NAME: **KATHRYN O. JOHNSON, Ph.D.**
24054 Palmer Gulch Road
Hill City, SD 57745
605.574.2024; 605.391.9955; kjohnson@johnsonenviro.com

EDUCATION:
Studies in Science, Technology and Public Policy, George Washington University, 1997.
Ph.D. 1986. Geology (Thesis: Geochemical Model of the Migration of Trace Metals from Uranium Mill Tailings) SD School of Mines and Technology, Rapid City, SD.
M.S. 1977. Chemistry, Iowa State University, Ames, IA.
B.S. 1975. Chemistry and Mathematics, Black Hills State, Spearfish, SD.

APPOINTMENTS:
2005 to present gubernatorial appointment to the SD Board of Regents.
Ten years of service on the SD Board of Minerals and Environment, 1995-2005.
Appointment by Senator Daschle to the Congressional Commission on the Advancement of Women and Minorities in Science, Eng & Tech, 1998-2000.
Member of Nat'l Research Council Comm. on Women in Science & Eng, 2000-2002.
Bush Foundation Leadership Fellow 1997.

ASSOCIATIONS: South Dakota Association of Environmental Professionals

CAREER SUMMARY:

Over 30 years of environmental consulting specializing in geochemistry, geohydrology, contaminant fate and transport, mass balance, and partitioning of inorganic and organic compounds between water, solid and air phases as applied to site investigations, permitting, treatment, technology development and remedial designs. As project manager consistently completed projects within budget and satisfied clients. Further experience includes: project and program planning, geochemical modeling and speciation analysis; data collection and analysis; evaluation of remediation technologies, compliance planning; development of investigative and remediation strategies with the EPA and State Agencies; expert testimony; and training. Projects have involved, soil, groundwater and surface water, mine waste, hazardous and solid waste, petroleum, agricultural waste, radioactive materials, landfills, and underground storage tanks. Dr. Johnson has provided support in legal disputes of liability, cost allocation, insurance coverage, and toxic tort. She has served as an expert witness and given trial testimony. Technical experience includes:

- Assessment of laboratory and field data to interpret fate and transport mechanisms and pathways that have occurred from sources through unsaturated soils, groundwater and air.
- Geochemical sampling, chemical analysis, data interpretation and modeling with PHREEQE and MINTEQ to characterize fate and transport of contaminants through environmental systems including contamination sources, speciation of contaminants, groundwater, surface water, and lakes.
- Provided technical expertise to preparation of Environmental Impact Statements, Environmental Assessments under NEPA regulations.
- Coupling technical information with policy considerations to develop project and program plans.
- Application of geochemistry to engineering to develop cost-effective, innovative technologies for remediation, waste treatment, minimization and reuse.
- Coupling geochemistry of metals, organic compounds, and nutrients with hydrology for contaminant transport analysis, watershed assessment, water quality evaluation, and groundwater and soils remediation.
- Numerical analysis and geo-statistics to determine distribution and relationships among constituents in contaminated media and association to sources and probabilistic confidence and uncertainty.

Project experience includes both government and private clients. Project scopes have ranged from highly specialized geohydrological and geochemical problems to major interdisciplinary programs. Expertise includes a working knowledge of the Environmental Protection Agency regulations as well as many state environmental regulations. Authored over 40 articles and reports on environmental and geochemical aspects of hazardous wastes, mining wastes, uranium mill tailings, radioactive waste and industrial processes.

WORK EXPERIENCE:

1990 - Present. JOHNSON ENVIRONMENTAL CONCEPTS, Rapid City, SD
OWNER/PRINCIPAL - Provides consultant services in geochemistry, geohydrology and environmental science related to environmental impacts, remediation technologies, waste management, regulatory analysis, and permitting. Representative projects include:

5RMK International, Boise ID. In role of Director of Environmental and Permitting Services will market and organize specific project opportunities in 5RMK's Resource Development Market, primarily in the Mining, Oil & Gas and Water Resource sectors.

United States Nuclear Regulatory Commission. Under an employment contract with Environmental Attenuation Company, serving as task manager and technical specialist for the preparation of NEPA documents; specifically supplemental environmental impact statements and environmental assessments for uranium in-situ recovery projects in Wyoming.

Davis Graham & Stubbs. – Provided litigation support for case involving a historic mining and milling site.

RESPEC, Inc. – Provided support to the Jurong Rock Cavern Project with PHREEQC modeling of interactions of seawater injected into bedrock and recommendations for water treatment.

Confidential Client. Providing technical management of an effort to develop and permit a gold resources project.

United States Department of Justice. Provided litigation support as a designated expert on a case involving historic phosphate mining wastes located in southeast Idaho.

Enviroscientists, Inc. – Provided geochemistry support to the initial planning for a NEPA Environmental Impact Statement for the proposed Simplot Dairy Syncline phosphate mine in SE Idaho for Bureau of Land Management.

Sunoco, Inc. and Beveridge and Diamond, P.C. – Provided technical support as a designated expert in litigation involving fate and transport of volatile organic compounds through a fracture controlled hydrological system.

TerraGraphics Environmental Engineering, Inc. Providing geochemical expertise in support of Idaho Department of Environmental Quality's development and evaluation of remedial actions for source control, and water treatment in the Coeur d'Alene Basin per the Records of Decision for the Bunker Hill Mining and Metallurgical Complex Superfund Site.

Millennium Science & Engineering. Supporting Idaho Department of Environment Quality and US Forest Service by reviewing EIS documents, permit assessments, fate and transport modeling, and laboratory test methods of selenium geochemistry in phosphate mining in Southeastern Idaho.

Private Clients and Small Business Administration. – Conduct Environmental Site Assessments for property transactions.

Beveridge and Diamond, P.C. Evaluation of remedial actions for source removal and plume control for migration of chlorinated solvents through groundwater.

RESPEC, Rapid City, SD. Assessed groundwater geochemical data and development of treatment protocols for a water circulation design for underground gas storage facilities.

Private Clients, Rapid City, SD. Sampled and assessed leaded-paint based contamination. Assessment of groundwater geochemical data for transport of petroleum hydrocarbons for the purposes of land development.

Bechtel SAIC Company, LLC, Las Vegas NV. Served as a Technical Specialist on a Quality Assurance Audit of the Physical and Chemical Environment Model of the Yucca Mountain Performance Assessment.

Sunoco, Inc. and Beveridge and Diamond, P.C. Provided technical litigation support relating to Horse Heaven mercury mine in central Oregon.

RESPEC, Rapid City, SD. Provided support as a technical specialist to BECHTEL SAIC COMPANY, LLC on the Yucca Mountain Site Recommendation and License Application as a nuclear waste disposal site, including Independent Assessment of TSPA-LA, Model Validation Status Review, Model Surveillance BQA-SI-04-048, independent technical assessment of model development and validation, and Performance-Based Audit of Analysis Report Products and Processes.

Bechtal BWXT Idaho, Idaho Falls ID. Provided technical support to the INEEL Regional Mine Waste Initiative. Organized a symposium of active and passive treatment technologies likely to play a role in water remediation in the Coeur d'Alene Basin. Provide expertise to study of groundwater source terms for Canyon Creek in Coeur d'Alene Basin.

Idaho Department of Environmental Quality/TerraGraphics. On behalf of the Coeur d'Alene Basin Commission prepared work plans for the implementation of the Record of Decision.

South Dakota Schools of Mines and Technology, Rapid City, SD – Instructor of Chemistry for two semesters.

Homestake Mining Company, Lead SD - Conducted Environmental Site Assessments on facilities located at the historic Yates shaft in Lead South Dakota.

Sunoco, Inc. and Beveridge and Diamond, P.C. - Evaluated remedial technologies and developed expert opinions on the environmental impacts of metals and acidity in surface water from past and recent operations of the Summitville Mine in Colorado.

Idaho Department of Environmental Quality - Managed and developed the State's remedial plan for the historic mining impacts to the Coeur d'Alene River Basin including water quality of metals and nutrients, tailings distribution, and health exposures from lead in soil. Responsibilities also include working with EPA throughout the RI/FS process, selection of the proposed plan and arriving at a Record of Decision. Designed and implemented a community outreach process to define consensus and common ground of a remedial plan. Applied geochemical principals to the development of innovative remediation technologies for removal of metals from water

South Dakota School of Mines & Technology, Rapid City, SD - Appointment for Spring 2001 of Instructor in Civil and Environmental Engineering, teaching Principles of Aqueous/Solid Environmental Remediation.

Property Owners - Developed plans for investigation and remediation of soil and water contaminated with metals, pesticides and hydrocarbons and managed sampling, removal and disposal.

Eastern Research Group, Lexington MA. Peer review of the revisions by the US EPA to the geochemical model, MINTEQA2, developed in support of the Hazardous Waste Identification Rule.

Holme Roberts and Owen, Denver CO. Provided geochemical expertise and expert testimony on mobility and transport of petroleum chemicals in the soil and groundwater at Southern Pacific RR yards for legal dispute involving allocation of damages from remediation costs.

Rand Corporation, Washington DC. Provided support to the White House Office of Science & Technology Policy on analysis of air quality models and modeling results used by EPA to predict fate and transport of ozone, particulate matter, and hazardous air pollutants, for setting regulatory policy.

White House Office of Science & Technology Policy, Washington DC. Fall 1997. Completed a 4-month internship on environmental policy with emphasis on air pollutants. Reviewed and analyzed EPA's Mercury Study Report to Congress including the emissions inventory, speciation and the modeled fate and transport.

Equus Farms, Denver CO. Applying geochemical expertise to analysis of the processes controlling the pathway of nitrogen and phosphorus in liquid hog manure applied to agricultural soil in the South Platte River Watershed. Provided testimony to the Colorado Water Quality Control Commission.

RE/SPEC Inc., Rapid City, SD and Sofergaz, Houston, TX - As part of a feasibility assessment for underground petroleum storage, conducted geochemical analysis on clays within bedded salt to evaluate chemical reactions affecting the clay mineralogy when subjected to brine.

Morrison-Maierle Environmental Corporation & Montana State Department of Lands, Helena, MT. Responsible for the geochemical component of the Environmental Impact Statement for the Seven-Up Pete Joint Venture's MacDonald Gold Mine Project. Coupled geochemistry, hydrology, and limnology in developing a model of the future pit lake chemistry.

Glanker Brown, Memphis, TN. Provided geochemical expertise to Velsicol Chemical Company and the City of Memphis in litigation for recovery of remediation costs of a CERCLA landfill site.

IMC Agrico Company, Orlando, FL. Geochemical modeling of the chemical reactions occurring between phosphoric acid wastes and the Floridan aquifer system.

Brobeck Phleger & Harrison, San Francisco. Provided geochemical expertise and expert testimony on the mobility and transport of pesticides and other organic chemicals in the soil and groundwater at the Rocky Mountain Arsenal in support of their representation of Shell Chemical.

S.M. Stoller Corporation, Boulder, CO. Reviewed hydrologic and geochemical data collected by Sandia National Laboratories for the Waste Isolation Pilot Plant against established technical criteria to determine data quality relative to compliance for certification of the facility.

GEOTEK Engineering, Sioux Falls, SD. Evaluate mobility of constituents from a solid waste landfill to select parameters, develop sampling protocol and statistical methods for a groundwater monitoring program

Rust Environment and Infrastructure, Minneapolis, MN. Provide permitting support for drilling and sampling at Ellsworth Air Force Base, SD.

Plains Manufacturing, Rapid City, SD. Investigated creosote contaminated soil, managed remediation activities, and arranged for disposal of hazardous wastes and contaminated soil.

Amoco Oil Company, Bairoil, WY. Evaluation of the rate of pyrite oxidation from pyritic oily sludges in carbonate soils in waste disposal area, as part of a permit for landfarm disposal.

Wyoming Refining, Denver, CO. Calculated the planning distance for a hypothetical release of petroleum products from the Ellsjet facility into the surface water system. Completed regulatory requirements for a contained release.

Preston Gates and Ellis, Seattle, WA and Burlington Northern Railroad Overland Park, KS. Provided technical support for a legal dispute relating to allocation of remedial costs among several potential PRPs. Used statistical methods, numerical analysis of bulk chemical data, and scanning electron speciation information to develop a model of distinct signatures of various metallurgical waste materials contributing lead and other metals to contaminated soil.

Fall River Properties, Fall River County, SD. Geohydrological characterization for permit application for ash disposal facility, including installation of groundwater monitoring wells, data interpretation, reporting and negotiations with SD regulatory agency. Evaluated the variable hydrologic conditions of saturation and unsaturation in shale rock and the interaction between surface and shallow subsurface water.

Various Underground Storage Tank Projects, SD. Conducted site assessments defining the extent of contamination of soil and water, developed corrective action plans and managed soil excavation. Efforts have included borings for soil sampling, vapor monitoring, sampling for lab analyses, and data interpretation.

Property Owners and Financial Institutions, SD. Environmental Site Assessments and audits of operations for permitting and real estate transactions.

Burlington Northern Railroad Overland Park, KS. Created a data base of Superfund Sites which have the cleanup remedies established and calculated the relative risk based upon frequency of occurrence and cost.

Holme Roberts and Owen, Denver, CO AND Cotter Corporation, CO. Geohydrological assessment of ongoing remediation activities to cleanup uranium and molybdenum from soil and groundwater for toxic tort litigation associated with Cotter's uranium mill in Canon City, CO. Provided expert testimony to a jury trial in Cotter's defense.

Power Engineering & Barrick Goldstrike Mines, Inc. NV. Modeled the carbonate equilibria as a function of temperature and pressure in water pumped from a mine.

Morrison Knudsen Corporation, Denver, CO. Geochemical modeling by PHREEQE analysis of data from leaching studies and statistical analysis of bulk chemical data to predict the metal bearing species in slag and tailings and to assess mobility of Pb, As, Zn, Cd from slag at the California Gulch Site for Denver & Rio Grand Railroad.

Blake Cassels and Graydon, Toronto, Canada AND International Minerals & Chemical Corp. (Canada) Ltd. Geochemical modeling by PHREEQE of salt mineral dissolution from IMC's Saskatchewan Potash Mine in support of litigation for mine and resource loss. Evaluated the equilibrium conditions between salt minerals and brine and calculated the concentrations of major cations and anions in the brine as a function of the salt minerals in the rock.

EnviroSearch, Salt Lake City, UT. Geochemical modeling by PHREEQE of chromium speciation and mobility in different pH and Eh environments in shallow aquifer in Salt Lake valley. Adapted PHREEQE to consider the naturally occurring high ionic strengths of the groundwater in the Salt Lake Valley.

Jacobs Engineering Group, Inc. (US EPA Subcontract). Provided oversight of collecting over 4500 soil

samples and of the arsenic analysis by field XRF for the Whitewood Creek, SD Superfund Site. Developed a database for reporting of arsenic concentrations to plan soil remediation of sediments along Whitewood Creek, SD by Homestake Mining Company.

Hathaway, Speight & Kunz AND Sinclair Oil Company, Cheyenne, WY. Geohydrological assessment of transport of organic compounds from Sinclair's petroleum refinery in support of toxic tort litigation associated with contaminated groundwater in Brookhurst, WY.

1986 - 1990. MORRISON KNUDSEN ENVIRONMENTAL SERVICES, Boise, ID.

PROJECT MANAGER/GEOCHEMIST - Managed geoscience department of about 15 professionals. Managed projects with all aspects of environmental audits, regulatory reviews, investigations, studies, design and construction for waste management projects. Directed project controls and procedures required to manage the cost and schedule aspects of a project and ensures all quality assurance/quality control and health and safety requirements are met. Experienced in managing and supervising MK personnel and subcontractors. Examples of relevant projects while at Morrison Knudsen:

Weldon Spring Site Remedial Action Project - U.S. Department of Energy. Managed the technical efforts of the RI report, including the analysis of hydrology, water quality and geologic data. Key contaminants include radionuclides from uranium processing wastes and organic compounds from munitions production. Focus was on transport and migration through fractured limestone bedrock within a complex geochemical environment.

Mixed Waste Landfill Groundwater Assessment - ESCO, Portland, OR. Assessment of groundwater contamination by metals from a landfill of foundry wastes located in an industrial park with several other sources of contamination. Provided guidance to client on strategies for dealing with regulatory agencies.

Uranium Mill Tailings Remedial Action Project - U.S. Department of Energy. Provided geochemical analysis for groundwater protection and restoration aspects of the design criteria for remediation of several sites. Modeling focused on transport and retardation of redox-sensitive metals and sulfate. Developed design of geochemical barrier of peat and clay to retard certain metals by precipitation as chemically reduced forms as well as adsorption.

Bergsoe Metals, St. Helens, OR - Bogle & Gates, Seattle, WA. Provided consulting services to Bogle and Gates representing East Asiatic Corporation in their ownership position in a secondary lead smelter. Preformed sampling of sediments for lead, interpreted soil and groundwater chemical data and assessed waste management and water treatment options.

Underground Storage Tank Project - Wyman Gordon, Chicago, IL. Managed a project in Illinois to remove and abandon in-place nine underground storage tanks containing petroleum products ranging in volume from 3,000 gallons to 210,000 gallons.

Litigation Support - Tennessee Valley Authority. Provided expert testimony on groundwater contamination from uranium mill tailings in New Mexico. Modeled leaching from source, transport, and retardation as well as groundwater restoration by a pump and reinjection system.

Titanium Production Plant Waste Treatment and Disposal - International Titanium, Inc, Moses Lake, WA. Project Manager for a comprehensive remedial investigation, feasibility study, remedial design and remedial action for the closure of a titanium plant in Moses Lake, Washington. The production plant involved mixed hazardous and low-level radioactive waste materials. Managed environmental site characterization of groundwater and soils on site. Directed the design, evaluation, construction and operations of chemical processes that eliminated the chemically hazardous nature and reduced the volume of low-level radioactive waste by ten.

1979 - 1986. GECR, INC., Rapid City, SD. President/Principal Consultant. Applied geochemistry and hydrology to site characterization and waste management in the study of environmental impacts from uranium mill tailings, high-level nuclear waste, and other groundwater contamination sources associated with the mining industry. Extensively used the geochemical computer code, PHREEQE in computer modeling of thermodynamic mineral reactions, and trace metal and radionuclide mobility. Prior experience included the involvement in development of analytical procedures for organic compounds. Consulting projects for industrial clients included:

Geochemical evaluation of contamination from a uranium mill site designated by EPA and CERCLA and participation in technical settlement discussions between the Cotter Corporation and the Colorado State Department of Law.

Evaluation of mobilization of toxic elements and water quality in aquifers disturbed by mining activities. Modeling the mobility of toxic metals released from cyanide milling ponds.

Involvement with Department of Energy Projects included:

Investigation of the geochemical character of shale as a potential repository for high-level nuclear waste; Served as Co-Project Manager on the four-year program for geochemical characterization of Department of Energy Uranium Mill Tailings Remedial Action Program. Coupled geochemical and hydrological concepts and developed a workable model to describe contaminant transport of radionuclide and chemical components from the tailings in groundwater in accordance with Nuclear Regulatory Commission and EPA guidance and regulations.

1977 - 1979. Nutritional Physiology Laboratory, Iowa State University, Ames, IA. Laboratory Manager. Managed chemical analysis of organic compounds for research projects in the Nutritional Physiology Department. Developed analytical methods for specialized analysis. Supervised staff technicians.

PUBLICATIONS & PRESENTATIONS:

Wallace, Michael G., Kathryn O. Johnson, John D. Osnes, Eric L. Krantz, Crystal M. Hocking. 2013. Hydrogeological and Geochemical Evaluations in Support of Mine Water Management for the Jurong Rock Cavern Project, Singapore. Presented at International Mine Water Association Conference, Colorado CO, August 2013.

Johnson, K. 2010. Conceptual Model of Selenium Release from Shale Units Within the Meade Peak Member of the Phosphoria Formation. Presented at the 2010 Geological Society of America Denver Annual Meeting (31 October - November 2010), Session No. 232, Wednesday, 3 November 2010.

Johnson, K., R. Mayes, and P. Wichlacz. 2004. A New Approach to Integrating a Superfund, "Megasite" Cleanup into Management of the Coeur d'Alene River Basin. Water Resources IMPACT, Vol. 6, No. 3, pp 22 – 24. American Water Resources Association. www.awra.org

Johnson, K. "Diversity for Survival". Geotimes. American Geological Institute. September, 2000.

Johnson, K. "Advancement of the Understanding of Chemical Behavior in the Environment". Presented at the 213th ACS National Meeting. San Francisco, CA. April 13-17, 1997.

Johnson, K. Surface Water Quality-Chemical Effects. Section in "Mining Environmental Handbook, Effects of Mining on the Environment and American Environmental Controls on Mining", Jerrold J. Marcus, editor. Imperial College Press. 1996.

Johnson, K. Geochemical Model of Water Quality in Pit Lake in Oxidized Tuff, McDonald Gold Mine. Prepared for Morrison-Maierle Environmental Corporation, 910 Helena Avenue, Helena, MT. October 1996.

Johnson, K. "Understanding the Foundations of Environmental Science: Chemistry and Analytical Issues". Presentation of the Environmental Science Course, An Introduction for Lawyers and other Environmental Professionals. Executive Enterprises, Washington DC. 1993-1998 Conferences in Washington, DC, Chicago & San Francisco.

Johnson, K. and D. J. Carpenter. Retardation of Arsenic, Selenium, Molybdenum, Vanadium, and Uranium by Redox Reactions. Presented at the Colorado Groundwater Association Annual Meeting, Denver CO. 1991.

Carpenter, D. and K.O. Johnson. Retardation of Uranium and Associated Elements by Chemical Reduction and Precipitation. Published in "Proceedings of Waste Management '90 Conference", Volume 1, pp 539-546, Tucson NM. February 1990.

Johnson, K., A. Connell, P. Patchin and F. Meyers. Hydrological and Geochemical Controls Limiting Contaminant Transport in Groundwater at Weldon Spring, Missouri. "Proceedings of Superfund '89," Hazardous Materials Control Research Institute, November 27-29, 1989, Washington, DC, pp 267-272.

Johnson, K., "Example of Processing and Disposal of Mixed Wastes," Proceedings of Waste Management '88 Symposium, Tucson, Arizona, March, 1988.

Johnson, K., "Geochemical Aspects of Seepage From Mill Tailings" 117th Annual SME Meeting, Phoenix, Arizona, January, 1988. Von Damm, J.J. and K.O. Johnson, "Geochemistry of Shale Groundwater: Results of Preliminary Laboratory Leaching Experiments," Oak Ridge National Laboratory, Environmental Sciences Division, Publication No. 2970, ORNL/TM-10535, 1987.

Johnson, K., "Geochemical Results of Leaching Shale at Ambient Temperature and 100^{o} C," Geotechnical and Geohydrological Aspects of Waste Management, Symposium, Colorado State University, Fort Collins, Colorado. Lewis Publishers, Inc., 1987.

Johnson, K., "Geochemical Model of the Migration of Trace Metals from Uranium Mill Tailings," PhD Thesis, South Dakota School of Mines and Technology, Rapid City, South Dakota, 1986.

Johnson, K. and M.R. Neumann, "Geochemical Model of Uranium and Selenium in an Aquifer Disturbed by In Situ Mining," GECR #R-8504, GECR, Inc., Rapid Site, South Dakota, Eighth Annual Symposium on Geotechnical and Geohydrological Aspects of Waste Management, Colorado State University, Fort Collins, Colorado, February, 1986.

Johnson, K., "Evaluation of Aquifer Reclamation by Geochemical Modeling and Solid Analysis," GECR #R-8405 GECR Inc., Rapid City, South Dakota, Seventh Symposium on Management of Uranium Mill Tailings Low-level Waste and Hazardous Waste, Colorado State University, Fort Collins, Colorado, February, 1985.

Johnson, K., "Geochemical Models of Mobility of Components from Low-Level Waste Disposal Sites," GECR #R-8501, GECR, Inc., Rapid City, South Dakota, Proceedings of Waste Management '85 Symposium, Tucson, Arizona, March, 1985.

Johnson, K., "Geochemistry of Uranium Waste," GECR #R-8502, GECR, Inc., Rapid City, South Dakota, Engineering of Waste Management Systems Seminar, University of Saskatchewan, August, 1985.

Johnson, K., "Use of Geochemical Modeling in the Interpretation of Water Quality and Overburden Chemical

Analysis," GECR #R-8503, GECR, Inc., Rapid City, South Dakota, Second Annual Meeting of the American Society for Surface Mining and Reclamation, Denver, Colorado, October, 1985.

Bush ne. Johnson, K.J., "Application of Geochemical Modeling to Solute Transport Modeling of Contaminant Migration Away from Uranium Mill Tailings," GECR #R-8402, GECR, Inc., Rapid City, South Dakota, Sixth Symposium of Management of Uranium Mill Tailings, Low-Level Waste and Hazardous Waste, Colorado State University, Fort Collins, Colorado, February, 1984, pp 135-144.

Markos, G. and K.J. Bush ne. Johnson, "Investigation of Contamination of Earthen Covers on Inactive Uranium Mill Tailings," DOE/UMT/0238, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Sites at Rifle, Colorado," DOE/UMT/0238, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Gunnison, Colorado," DOE/UMT/0239, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Ambrosia Lake, New Mexico," DOE/UMT/0240, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Falls City, Texas," DOE/UMT/0241, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Tuba City, Arizona," DOE/UMT/0242, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Lakeview, Oregon," DOE/UMT/0243, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Green River, Colorado," DOE/UMT/0244, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Slick Rock Colorado," DOE/UMT/0245, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Maybell, Colorado," DOE/UMT/0246, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Monument Valley, Arizona," DOE/UMT/2047, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Converse County, Wyoming," DOE/UMT/0248, 1983.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Lowman, Idaho," DOE/UMT/0249, 1983.

Bush ne. Johnson, K.J. and G. Markos, "Statistical Evaluation of Contamination from Uranium Mill Tailings by Physical Transport and Chemical Migration," GECR #R-8210, GECR, Inc., Rapid City, South Dakota, Fifth Annual Symposium on Uranium Mill Tailings Management, Colorado State University, Fort Collins, Colorado, December, 1982, pp 225-239.

Markos, G. and K.J. Bush ne. Johnson, "Geochemical Processes in Uranium Mill Tailings and Their Relationship to Contamination," GECR #R-8201, GECR, Inc., Rapid City, South Dakota, International Symposium on Management of Wastes from Uranium mining and Milling. International Atomic Energy Agency and OECD Nuclear Energy Agency, Albuquerque, New Mexico, 1982, pp 231-246.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Durango, Colorado," DOE/UMT/0227, 1982.
Markos, G. and K.J. Bush ne. Johnson, "Geochemical Investigation of UMTRAP Designated Site at Durango, Colorado," DOE/UMT/0228, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Riverton, Wyoming, DOE/UMT/0229, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Geochemical Investigation of UMTRAP Designated Site at Riverton, Wyoming, DOE/UMT/0230, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Grand Junction, Colorado, DOE/UMT/0231, 1982.

Markos, G. and K.J. Bush ne. Johnson, Geochemical Investigation of UMTRAP Designated Site at Grand Junction, Colorado, DOE/UMT/0232, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Geochemical Investigation of UMTRAP Designated Site at Shiprock, New Mexico, DOE/UMT/0233, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Shiprock, New Mexico, DOE/UMT/0234, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Geochemical Investigation of UMTRAP Designated Site at Salt Lake City, Utah, DOE/UMT/0235, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Salt Lake City, Utah, DOE/UMT/0236, 1982.

Markos, G. and K.J. Bush ne. Johnson, "Data for the Geochemical Investigation of UMTRAP Designated Site at Mexican Hat, Utah, DOE/UMT/0237, 1982.

Bush ne. Johnson K.J. and G. Markos, "Evidence for the Instability of Silicate Minerals in Acid Leach Uranium Mill Tailings," GECR #R-8103, GECR, Inc., Rapid City, South Dakota, Fourth Annual Symposium on Uranium Mill Tailings Management, Colorado State University, Fort Collins, Colorado, October, 1981, pp 473-486.

Markos, G. and Bush ne. Johnson K.J., "Contamination of Ground and Surface Waters by Uranium Mining and Milling, Volume II. Field Sampling and Empirical Modeling," GECR #R-8108, GECR, Inc., Rapid City, South Dakota, Prepared for U.S. Bureau of Mines, Contract No. JO295033, Washington, D.C., 1981.

Markos, G., K.J. Bush ne. Johnson, and T. Freeman, "Geochemical Investigation of UMTRAP Designated Site at Cannonsburg, Pennsylvania," UMTRA-DOE/ALO-226, 1981.