

ROBERT CHARLES KNOX
Ted A. Kritikos Chair and Director
Civil Engineering and Environmental Science
202 W. Boyd, Rm. 334
Norman, Oklahoma 73019-1024

PERSONAL

Age: 56
Date of Birth: 3-28-55
Sex: Male
Marital Status: Single

EMPLOYMENT

1983-1984	Environmental Engineer, Environmental and Ground Water Institute, University of Oklahoma, Norman, Oklahoma.
1984-1986	Assistant Professor, Department of Civil Engineering, McNeese State University, Lake Charles, Louisiana.
1986-1992	Assistant Professor, Civil Engineering and Environmental Science, University of Oklahoma, Norman, Oklahoma.
1992-1997	Associate Professor, Civil Engineering and Environmental Science, University of Oklahoma, Norman, Oklahoma.
1997-1998	Professor, Civil Engineering and Environmental Science, University of Oklahoma, Norman, Oklahoma.
1998-2000	Samuel Roberts Noble Presidential Professor, Civil Engineering and Environmental Science, University of Oklahoma, Norman, Oklahoma.
2000-2008	John A. Myers Professor and Director, Civil Engineering and Environmental Science, University of Oklahoma, Norman, Oklahoma.
2008-present	Ted A. Kritikos Chair and Director, Civil Engineering and Environmental Science, University of Oklahoma, Norman, Oklahoma.

EDUCATION

5-13-78	B.S. in Civil Engineering with Distinction, University of Oklahoma
5-12-79	M.S. in Civil Engineering, University of Oklahoma
5-14-83	Ph.D. in Civil Engineering, University of Oklahoma
1984	Engineering in Training
1986	Principles and Practice of Engineering (P.E.)

PROFESSIONAL REGISTRATION

Oklahoma (14903), Louisiana (22283)

AWARDS

.	NSPE Engineering Education Excellence Award, 2000
.	Samuel Roberts Noble Presidential Professor, 1998
.	College of Engineering Distinguished Lectureship Award, 1997
.	Fred Merryfield Design Award, American Society for Engineering Education - 1996
.	MAPCO Engineering Lectureship Award, OU College of Engineering - 1994, 1995
.	Outstanding Young Engineer of the Year Award, Oklahoma Society of Professional Engineers - 1990
.	OU Associates Distinguished Lectureship - 1988-89
.	Outstanding Young Man of America - 1987
.	DOW Outstanding Young Faculty Award, Gulf-Southwest Section ASEE - 1986

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers	American Society for Engineering Education
National Society of Professional Engineers	Association of Ground Water Scientists and Engineers
Association of Environmental Engineering Professors	American Geophysical Union
Oklahoma Society of Professional Engineers	

PROFESSIONAL OFFICES HELD

American Society for Engineering Education -
Campus Activities Coordinator, 1987 - 1993
Oklahoma Society of Professional Engineers -
Secretary/Treasurer of Canadian Valley Chapter, 1988-89
Oklahoma Society of Professional Engineers -
Vice President of Canadian Valley Chapter, 1989-90
Oklahoma Society of Professional Engineers -
President of Canadian Valley Chapter, 1990-91
Oklahoma Academy of Science -
Vice-Chair for Engineering Science, 1988
Oklahoma Academy of Science -
Chairman for Engineering Science, 1989
Phi Kappa Phi -
Membership Committee, 1993

PUBLICATIONS

A. Books Co-Authored or Co-Edited (7)

7. D.A. Sabatini, R.C. Knox, and J.H. Harwell, editors, Surfactant-Enhanced Remediation of Subsurface Contamination, ACS Symposium Series 594, American Chemical Society, Washington, D.C., 1995, ISBN 0-8412-3225-3, 300 pages.
6. Knox, R.C., Sabatini, D.A. and Canter, L.W., Subsurface Transport and Fate Processes, Lewis Publishers, Chelsea, Michigan, 1993, ISBN 0-87371-193-9, 430 pages.
5. Sabatini, D.A. and Knox, R.C., editors, Transport and Remediation of Subsurface Contaminants: Colloidal, Interfacial and Surfactant Phenomena, ACS Symposium Series 491, American Chemical Society, Washington, D.C., 1992, ISBN 0-8412-2223-1, 252 pages.
4. Knox, R.C. et al., Aquifer Restoration State of the Art, Noyes Publications, Park Ridge, New Jersey, 1986.
3. Canter, L.W., Knox, R.C. and Fairchild, D., Ground Water Quality Protection, Lewis Publishers, Inc., Chelsea, Michigan, 1986, ISBN 0-87371-018-5, 562 pages.
2. Canter, L.W. and Knox, R.C., Ground Water Pollution Control, Lewis Publishers, Inc., Chelsea, Michigan, 1985, ISBN 0-87371-014-2, 526 pages.
1. Canter, L.W. and Knox, R.C., Septic Tank System Effects on Ground Water Quality, Lewis Publishers, Inc., Chelsea, Michigan, 1985, ISBN 0-87371-012-6, 336 pages.

B. Peer Reviewed Journal Articles/Book Chapters (40)

40. McCray, J. E., Tick, G. R., Jawitz, J. W., Gierke, J. S., Brusseau, M. L., Falta, R. W., Knox, R. C., Sabatini, D. A., Annable, M. D., Harwell, J. H. and Wood, A. L. "Remediation of NAPL Source Zones: Lessons Learned from Field Studies at Hill and Dover AFB." Ground Water. 2011. In Press.
39. Thal, A., Knox, R.C., and Sabatini, D.A., "Estimating Partition Coefficients of Tracers", Ground Water Monitoring & Remediation, Vol. 27, No. 4, 2007, pp. 135-142.
38. Sabatini, D. A., Knox, R. C., Harwell, J. H. and Shiau, B. J. "Surfactant-Based Systems for Environmental Remediation." In Handbook of Detergents: Part D – Formulations, M. S. Showell, Ed. Marcell Dekker, Inc. 2006, 347-368.
37. Childs, J, Acosta, E, Annable, M, Brooks, M., Enfield, C.G., Harwell, J., Hasegawa, M., Knox, R., Rao,

- P.S.C., Sabatini, D., Shau, B., Szekeres, E., and Wood, A.L., "Field Demonstration of Surfactant-Enhanced Solubilization of DNAPL at Dover Air Force Base, Delaware," Journal of Contaminant Hydrology, Vol. 82, 2006, pp. 1-22.
36. Wood, A.L., Enfield, C.G., Espinoza, F.P., Annable, M., Brooks, M.C., Rao, P.S.C., Sabatini, D., and Knox, R., "Design of Aquifer Remediation Systems: (2) Estimating Site-Specific Performance and Benefits of Partial Source Removal," Journal of Contaminant Hydrology, Vol. 81, 2005, pp. 148-166.
35. Sabatini, D. A., Knox, R. C., Harwell, J. H. and Shiau, B. J. "Surfactant-Based Systems for Environmental Remediation." In Handbook of Detergents: Part D – Formulations, M. S. Showell, Ed. Marcell Dekker, Inc. 2006, 347-368.
34. J.D. Childs, E. Acosta, R.C. Knox, J.H. Harwell, D.A. Sabatini, "Improving the Extraction of Tetrachloroethylene from Soil Columns Using Surfactant Gradient Systems," Journal of Contaminant Hydrology, Vol. 71, pp. 27-45, 2004.
33. Flaming, J.E., Knox, R.C., Sabatini, S.A. and Kibbey, T.C., "Surfactant Effects on Residual Water and Oil Saturations in Porous Media," Vadose Zone Journal, Vol. 2, No. 2, May 2003, pp.168-176.
32. Shiau, B. J., Hasegawa, M. A., Brammer, J. M., Carter, T., Goodspeed, M., Harwell, J.H., Sabatini, D. A., Knox, R. C. and Szekeres, E. "Field Demonstration of Surfactant-Enhanced DNAPL Remediation: Two Case Studies." in Henry, S. M. and S. D. Warner eds., Chlorinated Solvent and DNAPL Remediation: Innovative Strategies for Subsurface Cleanup. American Chemical Society Symposium Series 837, ACS, Washington, D.C., 2003, 51-72.
31. Hasegawa, M.H., Shiau, B.J., Sabatini, D. A, Knox, R. C., Harwell, J. H., Lago, R., and Yeh, L., "Surfactant-Enhanced Subsurface Remediation of DNAPLS At The Former Naval Air Station Alameda, California", Treating Dense Nonaqueous-Phase Liquids (DNAPLS), Battelle Press, 2000, pp. 219-226.
30. Sabatini, D. A, Knox, R. C., Harwell, J. H. and Wu, B. "Integrated Design of Surfactant Enhanced DNAPL Remediation: Effective Supersolubilization and Gradient Systems." Journal of Contaminant Hydrology, 45(1), 2000, 99-121.
29. Hasegawa, M.A., Shiau, B.J., Sabatini, D.A., Knox, R.C., Harwell, J.H., Lago, R., Yeh, L., "Surfactant-Enhanced Subsurface Remediation of DNAPLS at the Former Naval Air Station Alameda, California." In Treating Dense Nonaqueous-Phase Liquids (DNAPLS), Remediation of Chlorinated and Recalcitrant Compounds, The Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds, G. B. Wickramanayake, A.R. Gavaskar, and N. Gupta, eds. Battelle Press, Columbus, Ohio, 2000, (C2-2), 219-226.
28. Sabatini, D.A. and Knox, R.C., "Results of a Student Discussion Group on Leadership Concepts," Journal of Engineering Education, April 1999, pp. 185-188.
27. Knox, R.C., Shiau, B.J., Sabatini, D.A., and Harwell, J.H., "Field Demonstration Studies of Surfactant Enhanced Solubilization and Mobilization at Hill AFB, Utah", Innovative Subsurface Remediation: Field Testing of Physical, Chemical, and Characterization Technologies, ACS Symposium Series 725, M.L. Brusseau, D.A. Sabatini, J.S. Gierke, and M.D. Annable, editors, American Chemical Society, Washington, D.C., 1999, pp. 49-63.
26. Sabatini, D.A., Harwell, J.H., and Knox, R.C., "Surfactant Selection Criteria for Enhanced Subsurface Remediation", Innovative Subsurface Remediation: Field Testing of Physical, Chemical, and Characterization Technologies, ACS Symposium Series 725, M.L. Brusseau, D.A. Sabatini, J.S. Gierke, and M.D. Annable, editors, American Chemical Society, Washington, D.C., 1999, pp. 8-23.
25. Harwell, J.H., Sabatini, D.A. and Knox, R.C., "Surfactants in Ground Water Remediation", Colloids and Surfaces A: Physicochemical and Engineering Aspects, Vol. 151, 1999, pp. 255-268.
24. Sabatini, D.A., Harwell, J.H., and Knox, R.C., "Surfactant Selection Criteria for Enhanced Subsurface

Remediation: Laboratory and Field Observations”, Progress in Colloid and Polymer Science, Vol. 111, 1998, pp. 168-173.

23. Knox, R.C., Sabatini, D.A., Hughes, D.E., Lambert, R., and Ketner, R., “A Practitioner Directed Approach to Teaching Engineering Design: A Case Study Using a Municipal Development Project”, ASCE Journal of Professional Issues in Engineering, Vol. 124, No. 4, 1998, pp. 105-109.

22. Sabatini, D.A., Harwell, J.H., Hasegawa, M., and Knox, R., “Membrane Processes and Surfactant-Enhanced Subsurface Remediation: Results of a Field Demonstration”, Journal of Membrane Science, Vol. 151, No.1, 1998, pp. 89-100.

21. Sabatini, D.A., Knox, R.C., Harwell, J.H. and Shiau, B.J., “Surfactant Enhanced NAPL Remediation: From the Laboratory to the Field,” in Soil and Aquifer Pollution: Non-Aqueous Phase Liquids - Contamination and Reclamation, Springer-Verlag, 1998, pp. 373-391.

20. Knox, R.C., Sabatini, D.A., Harwell, J.H., Brown, R.E., West, C., Blaha, F., and Griffin, C., “Surfactant Remediation Field Demonstration Using a Vertical Circulation Well”, Ground Water, Vol. 35, No. 6, Nov.-Dec., 1997, pp. 948-953.

19. Sabatini, D.A., Knox, R.C., Harwell, J.H., Soerens, T., Chen, L., Brown, R.E. and West, C., “Design of a Surfactant Remediation Field Demonstration Based on Laboratory and Modeling Studies”, Ground Water, Vol. 35, No. 6, Nov.-Dec., 1997, pp. 954-963.

18. Chen, L. and Knox, R.C., “Using Vertical Circulation Wells for Partitioning Tracer Tests and Remediation of DNAPL’s”, Ground Water Monitoring and Remediation, Vol. XVII, No. 3, Summer 1997, pp. 161-168.

17. Cates, D.A., Knox, R.C., and Sabatini, D.A., “The Impact of Ion Exchange Processes on Subsurface Brine Transport As Observed on Piper Diagrams”, Ground Water, Vol. 34, No. 3, May-June 1996, pp. 532-544.

16. Knox, R.C. and Canter, L.W., “Prioritization of Ground Water Contaminants and Sources”, Water, Air and Soil Pollution, Vol. 88, 1996, pp. 205-226.

15. Chen, Y., Chen, L.Y., and Knox, R.C., “Modeling of Innovative Measures for Improving the Hydraulic Efficiency of Surfactant Injection and Recovery Systems”, Surfactant-Enhanced Remediation of Subsurface Contamination, ACS Symposium Series 594, D.A. Sabatini, R.C. Knox, and J.H. Harwell, editors, American Chemical Society, Washington, D.C., 1995, pp. 249-264.

14. Krebs-Yuill, B., Harwell, J.H., Sabatini, D.A., and Knox, R.C., “Economic Considerations in Surfactant-Enhanced Pump-and-Treat Remediation”, Surfactant-Enhanced Remediation of Subsurface Contamination, ACS Symposium Series 594, D.A. Sabatini, R.C. Knox, and J.H. Harwell, editors, American Chemical Society, Washington, D.C., 1995, pp. 265-278.

13. Raleigh, L.H., Knox, R.C. and Canter, L.W., “A Proposed Nonhazardous Industrial Waste Classification Scheme,” ASCE Environmental Engineering, Vol. 121, No. 5, May 1995, pp. 402-410.

12. Knox, R.C., Sabatini, D.A., Sack, R.L., Haskins, R.D., Roach, L.W., and Fairbairn, S.W., “A Practitioner-Educator Partnership for Teaching Engineering Design”, Journal of Engineering Education, Vol. 84, No. 1, January 1995, pp. 5 - 11.

11. Knox, R.C., “Spatial Moment Analysis for Mass Balance Calculations and Tracking of a Subsurface Hydrocarbon Mound,” Ground Water Monitoring Review, Summer 1993, pp. 139 - 147.

10. Soerens, T. and Knox, R.C., “Discussion of Borden, R.C. and Ka, C.M. (1992), “Evaluation of Groundwater Extraction for Remediation of Petroleum-Contaminated Aquifers,” Water Environment Research, Vol. 65, No. 7, November/December 1993, p. 899.

9. Knox, R.C. and Sabatini, D.A., "Introduction," Transport and Remediation of Subsurface Contaminants: Colloidal, Interfacial, and Surfactant Phenomena, D.A. Sabatini and R.C. Knox, eds., ACS Symposium Series 491, American Chemical Society, Washington, DC, 1992, pp. 1-11.
 8. Sabatini, D.A. and Knox, R.C., "Review and Future Directions," Transport and Remediation of Subsurface Contaminants: Colloidal, Interfacial, and Surfactant Phenomena, D.A. Sabatini and R.C. Knox, eds., ACS Symposium Series 491, American Chemical Society, Washington, DC, 1992, pp. 234-240.
 7. Raleigh, L.H., Knox, R.C. and Canter, L.W., "Assessment of Non-Hazardous Industrial Waste Co-Disposal: A State Level Survey," Environmental Professional, Vol. 15, 1992, pp. 1-8.
 6. Knox, R.C. and Canter, L.W., "Water Resources Applications of the NEXRAD Weather Radar System," Environmental Professional, Vol. 13, 1991, pp. 331-336.
 5. Haiges, L. Knox, R.C. and Canter, L.W., "Evaluation of Underground Fuel Spill Cleanup Technologies," The Hazardous Waste Consultant, Vol. 8, No. 2, March-April 1990.
 4. Sims, L.C., Knox, R.C. and Canter, L.W., "Protocol for Selecting an In-Tank Leak Detection Device," International Journal of Environmental Studies, 1990.
 3. Michaelis, M., Knox, R.C. and Canter, L.W., "Evaluation of External Leak Effect Monitoring Systems for Underground Storage Tanks," Environmental Monitoring and Assessment, 1990.
 2. Haiges, L. and Knox, R.C., "Part 2: Ground Water Cleanup at Several Superfund Sites," Hazardous Materials Control, Vol. 1, No. 6, Nov-Dec. 1988.
 1. Knox, R.C., "Assessment of the Effectiveness of Barriers for the Retardation of Pollutant Migration," Ground Water, Vol. 22, No. 3, May-June 1984.
40. Conference Proceedings (34)
34. Nairn, R.W., T. Beisel, R.C. Thomas, J.A. LaBar, K.A. Strevett, D. Fuller, W.H. Strosnider, W.J. Andrews, J. Bays and R.C. Knox. 2009. Challenges in design and construction of a large multi-cell passive treatment system for ferruginous lead-zinc mine waters. In: Proceedings of Joint Conference of the American Society of Mining and Reclamation 26th Annual National Meeting and 11th Billings Land Reclamation Symposium, Revitalizing the Environment: Proven Solutions and Innovative Approaches. May 30 - June 5, 2009, Billings, MT., R.I. Barnhisel (Ed.), pp. 871-892.
 33. R.L. Kolar, R.C. Knox, G.A. Miller, K.K. Muraleetharan, and D.A. Sabatini, "An Assessment of How the Sooner City Project Addresses ASCE's Body of Knowledge", Proceedings of the 2004 American Society for Engineering Education Annual Conference & Exposition, Session 3115, American Society for Engineering Education.
 32. Shiau, B.J., Brammer, J.M, Sabatini, D.A., Harwell, J.H., Knox, R.C., "Recent Development of Low Concentration Surfactant Flushing for NAPL-Impacted Site Remediation and Pollution Prevention," 2003 Petroleum Hydrocarbons and Organic Chemicals in Ground Water: Prevention, Assessment, and Remediation Conference and Exposition, Costa Mesa, CA (August, 2003).
 30. Shiau, B.J., Hasegawa, M.A., Sabatini, D.A., Knox, R.C., Harwell, J.H., and Lago, R. "Field Demonstration of Surfactant-Enhanced DNAPL Remediation – Case Studies." 2001 International Containment & Remediation Technology Conference and Exhibition, Orlando, FL (June, 2001).
 30. Sabatini, D. A., Harwell, J. H., Knox, R. C., Wu, B. and Hasegawa, M. "Surfactant Selection for Enhanced Soil Remediation." Proceedings of the 6th International Conference on Environmental Science and Technology, Pythagorion, Samos, Greece: August 30 - September 2, 1999. Vol B, 210-217.
 29. Sabatini, D.A., Knox, R.C., and Harwell, J.H., "Surfactant Selection for Enhanced Contaminant Extraction", Groundwater Quality: Proceedings of GQ'98 Conference - Universitaet Tuebingen,

Germany, September, 1998, IAHS Publication No. 250, 1998, pp. 361-366.

1. Knox, R.C., Sabatini, D.A., Goodspeed, M., Hasegawa, M., and Chen, L., "Hydraulic Considerations for Advanced Subsurface Characterization and Remediation Technologies", Groundwater Quality: Proceedings of GQ'98 Conference - Universitaet Tuebingen, Germany, September, 1998, IAHS Publication No. 250, 1998, pp. 391-399.
27. Nelson, D.I., Everett, J.W., Nelson, R.M., Knox, R.C., and Kolar, R., "A Research Experience for Undergraduates in Environmental Science and Engineering", Air & Waste Management Association 91st Annual Meeting and Exposition, San Diego, CA, Fall 1997.
26. Chen, L. and Knox, R.C., "Innovative Vertical Circulation Well Enhanced Remediation and Partitioning Tracer Tests for Detection of Tetrachloroethylene (PCE): A Three-Dimensional Sand Tank Case Study", World Environmental Congress (World '96), Cincinnati, OH.
25. Sabatini, D.A., Knox, R.C., Harwell, J.H., and Shiau, B.J., "Surfactant Enhanced NAPL Remediation: From the Laboratory to the Field", International Workshop on Soil and Aquifer Pollution - Non-Aqueous Phase Liquids - Contamination and Reclamation, Technion, Israel Institute of Technology, Haifa, Israel, May 13-15, 1996.
24. Gupta, H.S. and Knox, R.C., "Modeling the Effectiveness of Hydraulic and Impermeable Barriers for Improving Contaminant Extraction or Surfactant Injection", PETRO-SAFE '96 Conference, Houston, TX, January, 1996,
23. Warram, J.E., Knox, R.C. and Robertson, J.M., "Nitrate Contamination from Windrow Composting," The Eighth International Conference on Solid Waste Management and Secondary Materials, Philadelphia, PA, November 1992.
22. Knox, R.C., Gupta, H.S. and Chen, Y., "Increasing the Efficiency of Surfactant Injection Schemes for Pump-and-Treat Remediation Through Use of Impermeable and Hydraulic Barriers," Aquifer Restoration: Pump-and-Treat and the Alternatives, Las Vegas, NV, National Ground Water Association, September 1992.
21. Vieux, B.E., Knox, R.C., Gaur, N. and Black, J., "Spatial Distribution of Chlorides in Drinking Water Wells in the Central Oklahoma Aquifer," Ground-Water Quality of the Central Oklahoma (Garber-Wellington) Aquifer Conference: Proceedings, Open-File Report 92-116, U.S. Geological Survey, February 20, 1992.
20. Sabatini, D.A., Knox, R.C. and Harwell, J. H., "The Potential Use of Edible Surfactants for the Remediation of Contaminated Groundwater Supplies," 3rd CESIO International Surfactants Congress and Exhibition - A World Market, City of London, June 1992.
19. Shiau, B., Gupta, A., Harwell, J.H., Knox, R. C. and Sabatini, D. A., "Edible Surfactants in Enhanced Remediation Processes," AIChE 1992 Summer National Meeting, Minneapolis, MN, August 1992.
18. Gupta, H.S., Chen, Y., and Knox, R.C., "Modeling Innovative Techniques for Improving the Hydraulic Efficiency of Pump and Treat Remediation Systems," 3rd International Conference on Ground Water Quality Research: Subsurface Restoration Conference, Dallas, Texas, June 21-24, 1992.
17. Knox, R.C., Vieux, B.E. and Black, J., "Relaxation Modeling and Spatial Moment Analyses for Tracking Subsurface Hydrocarbon Plume Movement," 3rd International Conference on Ground Water Quality Research: Subsurface Restoration Conference, Dallas, Texas, June 21-24, 1992.
16. Cates, D., Knox, R.C. and Sabatini, D.A., "Evaluation of Soil Parameters and Multicomponent Ion Exchange on Hydrogeochemical Patterns," 3rd International Conference on Ground Water Quality Research: Subsurface Restoration Conference, Dallas, Texas, June 21-24, 1992.
15. Knox, R.C. and Shadizadeh, R., "Aquifer Protection and Contamination Monitoring Related to Waste-

Disposal Facilities," Hazardous Waste Disposal in Oklahoma, Special Publication 90-3, Oklahoma Geological Survey, 1990.

14. Knox, R.C. et al., "An Evaluation of PCB Degradation by Microorganisms: Methanotrophs, Corynebacterium MB1, Alcanigenes Eutrophus H850 and Pseudomonas Putida LB 400," Proceedings of the HAZTECH-90 International Conference on Hazardous Waste and Hazardous Materials Management, May 1990, Houston, Texas.
13. Haiges, L., Knox, R.C. and Canter, L.W., "Evaluation of Underground Fuel Spill Cleanup Technologies," Proceedings of HAZTECH International 89 Conference and Exhibition, 1989.
12. Knox, R.C., "Surface Water Quality Modeling," Proceedings of the 4th International Symposium on Systems Analysis to Management of Water Resources, 1988.
11. Knox, R.C., Canter, L.W. and Robertson, J.M., "Graduate Programs in Ground Water Quality Management: Responding to a Crisis," Proceedings of the National Conference of the North American Association for Environmental Education, 1987.
10. Haiges, L. and Knox, R.C., "Ground Water Cleanup at Selected Superfund Sites," Proceedings of the 8th National Conference and Exhibition - Superfund '87, November 1987.
9. Knox, R.C. and Canter, L.W., "Overview of Ground Water Contamination," Proceedings of the 1987 National Convention of the American Water Works Association, June 1987.
8. Knox, R.C., and Robertson, J.M., "Transport and Fate of Organic Constituents in Drilling Muds," Proceedings of the Third National Conference on Disposal of Drilling Wastes, May 1987.
7. Fairchild, D.F. and Knox, R.C., "Off Site Disposal: Case Study - Merkle Pits, McCloud, Oklahoma," Proceedings of the First National Conference on Disposal of Drilling Wastes, May 1985.
6. Knox, R.C. and Canter, L.W., "Protocol for Aquifer Cleanup Decision-Making at Military Installations," Proceedings of 13th Environmental Systems Symposium, Bethesda, Maryland, Mar. 20-22, 1984, 18 pp.
5. Knox, R.C. and Canter, L.W., "Protocol for Aquifer Cleanup Decision-Making," Proceedings of the NWWA Eastern Regional Conference on Ground Water Management, National Water Well Association, Worthington, Ohio, 1983, pp. 463-494.
4. Knox, R.C., "Effectiveness of Impermeable Barriers for Retardation of Pollutant Migration," Management of Uncontrolled Hazardous Waste Sites, November 1983, pp. 179-184.
3. Knox, R.C., "Utility of Ground Water Models in EIA Studies," editorial in Environmental Impact Assessment Worldletter, Vol. 1, No. 1, June/July 1983, pp. 5-6.
2. Canter, L.W. and Knox, R.C., "Overview of Methodologies for Aquifer Clean-up," American Water Works Association Annual Conference and Exposition, Las Vegas, Nevada, June 5-9, 1983, 39 pp.
1. Knox, R.C., Stover, E.L., and Kincannon, D.F., "Examples of Aquifer Restoration," Groundwater Management Districts Association 9th Annual Conference Proceedings, 1982.

D. Technical Reports (27)

27. Knox, R.C. and Sabatini, D.A., "Reclamation of Brine Contaminated Soil: Clearview Demonstration Project", Submitted to Oklahoma Conservation Commission, July 31, 1999.
26. Shiau, B.J., Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Surfactant-Enhanced Mobilization for Remediation of Subsurface NAPL Contamination at Hill AFB, Utah", Submitted to Hill AFB, September 1997.

25. Shiau, B.J., Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Surfactant-Enhanced Solubilization for Remediation of Subsurface NAPL Contamination at Hill AFB, Utah", Submitted to Hill AFB, September 1997.
24. Sabatini, D.A., Knox, R.C., Tucker, E.E., and Puls, R.W., "Innovative Measures for Subsurface Chromium Remediation: Source Zone, Concentrated Plume, and Dilute Plume", Environmental Research Brief, EPA/600/S-97/005, September, 1997, U.S. Environmental Protection Agency, Ada, OK.
23. Sabatini, D.A., Knox, R.C., and Harwell, J.H., "Surfactant-Enhanced DNAPL Remediation: Surfactant Selection, Hydraulic Efficiency, and Economic Factors", Environmental Research Brief, EPA/600/S-96/002, August, 1996, U.S. Environmental Protection Agency, Ada, OK.
22. Canter, L.W., Knox, R.C., Sabatini, D.A., Vieux, B.E., Chowdhury, A.K.M. and Connick, J.E., "Expert System for Prioritization of Ground Water Contaminant Sources", Cooperative Agreement CR819003, submitted to U.S. Environmental Protection Agency, November, 1993.
21. Canter, L.W., Knox, R.C., Sabatini, D.A., Vieux, B.E., Shaw, K.M., Chowdhury, A.K.M., Overton, D.R. and Kamath, J., "Ground Water Contaminant Identification and Prioritization" completion report submitted to R.S. Kerr Environmental Research Laboratory, USEPA, Ada, OK, December, 1992.
20. Knox, R.C., Canter, L.W., Sabatini, D.A., Bell, R. and Paul D., "Evaluation of Underground Fuel Spill Cleanup Technologies for Selected Navy Sites," September 1992, report submitted to Battelle, Research Triangle, NC.
19. Knox, R.C. and Sabatini, D.A., "Evaluation of Soil Parameters and Multicomponent Ion Exchange on Hydrogeochemical Patterns", January 1992, Grant No. G1114140, OMMRRI.
18. Warram, J.E., Knox, R.C. and Robertson, J.M., "Environmental Assessment of Norman's Yard Waste Composting Operation," October 1992, School of Civil Engineering and Environmental Science, University of Oklahoma.
17. Sabatini, D.A., Palmer, C., Knox, R.C., Harwell, J.H., and Canter, L.W., "Advanced Subsurface Characterization and Remediation", completion report submitted to Battelle, Research Triangle, NC, February 1992.
16. Canter, L.W., Knox, R.C., Sabatini, D.A., Vieux, B.E., Shaw, K.M., Chowdhury, A.K.M., Overton, D.R. and Kamath, J., "Ground Water Contaminant Identification and Prioritization," December 1992, Cooperative Agreement CR 819003-01-0, U.S. Environmental Protection Agency.
15. Haiges, L.R., Paul, D., Knox, R.C. and Canter, L.W., "Evaluation of Underground Fuel Spill Cleanup Technologies," December 1988, Environmental and Ground Water Institute, Norman, Oklahoma.
14. Knox, R.C., Atalay, A. and Canter, L.W., "Granular Activated Carbon Treatment of Volatile Organic Compound Air Streams," December 1988, Environmental and Ground Water Institute, Norman Oklahoma.
13. Knox, R.C., and Canter, L.W., "Summary of Cost Information on Ground Water Treatment by Air Stripping and Carbon Adsorption," March 1988, report submitted to U.S. Environmental Protection Agency, Ada, Oklahoma.
12. Knox, R.C., and Canter, L.W., "Ground Water Monitoring Planning Guide," September 1985, report submitted to U.S. Army, Huntsville, Alabama.
11. Knox, R.C., et al., "State-of-the-art of Aquifer Restoration," September 1984, report submitted to U.S. Environmental Protection Agency, Ada, Oklahoma.
10. Canter, L.W., et al., "Environmental Implications of Off-Site Drilling Mud Pits in Oklahoma," April 1984, Environmental and Ground Water Institute, Norman, Oklahoma.
9. Canter, L.W., et al., "Environmental Study of Merkle Pits Near McLoud, Oklahoma, April 1984,

Environmental and Ground Water Institute, Norman, Oklahoma.

8. Canter, L.W. and Knox, R.C., "Evaluation of Septic Tank System Effects on Ground Water Quality," July 1983, National Center for Ground Water Research, Norman, Oklahoma
7. Knox, R.C. and Canter, L.W., "Summary of Ground Water Modeling," May 1983, Environmental and Ground Water Institute, Norman, Oklahoma
6. Knox, R.C., "Effectiveness of Impermeable Barriers for Retardation of Pollutant Migration," Ph.D. Dissertation, 1983, University of Oklahoma, Norman, Oklahoma.
5. Knox, R.C. and Canter, L.W., "Miscellaneous Ground Water Pollution Sources and Related Issues," NCGWR 80-33, November 1980, National Center for Ground Water Research, Norman, Oklahoma.
4. Knox, R.C. and Canter, L.W., "Effects of Oil and Gas Field Activities on Ground Water Quality," NCGWR 80-30, November 1980, National Center for Ground Water Research.
3. Knox, R.C. and Canter, L.W., "Effects of Coal Extraction and Development on Ground Water Quality," NCGWR 80-21, October 1980, National Center for Ground Water Research, Norman, Oklahoma.
2. Knox, R.C. and Canter, L.W., "Summary of Ground Water Modeling in the United States," NCGWR 80-20, October 1980, National Center for Ground Water Research, Norman, Oklahoma.
1. Knox, R.C., "Effects of Land Disposal of Sewage Sludge on Ground Water Quality," NCGWR 79-2, October 1979, National Center for Ground Water Research, Norman, Oklahoma.

E. University Reports (53)

1. Knox, R.C., "Program Self Study Report for Civil Engineering", Submitted to Accreditation Board for Engineering and Technology, July 1, 2011.
2. Knox, R.C., "Program Self Study Report for Environmental Engineering", Submitted to Accreditation board for Engineering and Technology, July 1, 2011.
3. Knox, R.C., "Program Self Study Report for Architectural Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 2011.
4. Knox, R.C., "Program Self Study Report for Civil Engineering", Submitted to Accreditation Board for Engineering and Technology, July 1, 2005.
5. Knox, R.C., "Program Self Study Report for Environmental Engineering", Submitted to Accreditation board for Engineering and Technology, July 1, 2005.
6. Knox, R.C., "Program Self Study Report for Architectural", Submitted to Accreditation Board for Engineering and Technology, July 1, 2005.
7. Knox, R.C., "Program Self Study Report for Civil Engineering", Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
8. Knox, R.C., "Program Self Study Report for Environmental Engineering", Submitted to Accreditation board for Engineering and Technology, July 1, 1999.
9. "Program Self Study Report for Aerospace Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
10. "Program Self Study Report for Chemical Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
11. "Program Self Study Report for Computer Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
12. "Program Self Study Report for Electrical Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
13. "Program Self Study Report for Engineering Physics", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
14. "Program Self Study Report for General Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
15. "Program Self Study Report for Industrial Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.
16. "Program Self Study Report for Petroleum Engineering", R.C. Knox, ed., Submitted to Accreditation Board for Engineering and Technology, July 1, 1999.

17. Knox, R.C., "Program Outcomes Assessment Report for Architectural Engineering for 2010-11". September 2011.
18. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2010-11". September 2011.
19. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2010-11". September 2011.
20. Knox, R.C., "Program Outcomes Assessment Report for Architectural Engineering for 2009-10". September 2010..
21. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2009-10". September 2010.
22. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2009-10". September 2010.
23. Knox, R.C., "Program Outcomes Assessment Report for Architectural Engineering for 2008-09". September 2009.
24. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2008-09". September 2009.
25. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2008-09". September 2009.
26. Knox, R.C., "Program Outcomes Assessment Report for Architectural Engineering for 2007-08". September 2008.
27. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2007-08". September 2008.
28. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2007-08". September 2008.
29. Knox, R.C., "Program Outcomes Assessment Report for Architectural Engineering for 2006-07". September 2007.
30. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2006-07". September 2007.
31. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2006-07". September 2007.
32. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2005-06". September 2006.
33. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2005-06". September 2006.
34. Knox, R.C., "Program Outcomes Assessment Report for Architectural Engineering for 2004-05". September 2005.
35. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2004-05". September 2005.
36. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2004-05". September 2005.
37. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2003-04". September 2004.
38. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2003-04". September 2004.
39. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2002-03". September 2003.
40. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2002-03". September 2003.
41. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2001-02". September 2002.
42. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2001-02", September 2002.
43. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 2000-01". September 2001.
44. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 2000-01", September 2001.
45. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1999-00". September 2000.

46. Knox, R.C., "Program Outcomes Assessment Report for Environmental Engineering for 1999-00", September 2000.
47. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1998-99". September 1999.
48. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1997-98". September 1998.
49. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1996-97". September 1997.
50. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1995-96". September 1996.
51. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1994-95". September 1995.
52. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1993-94". September 1994.
53. Knox, R.C., "Program Outcomes Assessment Report for Civil Engineering for 1992-93". September 1993.

PRESENTATIONS SINCE 1990 (60)

60. R.L. Kolar, R.C. Knox, K. Grammol and T.R. Rhoads, "A Pilot Study for a Course-less Curriculum", 2005 American Society for Engineering Education Annual Conference & Exposition, American Society for Engineering Education.
59. R.L. Kolar, R.C. Knox, G.A. Miller, K.K. Muraleetharan, and D.A. Sabatini, "An Assessment of How the Sooner City Project Addresses ASCE's Body of Knowledge", 2004 American Society for Engineering Education Annual Conference & Exposition, Session 3115, American Society for Engineering Education.
58. Hasegawa, M., Shiau, B., Sabatini, D. A. and Knox, R. C., "Ex Situ Soil Washing for the Removal of Total Petroleum Hydrocarbons and Brine." 6th Annual International Petroleum Environmental Conference, Houston, TX, November 16-18, 1999.
57. Sabatini, D. A., Harwell, J. H., Knox, R. C. and Hasegawa, M. "Surfactant-Enhanced Subsurface Remediation: Extraction Efficiency and Surfactant Reuse." EPA Workshop: Innovative Clean-up Approaches: Investments in Technology Development, Results and Outlook for the Future. Bloomingdale, IL, November 2-4, 1999. Invited.
56. Knox, R.C., Sabatini, D.A., Harwell, J.H., Hasegawa, M., and Boettcher, L., "Surfactant -Enhanced Remediation of Hydrocarbons - 3 Field Demonstrations", The 5th International Petroleum Environmental Conference, October 20-23, 1998, Albuquerque, NM
55. Sabatini, D.A., Knox, R.C., and Harwell, J.H., "Surfactant Selection for Enhanced Contaminant Extraction", Groundwater Quality: Proceedings of GQ'98 Conference - Universitaet Tuebingen, Germany, September, 1998, September 24, 1998.
54. Knox, R.C., Sabatini, D.A., Goodspeed, M., Hasegawa, M., and Chen, L., "Hydraulic Considerations for Advanced Subsurface Characterization and Remediation Technologies", Groundwater Quality: Proceedings of GQ'98 Conference - Universitaet Tuebingen, Germany, September, 1998, September 23, 1998.
53. Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Spartan Chemical Surfactant Flush of VOC's with Recycling of Surfactants", Research & Development of Emerging Environmental Remediation Technologies, Michigan Department of Environmental Quality, May 13, 1998.
52. Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Surfactant-Enhanced Subsurface Remediation at Hill AFB", University of Tubingen, Tubingen, DE, March 14, 1998.
51. Knox, R.C., "Physical Modeling of Vertical Circulation Wells", University of Karlsruhe, Karlsruhe, DE, March 1998.

50. Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Enhanced Contaminant Extraction", Surfactant Workshop, University of Stuttgart, Stuttgart, DE, March 11, 1998.
49. Sabatini, D. A., Harwell, J. H. and Knox, R. C., "Surfactant Enhanced Subsurface Remediation: Laboratory and Field Observations." The University of Strasbourg, Strasbourg, France, December 19, 1997.
48. Knox, R.C., Sabatini, D.A., Harwell, J.H., and Shiau, B.J., "Surfactant-Enhanced Remediation of Mixed NAPL Wastes: Solubilization versus Mobilization", ACS Fifth Chemical Congress of North America, November 11-15, 1997, Cancun, Mexico, November 13, 1997.
47. Harwell, J.H., Sabatini, D.A., Knox, R.C., and Shiau, B.J. "Processes and Concepts for Optimizing the Economics of Surfactant-Enhanced Remediation", ACS Fifth Chemical Congress of North America, November 11-15, 1997, Cancun, Mexico, November 13, 1997.
46. Sabatini, D. A., Harwell, J. H. and Knox, R. C. "Surfactant-Enhanced In Situ Ground Water Remediation", Separations Technology VII: Separations for Clean Production, Engineering Foundation Conference, Davos, Switzerland, October 26-31, 1997.
45. Sabatini, D. A., Harwell, J. H., Knox, R. C. and Shiau, B. J., "Surfactant Selection Criteria for Enhanced Subsurface Remediation: Laboratory and Field Observations", German Colloid Chemistry Society Meeting, University Essen, Essen, DE. October 2, 1997.
44. Sabatini, D. A., Harwell, J. H., Knox, R. C. and Shiau, B. J., "Surfactant Selection Criteria for Enhanced Subsurface Remediation: Laboratory and Field Observations", German Colloid Chemistry Society Meeting, University Essen, Essen, DE. October 2, 1997.
43. Shiau, B.J., Karapanagioti, H.K., Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Solubilization and Mobilization of Mixed NAPL Wastes Using Surfactants", Emerging Technologies in Hazardous Waste Management IX, Pittsburgh, PA, Sept. 15-17, 1997.
42. Richardson, T., Knox, R.C., and Sabatini, D.A., "The Clearview Brine Reclamation Demonstration Project - A Success Story", The 4th International Petroleum Environmental Conference, September 9-12, 1997, San Antonio, TX.
41. Sabatini, D. A., Knox, R. C. and Harwell, J. H. "Surfactant-Enhanced Subsurface Remediation: Laboratory and Field Observations." The R. S. Kerr Environmental Research Laboratory, Ada, OK, July 31, 1997.
40. Knox, R.C., Sabatini D.A., and Harwell, J.H., "Long-Term Implications of Chemical Extractants Used for Subsurface Remediation", 17th Annual Meeting of the International Association for Impact Assessment, New Orleans, LA, May 28-31, 1997.
39. Harwell, J.H., Sabatini, D.A., O'Haver, J., and Knox, R.C., "AATDF Demonstrations: Surfactant Recovery", Research Technologies Development Forum, In Situ Flushing Action Team, Hill AFB, UT, May 8-9, 1997.
38. Knox, R.C., Sabatini, D.A., Harwell, J.H., and Shiau, B.J. "SERDP Enhanced Source Removal: Surfactant Solubilization", RTDF In-Situ Flushing Action Team Meeting, Hill Air Force Base, UT, May 8-9, 1997.
37. Sabatini, D.A., Harwell, J.H., Knox, R.C., and Shiau, B.J. "SERDP Enhanced Source Removal: Surfactant Mobilization", RTDF In-Situ Flushing Action Team Meeting, Hill Air Force Base, UT, May 8-9, 1997.
36. Shiau, B.J., Knox, R.C., Sabatini, D.A., Harwell, J.H., and Shiau, B.J. "Surfactant-Enhanced Solubilization of Mixed NAPL Wastes at Hill, AFB: A Case Study", presented at 213 ACS National

Meeting, San Francisco, CA, April 13-17, 1997.

35. Shiau, B.J., Knox, R.C., Sabatini, D.A., Harwell, J.H., and Shiau, B.J. "Surfactant-Enhanced Mobilization of Mixed NAPL Wastes at Hill, AFB: A Case Study", presented at 213 ACS National Meeting, San Francisco, CA, April 13-17, 1997.
34. Chen, L. and Knox, R.C., "Innovative Vertical Circulation Well Enhanced Remediation and Partitioning Tracer Tests for Detection of Tetrachloroethylene (PCE): A Three-Dimensional Sand Tank Case Study", World Environmental Congress (World '96), Cincinnati, OH.
33. Knox, R.C., Sabatini, D.A., Shiau, B.J., and Harwell, J.H., "Ground Water Remediation by Solubilization", Annual Meeting of the Institute for Applied Surfactant Research, University of Oklahoma, Norman, OK, November 21, 1996.
32. Sabatini, D.A., Knox, R.C., Harwell, J.H., West, C.C., Shiau, B.J., and Brown, E., "Surfactant Enhanced Remediation of Subsurface Petroleum Contamination: Results of a Field Test", 211th ACS National Meeting, American Chemical Society, New Orleans, LA, March 24-26, 1996.
31. Sabatini, Knox, R.C., Harwell, J.H., and Shiau, B.J., "Surfactant Enhanced NAPL Remediation: From the Laboratory to the Field", International Workshop on Soil and Aquifer Pollution - Non-Aqueous Phase Liquids - Contamination and Reclamation, Technion, Israel Institute of Technology, Haifa, Israel, May 13-15, 1996.
30. Shiau, B.J., Wu, B., Karapanagioti, H.K., Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Use of Surfactants for Aquifer Remediation of Petroleum Wastes", Emerging Technologies in Hazardous Waste Management VIII. ACS Industrial and Environmental Chemistry Division Meeting, Birmingham, AL, September 9-12, 1996.
29. Knox, R.C., Sabatini, D.A., Thal, A., and Harwell, J.H., "Surfactant Enhanced Solubilization of Mixed NAPL Wastes: A Case Study", Emerging Technologies in Hazardous Waste Management VIII. ACS Industrial and Environmental Chemistry Division Meeting, Birmingham, AL, September 9-12, 1996.
28. Shiau, B.J., Wu, B., Karapanagioti, H.K., Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Use of Surfactants for Aquifer Remediation of Petroleum Wastes", presented at Third Annual Petroleum Environmental Conference, Albuquerque, NM, September 24-27, 1996.
27. Knox, R.C., Sabatini, D.A., Harwell, J.H., and West, C.C., "Surfactant Enhanced Subsurface Remediation - A Field Demonstration", presented at Third Annual Petroleum Environmental Conference, Albuquerque, NM, September 24-27, 1996.
26. Sabatini, D.A., Harwell, J.H., Knox, R.C., Shiau, B.J., Brown, E., Wu, B., Wesson, L., and Carter, T., "Surfactant Enhanced Subsurface Remediation: From the Laboratory to the Field", presented at 11th International Symposium on Surfactants in Solution, June 9-13, 1996, Jerusalem, Israel.
25. Knox, R.C., Sabatini, D.A., Harwell, J.H., West, C.C., Blaha, F., Griffin, C., Wallick, D., and Quencer, L., "Traverse City Field Test", Workshop on In Situ Surfactant Use, Kansas City, MO, September 20, 1995.
24. Chen, Y., Chen, L.Y., and Knox, R.C., "Assessing the Performance of Vertical Circulation Wells Using Physical and Numerical Models", presented at The Second International Petroleum Environmental Conference, New Orleans, LA, September 25-27, 1995.
23. Knox, R.C., Sabatini, D.A., Sack, R.L., Haskins, R.D., Roach, L.W., and Fairbairn, S.W., "A Practitioner-Educator Partnership for Teaching Engineering Design", presented to Education Via Academic-Government-Industry Partnerships, ASEE Annual Meeting, Anaheim, CA, June 25-28, 1995.
22. Chen, Y., Chen, L.Y., and Knox, R.C., "Modeling the Effectiveness of Innovative Measures for Improving the Hydraulic Efficiency of Surfactant Injection and Recovery Systems", presented at Fifth

Annual WERC Technology Development Conference, Las Cruces, NM, April 1995.

21. Knox, R.C., Sabatini, D.A., Sack, R.L., Haskins, R.D., Roach, L.W, and Fairbairn, S.W., "A Practitioner-Educator Partnership for Teaching Engineering Design", presented to Oklahoma City Branch of ASCE, February, 1995.
20. Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Surfactant Selection and Optimization of Single Well Injection/Extraction for DNAPL Remediation", presented at RSKERL Ground Water Research Seminar, Oklahoma City, OK, June 1995
19. Krebs-Yuill, B., Harwell, J.H., Sabatini, D.A., and Knox, R.C., "Economic Considerations in Surfactant-Enhanced Pump and Treat", 207th ACS National Meeting, American Chemical Society, San Diego, CA, March 13-17, 1994.
18. Chen, Y., Chen, L.Y., and Knox, R.C., "Use of Vertical Circulation Wells to Improve the Hydraulic Efficiency of Surfactant Enhanced Remediation Systems", presented to Kentucky Water Resources Research Institute, August 1994, Lexington, KY
17. Knox, R.C., Sabatini, D.A., and Harwell, J.H., "Use of Surfactants to Enhance Removal of Non-Aqueous Phase Liquids in the Subsurface" presented to Kentucky Water Resources Research Institute, August 1994, Lexington, KY
16. Gupta, H.S., Chen, Y., and Knox, R.C., "Modeling the Effectiveness of Innovative Measures for Improving the Hydraulic Efficiency of Surfactant Injection and Recovery Systems", presented at Surfactant-Enhanced Remediation of Subsurface Contamination: Emerging Technologies, ACS National Meeting, San Diego, CA, March 1994
15. Gupta, H. and Knox, R.C., "Modeling the Effectiveness of Barriers for Improving the Hydraulic Efficiency of a Pump and Treat System", Toxic Substances and the Hydrologic Sciences, American Institute of Hydrology, San Antonio, TX, April 10-13, 1994.
14. Knox, R.C. and Chen, Y., "Innovative Hydraulic Measures for Optimizing Subsurface Remediation", Institute for Applied Surfactant Research - Fall Meeting, December 2, 1993.
13. Gupta, H. and Knox, R. C., "Assessment of the Hydraulic Efficiency of Barrier Enhanced Pump and Treat Systems Utilizing Chemical Agents", ER '93 - Environmental Remediation Conference, U.S. Department of Energy, Office of Environmental Restoration, Augusta, GA, October 24-28, 1993.
12. Cates, D.A. and Knox, R.C., "Graphical Techniques for Analyzing Subsurface Transport of Oilfield Brine Contamination", Geosciences Seminar - University of Tulsa, Tulsa, OK, March 24th, 1993.
11. Knox, R.C. and Cates, D.A., "Transport of Inorganic Constituents of Oilfield Brines in the Subsurface", Oklahoma's Water and Sustainable Development, Oklahoma City, OK, February 17-18, 1993.
10. Harwell, J.H., Roberts, B., Sabatini, D.A., and Knox, R.C., "Model Aquifer Evaluation of Surfactants for Enhanced Water Flooding", AIChE 1993 Summer National Meeting, Seattle, WA, August 15-18, 1993.
9. Sabatini, D.A., Knox, R.C. and Harwell, J.H., "Surfactant Enhanced Subsurface Remediation of DNAPLs", Subsurface Cleanup and Mobilization Processes (SCAMP) Review Panel. USEPA, R.S. Kerr Environmental Research Laboratory, Ada, OK, October 20-21, 1992.
8. Shiau, B.J., Gupta, A., Harwell, J.H., Knox, R.C. and Sabatini, D.A., "Edible Surfactants in Enhanced Remediation Processes", AIChE 1992 Summer National Meeting, Minneapolis, MN, August 9-12, 1992, received best paper award for the conference.
7. Gupta, H.S., Chen, Y. and Knox, R.C., "Modeling Innovative Techniques for Improving the Hydraulic Efficiency of Pump and Treat Remediation Systems", 3rd International Conference on Ground Water Quality Research: Subsurface Restoration Conference, Dallas, Texas, June 21-24, 1992.

6. Knox, R.C., Vieux, B. and Black, J., "Relaxation Modeling and Spatial Moment Analyses for Tracking Subsurface Hydrocarbon Plume Movement," 3rd International Conference on Ground Water Quality Research: Subsurface Restoration Conference, Dallas, Texas, June 21-24, 1992.
5. Cates, D., Knox, R.C. and Sabatini, D.A., "Evaluation of Soil Parameters and Multicomponent Ion Exchange on Hydrogeochemical Patterns," 3rd International Conference on Ground Water Quality Research: Subsurface Restoration Conference, Dallas, Texas, June 21-24, 1992.
4. Canter, L.W., and Knox, R.C., "Site Assessments at Exploration and Production Facilities," 1991 Society of Petroleum Engineers Forum Series, Crested Butte, Colorado, August 1991.
3. Knox, R.C., Canter, L.W., Sabatini, D.A., and Haiges, L., "Innovations in Hydrocarbon Remediation", Second Annual Environmental Protection in the Energy Industry Symposium, University of Tulsa, Tulsa, OK, December 11, 1990.
2. Knox, R.C., et al., "An Evaluation of PCB Degradation by Microorganisms," presented at HAZTECH-90 International Conference on Hazardous Waste and Hazardous Materials Management, Houston, Texas, May 1990.
1. Cohenour, D. and Knox, R.C., "Nitrate Contamination in the Central Oklahoma Aquifer," presented at the Annual Conference of the National Water Well Association, Kansas City, Missouri, March 1990.

SPONSORED RESEARCH

64 projects totaling over \$18 million (Individual Credit - \$5.9 million)

38 projects totaling over \$12.7 million since 1995

Co-Principal Investigator on 50 Projects

Principal Investigator on 14 Projects

Project List

1. "Development of Protocol for Aquifer Restoration Strategies." Sponsor -- Robert S. Kerr Environmental Research Laboratory, U. S. Environmental Protection Agency, Ada, Oklahoma, September 1982 to August 1983, \$200,000, Co-Principal Investigator.
2. "Environmental Implications of Off-Site Drilling Mud Pits in Oklahoma." Sponsor -- Oklahoma Corporation Commission, Oklahoma City, Oklahoma, September 1983 to March 1984, \$109,000, Co-Principal Investigator.
3. "Performance Evaluation of Individual Home Wastewater Treatment Systems." Sponsor -- 1) Doise Concrete, Inc. and 2) Southwest Environmental Equipment and Tool Company, Inc., 1985, \$40,000, Principal Investigator.
4. "Granular Activated Carbon Treatment of Volatile Organic Compounds in Air Streams." Sponsor -- U.S. Navy, North Island, California, 1988 to 1989, \$85,000, Co-Principal Investigator.
5. "NEXRAD Hydrology Symposium." Sponsors -- United States Geological Survey, 1988, \$20,000, Co-Principal Investigator.
6. "Field Demonstration of Remediation Technologies for Underground Fuel Tank Spill Cleanup Programs." Sponsor -- U.S. Navy, Port Hueneme, California, 1989 to 1992, \$140,000, Co-Principal Investigator.
7. "Determination of Volatilization Rates and By-Products for Hydrocarbons in Subsurface." Sponsor -- U.S. Navy, Port Hueneme, California, 1989, \$36,000, Co-Principal Investigator.
8. "Advanced Subsurface Characterization for Sorptive Processes Using Nonionic Surfactants." Sponsor -- U.S. Navy, Port Hueneme, California, 90-555, October 1990 to August 1992, \$87,750, Co-Principal Investigator.

9. "Evaluation of Underground Fuel Spill Cleanup Technologies for Selected Navy Sites." Sponsor -- Battelle, 89-196, September 1990 to August 1992, \$34,831, Co-Principal Investigator.
10. "Contaminant Mobility Study: Norman Municipal Composting Site." Sponsor -- City of Norman, April 1991 to December 1991, \$11,000, Co-Principal Investigator.
11. "U. S. Department of Energy EPSCoR Traineeships." Sponsor -- U. S. Department of Energy, DE-FG02-91ER75662, September 1991 to September 1995, \$500,000, Principal Investigator.
12. "Planning Proposal for U. S. Department of Energy EPSCoR Program." Sponsor -- U. S. Department of Energy, DE-FG02-91ER75670, September 1991 to September 1993, \$100,000, Principal Investigator.
13. "Contaminant Identification and Classification." Sponsor -- U. S. Environmental Protection Agency, Ada, Oklahoma, CR 819003-01-0, September 1991 to September 1993, \$180,000, Co-Principal Investigator.
14. "Surfactant Enhanced Remediation of Subsurface DNAPL Contamination with Surfactant Recovery." Sponsor -- U. S. Environmental Protection Agency, Ada, Oklahoma, CR 818553-01-0, October 1991 to October 1994, \$303,000, Co-Principal Investigator.
15. "Sandtank Testing of Surfactant Enhanced Remediation of Subsurface Contamination by Chlorinated Solvents." Sponsor -- Surfactant Associates, Inc., Norman, Oklahoma, July 1992, \$9,600, Co-Principal Investigator.
16. "Innovative Methods for Remediation of Subsurface Chromium Contamination." Sponsor -- U. S. Environmental Protection Agency, Ada, Oklahoma, CR 820736-01-0 (T-2079), November 1992 to November 1994, \$175,000, Co-Principal Investigator.
17. "DOE/EPSCoR Traineeship Renewal." Sponsor -- U.S. Department of Energy, DE-FG02-91ER75662, September 1993 to September 1995, \$250,000, Principal Investigator.
18. "DOE/EPSCoR Planning Proposal." Sponsor -- U.S. Department of Energy, DE-FG02-91ER75670, September 1993 to September 1994, \$20,000, Principal Investigator.
19. "Building the Future: The Role of Engineering and Environmental Science in Sustaining Society." Sponsor -- Oklahoma State Regents for Higher Education, \$59,000, 1993, Co-Principal Investigator.
20. "Reclamation of Brine Contaminated Soil: Clearview Demonstration Project", Sponsor -- Oklahoma Conservation Commission, 080193AGR, October 1993 to January 1997, \$175,000, Principal Investigator.
21. "Protecting the Future of Ourtown: The Role of Environmental Engineering and Science" Sponsor - Oklahoma State Regents for Higher Education, \$44,683, 1994, Co-Principal Investigator.
22. "DOE EPSCoR Planning Proposal." Sponsor -- U.S. Department of Energy, DE-FG02-91ER75670, September 1994 to September 1995, \$20,000, Principal Investigator.
23. "DOE EPSCoR Traineeship Proposal." Sponsor -- U.S. Department of Energy, DE-FG02-91ER75670, September 1994 to September 1997, \$100,000, Principal Investigator.
24. "A Pilot-Scale Demonstration of Surfactant Enhanced Subsurface Remediation of Chlorinated Hydrocarbons" Sponsor -- U.S. Environmental Protection Agency, Ada, Oklahoma, CR 822689-01-0 (T-2079), August 1994 to July 1995, \$100,000, Co-Principal Investigator.
25. "Design Manual for the Extraction of Contaminants from Unconsolidated Subsurface Environments." Sponsor -- U.S. Environmental Protection Agency, Ada, Oklahoma, R 11961-7200-94, July 1994 to July 1997, \$3.2 million, Co-Principal Investigator.

26. "Mixing Rules for Optimization of Dowfax Blends for Soil Washing, In Situ Aquifer Remediation, Oil Spill Cleanup and Solvent Free Cleaning Systems," Sponsor -- DOW Chemical, 1/94 to 12/94,\$32,377, Co-Principal Investigator.
27. "Performance Testing of Innovative Technologies." Sponsor -- New Mexico State University, Q00162, \$20,460, June 1995 to January 1996, Co-Principal Investigator.
28. "Protecting the Future of Ourtown: The Role of Engineering & Science" Sponsor -- Oklahoma State Regents for Higher Education, \$43,738, 1995, Co-Principal Investigator.
29. "Surfactant Enhanced Subsurface Remediation." Sponsor -- Oklahoma Center for the Advancement of Science and Technology, AR4-046, May 1995 to April 1997, \$210,000, Co-Principal Investigator.
30. "Separation Processes for Surfactant-Contaminant Separation and Surfactant Reuse." Sponsor-- Advanced Applied Technology Demonstration Facility (Rice University / SERDP), November 1995 to October 1997, \$398,705, Co-Principal Investigator.
31. "Environmental Applications of the Oklahoma Mesonet." Sponsor -- National Science Foundation EPSCoR, OSR-9550478, August 1995 to July 1998, \$1,010,000 (plus \$1,010,000 matching funds), Co-Principal Investigator.
32. "Automation and Characterization of an Environmental Research Facility" Sponsor -- National Science Foundation EPSCoR Experimental Systemic Initiative, OSR-953363, July 1995 to June 1998, \$274,442 (plus \$274,442 matching funds), Principal Investigator.
33. "Acquisition of Equipment to Create the Environmental Computing Applications System." Sponsor -- National Science Foundation, ATM-9512145, September 1995 to August 1998, \$580,000, Co-Principal Investigator.
34. "Institute for Applied Surfactant Research," Sponsors -- Dupont, Kerr McGee, ICI, \$60,000, 08099LTR, Co-Principal Investigator.
35. "Intrinsic Bioremediation of Gas Condensate Hydrocarbons." Sponsor -- U.S. Department of Energy, DE-FG03-96-ER-62287, September 15, 1996 to November 30, 1999, \$57,301, Co-Principal Investigator.
36. "Surfactant-Enhanced Subsurface Remediation of Petroleum Hydrocarbons", Sponsor - Trust Environmental Services LLC, \$14,400, January to July, 1997, Co-Principal Investigator.
37. "Research Experience for Undergraduates in Environmental Monitoring and Modeling", Sponsor -- National Science Foundation, February 1997, \$57,397, Co-Principal Investigator, .
38. "Surfactant/Cosolvent Treatability Study for DNAPL at WAG6 - Paducah Gaseous Diffusion Plant." Sponsor -- Surbec LLC, October 1997 to January 1999, \$100,000, Co-Principal Investigator.
39. "Surfactant-Enhanced Subsurface Remediation of Petroleum Hydrocarbons - Tinker", Sponsor -- Surbec LLC, August 1997 to July 1998, \$20,000, Co-Principal Investigator.
40. "A Field Demonstration of Surfactant-Enhanced DNAPL Remediation", Sponsor -- Environmental Protection Agency, October 1997 to September 2000, \$441,362, Co-Principal Investigator.
41. "Center for Environmental Applications of the Oklahoma Mesonet Phase 3", Sponsor -- National Science Foundation, February 1998 to January 2001, \$723,737, Co-Principal
42. "Chemicals in the Environment - Doctoral Fellowships in Environmental Engineering", Sponsor -- U.S. Department of Education, August 1998 to September 1999, \$601,224, Co-Principal Investigator.
43. "Sooner City - Design Across the Curriculum", Sponsor - National Science Foundation, August 1998 to

- July, 2001, \$869,701, Co-Principal Investigator.
44. "Surfactant-Enhanced Subsurface Remediation of Petroleum Hydrocarbons - McLelland", Sponsor -- Surbec LLC, February to December 1999, \$50,000, Co-Principal Investigator.
 45. "Surfactant-Enhanced Treatability Study at Alameda Point", Sponsor -- Surbec LLC, March to October 1999, \$40,000, Co-Principal Investigator.
 46. "Acquisition and Development of Equipment for Unsaturated Soil Research", Sponsor -- NSF MRI Program, \$368,778 + \$161,496 (OU cost sharing), 9/00-8/02, with Drs. Muraleetharan, Kibbey, Zaman, Mooney, Sabatini, Kolar and Knox, Co-Principal Investigator (2%)
 47. "Rehabilitation of the Pawnee Boarding School", Sponsor -- Little Eagle and Associates, 2000, \$3000, Principal Investigator
 48. "Groundwater Sensitivity Analysis for Potential Pollution Sources," Sponsor -- U.S. EPA through Oklahoma Conservation Commission: \$380,063 (\$228,038 from EPA + \$152,025 cost sharing), Zaman, M., K. Strevett, R. Knox. 12/96 - 02/01, 1996 319(H) Task 68, Co-Principal Investigator (33%)
 49. "The Effect of In Situ Biosurfactant Production on Hydrocarbon Biodegradation," Sponsor -- EPA (97-NCERQA-1F); \$375,000, Strevett, K, D. Sabatini, R. Tanner, and R. Knox, 3/98 - 08/01, Co-Principal Investigator (25%)
 50. "Passive Treatment of Metal-Rich Waters Through Enhanced Wetland Technologies", Sponsor -- U.S. EPA, Years 1&2, 2001, Individual Credit - \$16,000, Co-PI (10%)
 51. "Passive Treatment of Metal-Rich Waters Through Enhanced Wetland Technologies", Sponsor -- Okla. State Regents, Years 1&2, 2001, Individual Credit - \$8000, Co-PI (10%)
 52. "The Oklahoma Bridge Design Squad", Sponsor -- ODOT, Year 1, 2001, Individual Credit - \$170,000, PI (100%)
 53. "Adventure Engineering", Sponsor -- NSF GK-12, Year 2, 2001, Individual Credit - \$363,517, PI (assumed project from Dr. Mooney)
 54. "Adventure Engineering", Sponsor -- NSF GK-12, Year 2 supplement, 2001, Individual Credit - \$24,500, PI (assumed project from Dr. Mooney)
 55. "Pilot Study for a Courseless Curriculum", Sponsor -- NSF Planning Grant, 2002, Individual Credit - \$100,000, Co-PI (25%)
 56. "Research Experience for Undergraduates in GeoEnvironmental Systems." Sponsor -- NSF REU Site Award, 2002, \$418112, Co-PI (5%).
 57. "Development of the Central Southwest Gulf Coast Regional Node of the NBII", Sponsor -- HARC, 2003, \$25,000, Co-PI (20%)
 58. "Passive Treatment of Metal-Rich Waters Through Enhanced Wetland Technologies" Sponsor -- Okla. State Regents, Year 3, 2003, \$40,000, Co-PI (10%)
 59. "The Oklahoma Bridge Design Squad," Sponsor -- ODOT, Year 2, 2003 \$113,320, PI (100%)
 60. "Doctoral Fellowships in Sustainable Technologies for Civil and Environmental Systems" Sponsor -- US DoEd, 2003, \$694,176, Co-PI (10%)
 61. "The Oklahoma Bridge Design Squad," Sponsor -- ODOT, 2004, Year 3, \$103,019, PI (100%)
 62. "Evaluation of Sub-micellar Synthetic Surfactants versus Biosurfactants for Enhanced LNAPL Recovery,"

Sponsor -- Integrated Petroleum Environmental Consortium, 2004, \$94,518, Co-PI (33%)

63. "Design, Construction and Evaluation of a Passive Treatment System for Contaminated Mine Waters," Sponsor -- USEPA, 2004, \$2,982,300, Co-PI (5%)
64. "Source, Transport and Fate of Mine Waste Contaminants at the Tar Creek Superfund Site, Oklahoma," Sponsor -- USGS, 2004, \$888,570, Co-PI (10%)

INTERNAL PROJECTS

1. "Assessment of the Impacts of Coal Mining and Conversion on Ground Water Resources," Sponsor -- Energy Resources Center, 1980, \$10,000, Co-Principal Investigator.
2. "Physical Modeling of the Effectiveness of Subsurface Barriers for Ground Water Pollution Control", Sponsor -- Research Council, 1983, \$3125, Principal Investigator.
3. "In-Situ Treatment of PCBs", Sponsor - Energy Center, 1988, \$6200, Co-Principal Investigator.
4. "Faculty Development Award", Sponsor -- Provost's Office, 1988, \$785.61, Principal Investigator.
5. "Precipitation Measurement Requirements for Hydrologic Studies in Relation to Capabilities of the NEXRAD System", Sponsor -- Cooperative Institute for Mesoscale Meteorological Studies CIMMS, 1988, \$15,000, Co-Principal Investigator.
6. "Modeling Multicomponent VOC Adsorption on Granular Activated Carbon", Sponsor -- Research Council, 1989, \$1348, Co-Principal Investigator.
7. "Laboratory Equipment", Sponsor -- Research Council, 1989, \$737, Principal Investigator.
8. "Evaluation of Soil Parameters and Multicomponent Ion Exchange on Hydrogeochemical Patterns," Sponsor - Oklahoma Mining and Mineral Resources Research Institute, Norman, Oklahoma, G1114140, July 1991 to June 1992, \$7,300, Co-Principal Investigator.
9. "Ecological Aspects of Storing Fly Ash in Mines." Sponsor -- Oklahoma Mining and Mineral Resources Research Institute, Norman, Oklahoma, February 1993 to January 1994, \$5,800, Co-Principal Investigator.
10. "Safety Training for Field Research Personnel", Sponsor -- Research Council, 1995, \$4200, Principal Investigator.
11. "Major Marketing Initiatives for Graduate Student Recruiting", Sponsor -- Research Council, 1996, \$5000, Principal Investigator.
12. "Major Marketing Initiatives for Graduate Student Recruiting", Sponsor -- Research Council, 1996, \$5000, Principal Investigator.
13. "Supplemental Fee Waivers for Graduate Student Recruiting", Sponsor -- Research Council, 1997, \$28,080, Principal Investigator.
14. "A Proposal to Establish OU Alumni Graduate Fellowships in CEES", Sponsor -- Graduate College, 1998, \$60,000, Co-Principal Investigator.
15. "Development, Implementation and Assessment of a Multi-Semester Mega-Project for Project-Based Learning Across the Curriculum", ECS/MDE Committee, Strevett, K., Nairn, R., and Knox, R.C., \$10,200, July 26, 2000, Co-PI (33%)

GRADUATE STUDENT SUPERVISION

- A. Ph.D. Dissertations Supervised (5)
1. Lisa Haiges (Ph.D. 1991). Dissertation Title -- "Assessment of Non-Hazardous Industrial Waste Disposal in Oklahoma."
 2. Reza Shadizadeh (Ph.D. 1991). Dissertation Title -- "Development of a Non-Fickian Solute Transport Model."
 3. Yili Chen (Ph.D. 1995). Dissertation Title -- "Using a Two-Dimensional Sand Tank to Model Surfactant Enhanced Pump-and-Treat Remediation of Dense Chlorinated Hydrocarbons."
 4. Li-Yuan Chen (Ph.D. 1996). Dissertation Title -- "Hydraulic Performance of Vertical Circulation Well Systems and Their Application to DNAPL Remediation in a Three-Dimensional Sand Tank."
 5. Al Thal (Ph.D. 1999). Dissertation Title -- "An Investigation of Alcohol Tracer Partition Coefficients and a Study of UTCHEM Simulations."
- B. M.S. Theses Supervised (11)
1. Jonathan Snell (M.S. 1987). Thesis Title - "Prioritization of Techniques for the Hydrogeologic Investigation of Leaking Underground Storage Tanks."
 2. Luis Ortiz (M.S. 1989). Thesis Title - "Evaluation of PCB Degradation by Microorganisms."
 3. Kathy Martin (M.S. 1989). Thesis Title - "Removal of PCBs from Topsoil Using Surfactants."
 4. David Cohenour (M.S. 1990). Thesis Title - "Nitrate Contamination in the Central Oklahoma Aquifer System."
 5. Richard Forbes (M.S. 1990). Thesis Title - "Assessment of Nitrate Contamination of Ground Water in the Arkansas River Alluvium in Northwestern Osage County."
 6. James Warram (MSCE 1992). Thesis Title - "Evaluation of Environmental Impacts from Co-Composting Yard Waste with Municipal Wastewater Treatment Plant Sludge: A Pilot Study."
 7. Hari Gupta (MSCE 1993). Thesis Title - "Modeling the Effectiveness of Barriers for Improving the Hydraulic Efficiency of a Pump and Treat System Utilizing Chemical Agents."
 8. David Cates (M.S. 1993). Thesis Title - "The Use of Geochemical Diagrams to Evaluate Ion Exchange Effects During Transport of Inorganic Solutes and Brine Through Fresh Ground Water."
 9. Fred Fitter (M.S. 1995). Thesis Title - "Fate and Transport of Oil Field Brines in Recharge Areas of the Central Oklahoma Aquifer."
 10. Kim Giles Fisher (MES, 1997). Thesis Title - "Variations In Hydraulic Conductivity Of The Aquifer Underlying The Norman Landfill."
 11. Jason Flaming (MSCE, 2002). Thesis Title -- "Surfactant Effects On Residual Water and Oil Saturations In Porous Media"

TEACHING AND CONTINUING EDUCATION

- A. McNeese State University (1984-1986)
Engineering Statics, Fluid Mechanics, Fluid Mechanics Laboratory, Hydrology, Water Supply and Sewerage, Pollution Control Engineering
- B. University of Oklahoma (1986-present)
- | | |
|---|---------------------------------------|
| Elementary Surveying | Environmental Engineering – I |
| Ground Water Quality Management | Hazardous and Solid Waste Design |
| Ground Water Pollution Control | Graphics and Design |
| Ground Water and Seepage | Civil Engineering Capstone Course |
| Environmental Quality Management Field Training | Environmental Science Capstone Course |
| Subsurface Water Quality Modeling | Technical Communications |
- C. Chulalongkorn University, Bangkok, Thailand
Environmental Modeling (2005)
- D. Technical Short Courses Taught (12)
12. "Introduction to Risk-Based Corrective Actions and Risk Assessment" -- Taught to attendees of "The 4th International Petroleum Environmental Conference", September 1997, San Antonio, TX.
 11. "Remediation of Contaminated Subsurface Environments" -- Taught to U.S. Army personnel, February 1994, Kingsport, TN.

10. "Remediation of Contaminated Subsurface Environments" -- Taught to U.S. Army personnel, January 1994, Schwetzingen, Germany.
9. "Simulation Exercise on Environmental Impact Assessment" -- Study director for simulation exercise for participants in the 13th International Seminar on Environmental Impact Assessment and Management, July 1992, Aberdeen, Scotland.
8. "EPA Regulations for Underground Storage Tanks" -- Taught to session of the 37th Annual Corrosion Control Course; Oklahoma Center for Continuing Education; September 1990; Norman, Oklahoma.
7. "Ground Water Containment and Removal Systems" -- Taught to OSC/RPM Basic Training Academy, U.S. Environmental Protection Agency; March 1990; Tampa, Florida.
6. "Simulation Exercise on Environmental Impact Assessment." -- Study director for simulation exercise for participants in the 10th International Seminar on Environmental Impact Assessment and Management; July 1989; Aberdeen, Scotland.
5. "Site Assessment and Closure of Underground Storage Tanks" -- Taught to personnel of SEARCH, Inc.; June 1989; Norman, Oklahoma.
4. "Ground Water Quality Protection." -- Taught to personnel of PPG Industries; May 1986; Lake Charles, Louisiana.
3. "Ground Water Quality Protection." -- Taught to local government and industry representatives; October 1985; Norman, Oklahoma.
2. "Ground Water Quality Protection." -- Taught to local government and industry representatives; June 1985; Lake Charles, Louisiana.
1. "Ground Water Quality Protection" -- Taught to Office of U.S. Environmental Protection Agency Region IV; May 1985; Dallas, Texas.

D. Technical Short Courses Attended (13)

13. "Hazardous Waste and Emergency Response – 8-hour refresher training" -- University of Oklahoma, Norman, OK, 2005.
12. "Hazardous Waste and Emergency Response Training." -- University of Oklahoma, Norman, OK, 2004.
11. "Hazardous Waste and Emergency Response - 8 hour refresher training." -- University of Oklahoma, Norman, OK, 1997.
10. "Hazardous Waste and Emergency Response - 8 hour refresher training." -- University of Oklahoma, Norman, OK, 1996.
9. "Hazardous Waste and Emergency Response Training." -- Institute for Environmental Management, Oklahoma City, OK, 1995.
8. "Integrating Design Into the Engineering Curriculum." -- Southern Methodist University, Dallas, Texas, 1992.
7. "Short course in Applied Surfactant Science and Technology" -- Surfactant Associates, Inc., Norman, Oklahoma, 1991.
6. "Hazardous Waste Safety Training" -- Rose State College, Midwest City, Oklahoma, 1991.
5. "First International Conference on Disposal of Drilling Wastes" -- American Petroleum Institute, Calgary, Alberta, Canada, 1988.
4. "Flood Plain Analysis - Open Channel Hydraulics" -- Oklahoma Center for Continuing Education, Norman, Oklahoma, 1987.
3. "First National Outdoor Action Conference on Aquifer Restoration, Ground Water Monitoring and Geophysical Methods." -- National Water Well Association, Las Vegas, Nevada, 1987.
2. "Reclamation of Difficult Sites." -- University of Wisconsin-Extension, Madison, Wisconsin, 1983.
1. "Ground Water Models Workshops - Parts 1, 2, and 3" -- Holcomb Research Institute, Butler University, Indianapolis, Indiana, 1982.

E. Invited Lectures and Presentations (9)

9. Knox, R.C., "Surfactant-Enhanced Remediation: From Laboratory Development to Field Applications" presentation to MAPCO Professorship Search Committee, April, 1996.
8. Chen, Y., Chen, L.Y., and Knox, R.C., "Modeling the Effectiveness of Innovative Measures for Improving the Hydraulic Efficiency of Surfactant Injection and Recovery Systems", presented to UT Petroleum Engineering Seminar, University of Texas at Austin, Austin, TX, February 23, 1995.
7. Knox, R.C. and Canter, L.W., "An Application of Risk Assessment: Evaluation of Coastal Development Projects," presented by R.C. Knox at the 13th International Seminar on Environmental Impact Assessment and Management, Aberdeen, Scotland, July 1992.

6. Knox, R.C. and Canter, L.W., "Risk-Based Approaches for Evaluation of Coastal Development Projects," presented at the Workshop on Environment, Tourism and Development: An Agenda for Action, Valletta, Malta, March 1990.
5. Canter, L.W. and Knox, R.C., "Impact Assessment for Water Resources," presented by R.C. Knox at the 10th International Seminar on Environmental Impact Assessment and Management, Aberdeen, Scotland, July 1989.
4. Knox, R.C., "Abiotic Processes Affecting Subsurface Transport and Fate," presented to Sigma Gamma Epsilon Honor Fraternity at the University of Arkansas, Fayetteville, Arkansas, February 1989.
3. Canter, L.W., "Role of EIA in Environmental Protection: Follow-up and Control," presented by R.C. Knox at the Environmental Impact Assessment Conference, Seville, Spain, November 1988.
2. Knox, R.C. and Canter, L.W., "Overview of Ground Water Contamination," presented to the South Central Environmental Engineering Committee Meeting, Chevrolet-Pontiac-Canada Group, General Motors Corporation, Midwest City, Oklahoma, October 1987.
1. Knox, R.C., "Environmental Effects of Drilling Fluids Disposal," presented at the Environmental Law Seminar, University of Oklahoma Law School, April 12, 1984.

SERVICE ACTIVITIES

A. Major University and College Committees

- Presidential Task Force on Energy Education and Research – 2004 to 2005
- ABET 2000 Liaison, College of Engineering - 1998
- Chairman, CEES ABET 2000 Committee - 1998
- Program Outcomes Assessment Coordinator - 1994 to present
- CEES Graduate Liaison - 1995 - 2000
- CEES Committee A - 1993-1995
- Faculty Advisor, ASCE Student Chapter – 1993
- Energy Center Fellow - 1991-1992
- Faculty Advisor, Tau Beta Pi Engineering Honor Fraternity - 1989 – 1994
- Faculty Senate Executive Committee – 1989
- Standing Committee on Classroom Maintenance – 1988 - 1990
- Faculty Senate - 1987-1989
- Advisory Board for Center for Environmental Applications of the Oklahoma Mesonet, 1995-1997
- Invited member of Institute for Applied Surfactant Research, 1996 to present.
- Executive Committee, Integrated Petroleum Environmental Consortium, 1997-present.

B. Professional Activities

Report and Proposal Reviews

- MOST Federal Grant Matching Research Equipment Program for the Oklahoma Center for Advancement of Science and Technology, 1988
- Hazardous Waste Research and Information Center, University of Illinois, 1989
- Technical Report review for U.S. Environmental Protection Agency, 1992, 1993
- National Science Foundation, 1998

Paper Reviews

- ASCE Environmental Engineering Division (1989, 1991, 1992, 1993, 1994, 1998)
- ACS Division of Industrial and Engineering Chemistry (1990, 1994)
- Ground Water (1991 to present)
- IEEE Technology and Society Magazine (1992)
- Ground Water Monitoring & Remediation, (1993 to present)
- Water Resources Research (1994 to present)
- Environmental Science & Technology (1995 to present)
- Advances in Water Resources (1996)
- Water, Air & Soil Pollution (1997, 1998)
- Water Research (1998)

- ACS Books (1998)

Miscellaneous

- Planning Committee and Panel Coordinator for NEXRAD Hydrology Symposium, October 1988. Panel title - "Methodologies for Radar-Raingauge Analyses."
- Session Chairman for 1988 Spring National Meeting of American Institute of Chemical Engineers. Session title - "Causes and Cures for Groundwater Pollution Due to Land Disposal."
- Session Co-Chairman for the American Chemical Society 65th Colloid and Surface Science Symposium, June 1991. Session title - "Colloid and Interfacial Aspects of Groundwater and Soil Cleanup."
- Session co-Chairman for 207th ACS National Meeting, March 1994. Session title -- "Emerging Technologies in Surfactant-Enhanced Subsurface Remediation."
- Session Chairman for Second International Petroleum Environmental Conference, September 1995. Session title - "Bioremediation of Petroleum-Contaminated Soils and Groundwater."
- Discussion Facilitator for ASCE Education Conference, 1995.
- Session Chairman for Third International Petroleum Environmental Conference, September 1996. Session title - "Treatment and Remediation of Petroleum Hydrocarbons."
- Session Chairman for Fifth International Petroleum Environmental Conference, October 1998. Session title - "Bioremediation of Petroleum Hydrocarbons."

C. Public Service Activities

- "In-Ground Treatment and Containment of Contaminated Ground Water." One day technical seminar for sanitarians and public health officials of the State of Louisiana, Baton Rouge, Louisiana, 1986.
- "Fluid Mechanics - Review for the EIT." Taught review sessions in fluid mechanics for those individuals preparing for engineer-in-training examination, 1984, 1985, 1990, 1991, 1992, 1993.
- "Overview of Ground Water Contamination." Presentation to the South Central Environmental Engineering Committee Meeting, Chevrolet-Pontiac-Canada Group, General Motors Corp., Midwest City, Oklahoma, 1988.
- "Wellhead Protection." Presentation to citizens of Texas County, Oklahoma, for Oklahoma Department of Pollution Control in Guymon, Oklahoma, 1988.
- "Overview of Ground Water Flow and Subsurface Transport of Contaminants" Presentation at Seminar on Real Estate Ground Water and Surface Pollution Issues in Oklahoma, Oklahoma City, Oklahoma, 1989.
- "Aquifer Protection and Ground Water Monitoring." Presentation to special session of Oklahoma Academy of Science on Hazardous Wastes in Oklahoma, 1989.
- "Environmental Engineering." Presentation to Blanchard High School for Career Day, 1990.
- "Brine Contamination of the Garber-Wellington." Presented to citizens of Norman, Oklahoma, 1990.
- "Transport of Inorganic Constituents of Oilfield Brines in the Subsurface." Presented to Governor's Water Conference, 1993

D. Public Testimony

- "Ground Water Recharge in the High Plains States; And Delivery of Water to the North Platte Irrigation Project." Hearing before the Subcommittee on Water and Power of the Committee on Energy and Natural Resources, United States Senate, Ninety-Eighth Congress, Woodward, Oklahoma, February 17, 1984.
- "Public Hearing on the Proposed Permit Actions Concerning USPCI Lone Mountain Hazardous Waste Management Facility." Oklahoma State Department of Health and the U.S. Environmental Protection Agency, Fairview, Oklahoma, December 10, 1990.

CONSULTING

Have provided consultant services to private citizens, engineering firms, investment firms, legal firms, municipalities and governing bodies. Activities have included site assessments, permit applications, landfill design and extensive expert witness experience in cases involving surface and/or ground water pollution. Several of my consulting projects have resulted in refereed journal publications.