

RICHARD E. KRAFT

Principal Engineer

FIELDS OF EXPERTISE

Industrial process technology; waste minimization, site characterization; analytical services; air quality, wastewater and permitting and industrial hygiene.

REGISTRATION & CERTIFICATION

Wastewater Treatment Operation, Indiana
OSHA 40-Hour Training for Hazardous Waste Operations
Certified Testing Specialist
Certified Environmental Manager
Certified Remediation Specialist

EDUCATION

- MBA, Marketing/Finance, Indiana University, 1980
- B.S., Chemistry, Indiana State University, 1975
- Degree Coursework, Earth Sciences Indiana State University
- Degree Coursework, Environmental Engineering

PROFESSIONAL SUMMARY

Mr. Kraft is a Principal Engineer for Patriot Engineering and Environmental, Inc.. He began employment in the environmental industry in 1976. He has extensive experience in industrial environmental concerns, including air emissions, wastewater, solid and hazardous waste, industrial hygiene and industrial process technologies. As a complement to his broad understanding of environmental issues, he has strong communications and interpersonal skills. He is an adjunct professor at Indiana Wesleyan University.

PROFESSIONAL AFFILIATIONS

- Water Pollution Control Federation
- American Chemical Society
- Air and Waste Management Association
- American Management Association

- Central Indiana Technical & Environmental Society
- Consulting Engineers of Indiana
- ACE Mentor Program

SELECTED PROJECT EXPERIENCE

- As Principal Project Manager, he has provided consultation and guidance to industries nationwide regarding water, air, solid and hazardous regulatory programs. Assisted with design and implementation of pollution control technologies.
- Principal Project Manager for industrial pollution control permit programs, including wastewater discharge, air emission, spill prevention and control, transportation and disposal of solid and hazardous waste. Performed environmental impact analysis
- Program management and supervision of Phase I and II and Phase III environmental site assessments, including contractor supervision in remedial clean-up activities involving waste characterization, waste disposal, and site reclamation.
- Program/project and site management of phased environmental audits for more than 100 commercial and multi-family properties. Specific tasks included recommendations for chemical inventory management, permit review, asbestos testing, abatement oversight and odor investigations.
- Developed industrial waste characterization and minimization plans.
- Provided design assistance for industrial pretreatment technologies for chemical and petrochemical industries.
- Provided design assistance for advanced municipal wastewater treatment plant.

- Project Manager for air quality Title III, V, PSD, NSR and ambient air projects.

SELECTED PROJECT EXPERIENCE

Compliance/Audits

- Conducted regulatory compliance audits of numerous industrial facilities
- Managed environmental compliance personnel for contracted industrial clients. Managed company employees who handled the day-to-day compliance activities at these facilities
- Provided on-call consulting services to industrial and commercial clients
- Prepared various plans and annual reports for facilities including: Spill Prevention, Control and Countermeasures (SPCC) plans; SARA Tier II reports; SARA Form R reports; NPDES Storm water Pollution Prevention Plans; and Annual Air Emissions Certification
- Prepared compliance programs for TOSCA, FIFCA and NRC programs throughout the Midwest

Property Acquisition Divestiture

- Conducted Phase I Environmental Site Assessments throughout the United States for the sale, acquisition, or refinancing of commercial, industrial, and undeveloped properties. Properties have ranged from undeveloped agricultural properties to integrated steel mills
- Managed the environmental issues associated with the sale of manufacturing facilities throughout the United States. Determined environmental liability costs and investigation and remediation plans
- Performed Phase I Environmental Property Assessments and all appropriate inquiries at numerous commercial facilities throughout North America

Performed building pre-demolition assessments of former industrial, commercial and public facilities to identify universal wastes and potential regulated/hazardous materials prior to building demolition

Permitting

- Completed numerous permit NPDES applications in various states for industrial clients that included pre-treatment requirements and equipment
- Successfully obtained stormwater discharge permits, developed stormwater plans, obtained NOI certifications and conducted sampling programs
- Completed Part 70, FESOP and SSOA air emission permits for various industrial clients throughout the Midwest. Permits include MACT, BACT analysis, dispersion modeling and control technologies
- Obtained various RCRA permits for TSD facilities throughout the United States to include monitoring and reporting plans. Obtained RCRA permits for remediation projects as required
- Obtained industrial discharge permits to public owned treatment works meeting pre-treatment categorical standards from various municipalities
- Conducted numerous public hearing meetings regarding environmental permits for community right-to-know and public disclosure requirements

Site Investigation/Remediation

- Managed remedial investigations of impacted soil and groundwater at industrial and commercial sites throughout the United States. Conducted remedial pilot testing and bench scale testing to evaluate remedial alternatives
- Managed and conducted investigations at numerous dry cleaning facilities to identify the extent of soil and groundwater impacts, determine potential exposure to sensitive environmental receptors and evaluate remedial alternatives
- Managed hydrogeological investigations at industrial or commercial facilities where groundwater was impacted with various industrial contaminants, including VOCs, heavy metals, and acids
- Conducted and managed the investigation of soil and groundwater impacts associated with underground storage tanks at retail gasoline stations, commercial buildings, and industrial facilities

- Performed field testing and evaluation of laboratory bench scale testing results to determine effectiveness of enhanced bioremediation, chemical oxidation and natural attenuation as remediation technologies for petroleum hydrocarbons, chlorinated VOCs, non-chlorinated VOCs and heavy metals
- Conducted soil vapor investigations at sites with groundwater VOC impacts in accordance with IDEM and USEPA guidance and protocols
- Conducted asbestos inspections of numerous commercial and industrial properties. Managed abatement of asbestos containing materials and prepared operation and maintenance plans for asbestos materials
- Conducted and managed the cleanup of PCB oil spills and contaminated material from historic spills. Projects included appropriate reporting to various regulatory agencies and confirmatory sampling using U.S. EPA guidance
- Managed the remediation of heavy metal-bearing lagoon sludges and wastewater treatment sludges by in-situ and ex-situ stabilization

Storage Tank Management

- Conducted underground storage tank removals and leaking underground storage tank investigations for regional and national retail petroleum companies. Investigations were conducted to delineate the extent of soil and groundwater contamination, both on site and off site. Evaluated the findings to design and install soils and groundwater remediation systems
- Managed spill response and project oversight for numerous clients
- Managed the investigation of leaking petroleum underground storage tanks during tank closure and upgrade programs for the state of Indiana and municipalities
- Managed the removal of petroleum underground storage tanks for national trucking firms. Managed the evaluation, immediate response and

investigation/remediation of soil and groundwater contamination

- Conducted subsurface investigations to determine the off-site origin of petroleum product contamination at several properties throughout the country
- Managed the cleaning and closure of numerous petroleum and chemical aboveground storage tanks at an active manufacturing facility

Wastewater/Storm Water

- Performed regulatory compliance audits of wastewater treatment systems and provided design recommendations at industrial facilities. Determined applicability of existing and proposed federal categorical limits and pretreatment standards for new sources (PSNS), as well as best practical control technology and best available control technology effluent limitations
- Negotiated wastewater discharge permits for discharge of industrial wastewater to a publicly owned treatment plants and NPOES programs
- Performed an analysis of storm water discharges for clients. Evaluation techniques included flow monitoring, physical and chemical testing of waters, smoke-testing sewer lines, videotaping sewer lines, and dye tracing and mapping unmarked lines
- Prepared Storm Water Pollution Prevention Plans, permit applications and conducted storm water sampling at various industrial facilities in numerous states

Environmental Construction Management

- Managed the design and implementation of a site-wide, multi-media remediation plan for a recycling facility, involving the development of Remedial Work Plans for soils, surface water, groundwater, air emissions, sediment, and sludges. Plans included soil stabilization, asbestos abatement, aboveground and underground storage tank closure or upgrade, landfill capping, pollution control equipment installation, groundwater treatment, and slurry wall containment

- Managed the installation of slurry wall and grouting technologies and the installation of groundwater recovery trenches. Managed the installation of pump systems, effluent piping and electrical systems associated with the groundwater recovery trenches
- Managed the closure of a wastewater equalization/settling lagoon at an active wastewater treatment plant. The project included sludge stabilization pilot testing, preparation of bid specifications, contractor selection, project oversight, and QA/QC testing
- Managed the upgrade of a wastewater treatment plant to AWT standards. Construction activities included the wet well, flow equalization basin, DAF units, activated sludge basins and ozone disinfection equipment

Industrial Hygiene

- Managed Indoor Air Quality investigations and worker exposure monitoring at numerous industrial, office, and commercial buildings. Air quality parameters included carbon dioxide, carbon monoxide, temperature, humidity, mold, and bacteria. Worker exposure monitoring included VOCs, metals, dust, silica, and noise
- Managed the abatement of asbestos containing materials from numerous industrial, commercial and public facilities. Provided oversight of abatement contractors on behalf of the general contractor, reviewed clearance and area sample results, and provided final inspection of the work areas
- Prepared asbestos management plans for industrial, commercial, and multi-family residential properties
- Performed or managed asbestos assessments of numerous residential, commercial, and industrial facilities. Activities included identifying homogenous areas and suspect asbestos containing materials, collecting samples of suspect asbestos containing materials, managing personnel involved in sample collection, reviewing laboratory analytical reports, determining when additional analysis (e.g., point counting) was required, preparing assessment reports

and drawings, preparing abatement bid specifications based on the assessment results, and project management

Health and Safety

- Implemented hazard communication and worker right-to-know programs for clients and project sites. Activities included employee training of health and safety programs, posting of applicable state and federal notifications, maintaining MSDS sheets for materials used or stored on-site, and identifying and implementing worker training/testing as required under state and federal OSHA standards
- Conducted workplace (office and project site) inspections for compliance with OSHA regulations, the OSHA General Duty Clause, and corporate health and safety programs
- Conducted company-wide training of field employees in field methods and equipment, including job site safety
- Prepared and updated standard operating procedures (SOPs) for job site safety and compliance with state and federal OSHA regulations and standards
- Documented work place injuries, investigated injury causes and circumstances, determined whether violations of corporate, state or federal health and safety programs had occurred, determined whether an OSHA reportable incident had occurred, documented causes and corrective measures taken, completed and filed OSHA 300 incident logs, conducted post-incident reviews with project team members and implemented employee disciplinary actions when appropriate
- Documented work place accidents that resulted in property damage but not injury to personnel. Investigated accident causes and circumstances, determined whether violations of corporate health and safety programs or local, state and federal laws and regulations had occurred, documented causes and corrective measures taken, worked with corporate personnel to complete and file applicable insurance reports or claims, conducted post-incident reviews with project team members and implemented

employee disciplinary actions when appropriate

- Implemented hearing conservation, respiratory protection, personal protective equipment and blood-borne pathogen programs for specific work activities

Litigation Support

- Performed Expert Witness testimony via deposition and interrogatory
- Prepared Expert Witness reports in support of environmental litigation
- Provided material witness testimony via deposition regarding environmental issues at various types of industrial and commercial facilities