Victor R. Johnson, Jr., P.E. P.O. Box 3157 Vallejo, CA 94590 707-644-4788 W 707-235-3108 Cell vrjvallejo@gmail.com Mr. Johnson has over 49 years of experience in civil engineering. He has specialized the last 45 years in environmental and waste management engineering. He has worked both in the United States and internationally. He has headed teams that have successfully designed, obtained permitting for, and operated six commercial hazardous waste treatment and disposal facilities in Alabama, California, Louisiana, and Texas. Disposal methods at these facilities included secure chemical landfills, industrial landfarms, chemical processing, underground injection wells, and incineration. He also has designed and developed hazardous waste reclamation and detoxification facilities, managed emergency cleanup work, and provided remedial action responses at uncontrolled sites. He has acted as a liaison between the waste disposal industry and governmental regulatory agencies.

Mr. Johnson is the co-inventor of a U.S. patented process for solar evaporation volume-reduction for aqueous waste and the sole inventor of a U.S. patented process for a new form of leak detection under landfills and impoundments. He helped secure the nation's first approval from the U.S. Environmental Protection Agency for polychlorinated biphenyl (PCB) disposal. He has led environmental due diligence teams both domestically and internationally for major mergers and acquisitions, followed by environmental policy development and implementation assignments for the new entities. He has authored or co-authored more than 50 technical reports and publications on waste management.

Employment History

Effective May 1, 2016: President of Engineering Pathways, Inc. 2005 to 2016: President of Engineering Pathways, Inc. and Senior Consultant to Civil & Environmental Consultants

1999 to 2005: President of Engineering Pathways, Inc. and Consultant to Versar and David Evans and Associates

1980 - 1999: Harding Lawson Associates (HLA) - Senior Vice President in U.S. and President of HLA's operations in Mexico and Latin America

1978 - 1980: Chemical Waste Management (CWM) - Regional Manager for the Southern U.S. and Vice President of CWM's Alabama subsidiary

1971 - 1977: IT Corporation - President of IT's three disposal subsidiaries

1967 - 1971: Exxon - Engineer and Distribution Supervisor for Exxon Marketing in California and Nevada

Registration and Certification

Professional Engineer - Alabama, Arizona, Arkansas, California, Colorado, Oregon, Texas

Training

ISO 9000 Quality Systems Provisional Auditor Certificate (1996) ISO 9000 Lead Assessor of Quality Systems Certificate (1995) OSHA Hazardous Waste/Emergency Response Training according to 29 CFR 1910.120 (1991, update 1996) California State Department of Education - Oil Fire School (1971) Contra Costa County California Course of Recognition and Control of Occupation Health Hazards (1976) Spanish language training (1993 - present)

Education

B.S., Civil Engineering, University of Arkansas, 1967 Graduate studies, Soil Mechanics, University of Arkansas, 1967

Patents

United States Patent #4,169,791 (October 2, 1979) - "Apparatus and Process for Volume Reduction of Aqueous Waste through Solar Evaporation"

United States Patent #4,404,516 (September 13, 1983) - "System for Detecting Leaks from Liquid-Containing Reservoirs and Conduits"

Representative Projects

Mergers/Acquisitions

International

Due diligence investigations, Belgium, Denmark, Italy, Netherlands, Sweden, Switzerland, U.K., France, Spain, and W. Germany - Led numerous investigations at a variety of industrial and commercial sites. Clients: Several confidential clients.

Domestic

Environmental due diligence, United States - Led investigative team for the 1986 acquisition of McKesson Chemical by Univar in a threestep transaction that involved Pakhoed Holding N.V., which resulted in Univar becoming the largest chemical distributor in the United States. Provided environmental policy and implementation guidance to the new combined firm. Client: Univar

Environmental due diligence, U.S. and Europe - Led environmental due diligence team in the 1996 acquisition of Univar (NYSE) by Royal Pakhoed N.V. This assignment involved the review of 355 chemical distribution sites with 294 in the United States, 38 in Europe and 23 in Canada. Client: Royal Pakhoed N.V.

Asbestos management, United States - Led asbestos surveys and subsequent abatement and control program for Allied Stores and Federated Department Stores as part of the Campeau acquisition/refinancing of same. Client: Allied Stores and Federated Department Stores

Secure Landfills for Solid and Hazardous Waste Disposal

Hazardous waste disposal facilities, nationwide - Headed a nationwide evaluation of commercial offsite hazardous waste disposal facilities and disposal options. Made recommendations on the various disposal options available. Supervised the compilation and analyses of pertinent state and federal regulations. Client: Shell Oil Company

Disposal site, Colorado - Headed team developing a 6000-acre hazardous waste disposal site. Team tasks included studying soils, groundwater, and surface water conditions; designing a hazardous waste solidification and disposal facility; and effecting full permitting of facility. Client: Confidential

Four hazardous waste disposal sites, California, Alabama, Louisiana, and Texas - Headed design and site development along with associated support operations. Clients: IT Corp/Chemical Waste Management

Major paper manufacturer, Alabama - Prepared engineering designs, plans, and specifications for final closure of onsite industrial landfill and surface impoundments. Performed site search for new landfill, determined most desirable location, conducted hydrogeologic investigations, and prepared engineering designs, plans, and specifications for new landfill (including evaluation of all costs). Client: Confidential

Proposed 160-acre Type 1 sanitary landfill, Houston, Texas - Led engineering team in design, site selection, and permitting. Client: Evergreen Group

Landfarming Development for Disposal of Biodegradable Industrial Waste

Three landfarms, California - Designed and operated 120-acre, 160-acre, and 320-acre waste disposal facilities that used landfarming as part of an integrated commercial disposal system for industrial waste. Owner: IT Corporation

Land treatment facility, East Texas - Responsible for operation of a 360-acre land treatment facility that successfully treated and disposed of oily refinery sludges. Conducted studies of optimization

techniques, economic analysis of facility, design of wastewater treatment plant. Owner: Chemical Waste Management, Inc.

Land treatment operation, southwestern Louisiana - Supervised operation of a 280-acre large-scale oily sludge and industrial waste facility. Responsible for operation, regulatory agency liaison, permit renegotiation, and development and implementation of a facility closure plan. Owner: Chemical Waste Management, Inc.

80-acre industrial landfarm, Deer Park, Texas - Designed landfarm and obtained permits. Client: Rohm and Haas

970-acre commercial landfarm, White Castle, Louisiana - Designed landfarm, obtained permits, and supervised construction of same. Client: Genstar Corporation

Incineration of Hazardous Wastes

Incinerator - Led a development team in the design, construction, and licensing of a 20-million-BTU-per-hour incinerator for the oxidation of halogenated compounds. Client: Confidential

Detoxification facility - Headed a team that developed a technically and economically successful incineration-based hazardous waste detoxification facility with a processing capacity of 100 million gallons per year. Client: Confidential

Incineration facility, Houston, Texas - Led engineering team evaluating construction of a 2,000-ton-per-day waste-to-energy facility. Considered market conditions, resource recovery, cogeneration of electricity, air quality control, and incinerator design. Client: Confidential

Acme Solvents Superfund site, Illinois - Led engineering team in design of a mobile incinerator. Client: Confidential

Deep-Well Injection Facilities for Disposal of Hazardous Waste

Headed design of a complete deep-well injection complex for disposal of hazardous waste. Client: Major waste disposal firm

Determined feasibility of deep-well injection of hazardous waste. Client: Regional oil company

Redesigned above-ground processing facilities for commercial deepwell injection complex for disposal of hazardous waste. Owner: Chemical Waste Management, Inc.

Emergency and Remedial Action

French Limited and Sikes Pit Superfund sites near Houston, Texas - Led engineering team in major geotechnical, geophysical, and hydrogeologic investigations and feasibility studies of remedial engineering alternatives. Project funded by grants from U.S. EPA and administered through the Texas Department of Water Resources.

Evaluated extent of a hazardous waste impoundment failure, designed remedial system, obtained necessary permits, and supervised installation of the remedial system. Client: Fortune 500, NYSE oil company

Investigated major underground gasoline spill and implemented recovery operations. Client: Fortune 500, NYSE oil company

Waste storage area - Designed sludge stabilization process and fugitive oil recovery system to enable the filling and secure closing of the waste storage area. Client: Fortune 500, NYSE oil company

Toxic Substances Control Act (TSCA)

Studied nationwide disposal options for polychlorinated biphenyls (PCBs), with emphasis on incineration. Client: Fortune 500, NYSE oil company

Disposal site, Alabama - Secured U.S. Environmental Protection Agency's approval for disposal of PCBs. Owner: Chemical Waste Management, Inc.

PCB-spill site, California - Evaluated extent of contamination and designed a remedial action response. Client: Confidential

Management of Hazardous Waste Disposal Facilities

Developed western U.S. hazardous waste management operations for IT Corporation from \$500,000 to \$5 million annual revenue base (1971 - 1978).

Developed southern U.S. hazardous waste management operations for Chemical Waste Management, Inc., from \$0 to \$30 million annual revenue base (1978 - 1980).

Negotiated union contracts (Teamsters) and managed hazardous waste trucking operations (California, Georgia, Alabama, Louisiana, Texas).

Regulatory Experience with Hazardous Waste Issues

Industrial sponsor in 1977 California Legislature for AB 1593, which became California's first Comprehensive Hazardous Waste Law.

First President (1976-77) of California Chemical Waste Processors Association (CCWPA), a trade association for the California hazardous waste industry.

Litigation Support

Since 1971, Mr. Johnson has provided expert witness testimony and reports for a large number of legislative and regulatory public hearings, city council meetings, board of supervisors meetings, and planning commissions. For the most part these events occurred in the 10 states in which Mr. Johnson is registered as a professional engineer. He has also provided expert opinions in proceedings involving both administrative and civil law.

Universal Services Co. Inc., Houston, Texas - Expert witness testimony to the Texas Department of Health Services in a 1985 administrative law case involving a solid waste landfill in Harris County, Texas (Evergreen Project).

Briscoe Maphis, Inc., Boulder, Colorado - Expert witness testimony to the Louisiana Department of Environmental Quality in a 1985 administrative law case involving a landfarm facility in Iberville Parish, Louisiana.

Dual Removal Systems, Ltd., North York, Ontario - Mr. Johnson provided an expert witness opinion for the law firm of Goodman & Carr, Toronto, Canada, in the 1993 case of Dual Transfer Systems, Ltd. vs. Hatch Associates, Ltd. The issue was a solid waste landfill transfer station.

Birch, Porter, and Johnson, Memphis, Tennessee - In a 1994 case before the United States District Court for the Western District of Tennessee, Mr. Johnson provided an expert witness opinion in the case of Mark W. Gregory, Wesley G. Grace et al. versus Chemical Waste Management, Inc. The issue was a hazardous waste facility in Alabama.

Minton, Burton, Foster & Collins, Austin, Texas. Mr. Johnson provided an expert witness opinion in the lawsuit of WCS versus Envirocare. The issue was a hazardous waste facility in Texas.

Nielsen and Senior, Salt Lake City, Utah. Mr. Johnson provided an expert opinion in the lawsuit of Semnani vs. USPCI. The issue was a hazardous waste facility in Utah.

International Engineering Consulting Work

Mr. Johnson has performed engineering consulting work for various clients in many international locations:

Pakhoed/Chemproha - July 16-21, 1990, in Haarlem, Utrecht, Woerden, Groningen, Enschede, Haaksbergen, Tilburg, Sittard, and Zwijndrecht in the Netherlands and Gronau, Germany.

Pakhoed/Pan Ocean - October 17-31, 1991, in Botlek, Pernis, and Delft in the Netherlands and Hemiksem and Antwerp (Eurotank) in Belgium. October 17-31, 1991 and June 5-15, 1992, in Eastham, Birkenhead, and Hull in the United Kingdom.

Pakhoed/Powell Duffryn - July 23 - August 4, 1990, in Purfleet, Ipswich, and Barry/Wales in the United Kingdom.

Pakhoed - (various subsidiaries) numerous visits to Dordrecht, Rotterdam, and Amersfoort in the Netherlands.

Univar/Beijer - October 1990 and January 1991 in Milton Keynes and the Isle of Sheppey in the United Kingdom; Copenhagen, Denmark; Malmo, Gothenburg, and Stockholm in Sweden; Zurich, Switzerland; Mestre, Italy.

Univar - January 4-13, 1991 in Birmensdorf, Switzerland and 1987 in Vancouver, Canada.

Qatar Ministry of Agriculture - September 1-9, 1992 in Doha.

IBM - 1984 in Montreal, Canada.

Tricil/IBM - several visits to Mississauga, Ontario.

Dual Transfer Systems - April 1993 in Toronto, Canada.

Univar/Europe / Lambert Riviere - January/February 1994 (two trips) in Paris, France and Madrid, Spain.

Mexico - numerous assignments. Mr. Johnson is President of GRIECO - HLA's Latin American venture.

Mr. Johnson has also visited London many times to perform engineering consulting work for various clients. He has also provided consulting work for a hotel complex in the Enterprise Zone in China, and for *Pakhoed* in both Finland and Norway, but he did not visit these specific sites.

Memberships

American Society of Civil Engineers

Tau Beta Pi - National Honorary Engineering Fraternity

Theta Tau - National Honorary Engineering Fraternity

Chi Epsilon - National Honorary Engineering Fraternity

Chemical Waste Committee, National Solid Waste Management Association

California Chemical Waste Processors Association (President, 1976-78)

Solid Waste Management Committee, Houston Chamber of Commerce (1984-85)

American Society for Testing and Materials, U.S. Technical Advisory Group to ISO TC 207 on Environmental Management

University of California at Davis, California, Department of Land, Air and Water Resources Advisory Committee

Harding Associates Board of Directors (1989-1991)

Publications

- 1996. Quoted in "Latin America Beckons a New Industry," *Environmental Business Journal*, October/November.
- 1996. Quoted in "Finding the Perfect Match," *El Financiero International*, Edition June 24-30.
- 1995. Quoted in "Sales & Marketing Still Evolving," *Environmental Business Journal*, September.
- 1992. Quoted in "The Sun Also Rises," *Environment Risk*, A Euromoney Publication, U.K., September.
- 1991. Environmental Regulation Lawmaking Guide Roundtable *California Republic*, April 23.
- 1987. Environmental auditing--organizational and financial analysis. *Waste Stream Journal*, January-February.
- 1985. Corporate preparation for Superfund. In *Proceedings*, Third Annual Hazardous Materials Management Conference, Philadelphia, PA, June 4-6.
- 1985. Get your corporate act together now for Superfund. *Hazardous Materials & Waste Management*, July-August.
- 1983. Monitoring groundwater at cyanide leach mining sites. *Groundwater Monitoring Review*, winter.
- 1983. New ways to solve underground contamination problems. In *Environmental Engineering, Proceedings*, National Conference of American Society of Civil Engineers, Boulder, Colorado.
- 1983. Overview of hazardous waste disposal technology, *Pollution Equipment News*, October.

- 1977. Processing of industrial waste for solar evaporation. American Institute of Chemical Engineers Symposium, series no. 162, vol. 73
- 1975. Managing industrial wastes excluded from the sewer. *Water, Air and Soil Pollution*, vol. 4, D. Reidel Publishing Company, Dordrecht, Holland.

Presentations

- 1998. Evolution of the Environmental Industry. Keynote address at Chemical Safety EMS Conference, September 17.
- 1998. Latin American Opportunities. A Presentation to the Professional Environmental Marketing Association, Berkeley, California, March 31.
- 1996. Lecture on landfarming of industrial wastes Pemex Executive Education Center, Mineral del Chico, Mexico, June 18.
- 1996. Lecture on ISO 14000. University of California at Santa Cruz, March 26.
- 1994. "Doing Business with Mexico Opportunities in Environmental Technology," San Francisco, California. Seminar on Doing Business with Mexico Sponsored by San Francisco Hispanic Chamber of Commerce. November 4.
- 1992. "An Engineer's Perspective on European Environmental Auditing for Due Diligence" Squire Sanders and Dempsey, Environmental Law Update, Phoenix, Arizona, February 24, 1992.
- 1991. "Differentiating Your Environmental Firm from Your Competitors," Environmental Business '91, Boston Massachusetts, March 18-19, 1991.
- 1991. Growth in the Environmental Industry Security Analysts of San Francisco, San Francisco, California, February 21.
- 1990. Environmental Issues in Economic Development California Association for Local Economic Development, Long Beach, California, April 11.
- 1989. Organization Politics Libraries Association, San Francisco Bay Region, San Francisco, California, January 20.
- 1989. Due Diligence Issues Related to Leasing and Buying Real Estate Corporate Real Estate Conference, San Jose, California, April 13.
- 1988. Environmental Audits Real Estate, University of California Environmental Health and Safety Officers Conference - Pacifica, California, October 20.
- 1987. Hazardous Waste Management Industry Trends, IBM Corporation Environmental Managers Annual Meeting, Poughkeepsie, New York, October 8.
- 1987. Toxic Management 1987, Control Data Corporation Managers Meeting, San Jose, California, October 20.
- 1986. Governor's Commission on Arizona's Environment Conference, Phoenix, Arizona, January 23.

- 1985. Third Annual Hazardous Materials Management Conference, Philadelphia, Pennsylvania, June 5.
- 1984. Conference of American Society of Civil Engineers, San Francisco, California, June 19.
- 1983. Hazardous Waste Management Industry Overview, IBM Corporation Environmental Managers Annual Meeting, Tarrytown, New York, April 5.
- 1983. Fourth National Conference on Hazardous Materials Management Las Vegas, Nevada, May 23-27.
- 1983. 1983 National Conference of American Society of Civil Engineers, Boulder, Colorado, July 7.
- 1983. Southwestern Spill Conference, National Spill Control School Houston, Texas, October 3-5.
- 1983. Hazardous Waste Audits, St. Regis Paper Company, Environmental Managers Annual Meeting, Atlanta, Georgia, October 11.
- 1983. Geotechnical Engineering for Waste Disposal Projects, College of Engineering short course, University of Texas, Austin, Texas, November 2.
- 1982. Hazardous Waste Landfill Design (short course), Phillips Petroleum -Bartlesville, Oklahoma, February 2-4.
- 1982. Hazardous Waste Landfill Design (short course), Ethyl Corporation Baton Rouge, Louisiana, March 9-10.
- 1982. Western Conference of National Water Well Association, Denver, Colorado, July 21.
- 1982. Geotechnical Engineering for Waste Disposal Projects, College of Engineering short course, University of Texas, Austin, Texas, October 18-21.
- 1981. Third National Conference on Hazardous Materials Management, U.S. EPA and California Department of Health, Anaheim, California, March 5.
- 1981. 13th Mid-Atlantic Industrial Waste Conference, University of Delaware Newark, New Jersey, Co-Authored with David Small, Universal Linings, June 26.
- 1980. Nineteenth Conference of Canvas Products Manufacturers, New York, New York, August 27.
- 1979. Second National Conference on Hazardous Materials Management - California Department of Health, U.S. EPA, San Diego, California, March 1.
- 1979. 1979 Southeastern Hazardous Waste Management Workshop, Tuscaloosa, Alabama, July 18.
- 1979. Hazardous Waste Management Short Course, Auburn University, Birmingham, Alabama, October 24.
- 1979. Graduate Seminar Department of Environmental Science, Rice University, Houston, Texas, November 8.

- 1978. Seventh National Congress on Waste Management Technology, San Francisco, California, September 21.
- 1977. National Conference on Hazardous Waste Management, San Francisco, California (Sponsor U.S. EPA), February 2.
- 1977. National Solid Waste Management Annual Convention, New Orleans, Louisiana, May 21.
- 1977. American Iron and Steel Engineers Annual Meeting, Newport Beach, California, June 18.
- 1977. Governmental Collection and Disposal Association, South Lake Tahoe, California, September 1.
- 1977. California Manufacturers Association, South Lake Tahoe, California, October 11.
- 1976. American Institute of Chemical Engineers Convention, Atlantic City, New Jersey, September 1.
- 1976. Peninsula Manufacturers Association, San Mateo, California, October 20.
- 1976. California Assembly Committee on Resources, Land Use and Energy, Sacramento, California, December 3.
- 1976. California Water Pollution Control Association, Los Angeles, California, December 9.
- 1975. American Institute of Chemical Engineers Convention, Houston, Texas, March 17.
- 1975. University of Wisconsin Hazardous Waste Management Program, Madison, Wisconsin, September 9.
- 1974. National Solid Waste Management Association, Annual Convention in Houston, Texas, June 26.
- 1974. EPA Hazardous Waste Task Force, San Francisco, California, February 28.
- 1974. Bay & Estuarine Association in San Francisco, California, May 15.
- 1974. Contra Costa County Solid Waste Committee in Concord, California, April 30.
- 1974. 4th Environmental Pollution Symposium at Stanford University, Palo Alto, California, October 23.
- 1974. Peninsula Manufacturers Association, South San Francisco, California, December 5.
- 1972. California Water Pollution Control Association, Annual Convention in Redding, California, October 7.