

# BEN J. STUART

Ohio University, Department of Civil Engineering, 120 Stocker Center, Athens, OH 45701  
Phone: (740)593-9455 FAX: (740)593-0625 E-mail: stuart@ohio.edu

## EDUCATION:

Rutgers, The State University of New Jersey, Piscataway, N.J. 08855-0909

Ph.D., Chemical and Biochemical Engineering, October 1995

Dissertation: *Transport of Microorganisms in Soil and Groundwater Systems*

M.S., Chemical and Biochemical Engineering, May 1993

Thesis: *Characterization of Municipal Waste Combustion Air Pollution Control Residues as a Function of Particle Size*

B.S., Chemical and Biochemical Engineering, May 1990

## REGISTRATION:

Registered Professional Engineer, State of Ohio Registration Number E-63367

## HONORS and AWARDS:

Faculty Fellow, the Voinovich Center for Leadership and Public Affairs, Ohio University, 2001-2002

Joseph J. Martin Award, outstanding paper in the ChE Division, 2001 ASEE Annual Meeting

Teaching Award (nominee), Department of Civil Engineering, Ohio University, 2001

Mike Berger Memorial Award, Outstanding Faculty Advisor, 2000 WERC Envi. Design Contest

Teaching Award, Department of Civil Engineering, Ohio University, 2000

Research Award (nominee), Department of Civil Engineering, Ohio University, 2000

Professor Leadership Recognition, Russ College of Engr. and Technology, Ohio University, 1999

Teaching Award (nominee), Department of Civil Engineering, Ohio University, 1999

Outstanding Undergraduate Instructor, Department of Civil Engineering, Ohio University, 1997

Co-Outstanding Undergraduate Instructor, Dept. of Chemical Engr., Ohio University, 1997

recipient, National Research Council Research Associateship, 1994

recipient, Association of Western Universities Research Fellowship, 1993

1<sup>st</sup> Place, AIChE National Student Paper Competition, Environmental Division, 1990

1<sup>st</sup> Place, Fifth Annual Environmental Management Competition, 1990

Daniel E. Bigler Award, N.J. Water Pollution Control Association, 1990

Garden State Distinguished Scholar

Tau Beta Pi

## TEACHING EXPERIENCE:

**Assistant Professor:** Department of Civil Engineering (joint appointment with Chemical Engineering 9/95 to 6/02), Ohio University, Athens, OH 45701

|              |         |                          |            |                                    |
|--------------|---------|--------------------------|------------|------------------------------------|
| 9/95 - Pres. | CHE 305 | ChE Thermodynamics       | CE 450     | Water Treatment                    |
|              | CHE 306 | ChE Phase Equilibrium    | CE 451     | Wastewater Treatment               |
|              | CHE 416 | Unit Operations Lab      | CE 452     | Water and Wastewater Analysis      |
|              | CHE 601 | Advanced ChE Thermo      | CE 453/553 | Solid & Hazardous Waste Mgmt.      |
|              | CE 340  | Fluid Mechanics          | CE 490/590 | Pollution Prevention Technologies  |
|              | CE 341  | Fluid Mechanics Lab      | CE 556     | Advanced Wastewater Treatment      |
|              | CE 353  | Basics of Environ. Engr. | CE 853     | Environmental Geotechnology II     |
|              | CE 400  | Societal Concerns in CE  | ET 400     | Fundamentals of Engineering Review |

**Teaching Assistant:** Department of Chemical and Biochemical Engineering, Rutgers University, Piscataway, N.J. 08855-0909

9/91 - 5/95 155:303/304 Transport Phenomena in Chemical Engineering I & II  
155:415/416 Process Engineering I & II  
155:453 Chemical Environmental Engineering  
155:491/492 Special Problems in Chemical Engineering I & II

#### **ADDITIONAL RESEARCH EXPERIENCE:**

**Graduate Assistant:** Department of Chemical and Biochemical Engineering, Rutgers University, Piscataway, N.J. 08855-0909

9/92 - 9/95 Transport of Microorganisms in Soil and Groundwater Systems  
1/92 - 1/94 Solidification and Stabilization of MSW Incineration Residuals  
7/91 - 12/91 Environmental Release of Contaminants from Facing Brick  
7/90 - 6/91 Characterization of Municipal Waste Combustion Air Pollution Control Residues as a Function of Particle Size  
1/89 - 6/90 Anaerobic Biodegradation of Benzene, Toluene, and the Xylene Isomers

**AWU Fellowship:** U.S. Department of Energy fellowship, awarded through the Association of Western Universities (AWU), to work with EG&G at the Princeton Plasma Physics Laboratory, Princeton University, P.O. Box 451, Princeton, N.J., 08543

7/93 - 10/94 Monitoring the Environmental Impact of Elemental Tritium Release or Tritium Conversion Products for Model Verification

#### **CONSULTING:**

7/02 - Pres. Expert Witness, property dispute concerning groundwater seepage in disturbed soils at a construction site, Joe Hazelbaker, Attorney at Law, Athens, Ohio.  
2/02 - Pres. Evaluation of the Remediation Efforts Following the Removal of a Compromised UST and Recommendations for Future Work, City of Grandview Heights, Ohio.

#### **EXTERNAL RESEARCH GRANTS:**

Adaptive Full Spectrum Solar Energy Systems (University of Nevada Reno is the lead institution in this \$3,085,000 project), with D.J. Bayless (PI), et al, June 2001, United States Department of Energy, \$199,000.

Enhanced Practical Photosynthetic CO<sub>2</sub> Mitigation, with Dave Bayless (PI), Greg Kremer, and Morgan Vis, September 2000, United States Department of Energy, \$1,075,100.

Surface Water Contaminant Modeling and Continued Water Quality Monitoring at Broken Aro Mine, July 1999, Ohio Department of Natural Resources, \$72,364.

Influence of Acid Mine Drainage on the Robinson Run Subwatershed, July 1999, Ohio Department of Natural Resources, \$51,620.

Influence of Underground Mines and the Misco Gob Piles on the Black Fork / Ogg Creek Subwatershed, with Mary W. Stoertz, Ken B. Edwards, and Dina Lopez, January 1999, Perry County Soil and Water Conservation District, \$195,744.

Groundwater Flow Characterization and Water Quality Assessments at Broken Aro Mine, with Ken B. Edwards, and Mary W. Stoertz, July 1998, American Electric Power Service Corporation, Division of Civil and Mining Engineering, \$40,225.

Impact of Flue Gas Desulfurization Sludge Mine Seal at Broken Aro Mine, with Ken B. Edwards, September 1997, R&F Coal Company, Inc., \$53,900.

Preliminary Water Quality Assessment at Broken Aro Mine, with Ken B. Edwards, April 1997, R&F Coal Company, Inc., \$7,081.

Data Collection, Monitoring, and Watershed Characterization for the Unnamed Tributary to Moxahala Creek, with Ken B. Edwards (PI), Mary W. Stoertz, and Moid U. Ahmad, November 1996, Ohio Department of Natural Resources, \$121,032.

Leaching Behavior of Facing Bricks Containing Treated Waste, with David S. Kosson (PI), March 1991, Air Products & Chemicals, Inc., \$19,893.

#### **INTERNAL RESEARCH, EDUCATIONAL, AND EQUIPMENT GRANTS:**

Greenhouse Gas and Nitrogen Emissions Bioremediation Using Applications of Translating Slug Flow, with Dave Bayless, Greg Kremer, Michael Prudich, and Morgan Vis-Chiasson, July 2001, 1804 Fund, Ohio University, \$32,000.

Ion Chromatograph for Environmental Program, with Guy Riefler (PI), June 2001, Stocker Endowment, Ohio University, \$30,375.

Support for Ohio University's Participation in the 2001 WERC National Design Contest, with C. Cunningham, March 2001, Oatey, \$1,000.

Total Carbon Analyzer For DOE Greenhouse Gas Mitigation Projects, with Dave Bayless (PI), July 2000, Stocker Endowment, Ohio University, \$10,000.

Support for Ohio University's Participation in the 2000 WERC National Design Contest, with H. Carlson, February 2000, DaimlerChrysler, \$5,000.

Support for Ohio University's Participation in the 2000 WERC National Design Contest, with C. Cunningham, January 2000, Oatey, \$1,000.

Support for Ohio University's Participation in the 2000 WERC National Design Contest, with P. Liedtke, January 2000, Nestles, \$600.

Support for Ohio University's Participation in the 2000 WERC National Design Contest, with T. Ottery, November 1999, Procter & Gamble Company, \$4,000.

Support for Ohio University's Participation in the 1999 WERC National Design Contest, February 1999, American Electric Power Service Corp., Div. of Engr. Education, \$3,000.

Multidisciplinary Research Using a Large Bioreactor, with Tingyue Gu (PI), Murray Moo-Young, Darin Ridgway, and Marcia Kieliszewski, July 1998, 1804 Fund, Ohio University, \$20,000.

A Custom Designed 80-Liter Bioreactor, with Tingyue Gu (PI), Murray Moo-Young, and Darin Ridgway, May 1998, Stocker Endowment, Ohio University, \$20,000.

Pollution Prevention Technologies at Ohio University, April 1997, Mitchell Scientific, Inc., software granted - "Emission Master®", market value \$30,000.

Testing and Analysis Equipment for Environmental Research, with Ken B. Edwards (PI), May 1996, Stocker Endowment, Ohio University, \$15,900.

#### **STUDENT THESES DIRECTED:**

"Analysis of Non-point Sources and Natural Attenuation Effect in the Acid Mine Drainage Affected Black Fork Sub-watershed, Perry County, Ohio", Xuan Qi Bradley, August 2002.

- "The Identification and Analysis of Acid Mine Drainage Sources to the Surface Waters of the Robinson Run Sub-Watershed", Christopher A. Brothers, August 2001.
- "Groundwater Assessments of Ibrahim Valley in Makkah City, Saudi Arabia", Faisal A. Osra, August 2001.
- "Evaluation of the Flue Gas Desulfurization Mine Seal and Sedimentation Pond at Broken Aro Mine Reclamation Site Located in Coshocton County, Ohio", Jed H. Thomas, June 2001.
- "Use of Biological Assessments and GIS for Streams Impacted by Acid Mine Drainage in Southeastern Ohio", Rajesh Ramachandran, November 2000.
- "Analysis of Acid Mine Drainage in the Black Fork Subwatershed", Julie A. Kocsis, June 2000.
- "Evaluation of the Broken Aro Flue-Gas Desulfurization Sludge Mine Seal Project to Abate Acid Mine Drainage Located in Coshocton County, Ohio", Michael T Rudisell, August 1999.

#### **STUDENT THESIS COMMITTEES:**

- "Recovery of Metals from Acid Mine Drainage by Alkaline Addition, Precipitation, and Fiber Filtration", Mayuresh Sant, GEOL, in progress.
- "Photosynthetic CO<sub>2</sub> Sequestration in a Membrane-Type Photobioreactor", Mingwei Li, ME, in progress.
- "Analytical and Experimental Analysis of Alternative Systems for Harvesting Organisms in a Biologically Based CO<sub>2</sub> Mitigation System", Jia Ma, ME, in progress.
- "Conversion of SO<sub>2</sub> to SO<sub>3</sub> During Gas Reburning to Reduce NO<sub>x</sub> Emissions from Coal Combustion", Kalyan R. Pedaprolu, ME, in progress.
- "Enhanced Photosynthetic CO<sub>2</sub> Mitigation: Integration of Translating Slug Flow and Membrane-Type Photobioreactor", Huiying Zhuang, ME, in progress.
- "Investigation of Heavy Metal Contaminants in Ilopango Lake, El Salvador, Central America", David O. Kudel, MSES, in progress.
- "Monitoring Network Quality of Service in a Dynamic Real-Time System", Hong Chen, EECS, August 2002.
- "Storm Water Runoff Treatment with Multi-Chamber Pipes", Yuming Su, CE, August 2002.
- "Traffic Characteristics on the Jeddah-Makkah Freeway, Saudi Arabia", Khalid A. Osra, CE, June 2002.
- "Application of LANSAT Data in Urban Change Detection: The Selective Use Approach", Uttam Kumar Bera, GEOG, May 2002.
- "Multiphase Corrosion in Wet Gas Pipelines", Dinesh Dhanabalan, ChE, November 2001.
- "Hydrologic and Thermal Mechanisms in a Burning Coal Refuse Pile: The Misco Gob Pile, Perry County, Ohio", Carol Farkas Doe, GEOL, August 2001.
- "Global Positioning System Based Runway Instrumentation System", Predrag Stanimir Mitrovic, ME, June 2001.
- "Low Temperature Conversion of SO<sub>2</sub> to SO<sub>3</sub>", Srinivas R. Tanneer, ME, November 2000.
- "Hydrogeochemical Characterization of the Carbondale Wetland, Athens County, Ohio: Evaluation of Acid Mine Drainage Remediation Alternatives", Jennifer Shimala, GEOL, June 2000.
- "The Characterization of Groundwater Flow and Trichloroethylene Transport in the West Lafayette, Ohio Wellfield (Using 3-Dimensional Modeling Techniques)", Kristy L. Hunt, GEOL, August 1999.
- "Experimental Studies of the Homogeneous Conversion of SO<sub>2</sub> to SO<sub>3</sub> via Natural Gas Reburning", Ashikur R. Khan, ME, August 1999.

"Effects of Pavement Type on Traffic Noise Levels", Matt J. Ambroziak, CE, June 1999.

"Characterization of a Highly Acid Watershed Located Mainly in Perry County, Ohio", Ryan J. Eberhart, CE, August 1998.

"Treatment of Highway Storm Water Runoff by Constructed Wetlands: Analytical Analysis and Design Model", Christopher L. Hunt, CE, November 1997.

"Effect of Gas Density on Corrosion in Horizontal Multiphase Slug Flow at High Temperatures and Pressures", Vijay Krishnamoorthy, ChE, November 1997.

"Wetland Pollutant Removal Effectiveness and Mitigation Related to Ohio Highways", Daniel Glenn Hall, CE, August 1996.

"Analysis of Anisotropic Material", Tatsuya Yamashita, ME, August 1996.

#### **PROFESSIONAL ACTIVITIES AND SOCIETIES:**

Planning Committee, 2002 Annual Research Conference, with ODNR-DMRM, August 20, 2002.

Technical Session Director, 23rd Annual Conference of the National Association of Abandoned Mine Land Programs, August 19-22, 2001

External Review Panel Member, WERC Research Program, February 6-7, 2001

session moderator, 45<sup>th</sup> Annual Midwest Ground Water Conference, October 17-19, 2000

member, Steering Committee for the Ohio Environmental Science & Environmental Engineering Scholarship Program, The Ohio Academy of Science, 2000-2002

reviewer, The Ohio State University CCP Program Review, September 1999

Faculty Advisor, Waste-Management Education and Research Consortium Student Environmental Design Contest, 1998-2002

Faculty Advisor, Society of Women Engineers, 1998-2002

reviewer, Environmental Science & Technology

reviewer, Journal of Colloid and Interface Science

reviewer, Environmental Engineering Science

reviewer, special edition of Journal of Hazardous Materials

American Society for Engineering Education, 1997-Present

American Chemical Society, ACS Environmental Division, 1992-2002

American Institute of Chemical Engineers, AIChE Environmental Division, 1991-Present

Secretary, AIChE Central Ohio Section, 1996

#### **WORKSHOPS, PROFESSIONAL ADVANCEMENT, AND COMMUNITY RELATIONS:**

participant, Combustion Technologies University Alliance Workshop, USDOE-NETL, 2002

participant, Green Engineering Educator's Workshop, USEPA, Roanoke, VA, 2001

instructor, Minority Men in Engineering and Technology, Ohio University, 2001-2002

participant, Sooner City Workshop - Integrating Design in the Undergraduate Civil Engineering Curriculum, NSF, University of Oklahoma, 2000

participant, Multidisciplinary Aspects of Novel Process Science and Engineering, NSF Undergraduate Faculty Enhancement Workshop, Rowan University, 1998

participant, Focus on Engineering and Technology - Ohio University Open House, 1998-2001

participant, ENT College Tours for Athens Middle School Honor Roll Students, 1998-1999

instructor, Field Studies in Hydrogeology and Watershed Characterization, workshop with the Department of Geological Sciences, Ohio University, 1997-2000

participant, Morrison Elementary Visiting Scientist Program, 1997-2002

guest lecturer, Environmental Engineering, ET 280 - Introduction to Engineering, 1997-2001

participant, Pollution Prevention Workshop, American Institute of Chemical Engineers, 1997

instructor, Women in Engineering and Technology, Ohio University, 1997

instructor, Be An Engineer, Project Challenge, Ohio University, 1997

supervisor, MATHCOUNTS competition, Ohio University, 1996, 1998-2002

guest lecturer, ET 400 - Professional Engineering Fundamentals Review, 1996-1997

participant, ENT Student Council Casino Night, 1996-1997, 1999

participant, Pathfinders Conference, Ohio Aerospace Institute, 1996

participant, National Effective Teaching Institute, Amer. Soc. for Engineering Education, 1996

## JOURNAL PUBLICATIONS:

- R.G. Riefler, B.J. Stuart, and J. Grow, "Biological Assessments for Acid Mine Drainage Impact Evaluations", in preparation.
- Doe, C.F., D.L. Lopez, B.J. Stuart, and M.W. Stoertz, "Hydrological and Thermal Processes in a Burning Coal Refuse Pile: The Misco Gob Pile, Perry County, Ohio", in preparation.
- Verb, R., M. Vis-Chiasson, and B.J. Stuart, "Analysis of Diatom Communities in the Black Fork Sub-Watershed", accepted for publication.
- Rudisell, M.T., B.J. Stuart, G. Novak, H. Payne, and C.S. Togni, "Use of Flue Gas Desulfurization By-Product for Mine Sealing and Abatement of Acid Mine Drainage", *FUEL*, 80(6), pp. 837-843, 2001.
- Young, V.L., and B.J. Stuart, "The Theme Course - Connecting the Plant Trip to the Text Book", *Journal of Engineering Education*, 89(4), pp. 475-479, 2000.
- Lotrario, J.B., Stuart, B.J., Lam, T., Arands, R.R., O'Connor, O.A., and Kosson, D.S., "Effects of Sterilization Methods on the Physical Characteristics of Soil: Implications for Sorption Isotherm Analyses", *Bulletin of Environmental Contamination and Toxicology*, 54(5), pp. 668-675, 1995.
- Stuart, B.J., and Kosson, D.S., "Characterization of Municipal Waste Combustion Air Pollution Control Residues as a Function of Particle Size", *Combustion Science and Technology*, 101(1-6), p. 525, 1994.
- Kosson, D.S., Kosson, T.T., Stuart, B., and van der Sloot, H., "Treatment of Air Pollution Control Residuals from Municipal Waste Combustors", *Rückstände aus der Müllverbrennung*, ed. Martin Faulstich, EF-Verlag für Energie und Umwelttechnik, GmbH, Berlin, 1992.
- Stuart, B.J., Bowlen, G.F., and Kosson, D.S., "Competitive Sorption of Benzene, Toluene and the Xylenes onto Soil," *Environmental Progress*, 10(2), pp. 104-109, May 1991.

## REFEREED PROCEEDINGS:

- Kocsis, J.A., and B.J. Stuart, "Identification and Analysis of Acid Mine Drainage Sources in the Black Fork Sub-Watershed", Proceedings of the 17<sup>th</sup> National Meeting of the American Society for Surface Mining and Reclamation, pp. 91-97, 2000.
- Kocsis, J.A., and B.J. Stuart, "Evaluation of a Constructed Wetland for Treatment of Acid Mine Drainage in Southeastern Ohio", Proceedings of the 17<sup>th</sup> National Meeting of the American Society for Surface Mining and Reclamation, pp. 446-450, 2000.
- Stuart, B.J., "Remining with CCBs at the Broken Aro Demonstration Site", Proceedings of the Technical Interactive Forum on the Use and Disposal of Coal Combustion By-Products at Coal Mines (USDOE-FETC), Morgantown, WV, April 12, 2000.
- Eberhart, R.J., K.B. Edwards, and B.J. Stuart, "Water Quality Analysis of a Highly Acidic Watershed in Southeast Ohio", Proceedings of the 15<sup>th</sup> Annual Meeting of the American Society for Surface Mining and Reclamation, pp. 22-31, 1998.
- Edwards, K.B., and B.J. Stuart, "Groundwater and Surface Water Monitoring Plan at a Coal Re-Mining Site Near Coshocton, Ohio", Proceedings of the 1997 Ground Water Protection Council Annual Forum, pp. 83-90, 1997.

## NON-REFEREED PUBLICATIONS, PRESENTATIONS, POSTERS, AND REPORTS:

- Stuart, B.J., "Using GIS for Data Management of AMD Projects", invited presentation for the SOARS Program at the NASA Glenn Research Center, Cleveland, Ohio, August 1, 2002.
- Stuart, B.J., M.W. Stoertz, and G. Novak, "Utilization of CCPs for AMD Abatement During Re-Mining of an Abandoned Underground Mine", 18<sup>th</sup> Annual International Pittsburgh Coal Conference, New Castle, Australia, December 4-7, 2001.

- Verb, R., M. Vis-Chiasson, and B.J. Stuart, "Analysis of Diatom Communities in the Black Fork Sub-Watershed", submitted to the Perry County Soil and Water Conservation District, the Moxahala Watershed Restoration Commission, and the Ohio Department of Natural Resources Division of Mineral Resources Management, August, 2001, 21 pages.
- Doe, C., D.L. Lopez, and B.J. Stuart, "Hydrologic and Thermal Mechanisms in a Burning Coal Refuse Pile: The Misco Gob Pile, Perry County, Ohio", submitted to the Perry County Soil and Water Conservation District, the Moxahala Watershed Restoration Commission, the Ohio Department of Natural Resources Division of Mineral Resources Management, August, 2001, 165 pages.
- Young, V., D. Ridgway, M. Prudich, D. Goetz, and B.J. Stuart, "Criterion-Based Grading for Learning and Assessment in Unit Operations Laboratory", 2001 Annual Conference of the American Society for Engineering Education, Albuquerque, NM, June 24-27, 2001.
- Stuart, B.J., and A. Ghassemi, "Participation in a National Environmental Design Contest: Observations and Student Motivations", 2001 Annual Conference of the American Society for Engineering Education, Albuquerque, NM, June 24-27, 2001.
- Thomas, J., and B.J. Stuart, "The Continued Evaluation of the Flue Gas Desulfurization Mine Seal at Broken Aro Mine Reclamation Site and Modeling of Its Sedimentation Pond", submitted to the Ohio Department of Natural Resources Division of Mineral Resources Management, June, 2001, 186 pages.
- Brothers, C., and B.J. Stuart, "The Identification and Analysis of Acid Mine Drainage Sources to the Surface Waters of the Robinson Run Sub-Watershed", submitted to the Ohio Department of Natural Resources Division of Mineral Resources Management, June, 2001, 233 pages.
- Stuart, B.J., and G. Novak, "Mine Sealing with CCPs for AMD Abatement", 14th International Symposium on Management & Use of Coal Combustion Products (CCPs), American Coal Ash Association, San Antonio, TX, January 22-26, 2001.
- Stuart, B.J., and G. Novak, "The Broken Aro Mine Seal: Impacts on Water Quality", 45<sup>th</sup> Annual Ground Water Conference, Columbus, OH, October 17-19, 2000.
- Stuart, B.J., and G. Novak, "Utilization of CCBs for Mine Sealing and AMD Abatement", 2000 Fall Conference of the Ohio Mineland Partnership, Coshocton, OH, October 2-3, 2000.
- Stuart, B.J., "Use of GIS for Managing Data in AML Assessments", 22<sup>nd</sup> Annual Conference of the National Association of Abandoned Mine Land Programs, Steamboat Springs, CO, September 24-27, 2000.
- Stuart, B.J., and W.P. Jepson, "Scrubbing SO<sub>2</sub> Using a Translating Slug Flow Reactor", Conference on Air Quality II (Energy & Environmental Research Center, USEPA, USDOE-FETC), McLean, VA, September 19-21, 2000.
- Stuart, B.J., and C.F. Doe, "Characterization of AMD Sources in the Black Fork Sub-Watershed", Research in Support of Reclamation Conference (ODNR-DMRM), Athens, OH, August 24, 2000.
- Thomas, J., M.T. Rudisell, and B.J. Stuart, "The Broken Aro Flue Gas Desulfurization Sludge Mine Seal Project", Research in Support of Reclamation Conference (ODNR-DMRM), Athens, OH, August 24, 2000.
- Kocsis, J.A., and B.J. Stuart, "Identification and Analysis of Acid Mine Drainage Sources in the Black Fork Sub-Watershed", Research in Support of Reclamation Conference (ODNR-DMRM), Athens, OH, August 24, 2000.
- Kocsis, J.A., and B.J. Stuart, "Analysis of Acid Mine Drainage in the Black Fork Sub-Watershed", submitted to the Perry County Soil and Water Conservation District, the Moxahala Watershed Restoration Commission, and the Ohio Department of Natural Resources Division of Mineral Resources Management, June, 2000, 213 pages.

- Kocsis, J.A., and B.J. Stuart, "Identification and Analysis of Acid Mine Drainage Sources in the Black Fork Sub-Watershed", 17<sup>th</sup> National Meeting of the American Society for Surface Mining and Reclamation, Tampa, FL, June 11-15, 2000.
- Kocsis, J.A., and B.J. Stuart, "Evaluation of a Constructed Wetland for Treatment of Acid Mine Drainage in Southeastern Ohio", 17<sup>th</sup> National Meeting of the American Society for Surface Mining and Reclamation, Tampa, FL, June 11-15, 2000.
- Stuart, B.J., and G. Novak, "Remining with CCBs at the Broken Aro Demonstration Site", Technical Interactive Forum on the Use and Disposal of Coal Combustion By-Products at Coal Mines (USDOE-FETC), Morgantown, WV, April 12, 2000.
- Kocsis, J.A., and B.J. Stuart, "Black Fork and Tropic Wetland Water Quality Sampling Update", submitted to the Perry County Soil and Water Conservation District and the Ohio Department of Natural Resources, December 17, 1999, 77 pages.
- Kocsis, J.A., and B.J. Stuart, "Identification and Analysis of Acid Mine Drainage Sources in the Black Fork Sub-Watershed", 1999 Regional Conference of the Society of Women Engineers Poster Contest, Morgantown, WV, November 13, 1999.
- Thomas, J., and B.J. Stuart, "Water Quality Assessments at Broken Aro Mine", Final Report - Volume 2 Addendum, submitted to American Electric Power Service Corporation and the Ohio Department of Natural Resources, October 29, 1999, 37 pages.
- Stuart, B.J., "Update on the Black Fork and Tropic Wetland Acid Mine Drainage Projects", Moxahala Watershed Restoration Commission, Crooksville, OH, October 28, 1999.
- Stuart, B.J., G.A. Novak, H. Payne, and C.S. Togni, "Use of Flue Gas Desulfurization By-Product for Mine Sealing and Abatement of Acid Mine Drainage", 1999 International Ash Utilization Symposium, Lexington, KY, October 18-20, 1999.
- Rudisell, M., and B.J. Stuart, "Water Quality Assessments at Broken Aro Mine", Final Report - Volume 2, submitted to American Electric Power Service Corporation and the Ohio Department of Natural Resources, July 30, 1999, 279 pages.
- Kocsis, J.A., and B.J. Stuart, "Acid Mine Drainage in Black Fork River", ASCE Ohio Student Paper Competition, Athens, OH, April 22, 1999.
- Stuart, B.J., K.B. Edwards, M.T. Rudisell, G.A. Novak, S. Mafi, J.R. Faulconer, M.W. Stoertz, and B.D. Olujic, "Re-mining and FGD Seal Placement for AMD Abatement at Broken Aro Mine", 20<sup>th</sup> Annual West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, WV, April 13-14, 1999.
- Stuart, B.J., R. Ramachandran, and J. Grow "Impact of Acid Mine Drainage on Streams in Southeastern Ohio: Importance of Biological Assessments", 20<sup>th</sup> Annual West Virginia Surface Mine Drainage Task Force Symposium, Morgantown, WV, April 13-14, 1999.
- Ramachandran, R., B.J. Stuart, and J. Grow, "Impact of Acid Mine Drainage on Streams: Importance of Biological Assessments", 14<sup>th</sup> Annual Scientific Symposium of the Ohio River Basin Consortium for Research and Education, Portsmouth, OH, October 14-16, 1998.
- Mafi, S., G.A. Novak (co-presenter), J. Faulconer, B.J. Stuart (co-presenter), and K.B. Edwards, "Broken Aro Remining/Reclamation Project", 20<sup>th</sup> Annual Conference of the National Association of Abandoned Mine Land Programs, Albuquerque, NM, September 26-October 1, 1998.
- Rudisell, M., B.J. Stuart, and K.B. Edwards, "Preliminary Water Quality Assessment at Broken Aro Mine", Final Report - Volume 1, submitted to R&F Coal Company, Inc. and the Ohio Department of Natural Resources, August 1998, 172 pages.
- Stuart, B.J., "Overview of Water Quality Characterization Data in the Moxahala Creek Watershed", Moxahala Watershed Restoration Commission, Crooksville, OH, July 8, 1998.

- Eberhart, R.J., K.B. Edwards, B.J. Stuart, M.W. Stoertz, B. Olujic, and M.U. Ahmad, "Moxahala Creek Watershed Characterization", a final report submitted to the Ohio Department of Natural Resources, July 1998, 148 pages.
- Mafi, S., G. Novak, and B.J. Stuart, "Broken Aro Coal Remining/Reclamation Project", Annual Meeting of the Ohio Mining and Reclamation Association, Columbus, OH, June 25, 1998.
- Eberhart, R.J., K.B. Edwards, and B.J. Stuart, "Water Quality Analysis of a Highly Acidic Watershed in Southeast Ohio", 1998 National Meeting of the American Society for Surface Mining and Reclamation, St. Louis, MO, May 16-21, 1998.
- Stuart, B.J., K.B. Edwards, R.J. Eberhart, B. Olujic, and M.D. Rudisell, "Field Evaluation of Surface Water Flowrate Measurement Devices", 1998 ASCE Wetlands Engineering and River Restoration Conference, Denver, CO, March 23-27, 1998.
- Stuart, B.J. and K.B. Edwards, "Preliminary Assessment of the Moxahala Creek Watershed", Ohio Department of Natural Resources - Division of Mines and Reclamation, Division-wide Meeting, Reynoldsburg, OH, March 12, 1998.
- Stuart, B.J. and K.B. Edwards, "Evaluation of the Effectiveness of the Tropic Wetland", Ohio Department of Natural Resources - Division of Mines and Reclamation, Division-wide Meeting, Reynoldsburg, OH, March 12, 1998.
- Stuart, B.J. and K.B. Edwards, "Impact of Flue Gas Desulfurization Sludge Mine Seal at Broken Aro Mine", Ohio Department of Natural Resources - Division of Mines and Reclamation, Division-wide Meeting, Reynoldsburg, OH, March 12, 1998.
- Rudisell, M., B.J. Stuart, and K.B. Edwards, "Preliminary Water Quality Assessment at Broken Aro Mine", a progress report submitted to R&F Coal Company, Inc. and the Ohio Department of Natural Resources, December 1997, 109 pages.
- Edwards, K.B., and B.J. Stuart, "Groundwater and Surface Water Monitoring Plan at a Coal Re-Mining Site Near Coshocton, Ohio", Ground Water Protection Council Annual Forum, Cleveland, OH, September 1997.
- Stuart, B.J., and D.S. Kosson, "Effects of Adhesion Potential and Median Pore Size on Bacteria Transport Through Soil", AIChE 1995 Annual Meeting, Miami, FL, November 1995.
- Tolchinsky, M., Massry, I., Stuart, B., and Kosson, D.S., "Manipulation of Factors Affecting Bacterial Surface Properties for Enhanced Transport Through Soil", AIChE 1993 Annual Meeting, St. Louis, MO, November 1993.
- Stuart, B.J., and D.S. Kosson, "Characterization of Municipal Waste Combustion Air Pollution Control Residues as a Function of Particle Size", Third International Congress on Toxic Combustion By-Products, (EPA, DOE, et al) Cambridge, MA, June 1993.
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