Professional Qualifications for Steven F. Neugebauer

Mr. Neugebauer has over 29 years experience in the environmental, ecological, hydrogeology and engineering geology fields. Mr. Neugebauer has conducted and managed projects located throughout the United States and in several different countries, including Canada, Mexico, Asia (Thailand, Cambodia, Vietnam, and Laos), and the Middle East (Qatar, Kuwait, Bahrain, Abu Dhabi, and Dubai). He has worked in all 10 USEPA regions in the United States with a focus on the Pacific Northwest for the last 11 years.

Mr. Neugebauer has been the project leader on many complex hydrologic, ecological, and environmental projects, including fluvial geomorphology studies on the Mississippi River in Minnesota and Louisiana, studies on the ecological and environmental impacts to the barrier islands off the Louisiana coast, and ecological impacts to the Arabian Sea after the Iraqi aggression into Kuwait. These projects also include many in the Pacific Northwest, including studies on the Commencement Bay, Hylebos Waterway, and Duwamish Waterway Superfund sites that also included NRDA restorations.

Mr. Neugebauer has also conducted complex ground water studies and designed ground water remediation at over 65 RCRA TSDFs and 45 USEPA Superfund sites, in addition to State listed sites and sites located in other countries. He has also conducted ground water studies for the development of municipal water supplies throughout the United States, the Middle East, and Asia. Mr. Neugebauer also has extensive engineering geology experience including major landslides, such as the Portuguese Bend, Blue Bird Canyon, Palos Verdes, and Aliso Viejo landslide areas and has conducted extensive work on the siting of dams and reservoirs.

Mr. Neugebauer has conducted NEPA, CEQA, and SEPA EA, EIS studies throughout the United States, California, and Washington State. He has also conducted wetland investigations throughout the United States, and throughout the Pacific Northwest, including studies in and east of the Cascade Range. He is currently a Principal Hydrogeologist/Engineering Geologist with SNR Company and is licensed as a geologist in several states and as a registered environmental assessor in California.

EXPERIENCE

SNR COMPANY

3/2007 - Present

Principal Hydrogeologist/Engineering Geologist – Conduct detailed, comprehensive critical areas studies including wetland, fluvial, lacustrine, and geologic hazards. Develop detailed geomorphologic investigative procedures and initiate the use of advanced methods for studying soils and hydrology/hydrogeology based on USACE approved methods. Introduce geologic and hydrogeologic investigations and methods to the study of ecological critical areas. Develop methods for identifying landslides and potential faults on properties. Develop methods for identifying hydrologic and hydrogeologic sources and for identifying water quality in the field. Introduce detailed testing methods for determining if existing anaerobic and hydric soils conditions are present on a site and developed a combined geologic and ecological critical areas report format that meets the requirements of the Growth Management Act of 1990 and all County and Municipal Critical Areas Ordinances and State requirements for geologic reports. Conduct comprehensive ground water investigations for environmental and for development of domestic and municipal water supplies.

KRAZAN AND ASSOCIATES

11/2005 – 3/2007

Environmental Division Manager, Pacific Northwest - Expand environmental services and add ecological services (critical areas, including wetland, fluvial, lacustrine, and geologic hazards.) Manage four offices throughout the Pacific Northwest and provide technical support of 11 other west coast offices. Upgraded environmental services to more complex VCP MTCA and CERCLA RI, RI/FS, and RA and was project manager for Brownfield, LUST, and RCRA projects. Conducted CEQA, SEPA, and NEPA EA and EIS investigations and developed new methods for conducting and reporting comprehensive ecological, hydrologic, and hydrogeologic investigations.

QATARI AMERICAL ENVIRONMENTAL CONSULTANTS

05/2004 – 11/2005

Managing Director. Conducted ecological, environmental, and feasibility studies and investigations for a 1,000 plus acre landfill that is located where the New Doha Airport will be located. Conducted studies and designed the closure of historic landfills and designed and permitted new landfills. Extensive ground water studies for at abandoned uncontrolled landfills and developed permanent closure strategies. Conducted studies to located potable ground water, and studies to identify impacts to ground water and soils from petroleum production (dump wells, soaker pits, condensate pits, etc.), petrochemical wastes, radioactive wastes, pesticides, and biological wastes. Conducted ecological studies on sea turtles and conducted a state wide soil survey identifying soil types throughout Qatar. Identified and studied sensitive ecosystems, including wetland areas in the State of Qatar. Also conducted ecological, environmental, and hydrogeology studies in Dubai, Kuwait, Abu Dhabi, and in Asia.

DELTA ENVIORNMENTAL CONSULTANTS

05/2002 – 05/2004

Senior Specialist/West Coast Industrial Division Project Manager. Regulatory expert, ground water studies and remediation, soils studies and remediation, environmental studies and closure of two 90 year old saw mills, including hazard and risk studies, MTCA cleanup, RCRA subtitle C & D landfills, wood preservatives (PCP and CCA) and 1,4 - Dioxane in soil and ground water. RCRA corrective action for pesticide and herbicide manufacturer with over 300,000 mg/Kg of arsenic and lead in soils and over 30,000 mg/L of arsenic in ground water. Commencement Bay and Hylebos Waterway superfund and NRDA activities. Perform extensive studies in Qatar (assess and audit 32 Qatar Petroleum facilities, including offshore, and prepare Monitoring Plans for each facility) and conducted ecological and environmental studies to determine current impacts to the Arabian Sea in post Iraqi occupied Kuwait. Conducted fluvial geomorphology and hydrologic studies on the Mississippi River in the Minneapolis St. Paul area, and conducted numerous NEPA EIS studies. Conducted numerous wetland, fluvial, and lacustrine ecological studies throughout the western United States and Canada.

NORTHWEST ENVIRONMENTAL

06/1993 – 05/2002

Principal Hydrogeologist/Engineering Geologist. Phase I ESAs, MTCA VCP, RCRA permitting, Air Permitting, NPDES permitting, and UST work. Also conducted wetland delineation studies, ground water studies, and geologic hazard studies – including landslide stabilization. Also conducted NEPA, CEQA, and SEPA studies and prepared EIAs and EISs. Obtained the first exemption granted

by the State of Louisiana for the thermal treatment of sewage sludges. Conducted studies at all PEMEX petrochemical facilities and many of the Terminals and refineries. Conducted clean up and remediation of soils and ground water at the petrochemical facilities including developing a new process to recycle hexachlorides. Conducted fluvial geomorphologic and hydrologic studies on the Mississippi River in Louisiana and environmental and ecologic studies on the barrier Islands along the Louisiana coast. Conducted environmental site audits and UST studies for all of the County of San Bernardino airports.

SNR COMPANY

03/1986 – 06/1993

Principal Hydrogeologist/Engineering Geologist. Conducted many "first of their kind" permitting (first in place closures of RCRA TSDFs in four USEPA Regions) and remediation projects. Developed new technologies, including one of the first uses of insitu low temperature oxidation. Also developed new techniques for thermal treatment and vitrification. Designed and constructed cutoff and slurry trenches for impacted ground water at a RCRA TSDFs and designed and implemented insitu ground water remediation for metals (hexavalent chromium, nickel, copper, zinc, etc.). Designed and implemented ground water remediation in karst aquifers, including sites impacted with halogenated hydrocarbons, metals, petroleum hydrocarbons, and PCBs. Characterized and designed/implemented ground water remediation for numerous sites impacted with halogenated and non-halogenated hydrocarbons, including sites with fractured bedrock. Conducted ecological studies for the Port of San Diego, the Port of Los Angeles, the Port of Long Beach and the several military bases.

MITTLEHAEUSER CORP.

11/1984 – 03/1986

Director of Environmental Division. Conducted numerous large environmental projects associated with RCRA permitting and corrective action. Also CERCLA RI/FS and RA. Other State regulatory programs that lead to soils and ground water remediation. One RCRA TSDF required corrective action at a site with over 14 million barrels of hydrocarbons on the ground water next to a major river. Conducted numerous ecological, fluvial geomorphologic, ground water, and environmental studies on the Sacramento River and delta, Trinity River, and Russian River and their deltas. Conducted detailed fluvial geomorphologic, ecologic, environmental, and hydrologic studies on the Colorado River in the Yuma, Arizona area.

2R ENGINEERING

09/1981 – 11/1984

Principal Geologist/Hydrogeologist. Lead numerous geotechnical, engineering geology, hydrologic, and hydrogeologic investigations. Including dams, containment basins, reservoirs, landslides, slope failures, fault mapping, seismic studies, geologic mapping, and other activities, including down hole logging in 24 and 30 inch bucket auger holes to 125 feet BGS. Activities included major commercial and residential developments, including the Irvine Ranch. Also developed one of the first petroleum ground water remediation systems approved by the RWQCB at a Texaco service station in Laguna Beach, CA. Conducted numerous marsh and back bay studies for the John Wayne airport and numerous similar studies for the Port of Long Beach. Conducted extensive ground water studies throughout the Mojave desert for potable ground water supplies.

EDUCATION

Pasadena City College	Natural Science	AS	1977
University of California, Irvine	Biology	Marine, fluvial, estuarine, and "wetland" studies.	1979
California State University, Long Beach	Geology/Hydrogeology	BS	1981
California State University, Long Beach	Engineering Geology	Graduate Studies	1983

PROFESSIONAL LICENSES

Licensed Geologist, Hydrogeologist, and Engineering Geologist	Washington State
Professional Geologist	Wyoming, Indiana
Registered Environmental Assessor	California
Registered Geologist	Kentucky, Arkansas

PROFESSIONAL ASSOCIATIONS

National Ground Water Association
Geological Society of America