

## MARK R. HUBER, PE

### Education

B.S., Civil Engineering, Iowa State University, 1989

### Professional Licenses

Professional Engineer – Wisconsin and Iowa



### Professional Experience

Mr. Huber has 35 years of consulting experience in civil and environmental engineering. He specializes in the civil engineering aspects of solid waste and environmental engineering projects with technical expertise in solid waste management, brownfield redevelopment, civil site design, and stormwater management. With a dual civil and environmental engineering background, Mark can take projects from initial site assessment through construction. Mark is adept at explaining complex issues in easy-to-understand language, and his experience working on a variety of complex projects allows him to quickly identify key issues and develop smart, simple solutions that save clients time and money. Mark is an excellent communicator, which helps him bridge the gap between client goals and regulatory requirements. Mark is always excited about helping clients in creative ways with responsive customer service.

#### **Electric Utilities**

**Coal Combustion Residuals (CCR) Impoundment Closures, Iowa and Wisconsin.** Design director for closing seven CCR impoundments, two landfills, and two coal yards at three coal-fired power plant sites. Projects included CCR hydraulic dredging, geotextile tube dewatering, in-situ stabilization (ISS) wall, conventional CCR excavation with moisture conditioning, soil and composite final covers, geotechnical monitoring with vibrating wire piezometers, slope inclinometers, and site restoration. Permitting included compliance with Federal CCR rules, state solid waste regulations, Army Corps wetland and flood plain permits, dewatering well permitting, and stormwater/erosion control permits.

**Portage, Wisconsin, Columbia Ash Landfill.** Project director and project manager for two 10-year plan of operation updates. Permitting and design work included landfill master planning, composite liner, final cover, contact water management, leachate management, stormwater management, and erosion control.

Project director for several landfill liner and final cover design and construction projects. Projects included clay and geomembrane composite liners, geosynthetic clay liner (GCL), and geomembrane composite final cover system. Projects involved preparation of construction drawings, specifications, and bidding documents, and construction administration. Projects also included construction oversight and preparation of a construction documentation report.

**Beloit, Wisconsin, Rock River Ash Landfill.** Project director for final closure of an ash landfill and sluice pond. The project involved updating the landfill final closure plan, preparation of design and construction documents for ash relocation, GCL and geomembrane composite final cover, stormwater management, and erosion control.

Project director for a utility scale photovoltaic system installed on top of the ash landfill final cover system. Project included preparing civil site design drawings and specifications for the PV ballast system, stormwater management, and erosion control.

**Town of Wilson, Wisconsin, I-43 Ash Landfill.** Senior review engineer for a major plan modification to the ash landfill plan of operation. Project involved design and permitting of a composite clay and geomembrane liner system and a composite clay and geomembrane final cover system.

Senior review engineer for several landfill liner and final cover design and construction projects. Work included preparation of design and construction documents for landfill liners, final cover systems, contact water management systems, leachate management system, stormwater management, and erosion control. The projects also included construction administration, construction oversight, and preparation of a construction documentation report.

**Ottumwa, Iowa, Ottumwa Midland Landfill.** Project director and senior design engineer for the horizontal and vertical expansion of a coal combustible residue (CCR) landfill. Project involved permitting and design of composite liner and final cover systems, leachate collection system, contact water management, stormwater management, and erosion control. Project also involved investigation of former coal mines within the proposed landfill expansion footprint.

Project director for a clay and geomembrane liner design and construction project. Work included preparation of design and construction documents for landfill liner, contact water management systems, leachate management system, stormwater management, and erosion control. The projects also included construction administration, construction oversight, and preparation of a construction documentation report.

**Iowa, Confidential Site.** Project director for a CCR sluice pond closure options analysis at an eastern Iowa electric generating station. The project involved developing closure options, estimating closure costs, and preparing an options analysis report.

Evaluated alternative methods for disposing of ash generated from a coal power generating facility in Iowa. Alternatives included filling a ravine, expanding an existing ash landfill, filling a wetland, and expanding an existing ash sluice pond. Project involved evaluating alternatives and developing detailed cost estimates.

Senior review engineer for preparation of USEPA initial closure plan, run-on/run-off control plan, and post-closure plan.

## **Renewable Natural Gas and Landfill Gas**

**Delavan, Wisconsin, Air Liquide Advanced Technologies LLC Renewable Natural Gas Pipeline.** Project director for a renewable natural gas pipeline from the Mallard Ridge Landfill biogas plant to the interstate pipeline interconnection. Services included performing/coordinating environmental reviews along the pipeline route (e.g., wetlands, archaeological resources, endangered resources); pipeline design (approximately 2 miles); environmental permitting (e.g., construction site SWPPP, wetlands, state-owned land crossings); agency coordination for other environmental resources that did not require a permit (agricultural impacts, land enrolled in Conservation Reserve Enhancement Program); securing and managing a contractor to install exclusion fencing; and perform inspections of exclusion fencing throughout construction

**Horicon, Wisconsin, Air Liquide Advanced Technologies LLC Renewable Natural Gas Pipeline.** Project director for a renewable natural gas pipeline from the Glacier Ridge Landfill biogas plant to the interstate pipeline interconnection. Services included environmental reviews along the pipeline route (e.g., wetlands, archaeological resources, endangered resources); pipeline design (approximately 4 miles); and environmental permitting (e.g., construction site SWPPP, wetlands, work in highway right-of-way, state-owned railroad crossings).

**Wisconsin Rapids, Wisconsin, Cranberry Creek Landfill.** Project manager and project director for a landfill gas projects that included Pipeline and Hazardous Material Safety Administration (PHMSA) compliance gas well installation, header improvements, gas well pump compressed air lines and forcemains construction, condensate sump and knockout installation, condensate drip leg construction, backup blower installation, blower building expansion, electrical upgrades, and instrumentation and controls updates, and related site improvements. Project included preparation of construction drawings, specifications, and project manual documents, contract administration, construction oversight, and preparation of a construction documentation report.

## Landfill Gas

**Wisconsin Rapids, Wisconsin, Cranberry Creek Landfill.** Acted as project manager and project director for a landfill gas improvement project that included gas well installation, header improvements, gas well pump compressed air lines and forcemains construction, condensate sump and knockout installation, condensate drip leg construction, backup blower installation, blower building expansion, electrical upgrades, instrumentation and controls updates, and related site improvements. Project included preparation of construction drawings, specifications, and project manual documents; contract administration; construction oversight; and preparation of a construction documentation report. Provided troubleshooting and data review for ongoing gas system operations.

**Hilbert, Wisconsin, Hickory Meadows Landfill.** Senior design engineer and project director for a landfill gas improvement project that included header improvements, condensate sump and knockout installation, new primary and backup blower installation, new blower building construction, new flare installation, connection to landfill gas to energy facility, electrical upgrades, instrumentation and controls upgrades, and related site improvements. Project included preparation of construction drawings, specifications, and project manual documents; and contract administration.

Acted as project director for landfill gas system expansion design and construction project. Project included vertical and horizontal landfill gas well installation, landfill gas piping installation, gas well pump compressed air line and forcemain installation, and repairs to the final cover. Reviewed construction drawings, specifications, and project manual documents. Assisted with construction administration and reviewed construction documentation report.

## Collection, Transfer Station, and Recycling Facilities

**Newport, Minnesota, Ramsey/Washington Recycling and Energy (R&E) Center.** Technical Director for design and construction administration of enhancements to an existing processing system at a mixed municipal solid waste (MSW) recycling and energy facility. Prepared the detailed equipment layout to remove durable compostable bags from the municipal solid waste stream within a new building addition and a complex system of processing equipment to remove recyclable commodities in the municipal solid waste stream within the existing building. The project was designed to help meet state waste diversion goals and move these materials up the waste hierarchy. SCS Engineers was a subconsultant to KOMA, the project architect, and worked closely with the R&E staff;

architectural, electrical and mechanical engineering design team members; the R&E's engineer serving as the owner's agent; and the construction manager.

**Appleton, Wisconsin, Outagamie County Tri-County Material Recovery Facility.** Technical Director for a material recovery facility (MRF) container line upgrade to improve the quality of sorted aluminum and PET products. Developed bidding documents and provide construction assistance for an upgraded eddy current and optical PET sorter. With upgraded equipment the location of the PET quality control station was relocated, and a new aluminum quality control station was added to the system. Recovery of PET and used beverage cans (UBC) increased as a result of the upgrades.

Technical Director for a material recovery facility (MRF) container line and residual line upgrade to incorporate robots to replace HDPE-C and HDPE-N manual sorters, and to target PP, PET and UBC on the residual line, reducing the reliance on manual labor and increasing recovery of commodities. Developed bidding documents, assisted with bidding process and will provide construction administration assistance during installation.

**Hartland, Wisconsin, Advanced Disposal Hauling Company.** Acted as project manager for a stormwater improvement project that involved evaluating stormwater management and treatment options for the vehicle maintenance and storage facility. Project also included preparation of construction drawings, specifications, and project manual documents; and construction administration.

**Wausau, Wisconsin, Advanced Disposal Hauling Company.** Acted as project manager for a stormwater improvement project that involved evaluating stormwater management and treatment options for the vehicle maintenance and storage facility. Project also included preparation of construction drawings, specifications, and project manual documents; and construction administration.

**Madison, Wisconsin, Dane County Construction Demolition Recycling Facility.** Acted as project director and senior design engineer for the design and construction of a construction and demolition recycling facility. Project included overall coordination of architectural, structural engineering, mechanical engineering, civil engineering, and equipment layout. Project involved preparation of preliminary design documents, detailed design documents, construction documents, specifications, and cost estimates. Assisted with construction administration and oversight.

## Landfill Design and Permitting

**Wisconsin Rapids, Wisconsin, Cranberry Creek Landfill.** Acted as senior engineer and project manager for a feasibility report and plan of operation for the current horizontal expansion. The landfill expansion is located near surface water bodies and wetlands, which involved navigability issues, surface water balancing, and practicable alternative wetland analysis. Landfill design work included underdrain system, composite liner, final cover, landfill gas collection system, leachate collection, stormwater management, and erosion control. Site work also included clay borrow source surface mining investigation, permitting, and extraction.

Acted as project director and project manager for several composite liner and final cover system design and construction projects. Work included preparation of construction drawings, specifications, and bidding documents. The liner projects consisted of an underdrain system, clay, geomembrane, and a leachate collection system. The final cover systems consist of a clay cap, geomembrane, drainage layer, top soil, and surface water drainage features. Work also included preparation and review of construction drawings, specifications, and project manual documents; and

assistance with contract administration and construction documentation support, including construction observation and preparation of a construction documentation report.

Acted as lead design engineer for design and construction of a leachate discharge automatic sampler and flow meter to comply with Wisconsin Rapids Waste Water Treatment Plan Requirements.

Performed design and construction oversight for a rail solid waste transfer station, which consisted of an elevated platform constructed adjacent to a rail spur to facilitate transfer of waste from rail cars to trucks for hauling to the adjacent landfill.

Provided operational assistance for a variety of tasks including erosion repairs, financial assurance updates, and routine agency correspondence.

**Hilbert, Wisconsin, Hickory Meadows Landfill.** Acted as senior design engineer for the current vertical and horizontal landfill expansion plan of operation. Project involved design and permitting of a composite liner, composite final cover, leachate collection system, stormwater management, liner underdrain system, gas collection system, stormwater management, and erosion control.

Acted as senior review engineer for composite liner and final cover system design and construction projects. Work included preparation of construction drawings, specifications, and bidding documents. The liner project consisted of an underdrain system, clay, geomembrane, and a leachate collection system. The final cover systems consist of a clay cap, geomembrane, drainage layer, top soil, and surface water drainage features. Also reviewed construction drawings, specifications, and project manual documents; assisted with contract administration tasks; and provided construction documentation support.

Provided operational assistance for a variety of tasks including erosion repairs, financial assurance updates, and routine agency correspondence.

**Horicon, Wisconsin, Glacier Ridge Landfill.** Acted as senior design engineer for vertical and horizontal expansion plan of operation. Project involved design and permitting of an underdrain system, composite liner, composite final cover, leachate collection system, stormwater management, and gas collection system. The project also involved mining of a former landfill to create space for the proposed expansion.

**Fort Atkinson, Wisconsin, Valley Meadows Landfill.** Acted as project manager for the construction of a final cover system and gas collection system. The cover consisted of a clay cap, geomembrane, drainage layer, rooting zone, and topsoil. Construction oversight and preparation of a construction documentation report were also part of the project.

**Muskego, Wisconsin, Emerald Park Landfill.** Acted as senior engineer and project manager for the preparation of construction drawings, specifications, and bidding documents for several composite liner and final cover projects. The liner consisted of a gradient control system, clay, geomembrane, and a leachate collection system. The final cover consisted of a clay cap, geomembrane, drainage layer, rooting zone, and top soil. The projects also included construction observation and preparation of a construction documentation report.

**Franklin, Wisconsin, Metro Landfill.** Acted as project engineer for the design of a leachate treatment system to remove PCBs. The treatment system consisted of clarification, sludge dewatering, granular media filtration, bag filtration, and carbon adsorption. Coordinated process and instrumentation

diagram creation, treatment system equipment selection and sizing, pump sizing, structural design, and electrical design work.

### **Civil Site Design and Brownfield Redevelopment**

**Madison, Wisconsin, Edgewater Hotel.** Served as project manager for a high profile hotel redevelopment adjacent to Lake Mendota. The project involved surveying, preparation of civil site design drawings, and preparation of stormwater management calculations to support the hotel redevelopment bid.

**Madison, Wisconsin, Former Dairy Property.** Directed project for an ownership transfer. Project involved developing a Phase 2 environmental site assessment, preliminary civil engineering site design evaluation, and exploration of brownfield redevelopment grant funds.

**Cudahy, Wisconsin, Meyer Place Fill Area.** Managed the installation of a parking lot over a former landfill. Project involved site investigation, requesting an exemption from WDNR to build on a landfill, capping and vapor barrier design, and construction assistance.

**Cudahy, Wisconsin, Cudahy Business Park.** Coordinated and served as project manager for the site investigation and remediation of an abandoned industrial facility. Remediation included removal and disposal of petroleum-impacted soils and PCB-impacted concrete. Groundwater remediation included site capping and natural attenuation of chlorinated solvents.

**Madison, Wisconsin, Wisconsin Department of Revenue.** Performed site investigation and remediation of a former landfill that was redeveloped. A soil management plan was developed to provide specific guidance on how to manage impacted soils encountered during redevelopment of the site.

**Kenosha, Wisconsin, Former Manufacturing Facility.** Designed a retail/residential mixed-use development. Engineering work included contaminated material handling, site grading, stormwater management, utilities, geotechnical investigation, and pavement design.

**McFarland, Wisconsin, 84 Lumber.** Served as senior engineer for redevelopment of an oil terminal into a joist manufacturing facility. Project included remediation design, material management, regulatory negotiations, and brownfield grant award.

**Madison, Wisconsin, 660 John Nolen Drive.** Involved in design of an office park development on a former brownfield. Engineering work included brownfield grant award, site closure, contaminated material handling, site grading, stormwater management, utilities, and geotechnical investigation.

**Cottage Grove, Wisconsin, Cottage Grove Cooperative.** Involved in the design of a treatment system to remove agricultural chemicals from groundwater. The treatment system included bag filtration and carbon adsorption. The project also included the design of a 3,000-foot gravity sewer in order to discharge the treated water to the nearest surface water body.

**DeForest, Wisconsin, Danco-Prairie Cooperative.** Coordinated the excavation and landspreading of over 12,000 cubic yards of agricultural-contaminated soil. The project also included the design, construction, and operation of a groundwater extraction and treatment system. The cleanup of this brownfield site paved the way for the construction of the Village of DeForest public safety building. Soil and groundwater remediation activities were carefully coordinated with the new building construction.

## Closed Landfill Remediation

**Bay County, Michigan, Hartley and Hartley Landfill.** Coordinated decommissioning of a 40-acre radioactive and hazardous waste landfill at the Hartley and Hartley Landfill in Bay County, Michigan. The project included the design of an interim groundwater/leachate treatment system, which included metals precipitation, air stripping, granular activated carbon, and sand filtration. The project also involved final cover maintenance and evaluation of final cover improvements. The project was conducted in accordance with Nuclear Regulatory Commission regulations.

**Fort Wayne, Indiana, Fort Wayne Reduction Site.** Acted as project engineer for the design of a groundwater treatment system and removal of over 20,000 buried drums containing a mixture of hazardous wastes at the Fort Wayne Reduction Facility. Project included construction of a vertical cutoff wall, landfill cover, groundwater collection trench, and groundwater treatment system. This project was completed under CERCLA regulations.

**Bullit County, Kentucky, Tri-City Disposal Site.** Managed a CERCLA project, which included the design and operation of a groundwater treatment system for two springs adjacent to a closed industrial landfill at Tri-City Industrial Disposal Facility. Special structures were designed to intercept water discharging from the springs. The spring water was treated with granular activated carbon before it was returned to the watershed.

**Sheffield, Illinois, U.S. Ecology Hazardous Waste Management Facility.** Evaluated the design and installation of a final cover and leachate extraction system in order to meet RCRA requirements.

**West Chicago, Illinois, Kerr-McGee Rare Earth Facility.** Oversaw the removal and disposal of approximately 1,000,000 tons of thorium-contaminated soil from an abandoned manufacturing facility located in a residential area. The project involved design of a rail load-out facility, soil screening facility, on-site wastewater treatment facility, building decommissioning plans, utility relocation, and excavation plans.

**Ames, Iowa, Ames Laboratory Chemical Disposal Site.** Involved with a removal action to remediate a closed landfill containing various laboratory wastes. A Removal Site Evaluation, Engineering Evaluation/Cost Analysis (EE/CA), and design documents were prepared to support the removal action.