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4. Guo, Y., C. Holton, H. Luo, P. Dahlen, K. Gorder, E. Dettenmaier, and P.C. Johnson. 2015. Identification of Alternative Vapor Intrusion Pathways Using Controlled Pressure Testing, Soil Gas Monitoring, and Screening Model Calculations. *Environ. Sci. Technol.* 49 (22), 13472–13482.
5. Holton, C., Y. Guo, H. Luo, P. Dahlen, K. Gorder, E. Dettenmaier, and P.C. Johnson. 2015. Long-term Evaluation of the Controlled Pressure Method for the Assessment of the Vapor Intrusion Pathway. *Environ. Sci. Technol.* 49 (4), 2091–2098.
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17. Kingston, J.T, P.R. Dahlen, and P.C. Johnson. 2010. State of the Practice Review of In Situ Thermal Technologies. *Ground Water Monitoring and Remediation*. 30 (4). 64 – 72.
18. Lesser, L.E., P.C. Johnson, G.E. Spinnler, C.L. Bruce, and J.P. Salanitro. 2010. Spatial Variation in MTBE Biodegradation Activity of Aquifer Solids Samples Collected in the Vicinity of a Flow-Through Aerobic Biobarrier. *Ground Water Monitoring and Remediation*. 30 (2). 63 – 72.
19. Johnson, P.C., C.L. Bruce, K.D. Miller. 2010. A Practical Approach to the Design, Monitoring, and Optimization of In Situ MTBE Aerobic Biobarriers. *Ground Water Monitoring and Remediation*. 30 (1). 58-66.
20. Luo, H., P. Dahlen, P.C. Johnson, T. Peargin, and T. Creamer. 2009. Spatial Variability of Soil-Gas Concentrations near and beneath a Building Overlying Shallow Petroleum Hydrocarbon-Impacted Soils. *Ground Water Monitoring and Remediation*. 29 (1). 81-91.
21. Johnson, P.C., R.A. Ettinger, J.P. Kurtz, R. Bryan, and J.E. Kester. 2009. Empirical Assessment of Ground Water–

31. Johnson, P.C.. 2005. Sensitivity Analysis and Identification of Critical and Non-Critical Parameters for the Johnson and Ettinger Vapor Intrusion Model. *Ground Water Monitoring and Remediation* Winter 2005. 25 (1). 63-78.
32. Vangelas, K., F.H. Chapelle, J. Cummings, P.C. Johnson, K.A. Lovelace, E.K. Nyer, R. Norris. 2005. Monitored Natural Attenuation Forum: A Panel Discussion on the Use of Integrated Mass Flux and MNA Inconsistencies Within Federal and State Agencies. *Remediation*. 16 (1). 141 -152.
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58. Johnson, P.C., M. W. Kemblowski, and J. D. Colthart. 1990. Quantitative Analysis for the Cleanup of Hydrocarbon-Contaminated Soils by In Situ Soil Venting. *Ground Water*. 3 (28):413-429.
59. Johnson, P.C., P. Nott, and R. Jackson. 1990. Friction-

18. Johnson, P.C., M. W. Kemblowski, and R.L. Johnson. 1998. Assessing the Significance of Subsurface Contaminant Migration to Enclosed Spaces: Site-Specific Alternatives to Generic Estimates. American Petroleum Institute Publication No. 4674. December.

6. Johnson, R.L. and P.C. Johnson. 2012. In Situ Sparging for Delivery of Gases in the Subsurface. In *Delivery and Mixing in the Subsurface: Processes and Design Principles for In Situ Remediation*. P. K. Kitanidis and P.L. McCarty (eds). Science+Business Media, LLC, New York, NY, USA. ISBN 978-1-4614-2238-9.
7. Johnson P.C., R.L. Johnson, C.L. Bruce CL. 2010. *In Situ* Air Sparging for the Treatment of Dissolved Hydrocarbon Groundwater Plumes. In Stroo HF, Ward CH, eds, *In Situ* Remediation of Chlorinated Solvent Plumes, Vol 2, SERDP/ESTCP Remediation Technology Monograph Series. Springer Science+Business Media, LLC, New York, NY, USA, In Press.
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Groundwater: Analysis, Fate, Environmental and Public Health Effects, Remediation, Vol I." P.T. Kostecki and E.J. Calabrese (eds.). Lewis Publishers. 253 - 282.

19. Rixey, W.G., P.C. Johnson, G.M. Deeley, D.L. Byers, and I.J. Dortch. 1991. Mechanisms for the Removal of Residual Hydrocarbons for Soils by Water, Solvent, and Surfactant Flushing. In Petroleum Contaminated Soils Volume 4 (P.T. Kostecki and E.J. Calabrese Eds.). Lewis Publishers.

9. Johnson P.C. and T. McHugh. 2014. Key Advances in Vapor Intrusion Assessments at Contaminated Sites. SERDP & ESTCP Webinar Series. October 30.
10. Johnson, P.C. 2014. Vapor Intrusion: Lessons-Learned from Four Years of Intensive Monitoring of a House Over a Dilute Chlorinated Solvent Plume. Groundwater Resources Association of California. GRACast Web Seminar Series on Vapor Intrusion, Part 2. June 25.
11. Johnson P.C. and J. T. Kingston.

19. Johnson, P.C., P. Dahlen, H. Luo, C. Holton, K. Gorder, E. Dettenmaier. 2011. Temporal Changes in VI Behavior: Considerations for Pathway Assessment. U. Washington/USEPA Superfund Research Center. June 15. Seattle, WA.
20. Johnson, P.C., P. Dahlen, H. Luo, C. Holton, K. Gorder, E. Dettenmaier. 2011. Temporal Changes in VI Behavior: Considerations for Pathway Assessment. 21st Annual Training Program – National Association of Remedial Program Managers. May 16-20. Kansas City, MO.
21. Johnson, P.C. and E. Nichols. 2011. Session Keynote: Measurement and Control of Subsurface Contaminant Discharge and Its Use in Decision-Making. RemTEC Summit. May 16-19. Chicago, IL.
22. Kavanaugh, M., K. Pennell, Johnson, P.C., and Anna Willett. 2011. Panel Discussion - Future of Subsurface Remediation Efforts in the United States: Barriers to Success. RemTEC Summit. May 16-19. Chicago, IL.
23. Johnson, P.C. 2011. Soil and Groundwater Remediation: Issues, Advances, and Challenges. Engineers Club of the West Valley. April. Sun City, AZ.
24. Johnson, P.C., P. Dahlen, H. Luo, C. Holton. 2011. Temporal Changes in VI Behavior: Considerations for Pathway Assessment. USEPA Workshop on Addressing Regulatory Challenges in Vapor Intrusion: A State of the Science Update Focusing on Chlorinated VOCs. AEHS 21st

31. Johnson, P.C. 2008. The Path to More Confident and Cost-Effective Vapor Intrusion Pathway Assessment. 18th Annual AEHS Meeting and International Conference on Soils, Sediments & Water. San Diego. March 10 - 13.
32. Johnson, P.C. and R.A. Ettinger. 2008. An Empirical Analysis of Data From the Colorado DoT Materials Laboratory Testing Site, Denver CO. 18th Annual AEHS Meeting and International Conference on Soils, Sediments & Water. San Diego. March 10 - 13.
33. Johnson, P.C., 2007. Vapor Intrusion – Conceptualizing and Dealing with Spatial and Temporal Variability. Air and Waste Management Association: Vapor Intrusion – A Rapidly Developing Environmental Challenge. November 13 – 15, 2007.
34. Dahlen, P. and P.C. Johnson. 2007. Field Comparison of Oxygen Delivery Technologies. University Consortium for Field-Focused Groundwater Contamination Research. A -4.6 (l)] TJ ET Q q 0.24 0 0 0.24

44. Johnson, P.C.. 2001. Assessing Risks From Vapor Migration To Enclosed Spaces. Pennsylvania Department of Environmental Protection Annual Conference. June 7. Harrisburg, PA.
45. Johnson P. C.. 2000. Advances in Vapour Intrusion Modelling for Risk-Based Decision Making. 2000 Contaminated Site Remediation Conference. December 4 – 8. Melbourne Australia
46. Johnson, P.C.. 2000. A Retrospective Look to the Future of LUST Issues. Third Annual Underground Storage Tank Program Conference, Arizona Department of Environmental Quality. September 29. Phoenix, AZ.
47. Johnson, P.C. and R.A. Ettinger. 2000. Progress Towards Gaining a Better Understanding of Subsurface Vapor Migration. RCRA: Visions for the Future Conference. USEPA. August 15 –18. Washington, D.C..
48. Johnson, P.C. and R.A. Ettinger. 2000. An Empirical Analysis of Data From the Colorado DoT Materials Laboratory Testing Site, Denver CO. RCRA: Visions for the Future Conference. USEPA. August 15 –18. Washington, D.C..
49. Johnson, P.C., C. Bruce, J. P. Salanitro, G. E. Spinnler. 2000. MTBE Biobarrier Studies at Port Hueneme, CA. 2000 National LUST Conference – U.S. Environmental Protection Agency. March. Portland, OR.
50. Johnson, P.C. and J.P. Salanitro. 1999. MTBE Bioremediation. New Jersey Department of Environmental Protection. August 17, 1999. Trenton, NJ.

57. Johnson, P.C.. 1996. Risk-Based Corrective Action. Santa Fe Pacific Pipeline Partnership. Los Angeles. August 23.
58. Johnson, P.C.. 1996. Risk-

72. Johnson, P.C., R.L. Johnson, C. Neaville, and E.E. Hansen. 1994. Performance Monitoring and Pilot Testing of In Situ Air Sparging Systems. Invited Presentation at the AGWSE National Education Program. October 9-12. Las Vegas, Nevada.
73. Johnson, P.C.. 1994. Pilot Testing of In Situ Air Sparging Systems. Invited Presentation at the Annual Air Force Center for Environmental Excellence (AFCEE) Conference. San Antonio.
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19. Spinnler, G.E., P.M. Maner, J.P. Salanitro and P.C. Johnson. 2001. Demonstration of the BioRemedy Process for MTBE Remediation at Retail Gasoline Stations. In Situ and On-Site Bioremediation – The Sixth International Symposium. San Diego. June 4 - 7.
20. Johnson, P.C. and R.A. Ettinger. 2000. Progress Towards Gaining a Better Understanding of Subsurface Vapor Migration. RCRA: Visions for the Future Conference. USEPA. August 15 –18. Washington, D.C..
21. Johnson, P.C. and R.A. Ettinger. 2000. An Empirical Analysis of Data From the Colorado DoT Materials Laboratory Testing Site, Denver CO. RCRA: Visions for the Future Conference. USEPA. August 15 –18. Washington, D.C..
22. Kembrowski, M.W. and P.C. Johnson. 2000. Environmental Monitoring, Modeling, and Management and Bayesian Belief Networks. Envirosoft. June. Bilbao, Spain.
23. Arulantham, R., P. C. Johnson, and M. W. Kembrowski. 2000. Identifying Low-Risk MTBE-Impacted Sites. Pacific Focus Ground Water Conference. February 17 – 18. San Francisco, CA.
24. Salanitro, J.P., P.C. Johnson, G.E. Spinnler, C.C. Neaville, P.M. Maner, S.M. Stearns, C.L. Bruce. 1999. Demonstration of the Enhanced MTBE Bioremediation (EMB) IN Situ Process. In Situ and On Site Bioremediation – Fifth International Symposium. April 19-22, 1999. San Diego, CA.
25. Bruce, C.L., I.L. Amerson, P.C. Johnson, R.L. Johnson. 1999. Diagnostic Tools for Quantifying Oxygen Mass Transfer Rates. In Situ and On Site Bioremediation – Fifth International Symposium. April 19-22, 1999. San Diego, CA.
26. Bruce, C.L., P.C. Johnson, and R.L. Johnson 1998. Methyl Tert-Butyl Ether Removal by In Situ Air Sparging in Physical Model Studies. The First International Conference on Remediation of Chlorinated and Recalcitrant Compounds. May 18-

31. Johnson, P.C., A. Das, R.L. Johnson, A. Leeson, D. McWhorter, R. Hinchee, and C.M. Vogel. 1997. Effects of IAS Process Changes on the Removal of Immiscible-Phase Hydrocarbons. The Fourth International Symposium - In Situ and On-Site Bioremediation. April 28 - May 1, 1997. New Orleans, LA.
32. Rutherford, K.W., D. Bass, W. McPhee, and P. C. Johnson. 1997. Estimating Oxygen Mass Transfer Coefficients During Air Sparging. The Fourth International Symposium - In Situ and On-Site Bioremediation. April 28

43. Johnson, P.C. and C.C. Stanley. 1993. An Integrated Exposure/Risk-Based Corrective Action Approach for Underground Storage Tank Sites. Presented at the 86th Annual Meeting and Exhibition of the Air & Waste Management Association. Denver, Colorado.
44. Stanley, C.C., P.C. Johnson, R.K. Wenzlau, J.L. Rous, J.F. Vargas, and J.L. Peterson. 1992. An Exposure/Risk-Based Corrective Action Approach for UST Sites. Proceedings of Petroleum Hydrocarbons and Organic Chemicals in Groundwater. Houston, TX. November.
45. Johnson, P.C., M.W. Kemblowski, and J.D. Colthart. 1988. Practical Screening Models for Soil Venting Applications. Proceedings; Petroleum Hydrocarbons and Organic Chemicals in Ground Water Conference, National Water Well Association, American Petroleum Institute; Houston, TX.

Sponsored Research - External Grants and Gifts:

1. P.C. Johnson (PI) and P. Dahlen. The VI Diagnosis Toolkit for Assessing Vapor Intrusion Pathways and Mitigating Impacts in Neighborhoods Overlying Dissolved Chlorinated Solvent Plumes. ESTCP. \$1,100,000. 5/1/2015 – 4/30/2018.
2. P.C. Johnson (PI), P. Dahlen, Br. Rittmann, P. Westerhoff, and others: Heavy Hydrocarbon Soil Remediation Group Consortium. Chevron. \$5,000,000. October 2012 – December 2017.
3. P.C. Johnson (PI), Remediation and Monitoring at Petroleum Impacted Sites. ExxonMobil. Through the University Consortium for Field-Focused Groundwater Remediation Research. \$150,000. 2011-2014.
4. P.C. Johnson (PI) and P. Dahlen. Improving Our Understanding of Dissolved Groundwater Plume Sources at Petroleum-Impacted Sites Through Physical Model, Mathematical Model, and Field-Site Studies. Chevron. \$500,000. 9/1/2010 – 12/31/2013.
5. P.C. Johnson (PI), and P. Dahlen. Integrated Field-Scale, Lab-Scale, and Modeling Studies for Improving Our Ability to Assess the Groundwater to Indoor Air Pathway at Chlorinated Solvent Impacted Sites.

11. P.C. Johnson (PI). Oxygen Delivery Technologies. Shell Global Solutions. \$20,000. 1/1/07 – 12/31/07.
12. P.C. Johnson (PI). Critical Evaluation of State-of-the-Art In Situ Thermal Treatment Technologies for DNAPL Source Zone Treatment

26. P.C. Johnson (PI).

41. P.C. Johnson (PI). In Situ Bioremediation of Contaminated Aquifer Soils. Battelle/SERDP/USAF. \$223,152. X CJ 6230. 11/1/96 - 12/31/98.
42. P.C. Johnson (PI). Chlorinated Hydrocarbon Remediation. Salt River Project. \$22,000. 5/1/95 - 11/1/97. GFT4628.
43. P.C. Johnson (PI). Gift - Environmental Restoration and Risk Assessment. Mobil Research Foundation. \$20,000. 2/1/97 -. XC51001.
44. P.C. Johnson (PI). and R. Charbeneau (U. Texas). Graphical Tools for Determining Site-Specific Risk-Based Soil Screening Levels for the Soil to Groundwater Transport Pathway - A Practical Alternative to Generic Dilution Attenuation Factors. American Petroleum Institute. \$105,000. 2/1/95 - 7/31/96. XCT 8786.
45. P.C. Johnson (PI).. Iron-Induced Hydrocarbon Degradation. Arizona Department of Water Resources. \$24,470. 95-0483. 11/1/95-2/1/97.
46. P.C. Johnson (PI).. Regional Water Quality and Supply Management Strategies for the Phoenix Metropolitan Area. Arizona Department of Water Resources. \$24,220. XCT1465. 11/1/95-2/1/97.
47. P. C. Johnson (PI), S. Houston, W. Houston, P.C. Johnson (25%). Direct Well Recharge of Tertiary Effluent. Arizona Department of Water Resources. \$77,558. XCT9251. 11/1/95 - 2/28/97.
- 48.

Sponsored Research - Internal Grants:

1. Johnson, P. Westerhoff, S. Beaudoin. Assessing the Impact of New Products and Process Changes on Environmental Resources. \$22,000. CEAS. 7/29/97 - 7/29/98.
2. Johnson. Chemistry Module for Undergraduate Civil Engineers. FEIGIA. \$6000. 6/1/95 - 5/31/96. ST1001.
3. Johnson. Restoration of Aquifers Contaminated with Solvents. FGIA. \$6000. XCRG0110. 4/1/95 - 3/31/96.
4. Johnson. Bioremediation of Contaminated Aquifer Soils. \$8000. OVPR. 9/1/94 - 8/31/95. XCR230.

STUDENT THESES AND DISSERTATIONS SUPERVISED

Masters Degrees Supervised

Student	Date	M.S. Thesis Title
Sean Wilson	5/14	Improving our Understanding of Source Zones at Petroleum Impacted Sites through Physical Model Studies
Lisa Clifton	12/08	Effect of Dissolved Oxygen Manipulation on the Benzene Flux from a Low Permeability Soil Layer
Pamela Maass	12/05	Modeling Groundwater Quality Changes Down-gradient of Permeable Reactive Barriers
Roberta Lenski	12/04	Source Longevity Estimates for Ground Water Impacts at the Former Williams AFB Site
Maikel Mendez	5/03	

Doctoral Degrees Supervised

Student	Date	Ph.D. Project Title
Yuanming Guo	12/15	Vapor Intrusion at a Site with an Alternative Pathway and a Fluctuating Groundwater
Chase Holton	4/15	Vapor Migration of Chlorinated Solvents from Groundwater to Indoor Air
Bridget Cavanagh	5/14	Use of Interface Treatment to Reduce Emissions from Residuals in Lower Permeability Zones to Groundwater Flowing Through More Permeable Zones
Ryan Ekre	5/13	Source Zone Mass Depletion of Chlorinated Aliphatic Hydrocarbons: Estimation of Rates and Insight into Source Architecture
Elsy Escobar	5/12	Transport and Biodegradation of Petroleum Hydrocarbon Vapors in the Subsurface: A Laboratory Soil Column Study
Hong Luo	5/09	Field and Modeling studies of Soil Vapor Migration into Buildings at Petroleum Hydrocarbon Impacted Sites
Jennifer Triplett-Kingston	5/08	Critical Evaluation of Thermal-Based Remediation Technologies
Luis Lesser	5/08	Spatial and Temporal Variations in MTBE Degrading Activity
Lilian Deize de Abreu	3/05	A Three-Dimensional Numerical Model for Subsurface Vapor Migration to Enclosed Spaces

8. Session Chairman, International Conference on Chlorinated Solvents and Other Recalcitrant Compounds. Combining Thermal with Other Remediation Technologies. Monterey, CA (2010).
9. Session Chairman, Annual SERDP/ESTCP Partners in Innovation Conference. Vapor Intrusion. Washington, D.C.. (2009).
- 10.

Contaminant Transport
Ground Water
Ground Water Monitoring and Remediation
Environmental Science and Technology
Journal of Contaminant Hydrology
Environmental Engineering Science
Water Resources Research
Separation Science and Technology
ASCE Journal of Environmental Engineering
Soils
Water Environment Research
Biotechnology and Bioengineering
International Journal of Bioremediation

CEE Self-Study Committee (2001 – 2002)
CEE Faculty Search Committee – Chair (1996 – 1997)
CEE Faculty Search Committee (1995 – 1996)
CEE Scholarship Committee (2001 – 2003)

EVALUATION OF INSTRUCTION – AWARDS

ASU College of Engineering Teaching Excellence Award	2002*
ASU Parents Association Teacher of the Year Finalist	2000
ASU College of Engineering Teaching Excellence Award	1998*

Year and

EVALUATION OF INSTRUCTION – NEW COURSES DEVELOPED

CEE560 – Soil and Ground Water Remediation

CEE598 – Contaminant Fate and Transport

ECE100 – Curriculum Development Committee (ECE100 revisions)

CEE598 – Environmental Data Systems and Analysis

WORKSHOPS/SHORT COURSES DEVELOPED

Other Professional Information

Past Consultant to:

US Environmental Protection Agency
US Department of Defense
US Department of Energy

IT Corporation
Battelle
Envirogen