 16-acre ash landfill cell. The work included the installation of geosynthetic clay liner and geomembrane.

Findlay, Ohio, Hancock County Landfill. Field engineer at a previous company of employment. Performed construction observation and documentation for an 8-acre landfill final cover system at a landfill in Findlay, Ohio. Oversaw the installation of a compacted clay cap, geocomposite drainage layer, geomembrane, toe-drain system, rooting soil, and topsoil.

Pond Closure Design and CQA

Sheboygan, Wisconsin, Edgewater Generation Station Ash Pond Closure. Project Manager that managed the CQA of the ash pond closure at the Edgewater Generating Station. Work included demolition of existing site features, pond dewatering, CCR excavation and placement, subgrade stabilization, installation of geocomposite drainage layer, construction of an 18-inch compacted clay cover including clay borrow oversight, placement of 6 inches of topsoil, construction of drainage features, and access road construction. Management included running weekly progress meetings, reviewing contractor submittals, coordination of field testing, review of survey data, review of lab testing data, review of daily reports, and coordination and review of the construction documentation report.

Marshalltown, Iowa, Sutherland Generation Station Ash Pond Closure. Project Manager that managed the design and CQA of the ash pond closure at the Sutherland Generating Station. Work included demolition of existing site features, pond dewatering, CCR excavation and placement, coal residual material excavation and placement, subgrade stabilization, construction of an 18-inch compacted clay cover, placement of 6 inches of topsoil, construction of drainage features, and access road construction. Project also included the management and removal of a byproduct stockpile for disposal at a landfill. Management included running weekly progress meetings, reviewing contractor submittals, coordination of field testing, review of survey data, review of lab testing data, review of daily reports, and coordination and review of the construction documentation report.

Clinton, Iowa, M.L. Kapp Generating Station Main Ash Pond Closure. Project engineer that coordinated the documentation for the M.L. Kapp Main Ash Pond closure project. Work included CCR excavation, placement, and grading; construction of an 18-inch compacted clay cover; placement of 6 inches of topsoil; and construction of drainage features including swales and culverts. Closure construction covered approximately 30 acres. Coordination included surveying for all aspects of closure construction, compaction testing of CCR and clay cover, coordination of laboratory testing of soils, storm water management inspections, and daily reporting.

Cedar Rapids, Iowa, Sixth Street Generating Station Ash Pond Closure. Project engineer that coordinated the documentation at the Sixth Street ash pond closure project including the filling and capping of four ash ponds with geosynthetics and soils. Coordination included all closure-related construction activities, review of contractor submittals, surveying data for all aspects of closure construction, geotechnical monitoring of a critical pond berm to ensure stability was maintained

during construction, compaction testing of fill materials and clay cover, coordination of laboratory testing of soil and geosynthetic portions of the cover, storm water management inspections, and daily reporting.

Beloit, Wisconsin, Rock River Ash Landfill. Project engineer that assisted with design and coordinated construction documentation for the abandonment of settling ponds and closure of a landfill at a utility site in southern Wisconsin. The project involved the demolition of existing structures, excavation and relocation of waste materials, abandonment of existing ponds, and closure of the existing landfill. The abandonment of the ponds and closure of the landfill consisted of preparing subbase grades with excavating and filling of waste materials, installation of a laminated GCL, construction of a toe drain and geocomposite drainage system, placement of rooting zone and topsoil materials, installation of storm water features, and restoration activities. Project coordination included review of contractor submittals, documentation surveying, full-time construction oversight, laboratory testing results, and documentation report preparation.

Landfill Engineering

Portage, Wisconsin, Columbia Ash Disposal Facility. Project engineer for multiple landfill module designs and cover projects from 2009 to 2021. Produced construction drawings and specifications for the design and assisted with procurement of a contractor. Projects included clay, GCL, geomembrane, and a leachate collection system.

Project engineer for the preparation of a 10-year plan of operation update. Work consisted of updating drawings, general calculations, updating the QA/QC plan, and updating the plan of operation.

Wisconsin Rapids, Wisconsin, Cranberry Creek Landfill. Project engineer for the design of a landfill cell, final cover system, and gas extraction system. Developed construction drawings, grade tables, and details for the landfill liner, cover areas, and gas extraction system. The liner project consisted of an underdrain system, clay, geomembrane, and a leachate collection system. The final cover system consisted of a clay cap, geomembrane, drainage layer, top soil, surface water drainage features, and gas collection system.

Assisted in the preparation of a Plan of Operation modification for the acceptance of additional alternative daily covers.

Hilbert, Wisconsin, Hickory Meadows Landfill. Project engineer supporting the landfill expansion plan of operation. Tasks included geotechnical calculations, QA/QC plan, and AutoCAD work. Performed update of slope stability calculations including dredged material properties from the existing landfill area.

Horicon, Wisconsin, Glacier Ridge Landfill. Project engineer for the vertical and horizontal expansion feasibility and plan of operation update. Performed slope stability and settlement analysis on the eastern berm for a landfill expansion feasibility report. The eastern berm was underlain by organic and glacial soft soils, which could have been problematic with future construction. Assisted with geotechnical calculations for the plan of operation expansions.

Iowa, Confidential Site. Project engineer for assisting in the evaluation of alternative methods for disposing of ash generated from the coal power generating facility. Project involved evaluating alternatives and developing detailed cost estimates.

Ottumwa, Iowa, Ottumwa Midland Landfill. Project engineer for the horizontal and vertical expansion of a coal combustible residue landfill. Project involved permitting and design of composite liner and final cover systems, leachate collection system, contact water management, storm water management, and erosion control. Assisted with geotechnical calculations for design of the landfill system. Produced detailed cost estimates for construction activities for a new landfill phase.

Menomonee Falls, Wisconsin, Orchard Ridge Recycling and Disposal Facility (RDF). Provided geotechnical assistance for a plan of operation update for the landfill and landfill expansion, including slope stability analysis and underdrain design and analysis.

Eaton, Ohio, Preble County Landfill. Project Engineer at a previous company of employment. Prepared and submitted a Permit to Install update to the Ohio Environmental Protection Agency (EPA). The update included slope stability analysis, quality assurance/quality control, final closure/post-closure plans, explosive gas monitoring plans, and future landfill design plan sheets.

Environmental Services

Buffalo, Minnesota, Rolling Hills Landfill. Project manager for gas extraction well and probe monitoring at Rolling Hills Landfill. Coordinated monitoring with field technician, performed data analysis, and corresponded with client regarding data.

Dane County, Wisconsin, Dane County Landfills. Technical coordinator for three Dane County Landfill sites. Assisted with gas extraction well and gas probe monitoring; groundwater, leachate, and private well sampling; data analysis; and reporting for the Dane County Rodefild Landfill and Dane County Verona Landfill. Also assisted with reporting for the groundwater sampling at the Dane County Truax Landfill.

Horicon, Wisconsin, Glacier Ridge Landfill. Conducted semiannual groundwater reporting for Glacier Ridge Landfill. Reporting included data analysis of groundwater analytical data.

Various Advanced Disposal and Waste Management Sites. Coordinated annual reporting assistance for the following Advanced sites: Seven Mile Creek Landfill, Cranberry Creek Landfill, Emerald Park Landfill, Glacier Ridge Landfill, and Mallard Ridge Landfill. Coordinated annual reporting assistance for the following Waste Management sites: Pheasant Run RDF, Metro Landfill, and Orchard Ridge RDF. Annual reporting included Organic Stability and/or Leachate Recirculation/RD&D plans and renewals, waste composition updates, evaluation of landfill gas generation changes, and recommended changes to the landfill systems.