

Advanced Groundwater Remediation, Inc.

Statement of Qualifications

June 2009



ADVANCED GROUNDWATER REMEDIATION, INC.

Advanced Groundwater Remediation, Inc. is a small, woman-owned business specializing in contaminated site investigations, remedial decisions, and remediation. AGWR was founded in 1997, and holds two US patents for groundwater remediation technologies (6,921,477 and 7,156,988).

AGWR has provided environmental consulting services to the Department of Energy, Brownfields firms, and other consulting engineering firms. AGWR staff have extensive consulting experience and expertise in all phases of site investigation and remediation under both CERCLA and RCRA regulations. A member of our staff was the primary author of the Department of Energy's RI/FS guidance document.

Over our 11-year history, AGWR has competitively bid, won, and executed fixed-price contracts to complete remediation projects for the US Army Corps of Engineers, US EPA, major oil companies, the Air Force Center for Environmental Excellence, other consulting engineering firms, Brownfields projects, and private clients.

CONTAMINATED SITE CONSULTING AND SERVICES

PHASE I AND PHASE II ENVIRONMENTAL SITE ASSESSMENTS

AGWR can provide all services in conducting Phase I and Phase II Environmental site assessments and preparing the required reports.

DUE DILIGENCE CONSULTING AND SERVICES

AGWR provides due diligence services for Brownfields projects. Clear adherence to the requirements of the due diligence process, and careful documentation of the process are critical in assuring that environmental liabilities taken on by a client in acquiring a contaminated property are clearly delineated and legally limited. AGWR provides full services throughout the due diligence process, including all required legal documentation.

SITE DATA ANALYSIS/CONCEPTUAL MODELS

Many sites that have been under investigation for several years have a large amount of data, from various investigations and remediation efforts. Typically, we find that such data have not been fully analyzed. Historical data on contaminated sites often contain more information about the nature and extent of contamination, and particularly about how the site works, than has been extracted.

AGWR specializes in reviewing and evaluating site information and developing more complete and revealing conceptual models for sites. We recently worked extensively with the available information for the 200-MW-1 operable unit at the Hanford site in Washington state, which resulted in better site understanding and better conceptual models for the waste sites in that operable unit. For Chevron, we completed a detailed review of the data for a site that has been under investigation and remediation for 25 years. The data from almost 100 wells and borings on this < 2-acre site contained much more information about the site and how it works than had been extracted. The improved

conceptual model revealed methods to achieve final cleanup that were previously unrealized.

More complete data evaluation and more detailed conceptual models often result in simpler and more effective remediation approaches and reduced remediation costs.

REMEDIAL INVESTIGATIONS AND RI REPORTS

AGWR staff have over 50 years of experience with site investigations, under both RCRA and CERCLA programs. Our experience includes all aspects of remedial investigations, from planning the investigations through final reporting. We have worked on RI/FS work plans at Hanford (100-BC-1 and 100-BC-5), and our Vice President, Steve Wilhelm, was the primary author of DOE's RI/FS Guidance document (<http://www.1hope.org/RI/FSGUID.PDF>).

AGWR can provide assistance with any aspect of a remedial investigation, including full responsibility for a remedial investigation and final RI report.

FEASIBILITY STUDIES

AGWR has extensive experience with feasibility studies for large and complex sites, experience dating from 1983 and continuing until the present. We have worked on all aspects and phases of feasibility studies over the entire range of site sizes and levels of complexity. We can provide the evaluations and analysis report writing and finalization for a complete FS, including drafting and finalizing all of the sections, figures, and tables.

REMEDIAL COST ESTIMATING AND REMEDIAL DECISION ANALYSIS

AGWR has eleven years of experience in estimating remedial costs using our technologies. Over our 11-year history, all but one of our projects have been done at fixed cost, requiring us to estimate the costs to very high levels of precision and confidence.

AGWR staff have more than 40 years of experience in estimating remedial costs for large contaminated site remediations, up to \$180 million.

These same personnel also have extensive experience with cost estimating models and programs, and with remedial decision analysis models. Our experience with cost estimating models includes models used at a Department of Energy site (Hanford).

PROPOSED PLANS

AGWR can provide all of the writing, editing, and document production services required to develop and produce complete proposed plans for even the most complex sites. Assembling detailed knowledge of the entire Superfund process for a site, from the DQO process, through site investigation, risk assessment, and the feasibility study, to the preferred alternative, and then summarizing all of that process and the results in a concise, readable public document is a special challenge. It requires crisp technical writing, clear and effective figures, and accessible, easily understood tables. AGWR can provide all of this, and produce an exceptional public document that significantly eases the public participation phase of the Superfund decision process.

REMEDIATION SERVICES

Design Investigations

The information and data required in designing a remediation approach for a contaminated site is frequently different from the data required for completing a feasibility study and deciding the remediation approach. AGWR provides complete services in planning, completing, and reporting site investigations to support remedial design, including pilot studies.

Remedial Technology Development and Application

AGWR's primary work is in developing technologies for groundwater remediation and in applying remediation technologies to specific sites.

AGWR has completed commercial development of one technology patented by another firm (DDC Technology/Wasatch Environmental, Patent 5,425,598) and has invented, patented, and developed to full commercial status, five other remediation technologies (www.AGWR.com). This work has required thousands of hours of R&D and detailed design work, all done in-house at AGWR.

Even using a fully developed and designed technology, remediation development at a particular site requires detailed application design work, to precisely fit the technology to the specifics of the site. AGWR has extensive experience in technology application design, including detailed remedial design for application of three AGWR technologies at a Chevron site in California, under very detailed and demanding requirements established for all Chevron projects.

Pilot Studies

AGWR has completed pilot studies for groundwater remediation projects for US EPA, private clients, 7-Eleven, and the NY Department of Environmental Conservation. These studies have included detailed determination of aquifer response, radius of influence, process efficiency, upgradient/downgradient contaminants reduction ratios, and evaluation of rebound. Robust and flexible pilot system design, and meticulous implementation have resulted in full-scale technology implementation following all but one of the pilot studies we have completed.

Remedial Design

AGWR has eleven years of experience in remedial design, completing conceptual designs for scores of sites and final designs for more than a dozen groundwater remediation projects, including projects for major oil companies. In addition to our own projects, we have provided design services to other consulting firms completing groundwater remediation projects.

Staff experience in remedial design extends back to early 1983, working on some of the largest EPA Superfund projects nationwide.

Design and Fabrication of Remediation Equipment and Systems

AGWR fabricates all of the remediation systems we install. Our prototyping, fabrication, and machine shop is 1,500 sq. ft. Final fabrication of large system components is completed by carefully selected local shops that have years of experience with our technologies and designs, and with the machining and fabrication tolerances that must be met in our work.

AGWR designs and manufactures complete blower systems to meet customer specifications. We have designed and built pressure blower systems up to [60-hp](#).

AGWR also designs and manufactures the control systems (panels) for all of our remediation systems. Any level of controls can be provided, including full SCADA controls. Where required, we can produce UL-listed control systems.

Remedial Implementation Oversight

AGWR oversees implementation of every remediation project we complete for clients. In addition, AGWR has provided implementation oversight for other remediation firms completing groundwater remediation projects.

Staff experience in remedial implementation oversight extends back to early 1983, working on the largest EPA Superfund projects nationwide, up to \$100 million.

Operation and Maintenance of Remedial Systems

In addition to designing and installing remediation systems, AGWR provides O&M services to our clients. Such services range from over-the-phone trouble shooting and remediation advice to maximize system performance and remediation efficiency to full onsite operation and maintenance of groundwater remediation systems.