



...chemistry for the environment.

En Chem, Inc. Statement of Qualifications

Corporate Office & Laboratory

**1795 Industrial Drive
Green Bay, WI 54302**

Phone: (920) 469-2436 • Fax: (920) 469-8827

Toll Free: (888) 736-2436

Madison Office & Laboratory

**525 Science Drive
Madison, WI 53711**

Phone: (608) 232-3300 • Fax: (608) 233-0502

Toll Free: (888)-536-2436

<http://www.enchem.com>



Qualifications Summary

STATEMENT OF QUALIFICATIONS

En Chem, Inc.
Madison Laboratory
525 Science Drive
Madison, WI 53711

Phone: 608-232-3300
Fax: 608-233-0502
www.enchem.com



Qualifications Summary

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Qualifications Summary

Section 1 OVERVIEW



Qualifications Summary

OVERVIEW

Meeting customer needs and solving problems in a timely and cost effective manner has been the focus of En Chem since it was founded in 1992. The Madison, Wisconsin, facility was formed through En Chem's purchase of the former RMT laboratory in 1996, and Hazleton Environmental Services, in 1997. Throughout this expansion En Chem has maintained its commitment to providing the highest quality analytical and data management services to all of its clients.

- The current En Chem -Madison Environmental Laboratory facility occupies approximately 30,000 square feet of modern testing space. Integrated facilities promote efficient, high throughput analytical determinations for waste water, ground water, soils, sludges, and waste stream characterization.
- An electronic security system controls access to laboratories and data management areas assuring both sample and data integrity. The data and samples are secure and cannot be accessed by unauthorized personnel.
- The possibility of sample contamination is eliminated through automated, independent laboratory air handling systems designed to segregate laboratory exhaust streams and prevent contamination of laboratory air with trace levels undesirable components.
- Safety glass separates all office and laboratory rooms, allowing observation of the sample preparation and instrument areas.

A computerized Laboratory Information Management System (LIMS) provides a confidential and centralized electronic network while providing for customer-specific reporting formats and electronic downloading of results. Direct instrument interface allows for rapid, error free transmission of results. Client's samples are tracked through instrument interface, data production, technical and quality assurance review, and report production to assure error free results.



Qualifications Summary

Section 2 CAPABILITIES



Qualifications Summary

CAPABILITIES En Chem-Madison is fully equipped for high-production environmental testing. Automated instrumentation supports environmental analyses, treatability and leachate studies, hazardous characterization, and trace-level analysis. We provide information and data in support of the following principal regulatory packages:

RCRA

- TCLP, SPLP, ASTM Neutral, and other leachate procedures
- Underground storage tank monitoring
- Ground water detection monitoring
- Subtitle C and land ban analyses
- Appendix IX analyses

CERCLA/Superfund

- Target Compound List
- Target Analyte List
- Contract Laboratory Program data packages
- Special analytical services

Clean Water

- Complete Priority Pollutant analytical services

Biota / Risk Assessment

- Environmental parameters on plant and animal tissue
- Agricultural parameters

PERFORMANCE EVALUATION PROGRAMS EnChem-Madison participates in performance evaluations such as:

- Wisconsin State Laboratory of Hygiene
- New York State Department of Health
- Environmental Resource Associates, WS and WP Interlaboratory
- Internal Blind QC



Qualifications Summary

CERTIFICATIONS

En Chem-Madison has a proven history of delivering high-quality data. The precision and accuracy of our work has been documented through several external audit programs. Our performance in these programs has resulted in certification of our laboratory by several regulatory agencies as follows:

State/Agency	Laboratory ID Number	Program/Category
State of Wisconsin Department of Natural Resources	113172950	Certified Laboratory SDWA Certified
State of Minnesota Department of Natural Resources	055-999-107	Certified Laboratory SDWA Certified Clean Water Program
State of North Carolina Department of Environmental Health and Natural Resources	503	Certified Laboratory
State of South Carolina Department of Health & Environmental Control	83001	Certified Laboratory SDWA Certified
State of Arkansas Department of Environmental Quality	*	Certified Laboratory
State of Louisiana Department of Environmental Quality	85085	Approval Pending
State of North Dakota Department of Health & Consolidated Laboratories	R-159	Certified Laboratory
State of Delaware Department of Natural Resources and Environmental Control	*	Certified Laboratory
State of Florida Department of Environmental Protection	CQapp 940300	DEP Approved
State of Michigan Department of Public Health	*	Approved Laboratory
State of New York Environmental Laboratory Approval	11436	Approved Laboratory
US-Army Corps of Engineers	*	Approved Laboratory
U.S. EPA Region V	*	CERCLA Analytical Work (Inorganic and Organic) RCRA Analytical Work (Inorganic, GC/MS, & GC/VOA)

* No laboratory number given as part of program.

Qualifications Summary

LABORATORY CERTIFICATION SUMMARY

STATE/ AGENCY	AIR	UST	RCRA SOLID/HAZ WASTE	WASTE WATER	DRINKING WATER	OTHER PROG.	CERTIFICATION NUMBER
Alabama		Accepted	Accepted	Accepted	X		
Alaska		X	X	X	X		
Arizona	X	X	X	X	X		
Arkansas		X	CERT	X	X		
California		X	X	X	X	X	
Colorado		Accepted	Accepted	Accepted	X		
Connecticut		X	X	X	X		
Delaware		Accepted	CERT	Accepted	X	X	
Florida		X	X	X	X	DEP Appr.	CQapp 940300
Georgia		Accepted	Accepted	Accepted	X		
Hawaii		Accepted	Accepted	Accepted	X		
Idaho		Accepted	Accepted	Accepted	X		
Illinois		Accepted	Accepted	Accepted	X		
Indiana		Accepted	Accepted	Accepted	X		
Iowa		CERT²	Accepted	CERT²	X		
Kansas		X	X	X	X		
Kentucky		Accepted	Accepted	Accepted	X		
Louisiana		X	CERT	X	X		
Maine		Accepted	Accepted	X	X		
Maryland		Accepted	Accepted	X	X		
Massachusetts		Accepted	Accepted	X	X		
Michigan		Accepted	Accepted	Accepted	X		
Minnesota		CERT^{1,2}	CERT^{1,2}	CERT^{1,2}	CERT¹		055-999-107
Mississippi		Accepted	Accepted	Accepted	X		
Missouri		Accepted	Accepted	Accepted	X		
Montana		Accepted	Accepted	Accepted	X		
Nebraska		Accepted	Accepted	Accepted	X		
Nevada		Accepted	Accepted	X	X		
New Hampshire		Accepted	Accepted	X	X		
New Jersey		X	X	X	X		
New Mexico		Accepted	Accepted	Accepted	X		
New York		X	CERT¹	CERT¹	X	X	11436
North Carolina		CERT¹	CERT¹	CERT¹	X		503
North Dakota		CERT^{1,2}	CERT^{1,2}	CERT^{1,2}	CERT¹		R-159
Ohio		Accepted	Accepted	Accepted	X	X	
Oklahoma		Accepted	Accepted	X	X		
Oregon		Accepted	Accepted	Accepted	X		
Pennsylvania		Accepted	Accepted	Accepted	X		
Rhode Island	X	X	X	X	X		
South Carolina		CERT^{1,2}	CERT^{1,2}	CERT^{1,2}	CERT¹		83001
South Dakota		Accepted	Accepted	Accepted	X		
Tennessee		X	Accepted	Accepted	X		
Texas		Accepted	Accepted	Accepted	X		
Utah		X	X	X	X		
Vermont		Accepted	Accepted	Accepted	X		
Virginia		Accepted	Accepted	Accepted	X		
Washington		X	Accepted	X	X		
West Virginia		X	X	X	X		
Wisconsin		CERT^{1,2}	CERT^{1,2}	CERT^{1,2}	CERT¹		113172950
Wyoming		Accepted	Accepted	Accepted	X		
USACE						Approved¹	

An 'X' indicates that the State/Agency has a program in place. **Laboratory NOT Certified.**

Accepted = The state does not have formal certification program.

CERT¹ = Madison Laboratory

CERT² = Green Bay Laboratory

Note! 'CERT' indicates Laboratory is certified for Limited parameters. Check with Laboratory for specifics



Qualifications Summary

Section 3

QUALITY ASSURANCE PROGRAM



Qualifications Summary

QUALITY ASSURANCE PROGRAM

En Chem maintains a rigorous Quality Assurance Program assuring that data produced are of high quality and meet the standards of our clients, the environmental regulations and the regulated community. Meeting these needs enables our clients to make informed, cost-effective decisions regarding their environmental concerns.

The objectives of the En Chem Quality Assurance Program are achieved through a comprehensive and effective program designed to measure and verify laboratory performance. The Laboratory Standard Operating Procedures are available at En Chem for review at any time. Using approved or proven methods, En Chem ensures that data produced are accurate, precise, and complete. Specific highlights of the program include:

- Statistical analysis of quality control data for assessment of precision and accuracy
- Maintenance of and adherence to laboratory standard operating procedures
- Corrective action program
- Data review and validation
- Certification program with various state and federal agencies
- Preparation of Quality Assurance Project Plans
- Laboratory performance audits

A data review process applicable to all analytical groups within the laboratory ensures analytical results integrity. For routine results-only reporting, the process incorporates review of the data by the analyst, followed by a peer review and then final approval by the section supervisor. Projects that require submission of supporting Quality Control (QC) data packages are subjected to a higher level of review by Quality Assurance staff, which is essentially equivalent to an outside 3rd-party validator. This is done to ensure complete compliance with client-requested QC requirements.

Through the application and use of these programs, the laboratory provides data that meet the criteria set forth in laboratory methods, as well as those in applicable Quality Assurance Project Plans. The Quality Assurance Unit provides laboratory management with feedback related to laboratory performance and adherence to laboratory protocols. This information keeps management informed of the status of the Quality Assurance Program and allows implementation of any necessary corrective actions.



Qualifications Summary

Section 4

FACILITY AND INSTRUMENTATION

Qualifications Summary

FACILITY

The laboratory facility was designed and planned with careful attention given to safety, security, and preservation of sample integrity. Highlights of the laboratory design include:

- Specially designed air handling system and temperature controls protect against contamination of samples, keep instruments functioning at highest performance levels, and ensure safe working environment for laboratory staff.
- Gases used for analytical purposes are segregated from the instrumental areas.
- All analytical and sample preparation areas are visible from corridors for safety checks and to reduce traffic through laboratory work areas.
- Technician's office areas are physically separated but adjacent to the laboratory areas to allow easy access and safety.
- The access and security control systems are designed to provide a secure facility for sample chain of custody, to reduce likelihood of sample cross-contamination, and to provide for worker safety.
- The laboratory is fully cabled for computer networking and has a computerized air conditioning system to keep the building environment comfortable.



Qualifications Summary

INSTRUMENTATION En Chem-Madison is fully equipped for high-production environmental testing. Automated instruments support applied research, treatability and leachate studies, hazard characterization, and trace-level analysis as follows:

- Computer interfaced equipment and instruments for data upload into the Laboratory Information Management System (LIMS).
- GC and GC/MS systems with state-of-the-art detectors, autosamplers, and purge and trap devices for organics analysis.
- Inductively coupled argon plasma spectrophotometers (ICP-Trace), ICP-Mass Spectrometry, and Graphite Furnace Atomic Absorption (GFAA) and Cold Vapor Atomic Absorption (CVAA) spectrophotometers for trace metals analysis.
- Total organic carbon analyzers.
- Ion Chromatography and Lachat autoanalyzer for classical wet chemistry analytes.
- TCLP and EP-Toxicity leaching apparatus.

Analytical Instrumentation is complemented by similar instrumentation located at En Chem's Green Bay, WI. facility.

Qualifications Summary

LABORATORY INSTRUMENTATION

INSTRUMENT INVENTORY	
Section Instrument/Peripherals	Date of Purchase
METALS	
1. ICP TJA 61E TRACE ANALYZER	3/00
2. ICP TJA 61E TRACE ANALYZER	10/98
3. GFAA (5100Z-2) (Graphite Furnace)	9/92
4. Perkin Elmer FIMS (Flow Inj. Mercury System)	8/98
5. Leeman Labs PS 200 Mercury Analyzer	1/94
6. ICP-MS, Hewlet-Packard 4500 Series	1/99
7. ICP-MS, Hewlet-Packard 4500 Series	3/00
SEMIVOLATILES	
1. Semivolatiles/ Base/Neutral/Acid Extractables a. GC/MS HP 5973 w/Chemstation b. GC/MS HP 5972 w/Chemstation	6/99 6/96
2. PESTICIDE a. GC/ECD(Dual) HP5890 (5 instruments) HP5890 Series 2 (6 instruments) b. GC/ECD(Dual) HP 6890	1990-1999 (various dates) 8/98
3. PESTICIDE/PCB CONGENERS a. GC/MS HP 5973 MSD w/ APEX lg. volume injector.	1/99
3. TPH a. Mattson FT-IR	1989
4. EXTRACTIONS a. GPC (2, ABC 1002B), (2, O.I. Autoprep 1000) b. Sonifier Cell Disruptors (4) c. Automated Solvent Extractor d. ASP FP-41 Muffle Furnace	1991- 2000 (various dates) 3/88 12/98 1988
5. HPLC a. PE 250 Binary LC Pump – LC 240 Fluorescence Detector – 235 C Diode Array Detector – LC 101 oven b. PE Series 410 LC Pump – PE ISS 200 Advanced Sample processor – PE LC-95 UV/VIS Detector – McPherson FL-750 Spectro Fluorescence Detector – Pickering PCX 5100 Post Column Reactor Module – Eppendorf CH-30 Column Heater c. PE Series 200 LC Pump	11/95 1986 5/2000

Qualifications Summary

INSTRUMENT INVENTORY	
Section Instrument/Peripherals	Date of Purchase
<ul style="list-style-type: none"> - PE Series 200 Advanced Sample processor - PE LC 835A Diode Array Detector - PE LC 240 Fluorescence Detector - PE 785A UV/VIS Detector - PE LC 200 Oven 	
INSTRUMENT INVENTORY (CONT.)	
Section Instrument/Peripherals	Date of Purchase
VOLATILES	
1. Mass Spec 5971 HP (Mass Selective Detector, MSD) a. Tekmar Purge and Trap 2000/Dynatech PTA-30	6/93 6/93
2. Mass Spec 5970 HP (MSD) a. Tekmar Purge and Trap 3000/Dynatech - Archon	5/91 5/96
3. Mass Spec 5973 HP (MSD) a. Tekmark Purge and Trap 3000/Dynatech - Archon	1/99 5/96
4. Mass Spec 5972 HP (MSD) a. Tekmar Purge and Trap 3000/Dynatech - Archon	6/96 6/96
5. Mass Spec 5972 HP (MSD) a. Tekmar Purge and Trap 3000/Dynatech - Archon	6/96 6/96
6. Mass Spec 5973 HP (MSD) a. Tekmar Purge and Trap 3000/Dynatech - Archon	3/00 1/99
7. Chromatography Processing Systems	5/95
a. HP Chemserver Data System	1/95
WET CHEMISTRY	
1. Total Organic Carbon Analyzer (TOC) Dohrmann DC-190 (2 instruments)	4/97, 7/99
2. Lachat Autoanalyzer	6/95
3. Spectrophotometer (UV-VIS SPEC)	3/86
4. Dionex DX-120 Ion Chromatograph	8/98

Qualifications Summary

INSTRUMENT INVENTORY (CONT.)	
Section Instrument/Peripherals	Date of Purchase
SAMPLE PREP/OTHER	
1. TCLP Leach Tumblers non-volatile (3)	1990, 1996, 1998
2. TCLP ZHE Tumblers (2)	1990
3. pH Meters (2)	1986, 1999
4. Hot Plates (4)	various
5. Analytical Balances Mettler AE160 Mettler AJ 100 Mettler H35AR	various
6. Top Loading Balances (4)	various
7. Drying Ovens (6)	various
8. Constant Temperature Water Baths (2)	2000
9. Fluoride Probe, Orion 96-09	1993
10. Questron 3000 (microwave digestion)	6/96
11. Mididistillation System (4 units)	6/96 - 7/99
12. Tecator 2040 Digestor (block)	6/97
13. Conductivity Meter, Accumet model 30	1/97
14. Hot Block Metals Digestion System (2 units)	1999
() = Number available in Laboratory.	



Qualifications Summary

Section 5

ORGANIZATION AND KEY STAFF



Qualifications Summary

ORGANIZATION En Chem is structured to promote efficient operations and to streamline the critical communication between the customer and the laboratory staff. Project managers manage the project requirements from initiation to completion. These individuals have hands-on analytical backgrounds and experience with the entire laboratory operation. They provide the conduit for communications, whether it is sample status, analytical issue resolution, or direct communication with laboratory staff.

The QA Group is separate from Operations to ensure the autonomy of the QA function. The Laboratory is staffed with experienced, qualified individuals, most of whom are degreed and have many years of experience.



Qualifications Summary

Section 6

KEY STAFF RESUMES



Qualifications Summary

KEY STAFF

Glen Coder - Operations Manager

As En Chem's Laboratory Manager, Mr. Coder's responsibilities include staffing, quality, health and safety, budgetary issues, and productivity in the laboratory. Before being named laboratory manager, Mr. Coder served as supervisor of the Organics sections with emphasis on Volatiles analysis. He has over 11 years experience in the environmental / management field.

Karri Warnock- Client Services / Data Quality Director

Ms. Warnock is responsible for overseeing the Project Management and Data Quality / Data Validation staff at En Chem. She serves as a technical point of contact for laboratory staff and environmental clients. She has managed or been an analyst for all analytical departments within the laboratory throughout her career and has over 14 years of experience in the environmental laboratory / client services field.

Gregory J. Graf - Quality Assurance Officer

As Quality Assurance Officer at En Chem, Mr. Graf is responsible for oversight of the laboratory Quality Assurance Program, preparation and distribution of standard operating procedures and quality documents, resolution of out-of-control events, and maintenance of laboratory certifications and agency approvals. Mr. Graf has 16 years experience in environmental analysis and holds a B.S. in Chemistry.

Julie Trivedi - Quality Assurance Auditor/Lead Project Coordinator

Ms. Trivedi assists with the implementation of the laboratory Quality Assurance Program, performs internal audits, and validates data packages for compliance with the appropriate method and Quality Assurance Project Plan. Ms. Trivedi holds a B.S. Biochemistry and has 8 years of experience in a laboratory environment. She also manages the QA Auditor / Project Coordinator departments at En Chem.

Jan Engles - Project Manager

Ms. Engles' laboratory experience includes analysis, development, technical service, and quality assurance. She has conducted numerous technical systems audits of supplier laboratories and has developed technical and quality policies and documentation. As a former contractor to the US EPA and the US DOE, she has a strong background in the regulatory aspects of environmental analysis. She serves as liaison between the client and laboratory operations.

Kevin Hinckley - Project Manager

Mr. Hinckley manages key client projects for En Chem-Madison. He is responsible for scoping projects, designing work plans, establishing budget constraints and communication between the client and the En Chem operations. Mr. Hinckley has 18 years experience in Environmental Analytical Laboratories including analytical, field services, sales and project management. He holds a B.S. in Biological Aspects of Conservation.



Qualifications Summary

Betsy Nabbefeld - Project Manager

As a Project Manager, Ms. Nabbefeld manages client projects for En Chem-Madison. She is responsible for scoping projects, designing work plans, establishing budget constraints and communication between the client and the En Chem operations. Ms. Nabbefeld has 9 years in the environmental business.

Tod Noltemeyer - Project Manager

As a Project Manager Mr. Noltemeyer's responsibilities include communicating with clients, scheduling sample analysis, assigning resources, and reviewing data. Mr. Noltemeyer holds a B.S. in Biology with minors in Chemistry and Math. Mr. Noltemeyer has 12 years of experience in Environmental analysis with emphasis on Pesticides/PCB analysis.

Dan Rude - Semivolatile Organic Group Leader

As Semivolatile Organics Group Leader, Mr. Rude organizes and schedules the analysis work flow, development and implementation of methodologies, adherence to regulatory guidelines and technical data review. Mr. Rude's 15 previous years of experience include 4 years as a research assistant analyzing semi-volatile organic compounds and 5 years analyzing for plutonium and other radioactive materials. Mr. Rude holds a B.S. in chemistry.

Jeff Gordon - Inorganics Group Leader

Mr. Gordon has 14 years of experience with inorganic analysis in the environmental laboratory. Most of his experience has been focused on the analysis of environmental samples for the determination of metals content. Previous analytical experience includes 4 years in a municipal wastewater treatment facility laboratory, and 6 years working in commercial environmental testing labs. For the past year, Mr. Gordon's responsibilities have included supervising employees, scheduling analyses, monitoring status of projects, maintains inorganic section SOP's and monitors EPA methods for updates. Mr. Gordon also develops new methodologies based on regulatory demands, serves as the laboratory Chemical Hygiene Officer as well as the Hazardous Waste Manager.

Al Seier - Volatile Organic Group Leader

Mr. Seier has 13 years of experience in environmental analysis with an emphasis in GC/MS volatiles. He has a strong background in US DOD, US DOE, and industrial projects. His responsibilities include organizing sample flow through laboratory, monitoring project status, implementation of new methodologies, technical review, and troubleshooting instrumentation. Mr. Seier holds as a B.S. in Geology, and a M.S. in Environmental Engineering Sciences concentrating in Hydrogeology.

Renee Breed – Lab Support Group Leader

As Lab Support Group Leader, Ms. Breed's responsibilities include organizing the sample receiving department and En Chem's local client courier service, monitoring department quality control, ensuring adherence to lab and sample receiving SOP's, and managing work flow for her department. Ms. Breed's educational background is in environmental studies with a B.S. in Biological Conservation and has been employed at En Chem for two years.



Qualifications Summary

Doug Orlofske - Information Systems Manager

As Information Systems Manager, Mr. Orlofske is responsible for the maintenance and administration of En Chem's WAN as well as aiding in application development for the LIS. Responsible for maintenance of upload programs for the Conifer database. He also aids in troubleshooting computer related problems, helping desk PC issues, and planning and implementing hardware changes to all Information Systems.

Matt Marks - Client Manager

Mr. Marks has over 30 years of experience in all phases of environmental chemistry. With a B.S. in Chemistry, his experience includes over 15 years as an analytical chemist performing analysis and methods development for pesticides, semivolatiles, dioxins/furans, metals and wet chemistry related to environmental investigations, pharmaceutical and ag-chem product registrations and food safety. He has been a project manager for numerous government and private client programs. He also was a quality assurance auditor for a period of time. Mr. Marks currently performs combined activities related to contract/program management and business development.



Qualifications Summary

PERSONNEL SUMMARY

En Chem, Inc. Madison employs over 55 technical employees who are very qualified to perform the analytical services required. The table below shows titles, academic degrees, and years of experience for the key laboratory personnel.

NAME	TITLE	DEGREE	YEARS EXP.
Glen Coder	Operations Manager	B.A. Communications	12
Karri Warnock	Client Services / Data Validation Director	B.S. Animal Science	15
Business Development / Sales			
Matt Marks	Business Development	B.S. Chemistry	30
Project Management			
Tom Trainor	Project Manager	B.S. Chemical Engineering	14
Kevin Hinckley	Project Manager	B.S. Conservation	19
Jan Engles	Project Manager	B.S. Chemistry	25
Betsy Nabbefeld	Project Manager	H.S.	9
Tod Noltemeyer	Project Manager	B.S. Biology	13
Project Coordinators			
Open Position	Project Coordinator		
Ellen Corning	Project Coordinator	H.S.	2
Mindy Hakala	Project Coordinator	H.S. & 2 yrs Undergrad. Chemistry	2
Kristine Mix	Project Coordinator	B.S. Earth Sciences	2
Information Systems			
Doug Orlofske	MIS / LIS Technician	B.S. Geological Engineering	5
Heather Gardner	MIS/ LIS Technician	B.A. Journalism	4
Eli Katzenmeyer	MIS / LIS Technician	H.S. & Undergrad. Studies	1
Administrative Support			
Kristine Hermanson	Administrative Assistant	H.S. & Undergrad. Studies	8
Michele Attaway	Administrative Assistant	H.S.	3
Inorganic Chemistry - Metals/Wet Chemistry			
Jeff Gordon	Group Leader	B. S. Chemistry & Biology	15
Kevin Donahue	Senior Analyst	B.S. Env. Chemistry	12
Kate Betz	Senior Analyst	B.S. Biology	12
Jean Riesterer	Laboratory Technician	B.S. Wildlife Ecology	2

Qualifications Summary

NAME	TITLE	DEGREE	YEARS EXP.
Tim Gramling	Laboratory Analyst	B.S. Chemistry	13
Gary Roecker	Laboratory Analyst	B.S. Water Chemistry	14
Doug Foy	Laboratory Technician	B.A. Biology	5
Mike Helman	Group Leader	B.S. Biology	2
Alexandria Wolf	Laboratory Analyst	B.S. Biology	2
Rachel Resch	Laboratory Technician	H.S. & Undergrad. Studies	1
Aaron Gokey	Laboratory Technician	B.S. Biology	2
Katie Voight	Laboratory Technician	B.S. Biology	1
Jason Kinnard	Laboratory Technician	B.A. Psychology	1
Kim Reed	Laboratory Technician	B.S. Chemistry	1
Sarah Gehlhoff	Laboratory Technician	B.S. Chemistry & Environmental Science	2
Anne Strouse	Laboratory Technician	B.A. Biology	1
Jason Treutel	Laboratory Technician	B.S. Biochemistry	1
Organic Chemistry - Semivolatile			
Dan Rude	Group Leader	B.S. Chemistry	16
Denise Johnson	Laboratory Analyst	B.A. Biology	6
Barb Rubio	Senior Project Analyst	M.S. Environmental Science	16
Kurt Schinke	Laboratory Analyst	H.S. & Undergraduate Studies	6
Peggy Lourigan	Laboratory Analyst	B.S. Biochemistry & Animal Science	8
Karen Lough	Laboratory Technician	B.S. Chemistry	3
Jim Grisamore	Laboratory Analyst	B.S. Biology	6
Bob Osmundson	Laboratory Analyst	B.A. Biology	8
Kevin Noltemeyer	Group Leader	H.S. & Undergrad. Studies	10
Tim Navin	Laboratory Technician	B.S. Zoology, B.A.C.	2
Shelley Bresina	Laboratory Analyst	B.S. Biology	3
Bill Bruckner	Laboratory Technician	B.S.	2
Chris Conrad	Laboratory Technician	B.S. Environmental Science	2
Betsy Hinrichs	Laboratory Technician	H.S. & Undergrad. Studies	1
Chris Isensee	Laboratory Technician	B.S. Chemistry & Biochemistry	1
Clarissa Schmidt	Laboratory Technician	B.S. Biology	1
Dawn Kerns	Laboratory Technician	B.S. Environmental Science	2

Qualifications Summary

NAME	TITLE	DEGREE	YEARS EXP.
Kristen Genisot	Laboratory Technician	B.S. Cell Biology	2
Laurie Reichling	Laboratory Technician	H.S. & Undergrad. Studies	2
Mike Selby	Laboratory Technician	B.S. Anthropology/ & Zoology	1
Rick Brah-Naujeck	Laboratory Technician	B.S. Geology	1
Ryan Conboy	Laboratory Technician	B.A. Biology/ Education	1
Sarah Lafontaine	Laboratory Technician	B.S. Zoology, B.A.C.	1
Sara Wilk	Laboratory Technician	B.A. Environmental Science	1
Organic Chemistry - Volatile			
Al Seier	Group Leader	M.S. Environmental Engineering Sciences	13
Alex Olson	Laboratory Technician	H.S. & Undergrad. Studies	2
Dereck Boock	Senior Analyst	B.S. Chemistry	9
Rosa Carrera	Laboratory Technician	M.S. Bacteriology	2
LiJian He	Laboratory Technician	M.S. Chemistry	2
Jan Feucht	Laboratory Technician	A.C. Wastewater	11
Sheila Neuzil	Laboratory Analyst	B.S. Biology	3
Jim Yoder	Second Shift coordinator	B.S. Chemical Engineering	12
Sample Receiving			
Renee Breed	Group Leader	B.S. Biology	2
Joel Gove	Laboratory Technician	B.A. Anthropology	1
Kathy Wojdacz	Laboratory Technician	B.S. Psychology	1
Bill Noltemeyer	Laboratory Technician	M.S. Gen. Science, B.E.D. Science Education	9
Quality Assurance			
Greg Graf	QA Officer	B.S. Chemistry	16
Julie Trivedi	QA Auditor	B.S. Biochemistry	8
Linda Gray	QA Auditor	B.S. Biology	12
Lynn Dieffenbach	QA Auditor	B.S. Zoology	5
Laurie Stockmeier	QA Auditor	B.S. Chemistry	4
Ruth Jallings	QA Auditor	B.S. Recreational Resource Management	6
Suzanne Korreck	QA Auditor	B.S. Microbiology	2

+ Post high school education has been or is currently being completed.



Qualifications Summary

Section 7

RECENT CONTRACT EXPERIENCE



Qualifications Summary

CONTRACT EXPERIENCE

En Chem Inc. has worked for a broad range of clients including federal, state, and local government agencies, consulting engineering firms, and private industry. A partial list of applicable experience is given below.

En Chem's annual analytical volume typically includes over 25,000 samples for metals, GC-MS volatiles and semi-volatiles, PCBs and PCB congeners, pesticides and various wet chemistry parameters. These analyses have usually been part of studies requiring combinations of the following methodologies:

- o Volatile and semivolatile organics by gas chromatography-mass spectrometry (GC-MS) techniques.
- o Volatile organics by gas chromatography techniques.
- o Organochlorine pesticides and PCBs by gas chromatography with electron capture detector (GC-EC).
- o Congener PCBs by GC-ECD.
- o Polynuclear aromatic hydrocarbons by high performance liquid chromatography (HPLC) with UV/Fluorescence detectors or GC/MS with selective ion monitoring (SIM).
- o Explosive residues by HPLC or GC.
- o Metals by inductively coupled argon plasma (ICP) spectrometry or with mass spectral analysis (ICP-MS) and selected metals by graphite furnace (GFAA) or cold vapor atomic absorption (CVAA) spectrometry.
- o Various wet chemistry techniques.

En Chem has a long-standing tradition of actively assisting its clients in the preparation of Quality Assurance Project Plans for EPA approval. This includes meeting with both the Potentially Responsible Parties and the EPA Project Managers and other staff in order to work out details that produce the most cost-efficient and scientifically sound sampling and analysis plans.



Qualifications Summary

Governmental Contracts and Experience

o New York State Department of Environmental Conservation

En Chem is currently under contract with the New York State Department of Environmental Conservation (NYSDEC). En Chem/Hazleton has held contracts with NYSDEC since the Mid 1970s. These contracts have been open-ended contracts for the analysis of water, soil and various biota collected by NYSDEC for both organic and inorganic residues. Hundreds of fish, as well as other types of biological samples are analyzed each year as part of this contract. The data generated is used for both enforcement and bioaccumulation studies.

o Lake Apopka, Florida Resources Damage Assessment

Federal and State investigations have been going on at Lake Apopka, Florida since 1999 to assess pesticide contamination associated with bird mortality. En Chem has analyzed approximately 1,800 soils and waters and over 200 biological samples for pesticides in support of investigations being conducted by the St. Johns River Water Management District.

o State of Indiana, Department of Environmental Management

En Chem/Hazleton has held contracts with the State of Indiana since 1988 for the analysis of fish samples to assess the statewide occurrence of contaminant residues in fish collected from Indiana lakes and streams. This has been an extensive project involving the analysis of approximately 1,500 fish and other aquatic biota for compounds including volatile and semivolatile organics analyzed by GC-MS, an expanded list of 36 organochlorine pesticides and PCBs by GC-ECD and selected metals by either atomic absorption (AA) or inductively coupled argon plasma spectrometry (ICAP) or mass spectrometry (ICP-MS). These contracts typically provide approximately 300 tissue samples annually for analysis.

o Wisconsin Department of Natural Resources

Since 1994 En Chem has been providing analytical support for many study phases of the Lower Fox River, WI System. The ongoing studies, being done for the Fox River Group in co-operation with the Wisconsin DNR has required the analysis of over 3,000 water, sediment, and biological samples to support the Natural Resources Damage Assessment and feasibility studies. The biological samples including fish, turtles, and invertebrates have been analyzed for contaminants such as pesticides, PCBs, PCB-congeners and metals.

o United States Geological Survey, Biological Resources Division

In 1999 and 2000 En Chem analyzed over 600 blood samples for mercury in support of a study of the affects of mercury exposure of common loons.



Qualifications Summary

o Commonwealth of Virginia, Marine Resources Commission

Beginning in September 1997 through the spring of 1998, En Chem provided PCB Aroclor analysis for over 300 striped bass fish samples for the Commonwealth of Virginia. The study was in fulfillment of New York requirement that imported striped bass did not exceed the federal guidelines for PCB levels as determined by a sample of the harvest from the jurisdiction or the state wishing to export the fish.

o USDI FWS, Patuxent Wildlife Research Center (PWRC)

En Chem/HES/Hazleton has held various contracts for laboratory services with the US Fish and Wildlife Service from 1962 to 1997. The analytical services provided under these contracts with USDI FWS have covered the analysis of tissue, water, soil and plant materials for organochlorine pesticides, PCBs, heavy metals and other toxic residues.

o Great Lakes Indian Fish & Wildlife Commission

En Chem analyzed about 150 fish samples from the great lakes in 1999 in support of a federal research grant to study the pesticide and PCB contaminant load in various types of fish. The investigation focused on the types of fish and fish products consumed by humans.



Qualifications Summary

Potentially Responsible Parties (PRP) Lead Investigations

En Chem has been a frequent subcontractor to various environmental engineering firms conducting Remedial Investigation Feasibility Studies (RI/FS) and Resource Conservation and Recovery Act (RCRA) Site Investigations for PRP lead investigations of hazardous waste sites. Most often the analyses include: volatile and semivolatile organics by GC/MS, organochlorine pesticides by GC-ECD and metals by ICAP, ICP-MS and atomic absorption. Examples of such sites in which En Chem, Inc. has provided analytical support are:

- o Alabama
 - McIntosh Floodplain, AL
- o Iowa
 - McGraw-Edison Site, Centerville, IA (multiple phases)
- o Illinois
 - Acme Solvent Site, Rockford, IL (multiple phases)
- o Indiana
 - Muncie Racetrack Site, Muncie, IN
 - Lakeland Disposal Site, Claypool, IN
- o Michigan
 - Duell & Gardner Landfill, MI
 - Ionia Landfill, Ionia, MI (multiple phases)
 - Butterworth Landfill, MI (multiple phases)
- o New York
 - Upper Hudson River, Hudson, NY
- o Ohio
 - Fields Brook Site, Ashtabula, OH (multiple phases)
- o South Carolina
 - Parachem, Simpsonville, SC
 - Cone Mills, Greenville, SC
- o Texas
 - Lavaca Bay Superfund Site, Port Lavaca, TX (multiple projects)
- o Wisconsin
 - Milwaukee's Brewer's Stadium, Milwaukee, WI
 - Janesville Disposal Facility, Janesville, WI (quarterly)
 - Kohler Landfill, Kohler, WI (multiple phases)
 - Madison MSD Site, Madison, WI (multiple phases)
 - Mid-State Disposal Site, Marathon County, WI (quarterly)
 - National Presto Industries, Eau Claire, WI (quarterly)
 - Sheboygan River and Harbor, Sheboygan, WI (multiple phases)
 - Spickler Landfill, Spencer, WI (quarterly)
 - Fadowski Drum Disposal Site, Milwaukee, WI
 - Lemberger Landfill, Whitelaw, WI
 - Oconomowoc Landfill, Oconomowoc, WI



Qualifications Summary

o Tennessee Gas Pipeline Fish Survey for PCB Contamination

Since late 1989, En Chem (formerly Hazleton Environmental Services), as a subcontractor to a large environmental engineering firm, has analyzed over 3,000 fish samples to determine the extent of PCB contamination in various fish species collected from lakes in the states of Louisiana, Alabama, Kentucky and Tennessee.

o Sheboygan River and Harbor Survey

Since 1987 En Chem (formerly Hazleton Environmental Services), as a subcontractor to a large environmental consulting firm, has provided analysis for PCBs and selected heavy metals in more than 2,500 samples of sediment, river water, and fish collected from the Sheboygan River and Harbor located in Wisconsin.

o PCB Baseline Survey of Upper Hudson River

Since 1989, En Chem (formerly Hazleton Environmental Services) has been under contract with a major environmental engineering firm to provide analyses for PCBs in environmental samples collected from the upper Hudson River. The initial phase of this program was to establish existing (baseline) PCB concentrations and their seasonal variations in the river water, sediment, and various aquatic biota prior to remedial construction activities; then to provide ongoing monitoring during and after the construction phase.

o McIntosh Floodplain Environmental Survey, Alabama

In 1992, Hazleton contracted with a major chemical manufacturer, to provide analytical services to investigate the extent of potential contamination of a floodplain adjacent to their chemical manufacturing plant. Analysis was conducted for the TCL organics, TAL inorganics and selected organophosphate pesticides and triazine herbicides.

This project involved the analysis of 60 waters, soil and sediment samples as well as 65 biological tissue samples. Tissue samples analyzed for this project included: fish, crayfish, worms, mice, shrews, turtles (fat, muscle, liver), raccoon (fat, muscle, liver) and venomous snakes.

o Butterworth, Michigan

Since early 1996, En Chem has served as a subcontractor to provide analytical testing in support of a RCRA investigation of landfill sites located at Butterworth and has analyzed groundwater surface water and soil samples, many on a rapid turn around basis, as the investigation of the site progressed. The determining issue is the degree and depth of contamination by the landfill.



Qualifications Summary

o Lavaca Bay Bioaccumulation Surveys, Texas

Since the spring of 1992 En Chem/HES has provided analytical services to a large environmental engineering firm conducting both sediment and bioaccumulation surveys in Lavaca Bay, Texas. The principal interest of these surveys is to determine the extent of mercury contamination of bottom sediments as well as various aquatic biota found in the bay. Analyses are being conducted for both total mercury and methyl mercury.

Under this program, En Chem/HES modified and validated an existing AOAC method for the determination of methyl mercury; incorporating capillary chromatography for improved resolution, the use of propylmercuric chloride as a surrogate compound and Ion Trap Mass spectrometry as an optional technique for qualitative confirmation.

Since this program began, over 2,000 samples of water, sediment and aquatic biota have been analyzed for total mercury, of which 600 samples (aquatic biota) were additionally analyzed for methyl mercury. In addition to the mercury and methyl mercury analysis, approximately 150 sediment samples were analyzed for Acid Volatile Sulfides and Simultaneously Extracted Metals.

o Fields Brook Superfund Site, Ashtabula, Ohio

Since the fall of 1992, En Chem/HES has analyzed over 3,000 soil, sediment and water samples from this site for a major environmental engineering firm. This project requires analysis of the full TAL/TCL lists, as well as other site-specific compounds and selected physical parameters under strict CLP data quality guidelines.

o Lemberger Landfill, Whitelaw, Wisconsin

During the construction phase of the wastewater treatment plant and the installation of monitoring wells in 1995 and 1996, analysis on a rapid turnaround basis of water samples that required immediate disposal at a local wastewater treatment plant was provided. Untreated and highly contaminated samples arrived bi-weekly for a full suite of organic and inorganic analyses. The results were provided as quickly as possible so that the stored water could be removed off-site. The project lasted several months and concluded with the analysis of effluent samples being generated by the newly installed treatment plant.

o Hydrite, Wisconsin

Since 1996, En Chem, under contract to a national consulting firm, analyzed ground water, drinking water and soil samples from an industrial Corrective Action site. The project includes a full spectrum of analytes, volatiles, semi-volatiles, metals and wet chemistry.



Qualifications Summary

o Former Koppers Company Site, Newport, Delaware

In the summer of 1996, En Chem under subcontract to a national consulting firm provided analytical support for an ecological risk assessment project at the Former Koppers Company, Newport Site in Delaware. Fish from the site were analyzed for the complete series of TCL Organics and TAL Inorganics. As an outgrowth of this project, En Chem was also asked to analyze more than 60 small rodents for semivolatile organics, pesticides and PCBs and metals. En Chem is also analyzing the earthworms from a 28-day sediment toxicology study for the same list of analytes as the small rodents.

o New York Mohawk Power Company, Upstate New York

During the period of 1994-1996 analyses were conducted under subcontract to a major environmental consulting firm, in support of several studies at various sites in New York State. These studies included the analysis of approximately 300 fish. The primary analytes were PCBs, but some samples were also assayed for organochlorine pesticides, polynuclear aromatic hydrocarbons and metals.

o Confidential Fortune 100 Chemical Producer, Delaware

During the winter of 1999-2000 approximately 150 soil, water and biota samples were analyzed for a wide range of non-routine organic and inorganic contaminants including site-specific specialty chemicals. The site was unique because of the presence of high quantities of non-target-analyte interfering substances. These substances required extensive organic cleanup procedures in order to achieve the site-specific low-level reporting limits.



Qualifications Summary

Military Installation Contract Experience

Projects related to military installations have frequently provided environmental samples for analysis at En Chem, Inc. These projects usually require En Chem to act as a subcontractor to consulting firms. The prime contractors have had access to the IRPIMS and IRDMIS database programs of the Air Force Center for Environmental Excellence (AFCEE) and the Army Environmental Center (AEC). En Chem, in turn, has provided data in a variety of client-specified electronic formats that have allowed our clients to easily download the data into the AFCEE and AEC databases.

o Badger Army Ammunition Plant, WI

- In the winter of 1997 through the spring of 1998, En Chem provided analytical support for remediation services at a confidential site. Over 400 soil samples were analyzed over a 2-month period for metals, SVOC's, Explosives, Leaching and Wet Chemistry. En Chem continues to provide analytical services for ongoing monitoring as needed.

o Tinker Air Force Base, OK

In October 1995, as a subcontractor to an engineering firm under contract with the US Air Force, En Chem (formerly Hazleton Environmental Services), analyzed approximately 44 plant and animal tissues for pesticides/PCBs, metals and PAHs and approximately 20 sediment samples for Acid Volatile Sulfides as part of an ecological risk assessment. . The project required the submission of complete supporting data packages and electronic deliverables in the client's specified format for downloading into the AEC IRDMIS database.

o Former Antigo Air Force Station, Antigo, WI

In May, 1996, as a subcontractor to an engineering firm under contract with the US Air Force, En Chem (formerly Hazleton Environmental Services), analyzed approximately 125 sediment and 40 water samples for volatile organics, PCBs, PAHs, petroleum hydrocarbons and metals from this site. The project required complete supporting data packages and electronic deliverables in the client's specified format. This project is now in its monitoring phase, with En Chem performing the analyses at this site.

o Camp Pendleton Military Reservation, CA

In December of 1995, En Chem (formerly Hazleton Environmental Services), provided analytical support for and Ecological Risk Assessment performed under the Navy Clean Program at Camp Pendleton, CA. As part of this program, EN CHEM prepared and analyzed approximately 85 tissues consisting of fish, invertebrates, plants and small mammals for organochlorine pesticides and PCBs, polynuclear aromatic hydrocarbons and heavy metals.



Qualifications Summary

o Fort McCoy Military Reservation, WI

In the fall of 1995 En Chem (formerly Hazleton Environmental Services), served as a subcontractor to provide analytical testing in support of a RCRA investigation of three landfill sites located at Fort McCoy. En Chem assisted the prime contractor in the development of the Chemical Data Acquisition Plan. En Chem analyzed 15 soil samples for full TCLP parameters. 80 additional samples were collected for "confirmation analysis" which included volatiles, semivolatiles, pesticides/PCBs, acid herbicides and heavy metals. All analyses were conducted according to SW-846 methods and full CLP-type data packages and electronic results were provided within 30 days of receipt.

o Tooele Army Depot, UT

Beginning in early 1994 En Chem (formerly Hazleton Environmental Services), worked with a remediation contractor in a risk assessment by determining the extent of biological contamination in about 150 samples of plants and animals. Specific analyses conducted included explosives, pesticides, herbicides, PAHs and heavy metals. Specific validations were conducted for these analytes in the exact matrices submitted.

o Loring Air Force Base, ME

In the fall of 1994, as subcontractor to an environmental engineering firm under a subcontract from the U.S. Air Force, En Chem (formerly Hazleton Environmental Services), provided analytical support for an ongoing CERCLA Remedial Action of contaminated soils from multiple sites at Loring Air Force Base, Maine. The majority of the approximately 90 samples required analysis for TCL/TAL and/or TCLP parameters with submission of data and QC summaries within 5 days of sample receipt. This was followed by full, CLP compliant supporting data packages and electronic deliverables in the client's format. Results were presented to the client in an electronic format suitable for downloading to the AFCEE IRPIMS database.

o Volunteer Army Ammunition Plant, TN

In the fall of 1994, as a subcontractor to a large environmental engineering firm under contract with the U.S. Army Environmental Center, En Chem (formerly Hazleton Environmental Services), analyzed approximately 30 fish for TCL/TAL volatiles, semivolatiles, pesticides/PCBs and metals as part of an ecological risk assessment project. The project required the submission of complete supporting data packages and electronic deliverables in the client's specified format for downloading into the AEC IRDMIS database.

o Homestead Air Force Base, FL

In the fall of 1993, as a subcontractor to an environmental engineering firm under contract with the U.S. Army Corps of Engineers-Omaha District En Chem (formerly Hazleton Environmental Services), analyzed approximately 60 fish for TCL/TAL volatiles, semivolatiles, pesticides/PCBs and metals as part of an ecological risk assessment project. The project required the submission of complete supporting data packages and electronic deliverables in the client's specified format for eventual downloading into the AFCEE IRPIMS database.



Qualifications Summary

Project Experience Supplement to Statement of Qualifications; March 2000

The experience listing given in our statement of qualifications is a partial summary for the analysis of biological matrices.

En Chem and the acquired staff of Hazleton Environmental Services (4/97) have been analyzing environmental contaminants in tissues, soil and water samples for more than 20 years. We have unique capabilities in sample preparation and extract cleanup, which were developed in our laboratories. These studies are usually done in support of Ecological Risk Assessment or Natural Resources Damage Assessment investigations. We continue to perform these analyses for federal and state agencies, consulting firms and industrial clients.

Recent and continuing accomplishments include analytical support for the following projects:

- o 9/98 -- 12/98; Approximately 300 fish, crayfish, turtles and benthic organisms from the Lower Fox River in Wisconsin for Pesticides/PCBs and metals.
- o 10/98 -- 11/99; Approximately 150 fish annually from the Indiana Dept of Environmental Management for Pesticides/PCB, metals and PAHs, and 20 fish annually for Semivolatiles.
- o 1987 -- 1998; Approximately 200 fish annually from the Indiana Dept. of Environmental Management for Pesticides/PCB, metals and PAHs, and 20 fish for Semivolatiles.
- o 1987 -- 1999; Approximately 800 -- 1000 fish per year from the Hudson River for PCBs under a contract with the New York Department of Environmental Conservation
- o 1995 -- 1999; Approximately 100 fish, invertebrates, and bird tissues per year for Cadmium in support of ecological risk assessments at Constitution Marsh in New York.
- o 1997 -- 1999; Approximately 50 samples per year of small mammals, invertebrates and birds for selected metals in support of ecological risk assessments for a mining company in Nevada.
- o 12/97 -- 9/98; 300 fish from the Chesapeake Bay for PCBs from the Virginia Marine Resources Commission
- o 1989 -- 1999; Approximately 300 fish per year from lakes in New York, Kentucky, Tennessee and Mississippi as part of a PCB monitoring program being conducted by a gas pipeline company.
- o 1993 -- 1999; Approximately 200 samples per year of Loon blood, loon muscle tissue and prey species under bioaccumulation studies being conducted by the Wisconsin DNR.
- o 1987 -- 1999; Numerous biological monitoring projects conducted by various universities in cooperation with state governments.
- o 6/99 -- 9/99; Approximately 1300 soil/sediment and 200 bird tissue samples for chlorinated pesticides including toxaphene for an investigation related to bird die-offs at Lake Apopka in Florida



Qualifications Summary

o 6/98 -- 7/99; Approximately 300 water samples for selected metals and anions in support of investigations related to a large proposed mining operation in Wisconsin.