

SER⁹⁰, Inc.

Interactive Statement of Qualifications

Instructions

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SER⁹⁰, Inc.

INVESTIGATION



REMEDIATION

INNOVATION

Statement of Qualifications

(SOQ)

CERTIFIED COMPANY

ISO 9001

14001

18001



Superior Environmental Remediation⁹⁰, Inc. (SER⁹⁰)

2101 Lincolnway East, Mishawaka, IN 46544

(574) 256-1490 • Facsimile (574) 256-1491 • www.ser90.com

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14001 18001

Company History

Superior Environmental Remediation⁹⁰, Inc. (hereby referred to as “Superior Environmental” and/or “SER⁹⁰, Inc.”) has been in existence since 1998.

Our founder, Sam Sirhan, enjoyed a solid reputation as an environmental professional, primarily but not exclusively, in the Great Lakes region who brought with him from the EPA the latest in technical know-how and best practices in solving environmental problems. He was able to call on his years of experience working for the Federal EPA and the years he served as the Engineering Manager for a local environmental services company to assist in efficient client problem resolution.

During the initial growth time period the company enjoyed immediate client contracts and embarked on a slow and methodically-planned expansion. Sam felt that the best way to provide the level of customer service and professionalism he believes in was to start his own company. The growth was planned around SER⁹⁰, Inc., Inc.’s professional expertise in specific technical areas and not simply by just taking on any new project. In order to best serve the client base and assure the company’s early financial health, both manpower and equipment were added on an as-needed basis only.

This practice of growing to meet the client need first has continued and is so successful that it will continue into the future.

Superior Environmental is financially stable and healthy and our current strategies have proven to out last many of our local competitors. We provide a good employment experience

for our professional staff by paying a competitive wage, providing good benefits, allowing for continuous education, and providing professionally stimulating projects to enhance growth and job satisfaction.

SER⁹⁰, Inc. works with a project-focused perspective (all projects are co-equal) on our business and is supported by our entire staff. This concept allows us to maintain the client focus we feel that we need at all levels of our organization to provide stellar customer service.



One Team...

Sustainable Solutions ...

Great Results!



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Company Profile

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<i>Date of Incorporation:</i>	November 20, 1998
<i>Licenses & Certifications:</i>	State of Minnesota Department of Commerce Contractor No. 20-1378 State of Indiana Small Business Vendor No. 62084 Registered Groundwater Remediation Firm, No. 3042110 Registered Lake County, Indiana Environmental Contractor No. 1994-21-003
<i>Corporate Location:</i>	2101 Lincolnway East Mishawaka, IN 46544 Office: (574) 256-1490 Fax: (574) 256-1491 Email: freeinformation@ser90.com
<i>Branch Office:</i>	1403 Branding Circle, Downer Grove, IL 60305
<i>Demographics:</i>	Great Lakes region - 80 miles east of Chicago, IL.
<i>Employees:</i>	9 degreed and many professionally registered staff: (7 - Geologists, Geophysicists, Engineers, and others; 2 degreed administrative)
<i>Revenue:</i>	Superior Environmental is a privately held corporation and as such does not divulge its financial statements. However, it does enjoy a multi-million dollar annual revenue.
<i>NAICS Codes:</i>	541620, 541330, 562910, 234930, 234990
<i>Authorized Representative:</i>	Emma Sirhan, CEO Sammy Sirhan, Vice President and Director of Environmental Services
<i>Federal I.D. Numbers:</i>	35-2060825
<i>Dunn & Bradstreet No.:</i>	DUN-08-1962503
<i>Insurance:</i>	Commercial General Liability coverage of \$6,000,000 Professional Liability coverage of \$6,000,000 per occurrence Pollution Liability coverage of \$6,000,000 per occurrence Commercial Vehicle coverage (for all vehicles owned or driven by our employees) Full Worker's Compensation coverage exceeding that required by the State of Indiana Licensed and bonded in most Northeast Illinois and Northern Indiana counties, cities, and townships



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Professional Staffing

Corporate Philosophy (Code of Conduct)

Our Code of Conduct is driven by the principles that: Satisfied clients make for good business, satisfied clients can be obtained through the service of competent, happy professionals, and happy, competent professionals get that way with good pay, benefits, and training. When all of these principles are working in concert best collective results will be obtained for SER⁹⁰, Inc. We obtain a high quality result for our client by:

-  Assuring our team members share with management the same business approach – we measure success “one project at a time.” This implies that all projects are important irrespective of the project size, revenue or profile in comparison to another one. No one project is considered to be more important than any other one. This keeps our focus on client needs.
-  To better satisfy our goal of the cost-effective control of our projects, we determined that we must have quick access to the most up to date data possible and then to have enough professional staff and equipment to form an appropriate response to this information. To this end we made our management structure simple therefore allowing for quick response to best focus on quality control. Also we equipped our scientists and engineers with remote control monitoring technologies as the best method to meet the monitoring needs of a broad geographic coverage area. We are committed to simplicity and a no nonsense approach to our business structure. As additional proof we have employed more experienced scientists and engineers than business function personnel. We will maintain a lean administrative staff using out-sourcing techniques where best employed. We will keep a sharp focus on minimizing overhead expenses all aimed at providing the dollars needed to stay on the leading edge of technology.

The central value of our operation, for the present and the future, is to focus on keeping our clients liability free at a fair cost. We believe that employee performance and improvement is possible through continuous training and exposure to new technologies. It is mandatory for each scientist and engineer at Superior Environmental to complete two to three continuing education hours (CE) through specialty training offered by the US EPA, Indiana Department of Environmental Management or any approved agency.

-  The Superior Environmental team always strives for excellence through Total Quality Management (TQM). Our procedures, processes, and methods of operation always undergo a thorough review by our QA/QC Director on a project-by-project basis.
-  Superior Environmental understands that sometimes client “wants” and regulatory agency requirements are not always in concert. Our team of professionals is able to successfully manage such disparities at a minimum cost to the client, and yet with full regulatory compliance via the use of innovative technologies. While it is not always easy to see the underlying needs and the corresponding solutions, our professionally trained staff is able to accomplish this task.
-  Our Team and subcontractors are dedicated individuals who are committed to serving our clients. As much as we would like to pretend to be error free, we are a collection of humans and as such mistakes will inevitably be made. However, we encourage and reward our staff to bring these errors out when discovered and engage in open discussion in order to assure that these will not be repeated in the future.



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Emma Sirhan,
CEM, CEI
President & CFO
(15 years)

SER⁹⁰, Inc.
ISO Certified Company



Fields of Competence

- ◆ *Large Project Funding & Financial Management.*
- ◆ *Special Geophysical Projects*
- ◆ *Search & Rescue Ops*
- ◆ *Customer Relations*

Credentials

- ◆ *B. Sc. Public Health Policy*
- ◆ *Certified Environmental Manager; CEM No. 77405*
- ◆ *Certified Environmental Inspector; CEI No. 1-77412*
- ◆ *Licensed GPR Operator (LGPRO).*

Member of



No. 0984352-01

EXPERIENCE SUMMARY

Emma has fifteen years experience in financial project management and planning. Emma worked as Park National Bank Vice President and large account executive. Before joining our team, Emma worked as a Customer Relations Officer for Roadway Express and was recognized as a problem solver. Emma assists our clients in project budgeting, funding and cost recoveries. In addition, Emma is the chairperson for Special Geophysical Application Projects such as search-and-rescue and other law enforcement projects. Emma provides the company with vision, long term planning and Total Quality Management (TQM) to provide our clients with best service achievable.

Emma assumed her responsibilities as the president and financial officer at our firm in early 1999. Emma is responsible for overseeing the company's rapid growth and finances to ensure solid opportunities for our team members.

RELATED PROJECTS

- ◆ **Park National Bank:** Emma was the bank Customer Relations Officer for five years, responsible for large account management and overall customer services. Emma was recognized for troubleshooting processes and the TQM program. Emma assisted a majority of the bank's clients to manage business growth and associated finances through long-term planning and strategic response to their market stimulus.
- ◆ **Roadway Express:** Emma was hired by Roadway to manage a troubled Customer Services Department. Emma applied TQM to every aspect of the company's services and setup programs and processes to overcome these problems. In her three-year stay at Roadway, customer service was elevated to number one priority and customer satisfaction was restored. Emma created a Customer Appreciation Day program, which was applied nationally through the company and Emma was recognized for her management skills.
- ◆ **Superior Environmental:** Emma has been the President and Chief Financial Officer of the firm since 1999. Emma is responsible for creating a challenging and rewarding work environment for our team to put SER⁹⁰. Inc. in a position to excel in providing our clients with sustainable solutions for their environmental concerns. Emma is responsible for securing growth funds and opportunities for the company and maintaining high quality environmental services.

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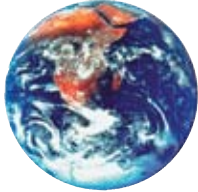
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Sammy H. Sirhan
CHMM, REM
Senior Project Manager
(20 years of experience)

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ISO Certified Company



Fields of Competence

- ◆ Remedial Investigation
- ◆ Complex Geological Interpretation & Studies.
- ◆ Non-destructive Testing & Geophysical Methods.
- ◆ Remedial Design & Feasibility Studies.
- ◆ Groundwater, Aquifer & Hydrogeological Assessment.

Credentials

- ◆ MSE- Geological Engineering, University of Idaho.
- ◆ BS- Environmental Geology, University of Jordan.
- ◆ Certified Hazardous Material Manager (CHMM) No. 3311.
- ◆ Registered Environmental Manager (REM) No. 972

Member of



No. 3042110

EXPERIENCE SUMMARY

Sammy is a senior project manager and Vice President for SER⁹⁰, Inc. He is a Certified Hazardous Material Manager since 1992 at a Master Level. Sammy worked as a senior project manager on hundreds of US EPA Superfund projects in Region 5 with complex scope and objectives. He designed and executed investigation workplans for numerous large and small projects ranging in budget from a few thousand dollars to multi-million dollars. Sammy is responsible for conducting remedial action feasibility studies and optimal remedial design and installation. Sammy has more than twenty (20) years of experience in environmental investigation, remediation and geophysical techniques.

RELATED PROJECTS

Sammy managed and directed numerous US EPA sites for both the public and private sectors. In addition, Sammy provided our clients with effective project management through accurate, cost-effective investigation and then timely remediation to eliminate threats of environmental exposure and associated liabilities. Below is a sample of Sammy's specific project experience:

- ◆ **Introduced site-specific innovative remediation technology** to treat PCB-contaminated waste by Solidification to render it non-hazardous at Greene Landfill, which provided the client with more than \$4 Million dollars in disposal and transportation cost.
- ◆ **Designed effective and innovative remedial systems** based on site-specific parameters. These systems were remotely controlled with true Man-Machine interface to achieve timely remedial objectives. At City of Portage Fire Department, Sammy designed a Dual Recovery System, which treated 6.5 million gallons of contaminated groundwater in 24 months to abate threat to the public health and the environment and eliminate the City's liability to its neighbors.
- ◆ **Designed effective Liquid Flushing & Injection remedial system** at Unocal 76, East Chicago. The system effectively recovered contaminated groundwater for surface treatment and re-injection for the purpose of fast flushing of remaining contaminated groundwater by creating artificial hydraulic gradients. All designs and remedial technology were computer simulated with site-specific parameters. The system handled more than 12.5 million gallons of contaminated groundwater with zero discharge to the surface.
- ◆ **Conducted wide range of non-destructive environmental investigation** at an 84-acre property for Lootens & Sons Co., Inc. to determine fill areas and delineate plume edges using ground penetrating radar survey coupled with EM-31 technologies. The project was cost-effectively investigated and met the approval of State and Federal regulatory agencies.
- ◆ **Prepared and executed hundreds of hydrogeological models** using US EPA and USGS-accepted software to simulate plume behavior for Indiana RISC and Illinois TACO closures. Sammy is a seasoned modeler trained by USEPA and Schlumberger Water Services.

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Lisa E. Doan, M. Sc.
Senior Project Geologist
(16 years of experience)

SER⁹⁰, Inc.
ISO Certified Company



Fields of Competence

- ◆ *Geological Investigation*
- ◆ *Well Design & Placement*
- ◆ *Groundwater Analysis*
- ◆ *Aquifer Pilot Testing*
- ◆ *MIP Probing*
- ◆ *Risk Based Assessment & Closures*

Credentials

- ◆ *M. Sc. Applied Geology, Old Dominion University.*
- ◆ *B. Sc. Geology, Ball State University.*
- ◆ *Certified Well Driller*

Member of



No. 3042110

EXPERIENCE SUMMARY

Lisa has more than 16 years in environmental investigation, groundwater and subsurface assessment and other complex hydrogeological data processing and presentation. Lisa conducted wide range of aquifer pilot tests to determine site-specific parameters for optimal remediation design. Lisa prepared and implemented a laboratory Standard Operating Procedures (SOP) under the direction and supervision of US EPA for the Applied Marine Research Laboratory in Norfolk, Virginia. She managed large scale projects with complex scope and objectives

RELATED PROJECTS

- ◆ ***Petro USA, Inc.:*** Project management of a 15 acre truck stop facility in western Illinois with free-phase diesel fuel entering the on-site building and numerous historic releases of gasoline and diesel fuel. Activities include reviewing documents from the Illinois Environmental Protection Agency (IEPA), preparation of work plans, project budgets and reports for the IEPA, planning, oversight and performance of soil boring and monitoring well installation, sample handling and surveying.
- ◆ ***Innovative Investigation Techniques:*** On-site supervision of site characterization activities at a large gas station which included bulk fuel and petroleum oil handling. Responsible for field determination of the appropriate technology necessary to collect data based on changing subsurface conditions. Investigation techniques included the use of Membrane Interface Probe (MIP), multiple types of direct-push sampling and hollow stem augers.
- ◆ ***Groundwater and Contaminant Transport Modeling:*** Performed groundwater contaminant transport modeling for a large petroleum handling terminal operating in northern Virginia. Modeling was performed to assess client potential responsibility as part of on-going litigation regarding a large free-phase petroleum plume affecting nearby residences. Project responsibilities included preparation of all necessary documentation to present and support the model results as part of the client's defense.
- ◆ ***Complex Investigations:*** Responsible for maintaining large database for an emergency response site in Baltimore, Maryland requiring delineation of petroleum contamination in soil and groundwater, and mitigation of vapors entering residences and business in an area covering several city blocks. Data collected daily from numerous groundwater monitoring wells and multiple soil vapor extraction systems was managed and kept current within 48 hours of the time of collection. Graphic representations of the data were prepared for inclusion in project status meetings with the clients several times per month. The data presentations were utilized in assessing site conditions and the decision making process for system expansion needs. Project responsibilities required close interaction with engineers, field personnel and Senior Geologist.

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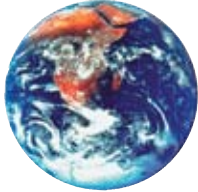
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Christopher Schoo
Project Manager
(13 years of experience)

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ISO Certified Company



Fields of Competence

- ◆ *Landfill Assessment & Monitoring*
- ◆ *Storm Water Compliance Planning & Installation*
- ◆ *Groundwater / Soil Geo-statistical Analysis*
- ◆ *Subsurface soil and Groundwater Sampling*
- ◆ *Risk Based Assessment & Planning*

Credentials

- ◆ *B. Sc. Environmental Science, University of Wisconsin*
- ◆ *B. Sc. Biological Science*
- ◆ *Bowling Green University*
- ◆ *Certified Waste Water Operator Class A and Class D, Indiana IDEM No 17450, Illinois EPA No.542005 Michigan DEQ No. 4828*
- ◆ *Certified Drug Lab Assessor*

Member of



No. 3042110

EXPERIENCE SUMMARY

Chris is an associate project engineer with thirteen (13) years of environmental compliance and pollution prevention experience. Chris served numerous of our clients by preparing and installing a full compliance program to avoid liability and enforcement. Chris coordinated efficiently with regulatory agencies on behalf of our clients to achieve compliance at economical cost in timely fashion. He managed and operated complex remediation systems, large volume waste water treatment plants and supervised O & M operations.

RELATED PROJECTS

- ◆ ***Southeast Berrien County Landfill:*** Chris designed and installed a full monitoring program for the County and managed the Landfill complex remediation system, which included leachate treatment, groundwater hydraulic control and methane gas management and destruction. Chris conducted the required subsurface soil and groundwater investigation for landfill expansion and administered the required hydrogeological testing and location-specific pilot tests.
- ◆ ***Mor/ryde International:*** Chris assisted our client in designing and installing an optimal waste water treatment system for a problematic \$1.5 million dollar automotive parts production line. Chris represented our client before the local, State and Federal regulatory agencies, which saved the client down-time and the risk of non-compliance. Optimal system design and installation quickly gained the acceptance of all regulatory agencies with no business interruptions for our client.
- ◆ ***Starke County Highway Garage:*** Chris prepared and executed soil and groundwater investigation plans for the county highway department. Chris designed the required remedial system based on site-specific pilot testing and aquifer parameters. The remedial system effectively achieved the required cleanup objectives within the computer-simulated time frame. Chris assisted the county in holding public meetings for the project and prepared public handouts to assist the county officials in their public relations campaign.
- ◆ ***Whirlpool Corporation:*** Chris assisted the corporation by designing and operating prototype remedial systems for feasibility and pilot testing and competitive analysis, which provide the client with substantial monetary savings and timely compliance.

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Jack Yan, PhD, PE
Professional Engineer (PE)
Senior Project Engineer
 (17 years of experience)

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ISO Certified Company



Fields of Competence

- ◆ *Geotechnical Investigation*
- ◆ *Remedial Engineering Design*
- ◆ *Water Resources Engineering*
- ◆ *Construction Management*
- ◆ *Slope Stability Analysis*
- ◆ *Risk Based Assessment & Closures*

Credentials

- ◆ *PhD Geotechnical Engineering, Northwestern University.*
- ◆ *MSE- Civil Engineering, Northwestern University.*
- ◆ *BSE- Civil Engineering, China National University*
- ◆ *Registered Professional Engineer, PE No. IL 062-051834, MI 6201041061*

Member of



No. 3042110

EXPERIENCE SUMMARY

Jack has over 17 years of experience in environmental, civil and geotechnical engineering. Experience includes construction management, range hazard analysis, site investigations, remediation programs, Brownfield Development, Risk Assessments, Remedial Pilot Tests and feasibility studies, and remediation design and implementation. Geotechnical engineering experience includes soil testing, shallow and deep foundation, drainage design, slope stability analysis, and Geosynthetic material applications. Jack's involvement in the design and construction of remediation systems includes groundwater pump and treat systems with air stripping and carbon filtration, air sparging, SVE, hot air injection, bioremediation, stabilization, physical separation, and free product removal systems. He has extensive hands-on experience in conducting groundwater modeling and in-situ groundwater testing, including pump and slug tests. Mr. Yan has also managed hundreds of LUST and SPR projects and obtained hundreds "No Further Remediation" letters from the IDEM and IEPA

RELATED PROJECTS

- ◆ **Water Supply and Waste Water Engineering:** Improved water supply and distribution systems for several mobile home parks in western Michigan. Designed a wastewater treatment system (including pH balance, odor control, mixing and settling tanks, sludge handling, pump stations) for Yoplait plant in Michigan. Prepared engineering design, and specifications. Conducted equipment selection and construction oversight.
- ◆ **Construction Management:** A key member of a consulting team, provided technical and litigation supports to the Illinois State Toll Highway Authority regarding the System-Wide Tollway Redevelopment Project. Managed numerous projects for the Capital Development Board (CDB), City of Chicago, Chicago Housing Authority (CHA), and other municipal governments. Prepared construction documents and specifications for Midway Airport Expansion, CVS stores, Wendy's International, and other Industrial and Commercial buildings.
- ◆ **Brownfields Assessment and Redevelopment:** Obtained Brownfield Redevelopment Grant from the EPA for several municipalities and private developer, including the Village of Thornton and Chicago Indoor Soccer. Managed environmental remediation in conjunction with site development.
- ◆ **Geotechnical Engineering:** Supervised and reviewed hundreds of geotechnical investigations and reports for residential and commercial development. Performed numerous foundation design (shallow and deep foundation), drainage design and slope stability analysis. Conducted dynamic compaction, grouting and other soil improvement techniques.

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R. Scott Liggett, M. Sc.
Senior Project Manager
Health and Safety Officer
(30 years)

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ISO Certified Company



Fields of Competence

- ◆ *Safety Risk Assessment*
- ◆ *Laboratory Data Validation*
- ◆ *Risk Based Assessment & Closure*
- ◆ *Bridge Scans using Ground Penetrating Radar*
- ◆ *MIP Probing*

Credentials

- ◆ *M. Sc Environmental Science, Indiana University.*
- ◆ *B.A. Biological Sciences and Chemistry, Indiana University.*
- ◆ *Certified Indiana Waste Water Operator Class D, Certification No. WW018432*
- ◆ *Certified OSHA Trainer in Occupational Safety and Health Standards for the Construction Industry, 2008*

Member of



No. 0984352-01

EXPERIENCE SUMMARY

Scott has over 10 years of experience in industrial and environmental health and safety as well as risk assessment. He has a diverse background in the environmental industry which includes consulting and laboratory experience with state and federal regulatory programs. In addition to being a certified waste water operator and OSHA instructor, he is trained in the use of ground penetrating radar for use in concrete bridge scans and membrane interface probe technology for subsurface investigations.

RELATED PROJECTS

- ◆ **Health and Safety:** Scott was responsible for OSHA safety programs, risk management and emergency planning both in-house at manufacturing facilities and as a private consultant. He is currently certified as an OSHA instructor in Occupational Safety and Health Standards for the Construction Industry.
- ◆ **RCRA Compliance Monitoring and Reporting:** Currently Scott oversees all phases of the NPDES process for groundwater remediation systems using pump and treat technologies. He oversees all required monitoring, sampling and reporting for waste water discharge and air emissions for two separate manufacturing plants operated by Mor/ryde International. In addition Scott functions as the liaison between our industrial clients and the various local and state regulatory agencies. Previous experience includes the administration of industrial environmental programs such as Title V permitting, hazardous waste handling and storm water discharge.
- ◆ **Risk Assessment for Site Closure Purposes Under Indiana RISC:** Scott is responsible for data analysis and evaluation for sites being considered for closure using methods other than Default Closure Limits under the Indiana RISC program. He has applied the use of statistical control limits, Mann Kendall stability tests and Chen tests to soil and groundwater data as a method of obtaining site closure where the use of Default Closure Limits is not a cost-effective option. These methods have been applied to petroleum release sites such as gas stations and RCRA Corrective Action facilities.
- ◆ **Thorough Understanding of Laboratory Procedures and Requirements Applicable to Environmental Industry Standards:** Scott's previous experience as both a laboratory manager (Williams Laboratory Services) and laboratory director (Environmental Quality Laboratory), as well as chief chemist for the Bureau of Wastewater for the City of South Bend provided him with a unique understanding of the role of contract laboratories in the environmental industry. He was responsible for overseeing projects related to a variety of types of projects, including: underground storage tanks, groundwater monitoring, storm water discharge, hazardous waste, drinking water, NPDES and air quality.



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David F. Lucas, BSChE
(30 years of experience)

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Fields of Competence

Product Development

- ◆ *Market Development*
- ◆ *Project Management*
- ◆ *Process Chemical Engineering*
- ◆ *Engineered Polymers*

Credentials

- ◆ *B. Sc in Chemical Engineering, University of Florida*
- ◆ *Market Development Manager for E. I. DuPont de Nemours, retired*
- ◆ *Former member Management Team of Environmental Services Company*

Member of

Association of Professional Marketing Executives

EXPERIENCE SUMMARY

David has more than 30 years experience in technical operations from engineering, production, sales & marketing, to management. Having a broad perspective on the Environmental business allows David to interface and troubleshoot many aspects of the business while helping to position the company to utilize the technical capabilities of the environmental professionals and meet or exceed the need of the client base.

RELATED PROJECTS

- ◆ **Continuous Centrifugation:** A DuPont Biomedical production operation was facing a costly plant expansion to keep up with production needs. Dave was able to develop and apply a never before used continuous centrifugation technique which eventually proved invaluable in extending the production efficiency and avoided a costly expansion. Technical papers were published on ionic-bed gel chromatography and a new process for solid-liquid separation of these proteins, and column bed formation techniques to solve gel bed channeling.
- ◆ **NVR Project:** E. I. DuPont was faced with the difficult task of minimizing the waste on a bottoms-stream from a nylon intermediates production process across three (3) North American production plants – Orange, TX; Victoria, TX; and, Mississauga, Ontario, Canada. This amounted to 300 million pounds per year and no molecular species was present in a concentration greater than 2%. Dave successfully headed up a multi-disciplinary, multi-plant project which when completed had isolated, developed and marketed two (2) new DuPont products, increased the quality of the stream to the boiler as secondary fuel value, redefined the specs of finished primary product, reduced the stream mass flow by 15%, and received three (3) new patents by Research as a direct result.
- ◆ **BHMT Product:** After observing a need that the marketing group had in the customer base for a higher quality BHMT product, Dave developed a way to produce this product. He led the effort among three (3) production plants and ultimately increased the product value by 100% and spread this over the entire product stream increasing the quality of the product, changing the markets to higher-value-in-use markets, and hence increased profits dramatically.
- ◆ **DBE Market:** This product was facing extinction from traditional markets due to technological shifts. Within five (5) years all sales would have ended. David's task was to find all new markets to save this down-stream business. I led the world-wide effort and managed the multiple-disciplinary project effort focusing on Research and Product Development. Two (2) years head of the time goal, all new markets were found, additional product needs were uncovered which allowed product modifications of the base product to capture these sales. Six (6) grades of the primary product were developed and sold.

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Superior Environmental Remediation⁹⁰, Inc.
(SER⁹⁰)

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Technical Services

Superior Environmental focuses the talent and expertise of its team to provide excellent environmental services to a wide range of clients. We adopt the Triad Approach in order to provide our clients with cost effective project planning and dynamic work strategy to achieve our goals and project objectives cost effectively in a timely manner. Superior environmental is your One Team for Great Results.

Our environmental services are concentrated in nine areas:

1) Environmental Compliance

Our team provided numerous of our clients with a full compliance and sustainable solutions. We provided major industrial clients with multifaceted compliance consulting services that eliminated entanglement with local state and federal rules and regulations. Our compliance services included baseline assessments, permitting and clients' representation before state and federal regulatory agencies.

Our clientele for environmental compliance services included small operators, Fortune 100 companies such as Ball Corporation and nationwide insurance and casualty recovery companies such as Universal Casualties Corporation.



Our professionals are trained to detect bridge deterioration and reinforcement decay using latest technology.

2) Infrastructure and Engineering Management

Superior environmental team provided our clients with infrastructure assessment, roadway and bridge evaluation for proper repair prioritization for optimal budget management. Our team provided a number of municipal airports with runway and taxiway scans for preventive maintenance that yielded a cost savings.

Our team of experts provided Fortune 100 companies with engineering management and sub-floor load-capacity assessment for their industrial plants around our area.



SER⁹⁰, Inc. team using SIR 3000 ground penetrating radar (GPR) to detect buried drums, wastes and other objects.



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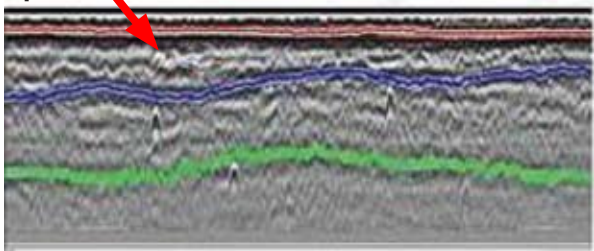


SER⁹⁰, Inc. team member sets up instrumentation for seismic survey at a client's site.

We are dedicated and highly trained to perform non-destructive geophysical infrastructure assessment — from roadway to airport runway scans.



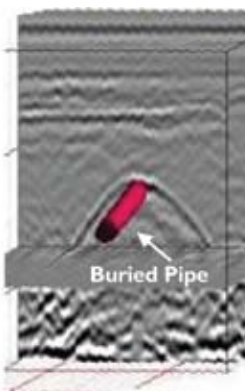
Void in concrete apron



Our technical services are valuable to assess the integrity of a bridge or a concrete structure following natural disasters or accidents. Highly trained professionals with latest technology at SER⁹⁰, Inc. can serve you best.



Our professionals assisted numerous Fortune 500 heavy industrial clients with plant upgrades by mapping buried utilities.



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3) Environmental Investigation Services

Our team of experts came with varied experience in environmental consulting. Some of our principles gained their work experience under regulatory agency authorities such as the US EPA, while other team members gained their work expertise from the private sector. This mixture of experience is additive and enables our team to strike an excellent balance between economics, environmental preservation and compliance; all aimed at giving our clients a polished product.

Our team's Triad Approach of problem solving is supported by the company's commitment to provide every available investigative tool, training or otherwise to provide our clients with exceptional services.

Our team provided Fortune 100 companies, major industrial clients, as well as small operators and local municipalities and counties with the same quality level of service. We excelled in providing the following environmental investigation services:

- Environmental Impact Statements (EIS) based on accurate risk assessment. Our team provided Van Buren County Government in Michigan with quality EIS for a wide area of the county.
- We provided our clients with Remote Sensing investigative services using our in-house 3-D Stereoscopic Aerial Photograph Analysis Laboratory.



SER⁹⁰, Inc. provided its professional team with every available investigative technology to best serve our clients.

- Our team prepared and executed CERCLA and RCRA facility assessments work plans.
- Our team conducted numerous feasibility studies and remedial investigations for number of high profile projects.
- The SER⁹⁰, Inc. team assisted client Civil and Structural engineers to investigate the integrity



View of one of our TVB-1000 Toxic Vapor Analyzers. The right tools with the right experience yield the best service.



No matter how deep our clients' environmental concerns are, we are able to detect, define and eliminate them so they enjoy liability free prosperous business. Above, a SER⁹⁰, Inc. team member conducts an EM-61 survey



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of concrete structures and bridges using the latest concrete and bridge scan technologies, i.e. GPR Structural Scans.

SER⁹⁰, Inc. made available to our team members every available site screening and investigative piece of equipment such as:

- Membrane Interface Probe (MIP) for quick detection and delineation of volatile organic plumes and the subsurface soil and groundwater.
- The latest models of toxic vapor analyzers (GPS capable TVA-1000B).



Our professionals delineated waste limits at municipal and hazardous waste landfill using non-intrusive geophysical techniques.

- Fully equipped hollow-stem and direct push drill rigs.
- The latest Ground Penetrating Radar (GPR – SIR 3000 system with multiple antenna frequencies) capable of penetrating 100 ft. in the ground (non-destructively).
- Fully stocked software library including predictive hydrogeologic modeling, geotechnical assessment and groundwater data management software.



Our professionals are ready and able to dig deep into the history of an environmental problem using in house 3-D Aerial Photo Lab.

Our investigative data is always accurate and precise to preserve our clients' funds.



View of Sister Lakes, Van Buren County, Michigan. Our professionals prepared an Environmental Impact Study to assess human impact on the lake's water quality and authrophication during peak summer seasons. The Study took two years which involved sampling, research, modeling and public survey



Our team has wide range of drill rigs at their disposal to get the job done right and on-time.



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A Membrane Interface Probe (MIP) is the latest addition to our arsenal of investigation equipment. We are able to delineate volatile and chlorinated plumes in a matter of days as opposed to months using conventional investigative methods. Our MIP added a new meaning of cost-effectiveness and timely investigation to the industry



SER⁹⁰, Inc. team member interprets MIP data in the field van. The van is fully equipped for multiple investigative activities such as pump/slug testing, down-well video logging and others.



Dual-tubing soil sampling technology using our 6620DT rig eliminates guesswork and vertical soil cross-contamination — so our data is precise and representative



Our professionals pay close attention to details to preserve clients' funds and to quickly eliminate liabilities and exposure

4) Remedial Design and Installation Services

Our team provided remedial design and installation of conventional as well as innovative systems to achieve cost effective and timely remediation. Our turnkey approach and lifecycle design encouraged our clients to recommend us to other prospective clients. Superior environmental has a track record in the design and installation of the following remedial technologies:



Conventional Remedial Technologies such as soil vapor extraction, Dual-phase extraction, vacuum-enhanced free product recovery

systems, and air sparging in well contaminant stripping systems.



We excelled in designing and installing a Combination of Conventional Technologies (CCT) such as dual-phase extraction coupled with fluid flushing to significantly shorten cleanup duration. It requires special talents and accurate site investigation to positively combine different cleanup technologies at a given site.



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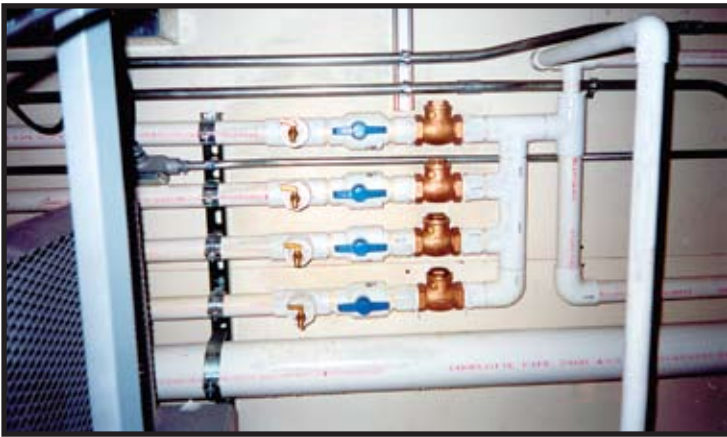
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Our professionals designed numerous remediation options—from the simple dig-N-haul to the sophisticated remedy. SER⁹⁰, Inc. is a turn-key remediation firm.



Thinking out of the Box. *View of Alternative Delivery and Recovery System to manage hard geology cleanups. Our professional simulated the design efficiency using the latest modeling software before installation. Cleanup levels were attained in record time.*

Perfect design, clean install and amazing results.

-  Our team designed and installed multiple Alternative Delivery and Recovery Systems (ADRS) to enhance the subsurface conditions and make it susceptible to cleanup effort. These alternative delivery system designs were reviewed and approved by regulatory agencies.
-  Our team successfully applied science and practice to buy the remediation at multiple projects. We established our own Bio-Phase I and Bio-Works for successful bioremediation. These protocols can easily predict plume natural attenuation or other bioremediation processes would work better for a given site.
-  Single-fluid Free-product Recovery Systems were proven by our team to be successful and cost-effective using site-specific hydrogeological parameter and design. Single fluid recovery is an excellent technology to minimize waste generation.

-  Our professionals simulated the efficiency of hundreds of remedial designs using US EPA and local agencies approved computer-aided simulation software. At our firm, efficiency simulation is an apart of the initial design criteria and the continued performance measurement. Our library contains hundreds of software titles for this purpose and our team members are highly trained. These titles include MODFLOW Pro®, Visual Groundwater®, AIRFLOW SVE® and AquiferTest®.
-  Our turnkey design included full Human-machine Interface for truly remotely controlled remedial systems.

**One Team...
Sustainable Solutions...
Great Results!**



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Added value to our remedial design saves clients time and money. Our remedial systems are equipped with true man-machine interface for remote control and monitoring using programmable logic control.

Accurate plume delineation is a major part of successful remediation. Our professionals using EM 31 to delineate contamination



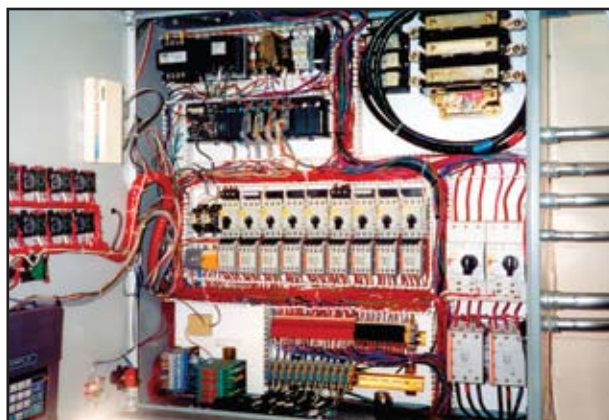
Landfill monitoring and gas management with our cost effective approach in the assessment and construction phase is easily achieved

5) Phase I Environmental Site Assessment and Brownfield Management

Our team provided major financial institutions and other clients with ASTM compliant Phase I environmental assessments. Our team complied with and applied All Applicable Inquiries (AAI) requirements well before it was mandated by the US EPA and other financial institutions. Our comprehensive approach eliminated potential future liabilities to our clients.

Our Phase I report format and environmental database search are inclusive and accurate to provide our clients, their financial institutions and other involved parties with full understanding of risk, liabilities and the recommended management thereof.

Our team is the team of choice for number of municipalities and counties for site assessments and accurate risk determination in order to preserve public funds.



Natural bioremediation can be the optimal remedy given the right conditions, Our bioremediation design is natural and effective, which provided some of our clients with substantial monetary savings over other conventional remedial options



Our experts provided numerous clients from the public and private sectors with water resource management and aquifer analysis to meet ever increasing demand on these resources. We provided our field teams with the right equipment to get the job done.

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6) Special Projects, RCRA Corrective & Feasibility Studies

This service area truly distinguishes us from the rest of the consulting firms by applying a scientific and innovative approach to otherwise complex environmental problems to achieve project objectives. We supported our Fortune 500 clients and other major industrial operators by conducting the following special projects:

-  Treatability studies to construct innovative and cost-effective remediation processes. We conducted a PCB-solidification Treatability Study for a major tire manufacturer in the United States. Our study was tested and reviewed by a third-party laboratory, the application of which provided our client with savings of million of dollars in disposal and transportation cost.
-  Our team conducted numerous site-specific RCRA feasibility studies, which was reviewed and easily approved by federal and state regulatory agencies.
-  Our team utilized the latest computer-aided simulations to determine the feasibility and applicability of our recommended remedial action.

7) Forensic Environmental Investigations

Our team provided wide range of clients including major insurance couriers with forensic investigation using solid scientific methodologies that withstand the scrutiny of a court room. These methods included Calibrated Forward and Reverse Modeling of aquifer systems, Finger-printing Chemical Analyses at well-known specialty laboratories.

Other forensic methods were used by our team included stereoscopic analysis of historic and recent aerial photographs using our in-house laboratory. We

The different geophysical methods available to our experts enable them to offer wide range of service and application. View of EM61 system for deep electromagnetic scanning



We provided our team with full line of geophysical investigation instruments ready to serve you at any time.

Our latest addition is the SIR 3000 GPR system with multiple antenna frequencies for wide range of applications from shallow buried utility scans to deep geologic formation mapping.



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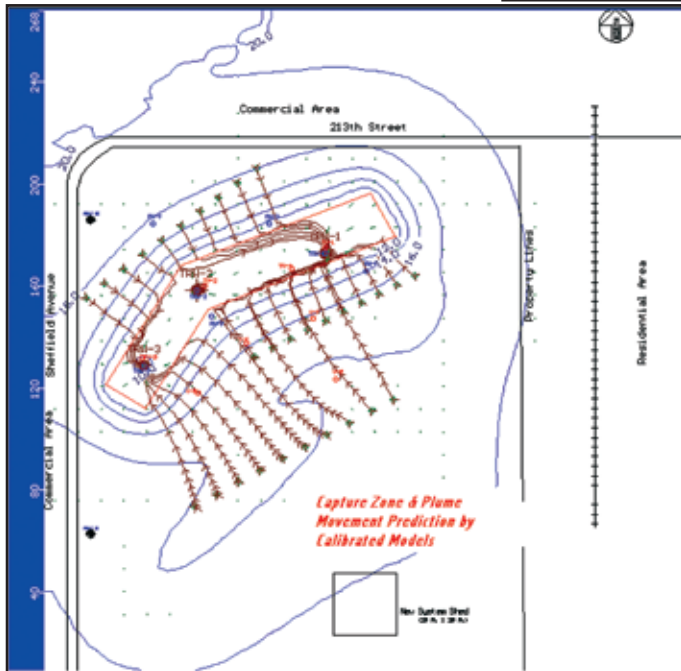
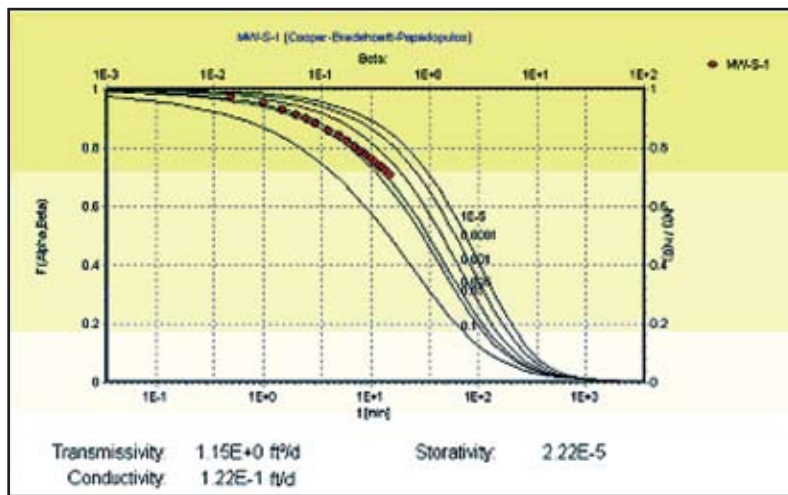


secured reliable aerial-photo sources for our team members to provide our clients with quality and timely service. We assisted our clients by identifying additional responsible parties using our forensic investigative methods to assist in the overall cleanup effort.

SIR 2000 system for special application.

8) Water Resources Management

Our professionals provided major metropolitan authorities with a third-party review of their existing Water Resources Management Plans including Wellhead Protection Plans. These services included review of the conceptual models, and recalibrating existing models to ensure adequate protection of their water resources. Our team excelled in providing the following services:



SER⁹⁰, Inc. conducted hundreds of aquifer tests to determine their physical parameters for adequate design, planning and overall resources management. Our team provided numerous clients with wellhead protection and remedial efficiency simulation aquifer analysis.

Our experts provided a wide range of clients with wellhead protection planning tools—from the initial concept to the calibrated models—using EPA and industry approved techniques and software such MODFLOW®, MODPATH® and others



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- Forward Solution Finite Difference and Analytical modeling using US EPA and State agencies-approved modeling softwares such as Visual MODFLOW®, GFLOW® and others.
- Local specific Pump Test and Well Specific Capacity. Our fully equipped field van is capable of simultaneously acquiring data from six-well test site and data analysis using on-board computer.
- Our team excelled in Reverse Modeling to estimate the accuracy of Forward Solutions.
- Our team conducted numerous Environmental Impact Studies to estimate human activities on the public water resources.



We mastered the understanding of plume behavior through experience, training and common sense.

9) Non-Destructive Geophysical Techniques

This one of our major strong suits, which entails the use of non-destructive geophysical methods to detect subsurface plumes cost-effectively and in a timely fashion. Accurate definition of any problem is a major part of its solution. Our team successfully applied non-destructive geophysics as follows:

- Ground Penetrating Radar surveys: These surveys ranged from shallow buried utility line detection to deep geological formation scans at more than 120 ft. below ground surface.
- Shallow Seismic Refraction surveys to detect shallow faults and deep seated one (Blind Faults) under major structures such as dam sites, bridges and airport runways.
- To help our client in managing their engineered structure we provided them with structural and concrete scans. These scans were provided to a wide range of clients from heavy industrial Fortune 500 companies to the local concrete cutting service contractors.
- In order to distinguish our team from our competitors, we added a membrane interface probe (MIP) for real-time detection of volatile organic compound in the subsurface soil and groundwater. Our MIP system is equipped with adequate detectors to screen for chlorinated solvents in addition to the regular single and multiple chained volatiles mentioned above.

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Investigative Equipment & Instrument Group

- ◆ GSSI SIR 3000 GPR with antenna selection (Five) from 100 MHz to 1.5 GHz for wide range application.
- ◆ Membrane Interface Probe equipped with FID, PID and ECD capable of 120 ft. depths.
- ◆ 6620DT® Geoprobe (2006) Drill Rig with dual-tube sampler.
- ◆ 5400LT® Geoprobe Direct Push Rig.
- ◆ EM-31, 34 and 61 with late model data loggers.
- ◆ Toxic Vapor Analyzers (TVB-1000B, (Three)) with FID & PID detectors
- ◆ Hnu PID with multiple lamps (One).
- ◆ S3A Noise Survey Meter (One)
- ◆ Membrane Dissolved Oxygen Meter w/logger. (One)
- ◆ Dikson® Temperature Data logger with 24-hour, 7-day chart printer.
- ◆ Fully Equipped Step-van for multi-well Aquifer Testing with on-board computer
- ◆ Ready-to-install multi-point SpillBuster® Single Fluid Recovery System
- ◆ Down Well Video Logger (color & B/W).
- ◆ Collection of Oil/Water Interface Probes (Five).
- ◆ REA® Four Gas Analyzer (One)
- ◆ Oakton® All-in-one Groundwater Monitor (One)

Construction Management Group

- ◆ Bridge and Concrete Scan Equipment (900 MHz to 1.5 GHz).
- ◆ Nikon Total Station Model 520 (One)
- ◆ Collection of handheld GPS
- ◆ Collection of Laser Markers and grade management instruments
- ◆ Skid-steer with attachments, 2004 Model 863 (One)
- ◆ Trench and Plate compactors (Two)
- ◆ Collection of Dewatering Pumps.
- ◆ Concrete coring and cutting equipment (Two)
- ◆ Case580K Series Excavator / Front End Loader

Support Equipment Group

- ◆ Variety of Chemical Transfer Pumps.
- ◆ Hand-held Motorola® radios with Base Station.
- ◆ Collection of Traffic Safety Control Signs.
- ◆ Well maintained fleet of trucks from 1-ton trucks to utility pickups.

Remediation Support Software Group

- ◆ All listed software suites are single user licensed to Superior Environmental except where specified
- ◆ Visual Groundwater®
- ◆ Risk Workbench®
- ◆ Aquifer Test Pro®
- ◆ Visual MODFLOW Pro®
- ◆ Multi-user National Instrument® Lookout Developer (PLC Systems)
- ◆ Variety of mapping software including Autocad®, Surfer®, Quicklog® and others



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Government/Public Sector

- ◆ State of Indiana Department of Administration
- ◆ State of Illinois
- ◆ Lake County, Indiana Environmental Task Force
- ◆ Town of Dyer, IN
- ◆ Town of Middlebury, IN
- ◆ Starke County Highway Department
- ◆ Starke County Health Department
- ◆ City of Portage (Fire, Police, Parks, and Street Departments)

Financial Institutions/Insurance Firms/Realtors

- ◆ Bank One (Chase Bank)
- ◆ 1st Source Bank
- ◆ Prudential One Realty
- ◆ Universal Casualty Insurance
- ◆ Eden Bank; Wheeling, IL
- ◆ Hallmark Properties Corporation
- ◆ Charles Hayes & Associates
- ◆ SAFCO Corporation
- ◆ Chubb Group Insurance

Private/Industrial/Transportation

- ◆ Ball Corporation
- ◆ Mor/Ryde International, Inc. (all Indiana plants)
- ◆ Saco Industries, Inc.
- ◆ Steel City International, Inc.
- ◆ Masonite Door Corporation
- ◆ Coach USA
- ◆ Cardinal Bus Tours
- ◆ Lootens & Son Company, Inc.
- ◆ Henschen Oil, Inc.
- ◆ Templeton Oil, Inc.
- ◆ Marathon of Valparaiso
- ◆ C & P Oil, Inc.
- ◆ C & S Fuels, Inc.
- ◆ Hull & Associates, Inc.
- ◆ Delta Environmental
- ◆ BP Corporation



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The following is a list of completed projects where total compliance was achieved for our clients. Project references and client contact are available upon request:

Project Name: Greene Landfill, Greene, Ohio

Activity Type: Superfund Responsible Party Cleanup

Budget: \$3,890,410.00

Description: Greene Landfill is a Superfund site contaminated with various volatile compounds and polychlorinated biphenyls (PCBs). Our team of professionals assisted in stabilizing landfill conditions and conducted a pilot study to treat the PCB-contaminated sludge. The study resulted in a site-specific Treatability procedure. Our site-specific treatment technology provided our client with approximately \$4 Million in cost saving over dig-n-haul option.

Project Name: Mor/ryde International Co. Inc., Elkhart, Indiana

Activity Type: RCRA Facility Compliance & Upgrade

Budget: \$1,224,080.00

Description: Mor/ryde International is a major RV and automotive brake manufacturer. Superior Environmental is the main consulting team for this client. Our compliance team assisted Mor/ryde by converting their chase primer line to more environmental friendly powder coating line. The new line is fully automated with local PLC screens for adequate control. We represented the client before federal, state and local agencies and obtained all necessary variances and permits. Now our client enjoys prosperous compliant operation.

Project Name: Town of Middlebury, Elkhart County, Indiana

The Town of Middlebury project before we began our work.

Activity Type: Remediation of Volatiles Compounds and Solvents

Budget: \$538,250.55

Description: The Middlebury EMS included volatile organic and solvent contaminated subsurface soils and groundwater. The site is located in the heart of this small town. The initial investigation and cleanup effort was started by a major consultant, who failed to bring remedy and closure for the site. In 2000, and after approximately



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The photo above shows the site during our remediation process, and right shows the site as it is today—being used as a children's playground.

\$385,000 expenditure of Taxpayer money, Superior Environmental was invited by the town to troubleshoot the remediation process. Our team brought full closure and the site location is used as children's playground.



Project Name: Marathon of Valparaiso, Valparaiso, Indiana

Activity Type: Leaking Tank Cleanup & Main Aquifer Rehab

Budget: \$523,403.00

Description: This is a leaking tank site that consisted of contaminated subsurface soil and groundwater. The main aquifer in the area of the site was heavily contaminated with petroleum fractions. Two major consultants failed to bring remedy for this site following six years of cleanup operations. Our team assumed responsibilities in 2000. We assisted our client by conducting calibrated plume fate & transport models and based on our accurate understanding of the subsurface we devised a site-specific remedial technology. Our cost-effective and timely remedial design and implementation prevented the arrival of contaminants at nearby drinking water wells. Our team eliminated client's liability and provided substantial protection to the public health and the environment.

Project Name: Tri State Coach, Inc., Gary, Indiana

Activity Type: In-situ Bioremediation of Soil and Groundwater

Budget: \$310,580.35

Description: Our bioremediation approach is unique and based on protocols established by our professionals. Our bioremediation processes are always site-specific natural and effective. Tri State, Inc. is a heavy petroleum contamination in an environmentally sensitive area. The site was started by a major



Successful bioremediation always starts with comprehensive biological assessment.



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consultant, who failed to bring remedy and closure using oxygen releasing compound technology. Our professionals design all investigation and bioremediation work plan. Closure was attained in 24 months and at a fraction of the cost that was incurred by the former consultant.



Delivery and injection must conform to the aquifer physical characteristics, which is always defined by our team of hydrogeologists during the investigation phase.



SER⁹⁰, Inc. designed and mass produced bio-augmentation on site for proper Plate Count and a good bioremediation head-start.

Project Name: Lootens & Son, Co. Inc., Saint Charles, Illinois

Activity Type: RCRA Facility Corrective Action

Budget: \$269,240.00

Description: Lootens & Son, Co. Inc. is a sand and gravel mine that commenced operations in early 1970. Our team assisted the client by preparing RCRA Facility Investigation Workplan and the implementation of such plans. Our team applied risk based measures that facilitate RCRA Closure in a timely and cost-effective manner.

Project Name: Henschen Oil Inc., Nappanee, Indiana

Activity Type: Spill Prevention (SPCC) & Remediation of Historic Spills

Budget: \$90,230.00

Description: Henschen Oil, Inc. is an AMOCO jobber since 1936 at this location. In response to inspection by the US EPA Region 5, we assisted our client to attain full compliance with the federal spill prevention

Our experts assessed all need compliance action.



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by professional spill prevention design and timely construction and implementation of the EPA-approved plan. Our client now enjoys a clean and environmental-friendly, prosperous operation.



General view of installed SPCC compliance action



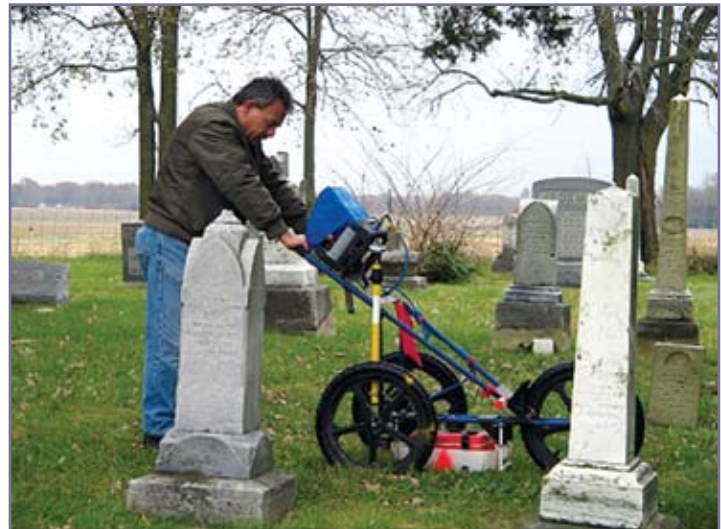
View of secondary containment and compliance with zero business interruptions to our client.

Project Name: Union Township Trustee, Bloomington, Indiana

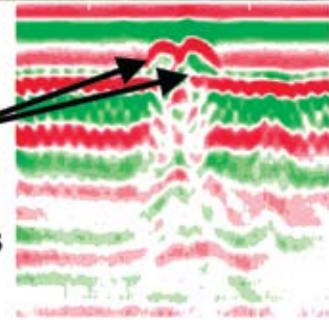
Activity Type: Ground Penetrating Radar Services

Budget: \$9,380.00

Description: Our team was tasked by the Trustee to locate lost graves dating back as early as 1823. Our team of geophysicists delineated all lost graves using ground penetrating radar survey. This is an example of our commitment to respect the dead and serve the living for a better environment and quality standard of living.



GPR anomaly showing two gravesites and headstones were displaced since 1823



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