



FOUNTAINHEAD
ENGINEERING
LIMITED

Fountainhead Engineering Ltd (FHE) was incorporated in Illinois in 1998 by principals of the firm that had a collective experience of over 65 years in the engineering, environmental, energy and solid waste management industry. Our experience continues to evolve as we enter the second decade of this new millennium primarily through project based assignments in sustainable development and renewable technologies reflecting emerging industry trends supporting the growing green economy. The firm has significant experience in many aspects of the renewable energy industry (i.e. solar, wind and biomass) and waste-to-energy industry. A portion of the firms practice is involved with developing traditional recycling systems, pollution prevention and implementation of industrial beneficial use programs. FHE has also worked on several large Brownfield redevelopment assignments throughout North America that have used innovative cleanup approaches to transform these formerly impaired sites into productive manufacturing and commercial operations creating thousands of new employment opportunities. The firm provides technical and regulatory services for redevelopment and transaction based assignments throughout the Midwest and Mid-Atlantic regions incorporating innovative stormwater management systems utilizing Low Impact Development (LID) approaches focusing on the use of natural sustainable systems as well as new technologies to manage and improve stormwater quality and promote the use of sustainable construction practices that qualify for LEED certification. This wide range of project experience in these business sectors provides FHE with unique perspectives that benefit our clients as they seek to implement sustainable strategies in a cost effective manner and add value to their customers.

In cooperation with the Russian Antarctic Expedition (REA) and through sponsorship provided by the Coca-Cola Company, FHE provided technical and project management services for solid waste, energy and environmental assessments in Antarctica (as a subcontractor to Inspire of Redcar, UK). The firm also provided similar assessments to several international clients in Europe, South America, Canada and the Balkans to assess new and emerging technologies focusing on the development of sustainable solid waste management and renewable energy programs. During the past decade FHE has conducted numerous renewable energy feasibility studies for clients (as independent power producers) or for conversion of existing systems using renewable or sustainable approaches, fuel switching or a combination of new and existing technologies at existing industrial or power generating facilities.

FHE is recognized for innovative project management approaches that are implemented in a timely fashion for clients to address critical path solutions. For private and public clients the firm performs initial and detailed feasibility assessments using a wide variety of technical, regulatory and business expertise to determine viability of commercialization of emerging technologies in the renewable or "alternative" energy industry. By integrating the critical path

elements of engineering, regulatory and business analyses ideas are converted into operating facilities. When assessing recycling or industrial beneficial use opportunities for solid or special waste “residuals” the firm has focused on systems analyses to evaluate the implementation of new programs with the least disruption to a facility’s existing infrastructure while maximizing both economic and environmental performance. Current and former FHE staff have conducted a significant number of transaction based environmental and engineering assessments and implemented several commercial and industrial beneficial use (recycling) programs diverting hundreds of thousands of tons of waste from landfills. For many of these assignments FHE has also provided public information programs working with clients to support the development or “siting” of new renewable energy and waste-to-energy systems converting residuals to viable feedstocks for onsite or offsite manufacturing or into renewable energy. As a Project Manager the firm provides the requisite civil and regulatory services to support project or facility permitting. This integration reduces development timelines and associated expenses for our clients.

The firm has provided ISO services and auditing for clients. These services assist clients with establishing, documenting, and implementing programs that result in continual improvement of an organizations environmental management system (EMS) and illustrate how they meet the requirements of the ISO 14001 standard (within the boundaries of how the organization defines and applies their EMS). ISO 14001 is an internationally recognized standard that describes the specifications and requirements for an environmental management system. The firm continues to provide more traditional environmental, regulatory and project management consulting services such as facility permitting to obtain regulatory approvals or address “non-compliance” issues that may arise from time-to-time for projects or operations impacting air, water, and soil media. FHE also addresses similar issues for disposal facilities such as solid waste landfills and ancillary systems such as methane recovery systems and develops solid waste transfer stations and multi-material recycling and construction-demolition recycling facilities for clients.

The firm has managed major demolition and redevelopment assignments involving impaired industrial properties referred to as Brownfield sites. FHE has managed over 5,000,000 ft² of Brownfield redevelopment assignments in eight states since the firm’s inception in 1998. Concurrently with redevelopment assignments the firm has performed regulatory assessments to determine the most appropriate level of site characterization in order to evaluate potential environmental impairment while assessing options for adaptive reuse of a site (i.e. final end use options). FHE has been retained by private clients, the United States Environmental Protection Agency (USEPA) as well as state and local governments at locations throughout the United States using USEPA Risk Based Corrective Action (RBCA) approaches and similar state adopted risk based corrective action cleanup standards. Remedial or corrective action assignments have included managing the decommissioning of industrial facilities, demolition of obsolete buildings, removal of underground (UST) and aboveground (AST) petroleum storage systems, onsite treatment of impacted or contaminated soil media, removal of impacted soil, installation of soil vapor extraction systems (to remediate impacted soil media), onsite treatment of impacted groundwater resources (groundwater treatment) as well as on site soil washing of petroleum contaminated soils. The firm has managed the redevelopment of several former steel production facilities, two manufactured gas plant (MGP) sites, several large petroleum storage installations, foundries and former industrial and obtained regulatory closure for abandoned solid waste “dumps” and on site industrial landfills throughout the United States.

For other assignments FHE has been responsible for assessing biomass fuel supply projects as well as development of power plants that use biomass and alternate fuels derived from appropriate residual or commercial waste streams using proprietary and patented fuel preparation technologies. FHE staff has provided professional engineering, technical, regulatory and environmental consulting services and conducted feasibility studies for diverse projects that include:

- Environmental Impact Assessment (and site evaluations) for the removal of a former 1,000,000-gallon aboveground refueling depot (tank farm) in Antarctica (at a former Soviet Union research facility).
- Environmental Engineering and Regulatory Compliance Consultant for the sale of a metals recycling company (multi-site investigations) at three separate Indiana storage and processing yards. Developed Stormwater Management Plans, conducted preliminary site characterizations of salvage/processing yards and subsequent soil remediation (at one location) to support sale of the company to a publicly traded entity.
- Developed evaluations and developed technical work plans for the redevelopment of a former 10 Megawatt (MW) power plant into a 10 MW renewable energy (biomass) facility at the abandoned sawmill and particle board plant for the Red Lake Chapter of the Navajo Nation. Performed fuel supply and air quality analyses for proposed biomass project. The project received Brownfield funding from the United States Environmental Protection Agency (USEPA).
- Developed Phase I Environmental Site Assessment (ESA), site infrastructure and facility engineering including regulatory permitting for a 2,000 TPD Class V Construction and Demolition (C&D) Recycling facility and Class II (mixed recyclables) processing facility in Chicago, Illinois.
- Development of Vertical Farming system powered by renewable energy sources.
- Acted as Engineering Consultant and Project Manager for a 500 Ton per Day (TPD) commercial recycling (sorting facility) and solid waste transfer station in Indiana.
- Performed regulatory and combustion systems assessments (air permitting, materials handling and infeed systems) for the re-powering of a 15 MW biomass energy project in Oregon.
- Developed Phase I Site Assessment (ESA) as well as a subsequent Site Characterization of a 50 acre abandoned dump site (submitted to the Navajo Nation Environmental Protection Agency - NNEPA) located on the Navajo Indian Reservation in New Mexico (for the Red Lake Chapter). The project was partially funded through a Brownfield grant provided by the United States Environmental Protection Agency (USEPA).
- Technical and Environmental Engineer that evaluated a former state Superfund site in North Carolina for redevelopment as a yacht manufacturing facility adjacent to the New Brunswick and Cape Fear Rivers. Performed regulatory and environmental analysis, which

ultimately led to the removal of the former super phosphate processing plant from the state Superfund list and allowed for the construction of the new yacht manufacturing facility. Performed initial asbestos abatement study and Phase II limited subsurface investigation.

- Environmental and Civil Engineering Consultant for the holding company that owned a former steel property in Chicago, Illinois which included the decommissioning of three steel processing lines, removal of two 30,000 gallon underground storage tanks, demolition of former steam boilers and demolition of over 40,000 ft² of obsolete structures. The firm provided on-site project management for installation of new municipal infrastructure as well as the subsequent cleanup of the site. The City of Chicago Department of Streets and Sanitation and Bureau of Forestry became tenants of this former steel mill/steel processing facility after completion of the site work.
- The firm was retained to assist in the completion of a solid waste materials recovery-transfer station permit for a private waste services company in Florida. For this same client performed a geotechnical evaluation for expansion of an existing solid waste transfer station (in Florida) and performed preliminary environmental and regulatory assessments for a third proposed (Florida) transfer station. Developed assessments for fuel system options for the company including the installation of several diesel aboveground fueling systems at various hauling locations throughout the state of Florida. FHE evaluated existing company sites and prepared recommendations for stormwater management and other regulatory compliance assessments prior to the sale of the company.
- Project Manager for erosion control assignments in Hawaii, California, Michigan, Indiana and Illinois using innovative low impact development (LID) approaches integrating bio-retention ponds, Rain Gardens, and innovative compost-based systems as Best Management Practices (BMPs) during and after construction.
- Project Manager and permit engineer for a biomass-coal combustion project using mill residues co-fired with coal fines in a 500 MW facility in the southeast United States.
- Project Manager for feedstock and combustion assessments for proprietary densified biomass fuel to co-fire with other high moisture biomass and coal at Flambeau River Papers, Park Falls, Wisconsin.
- Developed technical analysis and subsequent management strategy for paper mill residuals for use in alternate fuel system eliminating off site landfill disposal of residuals.
- Environmental Engineering Consultant and Project Manager for air permitting of three coal slag processing plants in Illinois, Texas and Alabama. Conducted Method 5 stack testing to confirm compliance with new permit conditions.

- Environmental Engineering Consultant for siting and permitting of a medical waste processing facility.
- Provided professional engineering, environmental and regulatory services as Client's Representative for the sale of a yacht and off shore boat manufacturing facility to a publicly traded entity in North Carolina.
- Permitting of 1,200 TPD Construction and Demolition (C&D) Recycling facility in Chicago, Illinois.
- Senior Project Manager, Environmental and Resident Engineer for developers of a facility that processed municipal waste incinerator ash, foundry sands and fluidized gas desulfurization (FGD) residues and used this material as feedstock for an onsite block and paver plant. This plant was developed for the former Robbins Waste-to-Energy (WTE) facility which closed in 2000. This was the first "manufacturing facility" of its kind to receive operational status in North America. Developed state of Illinois and Chicago Department of Environment facility permits. During the initial facility startup was responsible for verifying operational parameters of the plant consistent with facility solid waste and air permits developed and obtained by Fountainhead Engineering Ltd. Conducted ongoing testing of paver bricks and retaining wall products as well as ongoing health and safety compliance during plant operation. Subsequent detailed WTE ash utilization testing on behalf of the company was performed at WTE plants in Hartford, CT Islip, NY and Wayne County, MI. Fountainhead Engineering Ltd verified a variety of mix designs using various ash and foundry sand feedstocks as well as several coal combustion fly ash sources after closure of the Robbins WTE plant.

Prepared cost estimates, schedules and developed economic analyses for development of future proposed facilities for other sites throughout North America and the United Kingdom. Due to the fact that the process used regulated waste materials (incinerator ash and foundry sand) as feedstock for production of cementitious building products, state specific beneficial use criteria and risk based modeling (for products produced by the plant) was developed by Fountainhead Engineering Ltd and used in several states as part of comprehensive ash testing (evaluation) studies. The state of Illinois issued facility permits under "trade secret" status. The firm has been involved in similar beneficial use assignments since this project was completed in 2001 using other residual ash feedstocks.

- Technical Consultant "for a first" of its kind mobile soil washing remediation technology (North America) using a biodegradable non-toxic colloid. For the manufacturer documented system performance and development technical materials for inclusion with regulatory submittals. Developed three separate permit submittals for remediation projects for cleanups involving petroleum hydrocarbons, semi volatile compounds and inorganic compounds (metals). As a subcontractor developed Plan of Operation for proposed soil remediation assignment for an ammunition plant consistent with the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) for portions of a 7,354-acre site. Constituents of Concern (COC) to be addressed using this mobile soil washing technology were, trichloroethylene, 1,1,1-trichloroethane, nitroglycerine (NG), 2,6-dinitrotoluenes (26DNT), n-nitrosodiphenylamine (NNDPA), cadmium, chromium and lead.

- Project Manager and Senior Environmental Engineer that developed two separate vendor Request for Proposals (RFP) for asbestos abatement and demolition services for over 200,000 ft² of obsolete (former foundry complex) structures located on 17 acres in northwest Indiana. In addition, the firm developed scope of work for emergency demolition of a 70-foot process stack at the site. The firm provided on-site project management for all demolition activities and the subsequent cleanup of the site. This work was funded by the state of Indiana and all work was coordinated with the grant administrator, client (City of Michigan City, Indiana) and clients' project legal counsel.
- Environmental Engineering and Regulatory Compliance Consultant for storm water management and spill prevention programs at four coal slag processing plants in Texas, Illinois, Louisiana including site training for plant staff.
- Technology and regulatory assessments for manufacture's process equipment. Developed air permitting protocols/methodologies and field verification of performance standards for the manufacturer of mobile aboveground refractory lined air curtain combustion technology including technical presentations to USEPA Region 3 supporting development of a client's project.
- Regulatory Compliance Consultant developing stormwater management and spill prevention programs at select locations for a publicly traded metals recycler in the Midwest.
- Civil Engineer designing a reservoir-lake habitat for a land developer in southwestern Michigan.
- Provided expert witness testimony and acted as Environmental and Resident Engineer providing field services to assess potential alleged violations at a former foundry and machine shop. Instituted interim site control measures specifically the on-site management (and beneficial reuse) of spent foundry sands. The firm developed a Compliance Plan for the client in order to address historic and existing outstanding regulatory issues to support clients' settlement negotiations with the Illinois Attorney General's office.
- Civil and Environmental Engineer for a redevelopment assessment of a former General Motors parts distribution facility. The assessment addressed the demolition of obsolete structures, abandonment of two 10,000-gallon fuel oil USTs beneath an existing building and new site construction meeting requirements for a prospective client consistent with City of Chicago ordinances. The property was rehabilitated addressing all environmental issues and redeveloped.

- Engineering and Regulatory Compliance Consultant assessing fuel supply and alternative fuel use for a 3.0 MW biomass-to-electricity project in Arizona.
- The firm was retained to assist with expansion of an existing golf course (i.e. construction of an additional 18 holes) at a water park themed resort in the Wisconsin Dells. Conducted Phase I and Phase II assessments for the proposed new golf course and remediated portions of the property that had been used for unauthorized waste disposal. Conducted geotechnical investigations and drainage assessments for areas where proposed villas were being developed adjacent to the existing (and future) golf course property.
- Engineering Consultant which developed Part C Stormwater Quality Management Program (MS4) for the City of East Chicago, Indiana. Assessed structural and non-structural Best Management Practices (BMP) as well as developed the final Part C permit submitted to the Indiana Department of Environmental Management (IDEM).
- Operations and Regulatory Compliance consultant for a 1,000 TPD solid waste transfer station for the City of East Chicago, Indiana.
- Environmental Consultant on the design for an erosion protection system for parcels located adjacent to Grand Mere State Park, Lake Michigan. Prepared initial design and evaluated shore protection alternatives consistent with selection criteria as developed by the US Army Engineer Coastal Engineering Research Center.
- Civil Engineer for 100,000 ft² indoor soccer arena and 10 acre outdoor soccer complex in Lynwood, Illinois. Performed geotechnical evaluations for construction of indoor facility as well as designed and coordinated infrastructure installation (sanitary and stormwater) for outdoor facility. The firm acted as the Resident Engineer during construction of the project.
- Engineering Project Manager for development of a Closure Plan for the final capping of a 25-acre former steel mill flue dust stockpile.
- Conducted subsurface site characterization and existing conditions (infrastructure engineering assessment) for a 50 acre Electric Arc Furnace (EAF) mini-mill site in Chicago Heights, Illinois purchased from bankruptcy proceedings.
- Environmental Engineering Consultant that developed a supplemental workplan to address contamination at a former Amoco service station site to address groundwater exceedences found in monitoring wells off site. The resulting workplan called for additional investigations and placement of temporary monitoring wells to characterize groundwater plume migration. Based on the additional data collected the project received a Risk Based closure after installation of a bio-remediation program that addressed groundwater contamination issues.
- Technology and regulatory assessments for manufacture's of green waste and construction demolition debris process equipment – a mobile refractory lined air curtain destructor (ACD). Developed air permitting protocols/methodologies using modified USEPA methods and conducted

emissions testing for field verification of performance standards claimed by the manufacturer of the ACD technology including technical presentation of results to USEPA supporting the use of a reduced emission rate for the clients' technology.

- Compliance and Environmental Engineer Title V Air Permit for an Electric Arc Furnace (and rolling mill) in Illinois. Prepared documentation reports to state and municipal regulatory agencies verifying compliance with permit conditions.
- Developed Remedial Action Plan and subsequent environmental assessments addressing characterization and disposal of over 100 drums of potentially hazardous wastes abandoned at a multi parcel industrial facility.
- Developed feasibility assessment for beneficial reuse of water treatment sludge (Lime sludge) for use in a Class A BioSolid conversion process. The assignment included laboratory testing of pilot product as well as regulatory services regarding the use of historic (spent lime) sludge's disposed off site.
- Developed pallet-recycling assessment for a major soft drink bottling company as well as cost benefit analysis for conversion from wood shipping pallets to plastic beverage pallets.
- Project Manager and Engineering Consultant responsible for UST removals, site assessments and remediation of hydrocarbon-impacted soils and groundwater using a combination of remedial technologies at numerous locations in Illinois, Indiana, Michigan, Ohio and Wisconsin.
- Engineering and Technical Consultant for development of comprehensive solid waste management plans and Waste-to-Energy (WTE) feasibility studies for several clients in North America including feasibility and solid waste management assessments for facility financing, siting, and facility permitting. Studies were performed in nine states.
- Audit Consultant for the development of Environmental Management Systems (EMS) for several clients as well as related ISO 14000 audit services.
- The firm was retained by a wastewater treatment plant to conduct assessments regarding the feasibility of installing a system to produce a Class A BioSolid product from the facilities effluent. Feasibility assessment included an inventory of operating Class A technologies, economic assessments, as well as market survey for reuse (sale) of the proposed Class A product.
- Civil Engineer and Resident Engineer for a 25-acre former flue dust pile (Subtitle D) closure.
- Environmental Engineering and Technical Consultant for facility siting, facility permitting and construction documentation for a liquid waste (hazardous waste) processing facility in Kansas.

- Technical Consultant for over 75,000,000 cubic yards of combined sanitary landfill capacity (during 17 years) for several clients (publicly traded and privately held waste services companies including municipal entities) which included facility siting and state permitting.
- Conducted LUST investigations after removal of seven Underground Storage Tanks at a former trucking terminal in East Chicago, Indiana. FHE developed corrective action strategies consistent with the Indiana Department of Environmental Management (IDEM) LUST guidelines. Performed supplemental subsurface investigations to establish site-specific background metals present at the site in order to facilitate approval of proposed Corrective Action Plan. Final remediation was conducted and the site received a Risk Based closure.
- Environmental Engineering and Technical Consultant for several clients developing multi-material recycling processing facilities, solid waste processing (sorting) facilities as well as assessments of volume based curbside collection systems and evaluations of solid waste collection contracts.
- Technical and regulatory assessments for new proprietary technology (for venture capital firms) of a facility that manufactures lightweight aggregate products derived from the recycling of coal combustion ash residues and wastewater treatment sludge's.
- Environmental and Regulatory Consultant that coordinated the company's response to USEPA request for compliance verification under New Source Performance Standards (NSPS) (40 CFR Part 60) and developed air permit submissions to the Illinois Environmental Protection Agency (IEPA). The client operated concrete reprocessing plants in northeast Illinois. In addition, simultaneously addressed a USEPA request for information pursuant to 40 CFR Part 114 (Part 114 Request). USEPA Method 9 Visible Emissions field tests were conducted at the firms' two fixed locations and their mobile unit for submission to USEPA, IEPA, and the City of Chicago. Coordinated responses and requests for additional information from the United States Environmental Protection Agency, which included all relevant data on subsidiaries companies. All agencies were satisfied with the company's response and further enforcement actions were discontinued.
- Testing and evaluation of coal combustion byproduct sources for beneficial use as well as the development of regulatory strategies for mining and reuse of coal combustion byproducts for construction products.
- Former Health and Safety Consultant for 19 sites located in North America, South America, Europe, Asia, and Australia. The assignments primary focus is to fully integrate globalization efforts, metrics tracking and reporting and coordinate compliance with company procedures and local regulations. Assisted with overall safety management and advised client on external certifications useful to promote continuous improvement within the business unit.
- Regulatory and Technical consultant for beneficial use of spent foundry sand (from onsite landfills) as well as for cement kiln dust (CKD)

stockpiles generated by cement plants including regulatory strategies for mining of old CKD and beneficial reuse in building products.

- Performed air modeling and regulatory assessment as well as potential-to-emit calculations for mobile aboveground air curtain destructors (ACD) to be used in Malaysia. Developed Operational Memorandum for an assignment in the United Kingdom. Developed technical material supporting air quality permitting regarding the operation of the ACD for submission to the State of Indiana Department of Environmental Management, the State of Minnesota Department of Natural Resources, State of Michigan Department of Environmental Quality, State of Arizona, State of Illinois Environmental Protection Agency, State of New Mexico, State of Arkansas Department of Environmental Protection, State of West Virginia Department of Environmental Protection, and the State of California (Yolo-Salano Air Quality Management District).

Developed presentation of results of field emission testing and developed modified air quality sampling protocols for an assignment at a military base undergoing decommissioning which evaluated the use of air curtain destructors for processing former Army barracks and other onsite (wood) structures.

Conducted air emissions testing of mobile refractory lined air curtain destructor for submission to United States Environmental Protection Agency (USEPA) to verify manufacturers use of reduced emission factors.

- For an assignment on Johnston Inland in the South Pacific Ocean prepared estimates of combustion throughput, waste characteristics and economic benefit analyses for use of the ACD to process solid waste generated by the 1,400 military and civilian staff that inhabit the island whose mission is the destruction of chemical agents.
- Prepared a “no cost” mine reclamation plan for 2,400 acres of abandoned mine land for a client in Kansas. Developed a proposal to the U.S Bureau of Mines and the state of Kansas which included the sale of reclaimed coal fines to offset the cost of reclamation.
- Environmental Engineer for a TCE soil remediation at a furniture plant site in southern Wisconsin. The firm completed the site characterization and developed a Remedial Action Plan submitted to the Wisconsin Department of Natural Resources. After remediation was completed developed storm water management system redirecting on site drainage ways and instituted new procedures for accepting and storing stains and varnishes and handling of residues. As part of this assignment staff developed boiler specific testing protocols for modified Method 11 testing incorporating on-site mobile laboratory analysis of target compounds to establish best operating practices for the existing boiler system.
- Developed Compliance Plan and Corrective Action Plan in order to address violations at a 50 acre multi parcel site issued by the Illinois Environmental Protection Agency (IEPA) against the municipalities demolition contractor. Coordinated the removal of solid waste and demolition debris (50,000 CY) at the site. An onsite sorting and recovery program was developed for segregation of soil, wood, ferrous metal, brick and other demolition debris remaining at the site. The recovered concrete

- was used in a concrete reprocessing facility, which produced engineered materials (gravel) for use in infrastructure installations, foundation improvements as well as for road base at this site. Soil material removed during onsite sorting operations was tested and a majority was used for landscaping purposes. Ferrous metal recovered from the site (over 500 tons) was sold to a metals recycler to defray other cleanup costs. The volume of material requiring landfill disposal was reduced by 60% using the processes described previously. The remaining non-marketable materials (residual soils) were used as alternative daily cover at a municipal landfill.
- The firm provided regulatory and field services including construction oversight for closure of an 80 acre construction demolition reclamation facility. The facility accepted mixed loads of construction demolition debris and portions of this waste stream were recycled at the site. Concrete reclaimed at the facility was crushed (for sale), mixed soil was screened and reclaimed and sold for infrastructure backfill and sub base grade materials while ferrous and non-ferrous metals were also reclaimed and sold to local scrap businesses. A Closure Plan for the site was developed and the facility is now closed after 10 years of operations. As part of the closure activities Ecolutions slope stabilization and drainage systems were used.
 - Under a negotiated Consent Order with the state of Illinois and City of Chicago developed Site Characterization work plan and acted as technical consultant and expert witness for the defendants on this assignment. Completed site characterization using on-site mobile laboratory for analyses for VOC, PNA and PCB compounds. The firm developed supplemental investigations to further define site impacts for incorporation into site Corrective Action Plan (CAP) for this 15-acre 300,000 cubic yard (CY) former construction/demolition repository. Results of the investigations were used to develop a proposed plan to mitigate the final disposition and determine the reuse or recycling potential of approximately 300,000 cubic yards of debris. Soil remediation was conducted to remove impacted soil at specific locations at the site.
 - Coordinated the removal of one 8,000-gallon diesel UST, one 4,000-gallon gasoline UST and two 2,000-gallon waste oil USTs at a former truck in East Chicago, Indiana. An interim response action was required to mitigate excessive levels of contamination at the site.
 - Conducted Leaking Underground Storage Tank (LUST) investigation at a former trucking terminal site after UST removals. Develop corrective action strategies consistent with the Indiana Department of Environmental Management) IDEM) LUST guidelines. Performed supplemental subsurface investigation to establish site-specific background metals present at the site in order to facilitate approval of proposed Corrective Action Plan.
 - Regulatory Project Manager for the compliance auditing, permitting, and upgrading of a liquid fuel blending facility located in the St. Louis, Missouri Metropolitan region. The facility provided rail car cleaning services and accepted specific liquid waste streams, which were analyzed on-site and reformulated into secondary fuel sources. The majority of the facility-processed petroleum based products and solvents. An engineering

evaluation was conducted to develop new tank farm specifications prior to the decommissioning and dismantlement of the existing tank farm system. Wastewater and other effluent hauling systems were tested to determine the need for upgrades and to assure compliance with new (pending) hazardous waste regulations.

- Project Manager for several environmental and regulatory assessments in order to remediate impacted portions of a 360-acre resort (and former airfield) located in Adams County, Wisconsin. During a preliminary site survey of the properties, structures, and other facilities, (i.e., aircraft hangars, maintenance shops, etc.) several potential environmental threats were identified. Two illegal disposal sites containing regulated wastes and asbestos were investigated and remediated as part of this assignment. Four USTs were removed, and one leaking underground storage tank (LUST) site was identified. This site was investigated using a mobile laboratory and conducted soil remediation via mobile soil washing technology. More than twenty drums of various compounds were profiled and manifested for disposal. On behalf of the lien holders directly negotiated and developed workplans and site-specific cleanup standards for all investigations associated with this project. Enforcement action(s) initiated against the Bank (as trustee of the property) were suspended. The property was sold to a developer.
- Technical consultants providing expert witness testimony on behalf of client in U.S. Federal Court regarding environmental investigations, remediation technologies and storm water management issues. For this case provided regulatory analysis for a former trucking terminal and truck maintenance facility regarding sufficiency of previous investigations relating to pending state of Illinois cleanup standards as well as newly adopted Risk Based Corrective Action (RBCA) analysis and other pending federal applications (for site closure) prior to state involvement.
- Regulatory and project management consultant for equipment salvage (and subsequent demolition) for a former 2,000 tons per hour (TPH) coal preparation plant.

The company's experience is extensive both from a project and geographic perspective. The firm integrates the necessary technical, engineering, regulatory and environmental services for clients' strategically to achieve the best outcome for their projects. The firm's principals have been consistently in the alternative and renewable energy industry for over 25 years developing projects that reduce fossil fuel use and improve environmental performance. FHE participates in limited joint ventures with "client partners" to develop and implement viable, quantifiable strategies in order to expedite timeframes for regulatory approvals that reduce costs to our clients. Our staff is experienced with a wide variety of civil engineering, environmental, solid waste and beneficial use assignments. FHE routinely teams with other consulting engineers to bring our expertise to their projects in order to address unique issues at locations across the country and internationally. We feel that FHE staff and project experience throughout the United States and worldwide can ultimately benefit every one of our clients since there is no single approach that works in all situations and the diverse project and regulatory experience of the staff allows us to keep up with latest strategies, trends and technologies in the environmental and emerging green economy.