



Kendra Grossman Gutowski Environmental Engineer

FIELDS OF EXPERTISE

Air compliance permitting, enforcement actions, and soil and groundwater investigations and remediation.

REGISTRATION & CERTIFICATION

- OSHA 40-Hour Hazardous Waste Site Operations (HAZWOPER) Training; Annual 8-hour Refresher
- Certification in Erosion, Sediment, and Stormwater Inspector, CESSWI

EDUCATION

BS in Environmental Engineering, Michigan Technological University, 2015

Certificate in Global Technological Leadership, Michigan Technological University, 2015

PROFESSIONAL SUMMARY

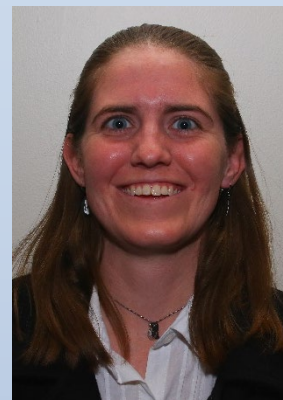
Mrs. Gutowski is a Staff Engineer at Patriot Engineering and Environmental, Inc. She has over three years of professional environmental consulting experience, providing services to clients in the area of environmental compliance and site investigation and remediation.

SELECTED PROJECT EXPERIENCE

- Performed quarterly groundwater sampling and monitoring, including oversight of dual phase extraction remediation system and preparation of monthly Quarterly Monitoring reports.
- Performed subsurface investigations using Geoprobe sampling equipment at sites with chlorinated and petroleum hydrocarbon contaminants and volatile organic compounds (VOCs).
- Performed ASTM Phase I Environmental Property Assessments at numerous undeveloped and commercial properties throughout Indiana.

SELECTED PROJECT EXPERIENCE CONT.

- Air Permit modifications and renewals.
- Air permit applications include:
 - Renewal of a Title V application in Indiana.
 - Major Modification a Federally Enforced State Operating Permit (FESOP) from a Life Time Operating Permit in Illinois.
 - Major modification of manufacturing facilities from Source Specific Operating Agreement (SSOA) to Minor Source Operating Permit (MSOP) in Indiana.
 - Major modification of multiple FESOPs in Indiana.
- Assist enforcement actions resulting from an inspection. Negotiate lower fines.
- Assist in stack testing and review all paperwork generated. Recommend stack testers to the client.
- Drafting of Spill Prevention Control and Countermeasures Plan (SPCCP).
- Drafting of Stormwater Pollution Prevention Plan (SWPPP).
- EPCRA requirements (SARA Tier II, Form R, MSDS list, etc.)
- EPCRA: Toxic Release Inventory (TRI or Form R) reporting.
- Annual EMITS emission report and submitted to IDEM and USEPA
- Environmental Site Assessment of a recycling and manufacturing facility in Ohio.
- Project manager for various sites investigations, including landfill monitoring and residential indoor air monitoring.





Doug Lam, L.P.G. Project Geologist

FIELDS OF EXPERTISE

Geology; hydrogeology; soil and groundwater investigations and remediation; environmental regulatory compliance; environmental due diligence, state voluntary remediation programs brownfields, remediation construction management.

REGISTRATION & CERTIFICATION

Licensed Professional Geologist: Kentucky No. 2462/114730

OSHA 40-hour Training in Accordance with OSHA 29 CFR 19210.120

OSHA 8-hour Supervisor Training

EDUCATION

BS, Geology, Western Kentucky University, 1997

PROFESSIONAL SUMMARY

Mr. Lam is a Project Manager and Geologist at Patriot Engineering and Environmental, Inc. with over 25 years of professional experience providing environmental consulting services to a wide variety of clients. He specializes in soil and groundwater investigations and remediation associated with IDEM and EPA regulatory programs, including VRP, RISC, CERCLA, RCRA, CWA, SDWA, and OPA. Experience also include geophysical investigations, geotechnical and materials testing, emergency response, unexploded ordnance investigations, and vapor intrusion investigation and mitigation.

SELECTED PROJECT EXPERIENCE

- Provided technical and administrative oversight for numerous sites within the Indiana Brownfields and Voluntary Remediation Programs.
- Site manager for a former petroleum refinery demo and cleanup in Ohio under RCRA order, with an annual budget of \$5M to \$25M. Performed investigations at former refineries in Alaska and active sites in California.
- Provided technical expertise for the Superfund Technical Assessment and Response Team (START) for USEPA Regions 4 and 5. Assisted in the deployment for hurricane responses, Level A atmospheric testing, and Superfund Immediate Removal projects.
- Assisted in the design and installation of various remedial systems including soil vapor extraction (SVE), groundwater pump and treat (GPT) utilizing carbon and air stripping technology, multi-phase vapor extraction (MVPE) and bioremediation.
- Determined the existence and extent of petroleum products contamination and developed appropriate remedial action programs at various service stations, bulk plants, and industrial sites throughout the South and Midwest
- Implemented and managed SPCC and SWPPP for facilities in the states of Indiana, Ohio, and Kentucky.
- Conducted hydrogeologic and vapor intrusion investigations to characterize the nature and extent of tetrachloroethene (PCE) and trichloroethene (TCE) in the subsurface at operating and abandoned dry cleaning facilities, industrial locations, and military installations.
- Conducted numerous geophysical surveys across the US to aid in environmental investigations, and to develop new technologies for unexploded ordnance (UXO) detection and discrimination.
- Performed ASTM Phase I Environmental Property Assessments at numerous undeveloped, industrial and commercial properties throughout Indiana, Kentucky, and Ohio.





Janna Stathyelich, P.E. Indiana Group Environmental Manager

FIELDS OF EXPERTISE

Soil and groundwater investigation, risk assessment, industrial surficial contaminant delineation and decontamination, demolition, specification development, and permitting for remediation, construction, and industrial operation.

REGISTRATION & CERTIFICATION

Professional Engineer: Indiana, Kentucky, Wisconsin
OSHA 40-Hour HAZWOPER/8-Hour Refresher
OSHA 30-Hour Construction Safety and Health

EDUCATION

MS, Civil Engineering – Environmental Remediation Specialty, Purdue University, 2004
BS, Civil Engineering – Environmental Specialty, Purdue University, 1998

PROFESSIONAL SUMMARY

Ms. Stathyelich's experience includes environmental engineering consulting, building assessment and demolition, and manufacturing plant environmental management. Her client sites have included: petroleum refining, bulk storage, and retail; pharmaceutical and medical products research and manufacturing; chemical research and production; electrical equipment manufacturing and servicing; appliance manufacturing; lead-acid battery manufacturing; rubber extrusion; aerospace and defense; metals machining, food and beverage distributing; truck rental and servicing; dry cleaning; industrial and municipal redevelopment; federal properties; public university; and municipal airport.

She is experienced with IDEM's programs, including Voluntary Remediation, State Cleanup, Leaking Underground Storage Tank, and Excess Liability Trust Fund; IDEM's risk-based site investigation and closure processes; programs in other states; and federal programs including RCRA, CERCLA, TSCA, Underground Injection Control (UIC) and NPDES.

PUBLICATIONS AND PRESENTATIONS

Presenting Author, "Selection of Phytoremediation Over Traditional Stabilization and Capping Alternatives as the Removal Action at a Waste Oil Lagoon Superfund Site", The Fourth Annual Phytotechnologies Conference/Phytotechnology Society, Denver, Colorado, 9/24 – 26/2007.

Invited Lecturer, "Environmental Issues in Construction and Demolition", CEM290 Construction Engineering and Management Course, Purdue University, 1/22/2009 and 2/18/2010

SELECTED PROJECT EXPERIENCE

- **Chlorinated Solvent Plume Impacting Off-Site Children's Day Care Facility, VRP Site, Indiana**

Investigation/delineation of PCE and TCE at former manufacturing facility partially developed with children's day care facility, and adjacent senior citizen day use facility and residential properties. Impacts delineated to ~80 feet below grade at concentrations significantly exceeding industrial screening levels. Implemented emergency repair and partial redesign of existing vapor mitigation system at children's day care after operational failure of 50% of previous consultant's design/installation. Implementing innovative periodic vapor monitoring to simultaneously demonstrate reduced vapor concentrations without mitigation operating, progress toward mitigation system termination sampling per IDEM guidance, and address potential background contaminant sources. RWP revision underway due to client change of future site use.

- **Chlorinated Solvent Source Area and Plume Delineation, State Clean-Up Program Site, Indiana**

Investigation/delineation of PCE at former dry cleaner redeveloped for non-commercial use. Impacts in soil under building slab resulted in indoor vapor concentrations ~3 times greater than commercial indoor air screening levels. Off-site impacts extend to at least 60 feet below grade at concentrations ~19 times greater than screening levels. Off-site delineation is ongoing.

- **Chlorinated Solvent Release, Industrial Site, Voluntary Remediation Program Site, Indiana**

Investigation and remedy planning for chlorinated solvent plume with potential off-site groundwater and vapor intrusion impacts. Evaluating vapor risk from historical release vs. background contaminant sources used by current building occupant vs. background contaminant sources in adjacent residences, and evaluating plume stability vs. potential off-site risk due to screening level exceedances at property line.



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- **Chlorinated Source Zone Removal, Voluntary Remediation Program Site, Indiana**

Work Plan to IDEM, scope of work and bid specifications, and Remediation Action Report to IDEM for source-zone removal at a chlorinated solvent- and petroleum-contaminated former industrial site. Removal included excavation to 25 feet below grade of over 5800 tons of contaminated soil plus overburden and sidesloping. Removal occurred during ongoing commercial operations of current facility with temporary utility redirection. Site restoration included utility replacement, backfilling, compaction, and repaving approximately 15,300 square feet.

- **Commingled Chlorinated Solvent Plume, Multi-Party Litigation, Indiana**

Seven-plus year ongoing litigation regarding ~0.5-mile chlorinated solvent plume in mixed-use urban area with heavy industrial development dating to late 1800s and numerous former industrial properties contributing disproportionately to plume. Litigation includes downgradient vs. upgradient sites, and downgradient and upgradient sites vs. IDEM. Upgradient investigations began in 1995 and downgradient investigations began in 1987 and are ongoing.

- **Multiple Federal Facilities, Petroleum UST Sites, Indiana**

Delineation of on- and off-site petroleum impacts at former underground storage tanks (USTs); preparation of investigation reports, risk assessment, development and implementation of Corrective Action Plans, and regulatory closure of multiple facilities across Indiana in accordance with IDEM's regulations and guidance.

- **Multiple Commercial and Municipal Sites, State Cleanup and LUST Program Sites, Indiana**

Provided ongoing and completed investigations and remediation of soil, groundwater, and vapor contamination at sites contaminated with chlorinated solvents, metals, and petroleum across Indiana. Remedies have included targeted excavation and free product recovery, with risk-based closure.

- **Surface Lead-Containing Dust Decontamination, Manufacturing Warehouse, Indiana**

Lead-containing dust decontamination specifications and implementation at ~480,000 sq. ft. warehouse for manufactured product, downwind of lead emission source and known exterior surficial lead contamination. Decontamination began on weekends and continued for two months during weekdays without interruption to operations. Safety training for all site personnel, decontamination process training for housekeeping staff, ongoing support of operations, and confirmation of surficial lead concentrations continued approximately two years during operations, culminating in final building decontamination prior to moving out of leased building.

- **Characterization And Specifications For Decontamination And Demolition, Battery Plant, Indiana**

Contaminant characterization and preparation of decontamination and demolition specifications for ~240,000 sq. ft. former lead-acid battery manufacturing plant. Delineated extent of building surface requiring disposal as hazardous waste due to toxic lead concentrations. Oversaw demolition to evaluate compliance with specifications

- **Waste Assessment and Building Demolition, Abandoned Electrical Motor and Transformer Facility, Indiana**

Redevelopment of ~34,000 sq. ft. abandoned transformer and motor repair facility dating to 1940s purchased by municipality in neighborhood improvement plan. Scoped/managed: building assessment; characterization of abandoned materials/wastes including oil-filled transformers, PCB oil containers, and hazardous ignitable, toxic, corrosive, and listed wastes; development of PCB self-implementing cleanup plan approved by USEPA without comment/revision; asbestos inspection; preparation of specifications for, and oversight of, regulated waste removal/disposal, asbestos abatement, structural demolition, and site restoration.



Douglas B. Zabonick, P.E. President

FIELDS OF EXPERTISE

Geology; hydrogeology; soil and groundwater investigations and remediation; environmental due diligence; state voluntary remediation programs; environmental regulatory compliance and permitting; remediation construction management.

REGISTRATION & CERTIFICATION

Professional Engineer Registered in Indiana, Michigan, and Ohio

OSHA 40-hour Training in Accordance with OSHA 29 CFR 19210.120

OSHA 8-hour Supervisor Training

ISO 14000 Lead Auditor

EDUCATION

B.S., Geological Engineering, Michigan Technological University, 1983

PROFESSIONAL SUMMARY

Mr. Zabonick is the President of Patriot Engineering and Environmental, Inc. He has over 35 years of professional experience providing engineering expertise serving various clients in the areas of site investigations, remediation design and installation, environmental assessments and audits, environmental compliance, health and safety, EHS training, solid waste management, and landfills.

Mr. Zabonick has conducted numerous multi-media audits and is a frequent instructor and trainer on EHS matters. He has performed due diligence on thousands of sites and has conducted investigations and remediation at hundreds of properties impacted by petroleum, solvents, metals and other compounds under various programs, including CERCLA, RCRA, UST, VPR and Brownfields. His experience also includes extensive work in the design and remediation of landfills.

SELECTED PROJECT EXPERIENCE

- Conducted landfill closures and O&M activities for numerous landfills, including Superfund sites
- Performed due diligence on thousands of sites and conducted investigations and remediation at hundreds of properties impacted by petroleum, solvents, metals, and other compounds under various programs, including CERCLA, RCRA, UST, VPR and Brownfields
- Designed various remedial systems including soil vapor extraction (SVE), groundwater pump and treat (GPT) utilizing carbon and air stripping technology, multi-phase vapor extraction (MVPE) and bioremediation
- Project manager for expansion of a Type I Restricted Waste Site used for the disposal of primarily salt cakes, dross, baghouse dusts and refractory generated during the processing of aluminum. The site is an active landfill equipped with a synthetic liner, leachate collection and storage system, groundwater monitoring system and leachate pre-treatment system
 - Extensive work included design and permitting of landfill expansion, oversight of construction of new landfill cells, conducted groundwater monitoring and reporting, prepared correcting action plans for groundwater. Expansion of the landfill area increased the size of the available fill area from approximately 10 acres to 28 acres while increasing the height by approximately 60 feet. Prepared the engineering design, including the design of the final slopes, steelement calculations, erosion controls, leachate collection system and the final closure capping system. Also, providing comprehensive environmental services, including Spill Prevention control and countermeasures, storm water management, spill response activities, and leachate disposal



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- Represented foundry client in enforcement case regarding RCRA landfill closure and restricted waste site. Provided site investigation services and designed closure plan(s) of expansion areas. Specified liner and capping systems to meet regulatory guidelines and budgetary parameters. Provided consulting services on process changes to minimize wastes and change waste type
- Designed and reviewed landfill designs for numerous sites. Designs included: leachate collection systems, natural and synthetic liners, capacity calculations, monitoring well system design and hydrogeologic studies.
- Determined the existence and extent of petroleum products contamination and developed appropriate remedial action programs at various service stations, bulk plants, and industrial sites throughout Midwest
- Conducted assessments of manufacturing complexes, service stations, commercial buildings and undeveloped sites. Evaluated these sites for the presence of soil and groundwater contamination, asbestos, PCB transformers, underground storage tanks, and illegal waste discharges
- Managed underground storage tank programs, including subsurface investigation, tank testing, groundwater sampling, analytical testing, monitoring well installation and recovery system design and installation
- Performed multi-media compliance audits at industrial sites throughout the United States, Adu Dhabi and Brazil, South America. Sites consisted of primarily heavy industry, manufacturing, utilities and coal mining/cooking facilities
- Managed all facets of ten major brownfields sites in Indiana and Ohio. Projects required technical expertise in compliance with grant and regulatory requirements, geotechnical engineering, project management, sustainability/recycling, site investigation, remediation, stormwater/erosion control and construction management
- Instructor for annual RCRA training for over 100 industrial facilities located across the United States. Training was performed under a multi-year contract and included "Train the Trainer" curriculum and preparation of Waste Minimization Plans
- Prepared and certified multiple SPCC and SWPPP for facilities in the states of Indiana, Ohio Utah, West Virginia and Alabama
- Expert witness in over 20 litigation cases involving insurance cost recovery, site investigation, site remediation, asbestos and RCRA matters. Majority of cases were settled favorably for my clients prior to going to trial
- Conducted 40-hour HAZWOPER training, UST training, Green Remediation and Brownfields training during a four year USEPA Brownfields Training grant
- Expert in beneficial reuse of foundry byproducts and contaminated soils. Recent projects included structural fill at industrial complex using foundry sand and reuse of petroleum and chlorinate solvent contaminated soils from former industrial sites being redeveloped in several major metropolitan areas
- Principal engineer for negotiation of Agreed Order and remediation of three-million-dollar contaminated soil project