

ENVIRONMENTAL
PROTECTION


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HORIZON ENVIRONMENTAL INC.

Statement of Qualifications
Environmental and Engineering Services

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SECTION I

INTRODUCTION

HORIZON ENVIRONMENTAL INC. has offices in Eldorado Hills and Bakersfield, California and provides environmental consulting, engineering, geologic, and construction services for Fortune 500 companies, private industry, developers, and lending institutions. *HORIZON* personnel have extensive experience serving clients throughout California and Nevada.

HORIZON ENVIRONMENTAL INC. staff includes registered and certified professionals in the disciplines of geology, civil engineering, environmental assessment, and environmental management. Our technical staff have worked on more than 500 environmental sites. All senior-level professionals in the firm have extensive experience assessing local conditions, meeting client needs and interacting with regulators. Resumes of senior staff are included in Section III.

HORIZON ENVIRONMENTAL INC. maintains an active health and safety program dedicated to the protection of its employees. Our environmental services staff actively participate in the health and safety program, which meets the requirements of OSHA Title 29 Code of Federal Regulations Part 1910.120. The firm is committed to providing a safe and healthful work environment that meets Federal and State requirements.

The key to success of *HORIZON ENVIRONMENTAL INC.* is the ability to provide a wide variety of technical services to our clients in a timely and cost-effective manner. These services include:

- Phase I - Preliminary Site Assessments (PSAs)
- Regulatory Compliance (Site Management and Permitting)
- Site Characterization (Phase II)
- Site Remediation (Phase III)
- Engineering Design
- Underground Storage Tank (UST) Management
- Remediation System Construction and Operations and Maintenance
- Site Closure Negotiating and Reports



SECTION II

CAPABILITIES

HORIZON ENVIRONMENTAL INC. provides a comprehensive range of services required for the complete management of environmental projects. These services include performance of the initial site evaluation, site characterization, design and installation of the appropriate remedial solution, operation and maintenance of remedial systems, and site closure.

Phase I Preliminary Site Assessments

The potential for property to have been contaminated by past activities has become a major concern to those who are involved in the sale, acquisition, refinancing or insuring of real estate. Many lending institutions, legal representatives, insurers and real estate professionals are increasingly requesting the performance of a Phase I Preliminary Site Assessment (PSA) before a property transaction occurs to meet "due Diligence" requirements. *HORIZON ENVIRONMENTAL INC.* conducts PSAs with the goal of minimizing our client's risks by providing them with the information necessary to make an informed business decision regarding the subject property.

Each PSA is designed to meet the requirements of our clients (e.g. loan approvals, property sales, insurance policy approval, etc.), and standards established by the American Society for Testing Material (ASTM). PSAs are performed under the supervision of a State of California registered environmental assessor (REA). During the site inspection, we look for and document any evidence of potential on-site and/or off-site problems, such as the presence of soil discoloration, USTs, asbestos containing materials (ACMs), PCBs, lead paint, and hazardous wastes. Additionally, we review available public domain records, aerial photographs, computer databases, and perform owner/operator interviews.

At the conclusion of the site inspection and document review, the PSA report is prepared describing the work performed, evaluating the potential liability associated with the property, and providing recommendations for additional investigations, if warranted.

Regulatory Compliance

One of the key concerns of industry today is the ever increasing number of environmental regulations and how to comply with promulgated laws that affect your business. *HORIZON ENVIRONMENTAL INC.* staff have assisted clients in evaluating their compliance with environmental regulations. A critical review of a facilities operations is often required to

identify those items that should be addressed to comply with appropriate regulations. From the information gathered for regulatory compliance, recommendations are presented regarding the development of procedures that should be performed to comply with current environmental regulations.

HORIZON ENVIRONMENTAL INC. has extensive experience in providing assistance in obtaining air, water, and waste permits for its clients.

Site Characterization (Phase II)

Phase II investigations are conducted to delineate the vertical and horizontal extent of contamination in soil and/or groundwater at a site. Typically, these studies involve the drilling exploratory soil borings, the installation of monitoring wells, the collection of soil and groundwater samples for laboratory analysis, and the performance of specific field tests to select the appropriate remedial action. Many of these investigations are performed utilizing a phase approach. By following a systematic approach, a contaminated site can be characterized in a cost-efficient manner.

HORIZON ENVIRONMENTAL, INC. staff have provided a full range of environmental services at sites contaminated with fuel hydrocarbons, chlorinated solvents, herbicides and pesticides, and heavy metals. Many of these investigations required the implementation of procedures to meet the requirements of federal, State, and local government agencies. *HORIZON ENVIRONMENTAL INC.* has the resources and experience to complete all phases of a site characterization as well as implement appropriate compliance monitoring programs.

Site Remediation (Phase III)

Site characterizations are performed to identify the presence of contamination that exceeds established regulatory action levels. As a result, regulatory agencies overseeing the site generally require the implementation of an appropriate remediation technology to mitigate the contamination. *HORIZON ENVIRONMENTAL INC.* has the capabilities of fully evaluating site conditions and developing and implementing feasible, cost-effective remediation. In many cases, there are several remedial alternatives that are technically feasible to attenuate identified contamination. These alternatives typically vary in capital costs, operation and maintenance costs, and time required to complete site remediation. The benefits and costs of each alternative are evaluated and the most appropriate remedial alternative is presented to the client for review.

The key to the success of a remediation project is effectively combining the technical aspects of the treatment alternative with development of a close working relationship with the regulator agency staff to implement remediation technologies that lead to site closure. Once a remedial action has been chosen, *HORIZON ENVIRONMENTAL INC.* can prepare a Remedial Action Plan (RAP) After review by the client, the RAP is submitted to the



appropriate regulatory agencies for review and approval. *HORIZON ENVIRONMENTAL INC.* staff have been successful in the negotiation of realistic cleanup levels with the regulatory agencies.

Engineering Design

HORIZON ENVIRONMENTAL INC. has experienced engineers to design remedial systems that meet client specifications. Our design services department is qualified to design remedial systems which meet all appropriate State and local agency hazardous materials, building, and planning requirements.

Underground Storage Tanks

HORIZON ENVIRONMENTAL INC. offers a complete range of environmental services for the replacement, investigation, monitoring, engineering design and remediation of Underground Storage Tank (UST) sites. Our staff have provided UST services for Shell Oil Company, Chevron U.S.A., Inc., ARCO Products Company, UNOCAL Corporation, Ultramar, Inc., and Exxon Company U.S.A., and numerous privately owned UST sites.

HORIZON ENVIRONMENTAL INC. capabilities in this area include:

- Initial Site Assessment
- Removal/Installation of USTs
- Site characterization and remediation
- Monitoring system design and permitting
- UST closure and confirmation sampling

HORIZON ENVIRONMENTAL INC. has the experience and technical capabilities to successfully manage simple or complex UST projects while addressing the issues of applying appropriate technologies, controlling costs, and meeting deadlines.

Remediation System Construction

HORIZON ENVIRONMENTAL INC. can perform remediation system construction and operations and maintenance (O&M). Our remediation construction experience includes:

- Soil excavation and aeration



- Soil vapor extraction systems
- Air sparging networks
- Bioremediation systems
- Extraction well networks
- Infiltration galleries
- Treatment system installations
 - enclosure designs
 - underground piping
 - system component hookups
 - system startups
 - equipment changeouts
 - troubleshooting

HORIZON ENVIRONMENTAL INC. can perform O&M on various types of systems at all levels of complexity. Our staff has experience with simple carbon treatment systems and more complex groundwater treatment and soil vapor extraction units. Equipment serviced includes EVAX Thermal Treatment and Catalytic Unit, King Buck, and ThermTech. In addition, *HORIZON* staff has the capabilities and equipment to repair electronic controllers and change out and clean catalysts. *HORIZON ENVIRONMENTAL INC.*, in most cases, can solve onsite problems with treatment systems, but if required, has the equipment available to transport systems to their Bakersfield shop for more complex repairs.



SECTION III

KEY PERSONNEL

The success of every environmental project depends both on the technical expertise and the management skill of the project staff. *HORIZON ENVIRONMENTAL INC.* staff have significant expertise in all aspects of environmental projects, beginning with the initial site assessment through the implementation of remedial actions. From our offices located in Bakersfield and El Dorado Hills, California, we are able to respond to our clients needs throughout California and Nevada. Our staff is dedicated and trained in client services oriented management.

Key Personnel

Key personnel consist of the following individuals:

Gary D. Barker, Vice President Operations/Senior Project Manager
Kenny B. Mateik, Senior Registered Geologist
Diane M. Barclay, Senior Project Geologist
Carl David Higgins, Project Geologist
Richard Johnson, Field Services Manager
Steve Graham, Senior Field Technician



Gary D. Barker
Vice President Operations/Senior Project Manager

B.S. Geology, 1983
California State University, Sonoma
B.S. University Studies, 1981
A.S. General Studies, 1980
Southeastern Illinois College

Mr. Barker has 13 years of experience working in the geosciences and engineering field. He has worked at various levels of environmental management from managing the onsite field and construction activities to overall project management. He has provided oversight for the work of project managers, geologist and engineers, reviewing and recommending technical approaches to various assessment and remediation projects. Mr. Barker has served as a Senior project manager for complex projects requiring high levels of communication between clients and regulatory agencies.

Project Experience

- Served as Project manager for aboveground bioremediation projects which involved design and installation of lined containment covering over an acre of area. Work included high level negotiation between client and agencies to obtain variances for treatment of soil containing levels of hydrocarbons in excess of 25,000 parts per million. Total cost of soil treatment and disposal was less than 500,000 dollars. Without treatment disposal would have cost approximately 1,250,000 dollars.
- Managed a project at a service station in Vacaville, California, which required quick decisive action to protect domestic water wells from contamination source 150 feet upgradient. Project involved geophysical investigation of subsurface and construction of an interim ground-water treatment system to control the plume migration. As well as assessment of multiple aquifers beneath the site.
- Developed programs for assessing and mitigating contaminated soil and ground water at gasoline stations throughout California. Projects budgets have ranged from less than 20,000 dollars to greater than 100,000 dollars.
- Supervised test pit excavation, soil profile interpretation, and sample collection at an abandoned steel processing plant and Superfund site. Results of investigation allowed client to develop property for residential use.

Gary D. Barker
Vice President Operations/Senior Project Manager

Professional Affiliations

Association of Engineering Geologists
Association of Ground Water Scientist & Engineers
Technical Member, California Groundwater Association
American Association of Petroleum Geologist

Professional Certifications and Registrations

- Registered Environmental Assessor, California (No. 00868), 1989
- 40-Hour OSHA Health and Safety Training (29CFR 1910.120), 1988
- 8-Hour OSHA Refresher Training, Annually
- 8-Hour Supervisors Training, 1992

Professional Training and Continuing Education Courses

- Risk and Decision Making at Petroleum Contaminated Sites, University of California, University Extension, Sacramento, California, 1996
- Introduction to Modeling Contaminant Fate and Transport In Groundwater, University of California Berkeley, 1988
- Site Assessment and Mitigation at Hazardous Waste Sites, University of California San Diego, 1989
- California Environmental Regulation, California Business Law Institute, 1989



Kenny B. Mateik
Senior Registered Geologist

B.A. Geology 1978
California State University at San Francisco
Specialization in Engineering Geology with Minor in Biological Sciences

Mr. Mateik has 15 years experience in geosciences with particular expertise in performing hydrogeologic and geotechnical investigations, conducting field geologic mapping, interpreting subsurface geologic and groundwater conditions, and delineating the extent of organic and inorganic contaminants in soil and groundwater. Extensive experience with drilling techniques and multi-aquifer well construction. He has represented consulting firms in meetings with clients and regulating agencies prior to or during investigations. Approximately ten years of experience in subsurface exploration and evaluation of hydrogeologic projects in the greater San Francisco Bay Area, in addition to nine years of experience in subsurface exploration and evaluation of geotechnical projects in northern and central California.

Project Experience

- Served as project manager for delineating and characterizing soil and groundwater contamination at a former municipal maintenance yard and fueling station in California. Work included formulating proposals and cost estimates; preparation of work plans and site safety plans; project management; arranging UST removals; supervision of drilling activities; installing monitoring, recovery, and extraction wells; sampling soil and groundwater; characterization of the regional and local subsurface geology and multi-aquifer system; delineating the extent of organic contaminants; removal of petroleum product from the subsurface soil and groundwater; technical review of extensive reports; and interaction with clients and regulatory agencies.
- Served as project geologist for delineating and characterizing soil and groundwater contamination at a former petroleum bulk plant and at a solvent recycling facility in Northern California. Work included lithologic logging during drilling of exploratory soil borings; installation of multi-aquifer monitoring wells; sampling soil and groundwater; characterization of the regional and local subsurface geology and multi-aquifer system; delineating the extent of organic contaminants; removal of petroleum product from the subsurface soil and groundwater; preparation of extensive technical reports; and interaction with clients and subcontractors.

Kenny B. Mateik
Senior Registered Geologist

- Served as project manager for delineating petroleum hydrocarbon contamination at numerous oil company service station sites (primarily Unocal, ARCO, and Shell); work included preparation of work plans; drilling and installing monitoring and recovery wells; sampling activities; aquifer testing and characterization; installation of interim remediation systems; interaction with clients and regulatory agencies; and technical review of hydrogeologic reports.
- Served as project geologist while performing field geology and suitability determination of hillside areas up to 220 acres in size, which were proposed for residential and commercial developments. Work involved site reconnaissances, extensive geologic literature research, stereo aerial photograph interpretation, field mapping, subsurface geophysical surveys, drilling supervision, fault and landslide investigations, laboratory testing, report preparation, technical review of reports, review of grading plans, supervision of large-scale landslide correction procedures, and limited foundation inspections. Familiar with ASTM laboratory soil and materials testing procedures.

Professional Affiliations

Groundwater Resources Association (GRA)
Northern California Geological Society (NCGS)
Pacific Section of the Society for Sedimentary Geology (SEPM)
Soil and Water Conservation Society (SWCS) *
National Water Well Association, Groundwater Scientists Section (NWWA) *
American Geophysical Union (AGU) *
Union of Concerned Scientists (UCS)

* = *Past Member*

Professional Certifications and Registrations

- California Certified HydroGeologist No. 323
- California Certified Engineering Geologist No. 1935
- California Registered Geologist No. 5861
- California Registered Environmental Assessor No. 3608



Kenny B. Mateik
Senior Registered Geologist

- Radiation Safety and Nuclear Soil Gauge Use Training, Campbell Pacific Nuclear, July 1978
- SARA Title III 40-hour Health and Safety Training, Applied GeoSystems, February 1988
- SARA Title III 8-hour Health and Safety Training Refreshers July 1990, June 1991, July 1992, March 1993, March 1994, and April 1995
- SARA Title III 8-hour Health and Safety Supervisor Training, RESNA Industries, March 1992

Professional Training and Continuing Education Courses

- Hazmacon 1985 in Oakland, California
- Hazmacon 1987 in Santa Clara, California
- Hazmacon 1989 in Santa Clara, California
- Hazmacon 1991 in Santa Clara, California
- Haz Mat 1992 in San Jose, California
- Hazmacon 1993 in San Jose, California
- Hazmacon 1994 in San Jose, California
- Hazmacon 1995 in San Jose, California
- Hazmacon 1996 in Santa Clara, California

Diane M. Barclay, C. E. G.
Senior Project Geologist

B.S. Geology, 1982
San Jose State University, San Jose

Ms. Barclay has 12 years experience in the environmental consulting industry. The last seven of these 12 years have been directing and assuming responsibility for technical aspects of soil and groundwater contamination and hydrogeologic investigations, including remedial investigations. This work included playing the principal role in creating technical standards for three environmental consulting companies. Ms. Barclay's strengths are technical advising, project and report organization, report writing and review, and meeting budgets and deadlines. The first five years of her experience consisted of performing and managing soil and groundwater contamination, fault, landslide, and drainage projects.

Project Experience

- Hydrogeological experience has included design and implementation of environmental assessments; supervision of underground tank removals; negotiation and design of groundwater monitoring programs; direction of hydrogeologic investigations; design, performance and evaluation of aquifer tests; and working closely with engineers to design, implement, and monitor the effectiveness of remediation. Developed technical standards for three environmental consulting companies, and trained many employees in field and office procedures. Environmental assessment work in the Bay Area and the Central Valley has resulted in limitation of potentially serious liability concerns for clients. Tank removal, groundwater monitoring, and hydrogeologic investigation work has involved fuel hydrocarbons, chlorinated solvents, metals, and pesticides. Specialties have included using technical and regulatory knowledge and negotiation skills to arrive at solutions which are cost-effective; and directing complex subsurface hydrogeologic investigations which have resulted in the delineation of compounds on sites with multiple water-bearing zones and complicated hydrogeology. Aquifer testing work has included design, implementation, and evaluation of aquifer tests in confined, semi-confined, and unconfined alluvial deposits and fractured bedrock. Remedial experience has included soil vapor extraction, excavation and disposal, air sparging, slurry walls, extraction trenches, and combinations of these methods.
- Managed and performed many soil, slope stability, large and small landslide, drainage, erosion control, and fault investigations in San Mateo, Santa Clara, and Santa Cruz Counties. Performed air photo interpretation, geologic mapping, and monitoring of slope movement, including installation of slope indicators and data



Diane M. Barclay, C. E. G.
Senior Project Geologist

analysis. Experienced at supervising engineering field inspection of retaining wall construction, drainage facilities, and landslide repairs, including soldier beam walls, buttress fills, and drainage galleries.

Professional Certifications and Registrations

- California Registered Geologist No. 4369 (1987)
- California Certified Engineering Geologist No. 1366 (1987)
- Will take first offered California Certified Hydrogeologist examination in March, 1995

Carl David Higgins
Project Geologist

B.A. Geology, San Jose State University, San Jose, California

Mr. Higgins has 10 years experience in the geosciences. He has worked at characterization and remediation of unauthorized releases involving underground storage tanks and associated product lines, hydrogeologic investigations and aquifer characterization, interpretation of subsurface geology and hydrogeology, delineation of contamination in soil and groundwater, and interpretation of the fate and transport of contamination in subsurface environments. Additional experience includes geologic field mapping.

Project Experience

- Served as project manager for conducting site investigations related to soil and groundwater contamination at a former service station in San Jose, California. Work included drilling soil borings and installing groundwater monitoring wells, soil and groundwater sampling, characterization of regional and local geology and hydrogeology, delineation of soil and groundwater contamination, design and permitting of groundwater remediation system. Site remediation included dissolved, absorbed, and free phase gasoline and diesel hydrocarbons.
- Managed a project for conducting remediation and site investigations related to soil and groundwater contamination at an active service station in Watsonville, California. Work include drilling soil borings, installing groundwater monitoring and recovery wells, soil and groundwater sampling, characterization of local geology and hydrogeology, delineating soil and groundwater contamination, operation, maintenance, and permitting of groundwater remediation system, soil vapor extraction feasibility study, and preliminary design of a soil vapor extraction remediation system. Site remediation included dissolved, absorbed, and free phase gasoline hydrocarbons.
- Served as project manager for site investigation and soil remediation related to soil contamination at two active service stations in Sunnyvale, California. Work included drilling soil borings, installing vapor extraction wells, soil sampling, characterization of local geology, delineation of soil contamination, installation of soil vapor extraction remediation systems, and permitting of temporary and long term abatement devices. Site remediation included absorbed gasoline hydrocarbons.



Carl David Higgins
Project Geologist

- Supervised site investigations and soil remediation related to soil contamination at a former lumberyard in Santa Clara, California. Work included drilling soil borings, soil sampling, groundwater monitoring well abandonment, excavation of contaminated soil, and installation of an above-ground biodegradation remediation system for contaminated soil. Site remediation included absorbed gasoline hydrocarbons.
- Served as project manager and project geologist for numerous site investigations. Work included delineating petroleum hydrocarbons in soil and groundwater, soil and groundwater sampling, drilling soil borings, installation of groundwater and vadose monitoring wells, installation of groundwater and soil vapor extraction wells, aquifer testing and characterization, operation and maintenance of groundwater and soil remediation systems, and design of remediation systems.
- Performed mapping of geological formations along the San Andreas fault zone in central California to delineate areas of seismic movement and distances of formation offset.

Professional Affiliations

American Geophysical Union (AGU)

Richard Johnson
Field Services Manager

American River College, Sacramento
Spokane Falls Community College, Spokane, WA
Lewis and Clark High School, Spokane, WA

Mr. Johnson has 9 years experience in construction and oversight of environmental system installations for water and soil treatment, such as, vapor extraction systems, air strippers and bio-remediation stockpiles. He has also performed operation, maintenance and sampling of vapor extraction systems, including thermal oxidizers, catalytic oxidizers, internal combustion (I.C.) engines and ambient vent systems. Experience includes operation of construction equipment, backhoes, loaders, and dump trucks for environmental projects.

Project Experience

- Coordinate, expedite and perform site specific vapor extraction tests and sparge feasibility studies. Operation, maintenance, and sampling of water treatment devices and bio-remediation stockpiles. Quarterly monitoring and sampling of on site monitor wells. Directed operations and collected soil samples for analyses for environmental assessments associated with removal of underground storage tanks (gasoline, diesel, and waste oil).

Professional Certifications and Registrations

- 40 Hour OSHA Hazardous Waste Certified for supervising and remedial actions (current 8 hour refresher)
- Red Cross C.P.R. and Standard First Aid Certificate

Steve Graham
Senior Field Technician

Mr. Graham has 11 years as an Instrument and Electric Technician working in various industries in California. Qualifications include installations and service of process control systems, burner control technology as well as combustion and oxygen controls, well testing systems, (A.W.T.'s) power distribution, motor control, programmable controllers, and microprocessors. Also served as a field technician under contract to provide operation and maintenance of vapor extraction systems on site.

Project Experience

- Experience with pneumatic and mechanical control devices such as: differential, temperature and pressure recorders, flow meters, control valves and positioners. Start up, modification and maintenance on vapor extraction systems including EVAX, ThermTech, Baker Furnace, Paragon Systems and King-Buck electric VOC units, steam generator and hot water systems.

Professional Certifications and Registrations

- 40 Hour Hazardous Waste Operations and Emergency Response, California Code of Regulations

Professional Training and Continuing Education Courses

- Combustion Control Technology. The operation and programming of the Westinghouse Model TC-200 (Veritrim) microprocessor oxygen control system. Instructed by Mr. Robert Ramsey, Westinghouse Combustion Control, Division Orovil, Ohio
- Burner Control and Management. Operation and application of burner control systems. Instructed by Mr. David Erickson, R. C. Hoffman Company, Inc., Pasadena, California