

Plants of Two Appalachian Rivers. Symposium on Dynamics of Lotic Ecosystems. Savannah River Ecology Laboratory (Oct. 19-22) Augusta, GA.

Saleh, F.Y., K.L. Dickson, and J.H. Rodgers, Jr. 1980. Fate of Lindane in the Aquatic Environment: Rate Constants of Physical and Chemical Processes. Annual Meeting of the Society of Environmental Toxicology and Chemistry. (Nov. 23-25) Arlington, VA.

Staples, C.A., K.L. Dickson, J.H. Rodgers, Jr. and F.Y. Saleh. 1981. A Microcosm Study of Lindane and Naphthalene Partitioning for Model Validation. Presented at the 6th Symposium on Aquatic Toxicology. (Oct. 13-14) Kansas, City, MO.

Rodgers, J.H., Jr., K.L. Dickson, F.Y. Saleh, and C.A. Staples. 1981. Use of Microcosms to Study Transport, Transformation, and Fate of Organics in Aquatic Systems. Annual Meeting of the Society of Environmental Toxicology and Chemistry. (Nov. 22-25) Arlington, VA.

Rodgers, J.H., Jr., 1982. Comparison of Biotransformation Rates to Biodegradation Rates and Mineralization to CO₂. 82nd Annual Meeting of the American Society for Microbiology, (March 7-12), Atlanta, GA.

Rodgers, J.H., Jr., K.L. Dickson, and T.J. Leslie. 1982. Relationships of Biotransformation and Ultimate Biodegradation of Organics in Aquatic Conference on Environmental Sciences - Water. (June 28- July 2) New Hampton, N.H.

Saleh, F.Y., K.L. Dickson, J.H. Rodgers, Jr. 1982. Physical and Chemical Transport Processes for Naphthalene and Lindane in the Aquatic Environment. Annual Meeting of the American Chemical Society, Division, of Environmental Chemistry. (Vol. 22, No.1).

Rodgers, J.H., Jr., K.L. Dickson, F.Y. Saleh, C.S. Staples, and T.J. Leslie. 1982. Biodegradation and Biotransformation in the Hazard Evaluation Process. Third Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 14-17) Washington, D.C.

Leslie, T.J., M. Page, K.H. Reinert, C.K. Moses, J.H. Rodgers, Jr., K.L. Dickson, and M.L. Hinman. 1983. Biotransformation of Organic Chemicals - Factors Important in Test Design. 83rd Annual Meeting of The American Society for Microbiology. (March 6-9) New Orleans, LA.

Reinert, K.H., and J.H. Rodgers, Jr. 1983. Influence of Sediment Types on the Sorption of Endothall. Texas Water Pollution Control Federation. (May 25-27) Fort Worth, TX.

Rodgers, J.H., Jr. 1983. Overview of Systems Analysis in Environmental Impact Assessment, Fate and Effects of Radioactive Materials, Demonstration of Computer Based Decision Systems. Federal Energy Institute. (September 12-13) Cuernavaca, Morelos, Mexico.

Rodgers, J.H., Jr., K.H. Reinert, and M.L. Hinman. 1983. Water quality Monitoring in conjunction with the Pat Mayse Lake Aquatic Plant Management Program. Presented at the U.S. Army Corps of Engineers 18th Annual Aquatic Plant Control and Research Meeting. (November 14-17) Raleigh, NC.

Reinert, K.H., M.L. Hinman, J.H. Rodgers, Jr., and K.L. Dickson. 1984. Need for Feedback from Fate and Effects Studies of Herbicides in Integrated Aquatic Weed Management. Presented at the 24th Annual Meeting of the Weed Science Society of America. (February 8-10) Miami, FL.

Hinman, M.L., K.H. Reinert, and J.H. Rodgers, Jr., 1984. The Use of Laboratory Tests, Microcosms, and Field Studies to Validate Environmental Fate Models. Presented at the 57th Annual conference of the Water Pollution Control Federation. (September 30-October 4) New Orleans, LA.

Reinert, K.H., and J.H. Rodgers, Jr. 1984. An Approach for Validating Predictive Fate Models Using an Aquatic Herbicide, Endothall. Presented at the 5th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 4-7) Arlington, VA.

Rodgers, J.H., Jr., K.L. Dickson, F. Saleh, D. Wilcox, C. Staples, and S. Hall. 1984. Assessing the Role of Suspended Solids in Regulating the Bioavailability of Chemicals. Presented at the 5th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 4-7) Arlington, VA.

Dorn, P.B., J.C. Raia, A.B. Greak, J.H. Rodgers, Jr., K.M. Jop, K.L. Dickson, and P.M. Rocchio. 1984. The Use of Potassium Dichromate as a Reference Toxicant in Effluent Bioassay Evaluations. Presented at the 5th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 4-7) Arlington, VA.

Rodgers, J.H., Jr., and K.H. Reinert. 1984. Effects of Endothall Used to Control Eurasian Watermilfoil in Pat Mayse Lake, Texas. Presented at the Annual Meeting of the Florida Aquatic Plant Management Society. (October 23-25) Plant City, FL.

Reinert, K.H., and J.H. Rodgers, Jr. 1984. Fate of Endothall Used to Control Eurasian Watermilfoil in Pat Mayse Lake, Texas. Presented at the annual Meeting of the Florida Aquatic Plant Management Society. (October 23-25) Plant City, FL.

Rodgers, J.H., Jr., and P.A. Clifford. 1984. Pat Mayse Lake, Texas, Aquatic Plant Management Program: Continuing Studies. Presented at the U.S. Army Corps of Engineers 19th annual Aquatic Plant Control and Research Meeting. (November 14-17) Raleigh, NC.

Leslie, T.J., K.L. Dickson, and J.H. Rodgers, Jr. 1984. Effects of Suspended Solids on

the Biotransformation Rate Kinetics of Anthracene in River Water. Sixth International Biodeterioration Symposium. (August 6-10) Washington, D.C.

Jop, K.M., J.H. Rodgers, Jr., P.B. Dorn, and K.L. Dickson. 1985. Use of Hexavalent Chromium as a Reference Toxicant in Toxicity Testing. Presented at the Ninth Symposium on Aquatic Toxicology and Environmental Fate. American Society for Testing and Materials Meeting. (April 14-16) Philadelphia, PA.

Dorn, P.B., K.M. Jop, J.H. Rodgers, Jr., and K.L. Dickson. 1985. Difficulties in Using Screening Bioassays for Effluent Toxicity Testing. Presented at the 6th Annual Meeting of the Society of Environmental Toxicology and Chemistry. St. Louis, MO.

Rodgers, J.H., Jr., P.A. Clifford, K.H. Reinert, and M.L. Hinman. 1985. Management of *Myriophyllum spicatum* using Endothall: The Pat Mayse Lake Experience. Presented at the 25th Annual Meeting of the Aquatic Plant Management Society. Vancouver, British Columbia, Canada.

Reinert, K.H., P.M. Rocchio, and J.H. Rodgers, Jr. 1985. Parameterization of Predictive Fate Models: A Case Study. Presented at the 6th Annual Meeting of the Society of Environmental Toxicology and Chemistry, St. Louis, MO.

Parkerton, T.F., S.S. Stewart, K.L. Dickson, J.H. Rodgers, Jr., and F.Y. Saleh. 1986. Evaluation of the Indicator Species Procedure for Deriving Site Specific Water Quality Criteria for Zinc. American Society for Testing and Materials -Tenth Symposium on Aquatic Toxicology and Hazard Assessment. (May 1986) New Orleans, LA.

Rodgers, J.H., T.F. Parkerton, E.E. Price, P.B. Dorn, and K.L. Dickson. 1986. Is Your Wastewater Really Toxic? – Assessing Sources of Variability in Bioassays. Presented at the 59th Annual Conference of The Water Pollution Control Federation. (October 1986) Los Angeles, CA.

Parkerton, T.F., S.M. Stewart, K.L. Dickson, J.H. Rodgers, Jr., and F.Y. Saleh. 1986. Application of Acute Toxicity Data for Deriving Site Specific Water Quality Criteria for Zinc in Three Texas Waters. Presented at the 59th Annual Conference of the Water Pollution Control Federation. (October 1986) Los Angeles, CA.

Price, E.E., J.H. Rodgers, Jr., K.L. Dickson, P.B. Dorn, and K. Jop. 1986. Influence of Ion Composition and Ionic Strength on Observed Effluent Toxicity. Presented at the 59th Annual Conference of the Water Pollution Control Federation. (October 1986) Los Angeles, CA.

Clifford, P.A., and J.H. Rodgers, Jr. 1986. Regrowth of *Myriophyllum spicatum* L. Harvested to Several Depths in a Texas reservoir. Presented at the 26th Annual Meeting of the Aquatic Plant Management Society, Inc. (July 13-16) Sarasota, FL.

Rocchio, P.M., and J.H. Rodgers, Jr. 1986. The Relative Effectiveness of 2,4-D and Endothall on *Myriophyllum heterophyllum*. Presented at the 26th Annual Meeting of the Aquatic Plant Management Society, Inc. (July 13-16) Sarasota, FL.

Rodgers, J.H., Jr., D.L. Robinson, C.L. Missimer, and J.F. Hall. 1986. Proximate Oxygen Demand of Three Aquatic Macrophytes: Use in Management of Aquatic Systems. Presented at the 26th Annual Meeting of the Aquatic Plant Management Society, Inc. (July 13-16) Sarasota, FL.

Rodgers, J.H., Jr., and P.B. Dorn. 1986. Variability Associated With Identification of Toxics in NPEDS Effluent Bioassays. Presented at the 7th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 2-5) Alexandria, VA.

Rodgers, J.H., Jr., 1986. Efforts Toward Development of an Aquatic Plant Management Concept for Pat Mayse Lake, Texas. 21st Annual Meeting Aquatic Plant Control Research Program of the U.S. Army Corps of Engineers. (Nov, 17-21) Mobile, AL.

Price, E.E., K.L. Dickson, and J.H. Rodgers, Jr. 1986. Effects of Excessive Calcium Concentration on (Na⁺ + K⁺) ATPase Activity of Two Euryhaline species, *Cvorinondon variegatus* and *Mysidopsis bahia*. Presented at the 7th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 2-5) Alexandria, VA.

Rocchio, P.M., and J.H. Rodgers, Jr. 1987. The Fate and Effects of Diquat and 2,4-D Amine in Laboratory Aquatic Systems. Eighth Annual Meeting of the Society of Environmental Toxicology and Chemistry. (Nov. 9-12) Pensacola, FL.

Parkerton, T.F., S.M. Stewart, K.L. Dickson, J.H. Rodgers, Jr., and F.Y Saleh. 1987. Derivation of Site Specific Criteria for Zinc: Implications for Wasteload Allocation. 8th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (Nov. 9-12) Pensacola, FL.

Rodgers, J.H., Jr., and P.A. Clifford. 1987. A Coupled Herbicide Fate and Target Species' Effects Model. 22nd Annual Meeting of the Aquatic Plant Control Research Program of the U.S. Army Corps of Engineers. (Nov. 16-19) Portland, OR.

Rodgers, J.H., Jr. 1987. Management of Aquatic Plants in Texas Reservoirs. Southwest Regional Meeting of the North American Lake Management Society (July 27-28) Austin, TX.

Rodgers, J.H., Jr. 1987. Aquatic Plants as Sentinels of Environmental Health. 26th Annual Meeting of the Society of Toxicology (Feb. 24-27) Washington, D.C.

Hall, J.F. and J.H. Rodgers, Jr. 1987. Use of Environmental Fate Information in Selection of Herbicides for Aquatic Plant Management. 27th Annual Meeting of the Aquatic Plant Management Society. (July 12-15) Savannah, GA.

Cassidy, K.M. and J.H. Rodgers, Jr. 1987. Relationship Between Tissue Burden and Response of Hydrilla to Diquat. 27th Annual Meeting of the Aquatic Plant Management Society. (July 12-15) Savannah, GA. (Fourth Place in APMS Student Paper Contest).

Rocchio, P.M., and J.H. Rodgers, Jr. 1987. Comparative Study of the Fate and Effects of Diquat and 2,4-D. 27th Annual Meeting of the Aquatic Plant Management Society. (July 12-15) Savannah, GA. (Second Place in APMS Student Paper Contest).

Clifford, P.A. and J.H. Rodgers, Jr. 1987. Application and Validation of the COE-WES HARVEST Model in Pat Mayse Lake. 27th Annual Meeting of the Aquatic Plant Management Society. (July 12-15) Savannah, GA.

Hall, J.F., T.F. Parkerton, J.H. Rodgers, Jr., and K.L. Dickson. 1987. Strategies for the Development of Sediment Quality Criteria: An Overview. South Central Chapter Meeting of the Society of Environmental Toxicology and Chemistry. (May 6, 1987) Houston, TX.

Dickson, K.L., J.H. Rodgers, Jr., T.M. Davis, M.E. McKeivitt, D.P. Wilcox, and K.A. Anderson. 1987. Use of *In Situ* Primary Productivity and Color Bioassays to Assess Papermill Impacts. American Society of Limnology and Oceanography Annual Meeting. (January 15) Madison, WI.

Rodgers, J.H., Jr., J.H. Kennedy, J.F. Hall and B.C. Suedel. 1988. Test Methods for Sediment Toxicity Using Freshwater organisms. The Coastal Society - Eleventh International Conference. (October 22-26) Boston, MA.

Rodgers, J.H., Jr. and P.A. Clifford. 1988. Validation of a Coupled Herbicide Fate and Effects Model: HERBICIDE. 23rd Annual Meeting of the Aquatic Plant Control Research Program of the U.S. Army Corps of Engineers. (Nov, 16-17) West Palm Beach, FL.

Suedel, B.C. and J.H. Rodgers, Jr. 1988. Sediment Characteristics as Potential Normalization Factors for the Bioavailability of Neutral Organic Compounds Sorbed to Sediments. Poster presented at the Ninth Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November, 1988) Arlington, VA.

Suedel, B.C. and J.H. Rodgers, Jr. 1989. Sediment Quality Mediation of the Toxicity of Neutral Organic Compounds. Poster presented at the American Society for Testing and Materials, 13th Symposium on Aquatic Toxicology and Risk Assessment. (April 1989) Atlanta, GA.

Suedel, B.C., J.H. Rodgers, Jr. and P.A. Clifford. 1989. Use of Organic Carbon as a Normalization Factor for the Bioavailability of Neutral Organic Compounds Sorbed to Sediments. Poster presented at the Tenth Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October, 1989) Toronto, Canada.

Suedel, B.C. and J.H. Rodgers, Jr. 1990. Sediment Characteristics That May Influence Aquatic Plant Distributions in the United States. Platform presentation at the 30th Annual Meeting of the Aquatic Plant Management Society. (July 17) Mobile, AL.

Suedel, B.C., J.H. Rodgers, Jr. and P.A. Clifford. 1990. Bioavailability of Fluoranthene in Freshwater Sediment Toxicity Tests. Platform presentation at the Eleventh Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November, 1990) Arlington, VA.

Rodgers, J.H., Jr. and P.A. Clifford. 1990. Effective use of Sonar-SRP in marginal treatments for control of *Myriophyllum spicatum*. Presented at the 30th Annual Meeting of the Aquatic Plant Management Society, Inc. (July 15-18) Mobile, AL.

Rodgers, J.H., Jr. 1990. Research on Aquatic Plant Effects on Water Quality and Fish. Presented at the 9th Annual Meeting of the Mid-South Aquatic Plant Management Society, Inc. (October 24-26) Eufaula, AL.

Hall, J.F. and J.H. Rodgers, Jr. 1990. Characterization of Toxicants in Contaminated Sediments. Presented at the Eleventh Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 11-15) Arlington, VA.

Rodgers, J.H., Jr. and J. Ackerman. 1990. Regulatory Issues and Future Data Requirements for Herbicide Registration for Aquatic Use. Presented at the 25th Annual Meeting of the Aquatic Plant Control Research Program. U.S. Army Corps of Engineers. (November 26-30) Orlando, FL.

Rodgers, J.H., Jr. 1990. Chemical Control Simulation for Aquatic Plant Management. Presented at the 25th Annual Meeting of the Aquatic Plant Control Research Program. U.S. Army Corps of Engineers. (November 26-30) Orlando, FL.

Suedel, B.C. and J.H. Rodgers, Jr. 1991. Fluoranthene Partitioning and Toxicity to *Hyalella azteca* in Freshwater Sediments. Presented at the 12th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November, 1991) Seattle, WA.

Giddings, J., J.H. Rodgers, Jr., R. Graney, T. La Point, R. Meyerhoff, S. Orenstein, and L. Touart. 1991. Conclusions of the SETAC Workshop on Microcosms for Ecological Assessment of Pesticides. Presented at the 12th Annual Meeting of the Society for Environmental Toxicology and Chemistry. (November, 1991) Seattle, WA.

Rodgers, J.H., Jr. and A.W. Dunn. 1991. Developing Guidelines for Constructed Wetlands to Remove Pesticides from Agricultural Runoff. Presented at the U.S. Environmental Protection Agency Symposium and Workshop on Developing Wetlands for the Use of Created and Natural Wetlands in Controlling Rural Nonpoint Source Pollution. (June 10-12) Arlington, VA.

Gendusa, T.C., T.L. Beitinger and J.H. Rodgers, Jr. 1991. Toxicity of Fluoranthene from Aqueous and Sediment Sources to *Pimephales promelas* and *Ictalurus punctatus*. Presented at the 12th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 3-7) Seattle, WA.

Robison, R.H., A.W. Dunn and J.H. Rodgers, Jr. 1991. Partitioning and Persistence of Aquatic Herbicides in Guntersville Reservoir, Alabama. Presented at the 12th Annual Meeting of the Society of Environmental Toxicology and Chemistry. November 3-7, 1991, Seattle, WA.

Dunn, A.W. and J.H. Rodgers, Jr. 1991. Partitioning and Persistence of Aquatic Herbicides In Guntersville Reservoir, Alabama. Presented at the 12th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 3-7) Seattle, WA.

Witt, W.T. and J.H. Rodgers, Jr. 1991. Effects of Sediment Associated Hexavalent and Trivalent Chromium on *Daphnia magna*, *Hyalella azteca*, *Chironomus tentans*, and *Stylaria lacustris*. Presented at the 12th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 3-7) Seattle, WA.

Brown, S.S., J.H. Rodgers, Jr., G.R. Gaston, A.P. McAllister, B.C. Suedel, A.W. Dunn and J.D. Mahony. 1992. Effects of Sediment-associated Copper on Stream Invertebrate Assemblages: Sediment Characteristics, Toxicity and Macrobenthos. Presented at the 13th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 8-12) Cincinnati, OH.

Suedel, B.C. and John H. Rodgers, Jr. 1992. Development of Formulated Reference Sediments for Freshwater and Estuarine Sediment Toxicity Testing. Presented at the 13th Annual Meeting of the Society for Environmental Toxicology and Chemistry. (November 8-12) Cincinnati, OH.

Dunn, A.W., J.H. Rodgers, Jr., E. Burns and A.L. Bates. 1992. Fate and Persistence of Herbicides in Guntersville Reservoir, AL. Presented at the 13th Annual Meeting of the Society for Environmental Toxicology and Chemistry. (November 8-12) Cincinnati, OH.

Burres, R.E. and J.H. Rodgers, Jr. 1992. Measuring Responses of *Myriophyllum spicatum* to Fluoridone. Presented at the 13th Annual Meeting of the Society of Environmental Toxicology and Chemistry. November 8-12, 1992, Cincinnati, OH.

Fader, P.G., K. Pigot, and J.H. Rodgers, Jr. 1992. Cytoplasmic Ion Release From Aquatic Plants as an Indicator of Membrane Injury. Presented at the 13th Annual Meeting of the Society for Environmental Toxicology and Chemistry. (November 8-12) Cincinnati, OH.

Rodgers, J.H., Jr. 1992. Studies for Calibrating Fate/Effects Algorithms in HERBICIDE

Version 2.0. Presented at the 27th Annual Meeting of the U.S. Army Engineers Waterways Experiment Station, Aquatic Plant Control Research Program. (November 16-19) Bellevue, WA.

Giddings, J.M. and J.H. Rodgers, Jr. 1992. Large Outdoor Microcosms for Ecological Assessment of Pesticides. Presented at the Second Symposium on Environmental Toxicology and Risk Assessment: Aquatic Plant and Terrestrial, American Society for Testing and Materials. (April 26-29) Pittsburg, PA.

Crossland, N.O., P.G. Fader, E.R. Kline, J.H. Rodgers, Jr., and H.G. Walker. 1992. Development of Model Streams Designed for Risk Assessments in Lotic Ecosystems. Presented at the Second Symposium on Environmental Toxicology and Risk Assessment: Aquatic Plant and Terrestrial, American Society for Testing and Materials. (April 26-29) Pittsburg, PA.

Rodgers, J.H., Jr. and A.W. Dunn. 1992. Utilization of Copper Based Herbicides in Aquatic Plant Management in Guntersville Reservoir. Presented at the 11th Annual Meeting of the Mid-South Aquatic Plant Management Society. (September 30-October 2) Guntersville, AL.

Dunn, A.W. and J.H. Rodgers, Jr. 1992. Partitioning and Persistence of Herbicides in the 1991 Guntersville Aquatic Plant Management Program. Presented at the 11th Annual Meeting of the Mid-South Aquatic Plant Management Society. (September 30-October 2) Guntersville, AL.

Rodgers, J.H., Jr. and A.W. Dunn. 1992. Using Constructed Wetlands for Pesticide Retention and Processing. Presented at the 9th Annual Meeting of the Soil and Water Conservation Society. (August 9-12) Baltimore, MD.

Crossland, N.O., P.G. Fader, E.R. Kline, J.H. Rodgers, Jr. and H.G. Walker. 1992. Model Streams Designed for Risk Assessments in Lotic Systems. Presented at the 13th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 8-12) Cincinnati, OH.

Gillespie, B., J.H. Rodgers, Jr., N.O. Crossland and H.G. Walker. 1992. Evaluation of Parameters Used for Measuring Responses of Macroinvertebrate Assemblages in Model Streams. Presented at the 13th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 8-12) Cincinnati, OH.

Rodgers, J.H., Jr. 1992. Herbicide Residue Studies. Presented at the 1992 Review Meeting of the Joint Agency, Guntersville Project. (April 22-23) Guntersville, AL.

Suedel, B.C. and John H. Rodgers, Jr. 1992. Formulated Reference Sediments for Freshwater and Estuarine Sediment Toxicity Testing. Presented at the American Society for Testing and Materials Sediment Toxicology Subcommittee Meeting

(E47.03). (November 7) Cincinnati, OH.

Rodgers, J.H., Jr., N.O. Crossland, P.B. Dorn, S.T. Dubey and L.K. Kravetz. 1993. The Ecological Effects of a Nonionic Surfactant in Stream Mesocosms. Platform Presented at the 14th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November 1993) Houston, TX.

Rodgers, J.H., Jr., N.O. Crossland, E.R. Kline, W.B. Gillespie, Jr., R.A. Figueroa and P.B. Dorn. 1993. Design and Use of Model Stream Mesocosms for Aquatic Safety Assessments of Surfactants. Presented at the International Workshop on Environmental Fate and Effects of Surfactants. (September 13-15) Veldhoven, The Netherlands.

Gillespie, W.B., Jr., J.H. Rodgers, Jr., N.O. Crossland and P.B. Dorn. 1993. The Ecological Effects of a Nonionic Surfactant on Macroinvertebrates in Model Stream Mesocosms. Poster Discussion presented at the 14th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November, 1993) Houston, TX.

Figueroa, R.A., E.R. Kline, J.H. Rodgers, Jr. and P.B. Dorn. 1993. The Responses of Fish Exposed to a Nonionic Surfactant in Stream Mesocosms. Poster Discussion presented at the 14th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November, 1993) Houston, TX.

Deaver, E., B.C. Suedel and J.H. Rodgers, Jr. 1993. Copper Sulfate as a Reference Toxicant for Use in Sediment Toxicity Tests. Poster Discussion presented at the 14th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (November, 1993) Houston, TX.

Suedel, B.C., E. Deaver and J.H. Rodgers, Jr. 1993. Reducing Uncertainty in Sediment Toxicity Tests. Platform presentation at the 14th Annual Meeting of the Society of Environmental Toxicology and Chemistry. November, 1993, Houston, TX.

Rodgers, J.H. Jr., E. Deaver, B.C. Suedel and P.L. Rogers. 1993. A Tiered Research Strategy for Evaluation of Silver Bioavailability in Aquatic Systems. Presented at the First International Conference on the Transport, Fate and Effects of Silver in the Environment. Madison, WI.

Suedel, B.C. and J.H. Rodgers, Jr. 1993. Formulated Reference Sediments for Freshwater and Estuarine Toxicity Testing. Presented at the American Society for Testing and Materials Third Symposium on Environmental Toxicology and Risk Assessment: Aquatic, Plant and Terrestrial. (April, 1993) Atlanta, GA.

Rodgers, J.H., Jr., E. Deaver and P. Rogers. 1994. Evaluation of the Bioavailability and Toxicity of Silver in Sediment. Presented at the Second International Conference on Transport, Fate and Effects of Silver in the Environment. (September 11-14) Madison, WI.

Rodgers, J.H., Jr., P.L. Rogers, N. Kaul and E. Deaver. 1994. Silver Toxicity: Fact and Fiction. Presented at the Third Pollution Prevention for Silver Imaging Systems Seminar. National Association of Photographic Manufacturers. (May 11-14) Lake Buena Vista, FL.

Rodgers, J.H., Jr., P.L. Rogers and E. Deaver. 1994. Responses of Aquatic Invertebrates to Silver Compounds. Platform presentation at the 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October 30 – November 3) Denver, CO.

Figueroa, R.A., J.H. Rodgers, Jr., R.E. Lizotte and P.B. Dorn. 1994. Responses of Fish Exposed to Nonionic Surfactants in Stream Mesocosms. Poster presented at the 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October 30 - November 3) Denver, CO.

Gillespie, W.B., Jr., J.H. Rodgers, Jr. and P.B. Dorn. 1994. Responses of Aquatic Invertebrates to a Nonionic Surfactant in Laboratory and Model Stream Mesocosm Exposure. Poster presented at the 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October 30 - November 3) Denver, CO.

Rodgers, J.H., Jr., P.B. Dorn, S.T. Dubey, W.B. Gillespie, Jr. and R.A. Figueroa. 1994. Comparative Ecological Effects of Two Homologous Nonionic Surfactants in Stream Mesocosms. Poster presented at the 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October 30 - November 3) Denver, CO.

Dunn, A.W. and John H. Rodgers, Jr. 1994. Uptake of Triclopyr by Eurasian Watermilfoil (*Myriophyllum spicatum*) Under Different Exposure Conditions. Poster presented at the 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October 30 - November 3) Denver, CO.

Dorn, P.B., N.R. Vergel, W.B. Hawkins, A.W. Dunn and J.H. Rodgers, Jr. 1994. Design of Pilot-scale Constructed Wetlands for Tertiary Treatment of Refinery Effluent. Poster presented at the 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October 30 - November 3) Denver, CO.

Deaver, E. and J.H. Rodgers, Jr. 1994. Evaluations of Bioavailable Copper in Amended Wetland Sediments. Poster presented at the 15th Annual Meeting of the Society of Environmental Toxicology and Chemistry. (October 30 - November 3) Denver, CO.

Deaver, E. and J.H. Rodgers, Jr. 1994. Analysis of Copper in Aqueous Systems. Presented at the Annual Meeting of the Aquatic Plant Management Society. (July 10-13) San Antonio, TX.

Deaver, E. and J.H. Rodgers, Jr. 1994. Analysis of Copper in Aqueous Systems.

Presented at the Annual Meeting of the South Carolina Aquatic Plant Management Society. (August, 1994) Columbia, SC.

Deaver, E. and J.H. Rodgers, Jr. 1994. Analysis of Bioavailable Copper in Amended Wetland Sediments. Presented at the Annual Meeting of the Agronomy Society of America. (November 12-17) Seattle, WA.

Deaver, E. and J.H. Rodgers, Jr. 1994. Analysis of Copper in Aqueous Systems. Presented at the Annual Meeting of the Mid-South Aquatic Plant Management Society. (October, 1994) Birmingham, AL.

Rodgers, J.H., Jr. 1994. Current Research Activities at the University of Mississippi's Biological Field Station and Center for Water and Wetland Resources. Presented to the Annual Meeting of the Mid-South Aquatic Plant Management Society. (October, 1994) Birmingham, AL.

Rodgers, J.H., Jr., W.B. Hawkins, A.W. Dunn and T.L. Deardorff. 1994. An Evaluation of Potential Impacts of Bleached Kraft Mill Effluents on the Lower Sulphur River, Texas-Arkansas. Presented at the Second International Conference on Environmental Fate and Effects of Bleached Pulp Mill Effluents. (November 6-9) Vancouver, B.C.

Rodgers, J.H., Jr. 1995. Use of Copper for Aquatic Plant Management. Presented at the 14th Annual Meeting of the Mid-South Aquatic Plant Management Society. (October 11-13) Sheffield, AL.

Deaver, E. and J.H. Rodgers, Jr. 1995. Measuring Bioavailable Copper Using Anodic Stripping Voltammetry. Presented at the 14th Annual Meeting of the Mid-South Aquatic Plant Management Society. (October 11-13) Sheffield, AL.

Rodgers, J.H., Jr. and A.W. Dunn. 1995. Constructed Wetlands Integratively Designed for Transfer and Transformation of Copper, Lead and Zinc. Presented at the 14th Annual Meeting of the Mid-South Aquatic Plant Management Society. (October 11-13) Sheffield, AL.

Hawkins, W.B. and J.H. Rodgers, Jr. 1995. Utilization of *Scirpus californicus* [(C.A. Meyer) Steud.] in Constructed Wetlands. Presented at the 14th Annual Meeting of the Mid-South Aquatic Plant Management Society. (October 11-13) Sheffield, AL.

Lizotte, R.E., J.H. Rodgers, Jr., P.B. Dorn, S.T. Dubey, W.B. Gillespie, Jr. and R.A. Figueroa. 1995. Comparative Ecological Effects of Two Homologous Nonionic Surfactants in Stream Mesocosms. Sigma Xi, The University of Mississippi Chapter and Office of Research/Graduate/Undergraduate Student Poster Symposium.

Deaver, E. and J.H. Rodgers, Jr. 1995. Investigations of Copper Speciation and Bioavailability. Presented at the 16th Annual Meeting and Second World Congress of

the Society of Environmental Toxicology and Chemistry. (November 5-9) Vancouver, B.C.

Hawkins, W.B., A.W. Dunn, J.H. Rodgers, Jr. and P.B. Dorn. 1995. Pilot-scale Constructed Wetlands for Tertiary Treatment of Refinery Effluent. Presented at the 16th Annual Meeting and Second World Congress of the Society of Environmental Toxicology and Chemistry. (November 5-9) Vancouver, B.C.

Gillespie, W.B., Jr., J.H. Rodgers, Jr., P.B. Dorn and S.T. Dubey. 1995. Responses of Aquatic Invertebrates to Three Homologous Nonionic Surfactants in Model Stream Mesocosm Exposures. Presented at the 16th Annual Meeting and Second World Congress of the Society of Environmental Toxicology and Chemistry. (November 5-9) Vancouver, B.C.

Dunn, A.W. and J.H. Rodgers, Jr. 1995. Responses of a Submerged Aquatic Plant and Periphyton to a Nonionic Surfactant in Model Stream Mesocosm Exposures. Presented at the 16th Annual Meeting and Second World Congress of the Society of Environmental Toxicology and Chemistry. (November 5-9) Vancouver, B.C.

Rodgers, J.H., Jr., P.B. Dorn, W.B. Gillespie, Jr. and S.T. Dubey. 1995. Effects of Three Homologous Nonionic Surfactants in Model Stream Mesocosm Exposures. Presented at the 16th Annual Meeting and Second World Congress of the Society of Environmental Toxicology and Chemistry. (November 5-9) Vancouver, B.C.

Lizotte, R.E., Jr., J.H. Rodgers, Jr., P.B. Dorn and S.T. Dubey. 1995. Effects of Three Homologous Nonionic Surfactants on Fish in Stream Mesocosms. Presented at the 16th Annual Meeting and Second World Congress of the Society of Environmental Toxicology and Chemistry. (November 5-9) Vancouver, B.C.

Rodgers, J.H., Jr., E. Deaver and P.L. Rogers. 1995. Partitioning and Effects of Silver in Amended Freshwater Sediments. Presented at the Third International Conference on Transport, Fate and Effects of Silver in the Environment. (August 6-9) Washington, D.C.

Deardorff, T.L., J.H. Rodgers, Jr., D.P. Felder, and S.J. D'Surney. 1998. A multifaceted investigation of the aquatic ecosystems near a bleached and unbleached kraft mill. Presented at the Third International Symposium on Aquatic Impacts of Pulp and Paper Mills, Nov. 1998. New Zealand.

Mastin, B.J. and Rodgers, J.H., Jr. 1998. Toxicity and bioavailability of copper herbicides (Clearigate®, Cutrine®-Plus, and copper sulfate) to freshwater animals. 19th Annual meeting, Society of Environmental Toxicology and Chemistry, Nov., Charlotte, NC. p.212.

Moore, M.T., W.B. Gillespie, Jr., and J.H. Rodgers, Jr. 1998. Constructed wetlands to mitigate agricultural pesticide runoff. 19th Annual Meeting, Society of Environmental

Toxicology and Chemistry, Nov., Charlotte, NC. p.284.

Mastin, B.J. and Rodgers, J.H., Jr. 1998. Characterization and assessment of *Lyngbya*-dominated cyanobacteria "blooms" in the SB-1 Reservoir Springhill, Louisiana. Biology Department University of Mississippi.

Maciorowski, A.F., Reinert, K., and Rodgers, J.H., Jr. 1998. Ethics in Ecological Risk Assessment: An Overview. publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry, Nov. Charlotte, NC.

Bohannon, A.L., Moore, M.T., Cooper, M., and Rodgers, J.H. Jr. 1998. Effects of Chlorpyrifos on Macroinvertebrates in Constructed Wetlands. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC.

Dorn, P.B., Tattersfield, L.J., Raney, K.H., and Rodgers, J.H. Jr. 1998. Development of Effects Data for Alcohol Ethoxylate Surfactants using Stream Mesocosms. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC. p. 175.

Huggett, D.B., Muller, S.L., Bohannon, A.L., and Rodgers, J.H.Jr., Adams, D.L., Deardorff, T.L. 1998. Toxicity Assessment of Historically Contaminated Sediments. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC. p.209.

Mastin, B.J., and Rodgers, J.H., Jr. 1998. Toxicity and Bioavailability of Chelated-Copper Herbicides Clearigate®, Cutrine®-Plus and Copper Sulfate. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC. p.212.

Rodgers, J.H., Jr., Fisher, R.P., and Festa, J.L. 1998. Development of a North American research strategy to assess potential reproductive effects of pulp mill effluents on fish-focus on hormone-mediated effects and assessment. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC. p. 233

Gillespie, W.B. Jr., Rodgers, J.H., Jr., Cooper, C.M., and Smith S. 1998. Constructed Wetlands to Mitigate Agricultural Pesticide Runoff. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC. p. 284.

Huddleston, G.M. III, Gillespie, W.B., Jr., Rodgers, J.H., Jr. 1998. Abatement of Ammonia and Biochemical Oxygen Demand in a Petroleum Refinery Effluent Using Constructed Wetlands. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC. p. 284.

Muller, S.L., Huggett, D.B., Rodgers, J.H., Jr. 1998. Effects of Copper Sulfate on *Typha latifolia* Seed Germination and Early Seedling Growth in Aqueous and Sediment

Exposures. Publ. abstr. 19th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Charlotte, NC. p. 287.

Moore, M.T., S. Smith, Jr., and C.M. Cooper. 1999. Comparative mitigation of chlorpyrifos, atrazine, and metachlor-associated runoff using constructed wetlands. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p.102.

Bohannon, A.L., M.T. Moore, and J.H. Rodgers, Jr. 1999. Evaluation of bench-scale constructed wetland microcosms for potential tertiary treatment of produced water from a petroleum refinery. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p..271.

Huddleston, G.M., A.L. Schwartzman, and J.H. Rodgers, Jr. 1999. Risk mitigation of a complex effluent using constructed wetlands. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p..272.

Mastin, B.J., J.H. Rodgers, Jr. and T.L. Deardorff. 1999. Risk assessment of cyanobacteria-dominated algal "blooms" in a north Louisiana reservoir. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p.284.

Huddleston, G.M., J.H. Rodgers, Jr., D.B. Huggett, M.T. Moore, and C.M. Cooper. 1999. Herbicide effects on *Typha latifolia* (Linnaeus) germination and root and shoot development. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p. 158.

Schwartzman, A.L., B.J. Mastin, and J.H. Rodgers, Jr. 1999. The role of plants for influencing redox potential in the root zone in different hydrosols. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p. 158.

Winfield, L.E., J.H. Rodgers, Jr., S.J. D'Surney and C.R. Lee. 1999. Phytotoxicity of RDX Exposure (<12 days) to selected terrestrial plants. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p.. 158.

Huddleston, G.M., J.H. Rodgers, Jr., B.J. Mastin, S.E. Woods and D. McHenry. 1999. Macroinvertebrate survey of the Tenn-Tom Waterway in the vicinity of a pulp and paper effluent discharge: Factors influencing rapid bioassessment interpretation. Presented at the 20th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Philadelphia, PA, 14-18 November 1999. p. 245.

Rodgers, Jr., J.H. 1999. Risk assessment of herbicides for aquatic use. Presented at the 18th Annual Meeting of the Midsouth Aquatic Plant Management Society. Gulf Shores, AL, 20-22 October 1999.

Rodgers, Jr., J.H. 1999. Risk assessment of herbicides for aquatic use. (Keynote Address) Presented at the Annual Meeting of the South Carolina Aquatic Plant Management Society. Columbia, SC, 12-13 August 1999.

Rodgers, Jr., J.H. 1999. Environmental toxicology and ecotoxicology. Presented at a workshop on Partners in Scientific Collaboration. Oak Ridge National Laboratory, Oak Ridge, TN, 18-19 August 1999. Sponsored by AAAS, NSF, U.S. DOE and ORNL.

Huddleston, G.M., III, Mastin, B.J., Rodgers, J.H., Jr., Woock, S.E., McHenry, D. 1999. Macroinvertebrate survey of the Tennessee-Tombigbee Waterway in the vicinity of a pulp and paper effluent discharge: factors influencing rapid bioassessment interpretation. Annual Meeting, Society of Environmental Toxicology and Chemistry., Philadelphia, PA.

Rodgers, J.H., Jr. 1999. Toxic effects of forest herbicides on aquatic organisms. Presented at the Symposium Pesticides and the Forest Environment. April 13-15, 1999 Nacogdoches, Texas.

Rodgers, J.H., Jr. 1999. SETAC-US EPA. WET Initiatives: All WET and Nothing but WET. Presented at Air and Waste Management Association Environmental Permitting Symposium (February 17-19, 1999), Research Triangle Park, NC.

Winfield, L.E., Lee, C.R., Rodgers, J.H., Jr., and D'Surney, S.J. 1999. Effects of short-term exposure to RDX amended mollisols in wild/cover plants. Poster presentation. Annual Meeting Soc. of Toxicology. March 1999. New Orleans, LA.

Winfield, L.E., D'Surney, S.J., Rodgers, J.H., Jr., and Lee, C.R. 1999. Phytotoxicity of RDX exposure (<12 days) to selected terrestrial plants. Poster presentation. 20th Annual Meeting of Society of Environmental Toxicology and Chemistry. Nov 1999. Philadelphia, PA.

Huddleston, G.M., Rodgers, J.H., Jr., Huggett, D.B., Moore, M.T., and Cooper, C.M. 1999. Herbicide Effects on *Typha latifolia* (Linnaeus) Germination and Root and Shoot Development. Publ. abstr. 20th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Philadelphia, PA.

Winfield, L.E., Rodgers, J.H. Jr., D'Surney, S.J., and Lee, C.R. 1999. Phytotoxicity of RDX Exposure (<12 days) to Selected Terrestrial Plants. Publ. abstr. 20th annual meeting Society of Environmental Toxicology and Chemistry. Nov. Philadelphia, PA.

Ausley, L.W., D.T. Burton, D.L. Denton, P.B. Dorn, W.L. Goodfellow, Jr., J.R. Gully, T.J.

- Norberg-King, J.H. Rodgers Jr., and W.T. Waller. 2000. Watershed Management: Historical Perspective for the Future. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16, 2000 (Platform). p. 29.
- Huddleston, III, G.M., A.L. Schwartzman, and J.H. Rodgers, Jr. 2000. Constructed Wetland Design for Decreasing Copper Bioavailability Associated with an Aqueous Matrix. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16, 2000 (Poster). p. 283.
- Mastin, B.J. and J.H. Rodgers, Jr. 2000. Design and Performance of Constructed Wetlands for Treatment of Petroleum in an Aqueous Matrix. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16, 2000 (Poster). p. 284.
- Murray-Gulde, C.L., J.E. Heatley, J.H. Rodgers, Jr., J.E. Myers, and J.F. Hall. 2000. Design of a Pilot-Scale Constructed Wetland Treatment System for Oilfield Produced Waters. Carolina Regional of Society of Environmental Toxicology and Chemistry, Wilmington, NC. March 31-April 1, 2000 (Poster). p. 284.
- Rodgers, Jr., J.H., M.T. Moore, C.M. Copper, and S. Smith, Jr. 2000. Constructed Wetlands for Mitigation of Risks from Golf Course Runoff. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16, 2000 (Poster). p. 191.
- Schwartzman, A.L., G.M. Huddleston, III, and J.H. Rodgers, Jr. 2000. The Role of *Scirpus californicus* (Giant Bulrush) in Constructed Wetlands for Remediation of Copper-Contaminated Wastewater. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16, 2000 (Poster). p.283.
- Sherrard, R.M. and J.H. Rodgers, Jr. 2000. Design of Constructed Wetland Anaerobic Reactors for Treatment of Trichloroethylene and Perchloroethylene. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16, 2000 (Poster). p. 284.
- Sherrard, R.M. and J.H. Rodgers, Jr. 2000. Design of Constructed Wetland Anaerobic Reactors for Treatment of Trichloroethylene. Carolina Regional Meeting of Society of Environmental Toxicology and Chemistry, Wilmington, NC. March 31-April 1, 2000 (Poster).
- Winfield, L., S. D'Surney, C. Lee, and J.H. Rodgers, Jr. 2000. A Comparison of the Responses of Agronomic and Wild/Cover Plants to RDX Amended Grenada and Bowdry Soils. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16, 2000 (Poster). p. 236.
- Winfield, L., J.H. Rodgers, Jr., C.Lee, S. D'Surney, and D. Brandon. 2000. The Phytotoxicity and Bioaccumulation of RDX by Sunflower (*Helianthus annuus* L.) Plants. Society of Environmental Toxicology and Chemistry, Nashville, TN. November 12-16,

2000 (Poster). p. 236.

Rodgers JH Jr., and Myers JE. 2001. Treatment wetlands as sustainable technology for water treatment: fundamentals. Presented at the 5th International Congress on Health, Safety, and Environment (COSSMAP): Panama City, Panama; July 11-14, 2001.

Rodgers JH Jr. 2001. Treatment wetlands as sustainable technology for water treatment: domestic wastewater. Presented at the 5th International Congress on Health, Safety, and Environment (COSSMAP): Panama City, Panama; July 11-14, 2001.

Rodgers JH Jr. 2001. Treatment wetlands as sustainable technology for water treatment: stormwater. Presented at the 5th International Congress on Health, Safety, and Environment (COSSMAP): Panama City, Panama; July 11-14, 2001.

Rodgers, JH Jr. 2001. Environmental research at Clemson University and opportunities for collaboration. Presented at Universidad Catolica Santa Maria La Antigua, El Dorado, Panama; July 13, 2001.

Mastin, B.J., J.H. Rodgers, Jr. and Y.T. Shah. 2001. Hybrid cavitation/ constructed wetland reactors for treatment of chlorinated and non-chlorinated organics. *Chemical Engineering Tech* 24(8): 97A-105A.

Winfield, L.E., D'Surney, S.J. and Rodgers, J.H., Jr. 2001. The response of terrestrial plants to hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) exposures: Part 1- Short-term (<12 days) exposures using cover plants. Submitted to J. of Ecotoxicology.

Winfield, L.E., Rodgers, J.H., Jr., and D'Surney, S.J. 2001. The response of terrestrial plants to hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) exposures: Part II- Short-term (<12 days) exposure using five crop plants. Submitted to J. of Ecotoxicology.

Windfield, L.E., D'Surney, S.J. and Rodgers, J.H., Jr. 2001. The response of sunflower (*Helianthus annuus L.*) plants long-term (2,4, and 6 weeks) Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) exposures: Part III-Growth responses of two life stages. Submitted to J. of Ecotoxicology.

Windfield, L.E., Rodgers, J.H., Jr., and D'Surney, S.J. 2001. The response of two life stages of sunflower (*Helianthus annuus L.*) plant to long-term (2,4, and 6 weeks) RDX exposure: Part IV-Bioconcentration and phytotoxic responses. Submitted to J. of Ecotoxicology.

Winfield, L.E., D'Surney, S.J., and Rodgers, J.H., Jr. 2001. The response of terrestrial plants to short-term hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX) exposure. Accepted for publication in Proceedings, Conference on Sustainability of Wetlands and Water Resources. Center for Water and Wetland Resources at the Univ. of MS Biology Field Station. University, MS.

Winfield, L., S. D'Surney and J.H. Rodgers, Jr. 2001. Development of a short-term screening method to assess RDX Bioavailability and phytotoxicity. Presented at the 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry. 11-15 November 2001, Baltimore.

Rodgers, J.H., Jr., L.W. Ausley, D. Burton, D.L. Denton, P.B. Dorn, W. L. Goodfellow, J. Gully, T.J. Norberg-King, and W.T. Waller. 2001 TMDL's: After point sources, what can we do next? Presented at the 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry. 11-15 November 2001, Baltimore. P. 59.

Johnson, A.R., and J.H. Rodgers, Jr. 2001. Scaling in Ecotoxicity: theory, evidence and research needs. Presented at the 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry. 11-15 November 2001, Baltimore. P. 84.

Mastin, B.J., G.M. Huddleston and J.H. Rodgers, Jr. 2001. Partitioning of copper to Scirpus californicus organic matter: effects on toxicity to Ceriodaphnia dubia. Presented at the 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry. 11-15 November 2001, Baltimore. P. 157.

Murray-Gulde, C.L., J.E. Heatley, A.L. Schwartzman and J.H. Rodgers, Jr. 2001. Toxicity of Clearigate, Cutrine-Plus and Copper Sulfate to Raphidocelis subcapitata, Ceriodaphnia dubia and Pimephales promelas. Presented at the 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry. 11-15 November 2001, Baltimore. p. 206.

Sherrard, R.M. C.L. Murray-Gulde, and J.H. Rodgers, Jr. 2001. Comparative toxicity of chlorothalonil and chlorpyrifos: Ceriodaphnia dubia and Pimephales promelas. Presented at the 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry. 11-15 November 2001, Baltimore. P. 338.

Mastin, B.J., Rodgers, J.H., Jr. 2001. Design and performance of constructed wetlands for treatment of stormwater. Constructed Wetlands for Water Quality Improvement, Clemson University, Departments of Plant Pathology and Physiology, and Department of Industrial Engineering.

Mastin, B.J. Rodgers, J.H., Jr., Deardorff, T.L. 2001. Risk evaluation of cyanobacterial-dominated algal blooms in a North Louisiana reservoir. Annual meeting Society of Environmental Toxicology and Chemistry, Carolinas Chapter.

Mastin, B.J., Huddleston, G.M. III, Rodgers, J.H., Jr. 2001. Partitioning of copper to Scirpus californicus organic matter: Effects on toxicity to Ceriodaphnia dubia. Presented at the 22nd Annual Meeting of the Society of Environmental Toxicology and Chemistry. 11-15 November 2001, Baltimore.

Rodgers, J.H. Jr. 2001. Strategies for Risk Characterizations of Contaminated

Sediments. Invited speaker. Conférence De Prestige Cirtox. Centre interuniversitaire de recherche en toxicologie (CIRTOX). Université de Montréal. May 31, 2001. (invited plenary lecture)

Winfield, L.E., D.Surney, S.J. and Rodgers, J.H., Jr. 2001. Development of a short-term method to assess RDX bioavailability and phytotoxicity. Accepted for presentation during 22nd Annual Meeting of Society of Environmental Toxicology and Chemistry. Nov. 2001. Baltimore, MD.

Winfield, L.E., D'Surney, S.J., and Rodgers, J.H., Jr. 2001. The growth response of selected terrestrial plants to RDX exposure. Invited speaker for special symposium. Annual Meeting of the American Phytopathology Society. Aug. 2001. Salt Lake City, UT.

Murray-Gulde, C., Heatley, J.E., Karanfil, T., Rodgers, Jr., J.H. and Myers, J.E. (in press). Performance of a Hybrid Reverse Osmosis-Constructed Wetland Treatment System for Brackish Produced Water. Water Research

Rodgers, J.H., Jr. 2002. Case Study: A TMDL for copper. Presented at the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2002, Salt Lake City, UT.

Rodgers, J.H., Jr., J.E. Heatley, and C.L. Murray-Gulde. 2002. Toxicity of five copper-containing algaecides to selected algae and animal species. Presented at the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2002, Salt Lake City, UT.

Murray-Gulde, C.L., J. Berr, J. Gallagher, J. Heatley, G.M. Huddleston III, and J.H. Rodgers, Jr. 2002. Design and evaluation of a constructed wetland treatment system for decreasing the concentration and bioavailability of copper in a wastestream. Presented at the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2002, Salt Lake City, UT.

Mastin, B.J. and J.H. Rodgers, Jr. 2002. Discerning toxic fractions of crankcase oil and diagnostic responses of freshwater testing organisms. Presented at the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2002, Salt Lake City, UT.

Murray-Gulde, C.L., G.M. Huddleston III, and J. H. Rodgers, Jr. 2002. Comparison of a microcosm-scale and full-scale constructed wetland treatment system designed to treat a copper-contaminated wastewater. Presented at the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2002, Salt Lake City, UT.

Murray-Gulde, C.L. and J.H. Rodgers, Jr. 2002. Contributions of *Scirpus californicus* in a constructed wetland system receiving copper contaminated wastewater. Presented at

the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2002, Salt Lake City, UT.

Gallagher, J.S., G.M. Huddleston III, and J.H. Rodgers, Jr. 2002. Toxicity of lake sediments to *Hyalella azteca* Sausure and *Ceriodaphnia dubia* Richard following copper-herbicide applications. Presented at the 23rd Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2002, Salt Lake City, UT.

Johnson, A.R. and J.H. Rodgers, Jr. 2003. Scaling in ecotoxicology: theory, evidence and research needs. Presented at the 7th International Conference on Aquatic Ecosystem Health and Management Society, Sep., 2003. Lyon, France.

Huddleston, G.M., J.C. Arrington, and J.H. Rodgers, Jr. 2003. Winter removal of BOD and solids from an industrial effluent using constructed wetlands. Presented at the 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2003, Austin, TX.

Garber, K.V., J.S. Gallagher, J.H. Rodgers, Jr., and A.R. Johnson. 2003. Measuring and modeling changes over time of fecal coliform densities in aquatic systems. Presented at the 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2003, Austin, TX.

Stag, C.L. and J.H. Rodgers, Jr. 2003. Identification of toxic fractions of a formulated produced water and diagnostic responses of *Ceriodaphnia dubia*. Presented at the 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2003, Austin, TX.

Duke, B.M., and J.H. Rodgers, Jr. 2003. Comparative toxicity of a copper containing algaecide to four algal species. Presented at the 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2003, Austin, TX.

Gallagher, J.S., K.V. Garber and J. H. Rodgers, Jr. 2003. Mitigating risks of domestic wastewater using model constructed wetlands: Influence of HRT and loading. Presented at the 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2003, Austin, TX.

Rodgers, J.H., Jr. 2003. After the TMDL, what do we do? Presented at the TMDL Short Course at the 24th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov., 2003, Austin, TX.

Rodgers, J.H., Jr., C.L. Murray-Gulde and G.M. Huddleston, III. 2003. Expanding functional roles of vascular aquatic plants: *Schoenoplectus californicus* as an example. Presented at the 43rd Annual Meeting of the Aquatic Plant Management Society, July, 2003. Portland, Maine.

Rodgers, J.H., Jr. 2003. Role of *Schoenoplectus californicus* in constructed wetlands for treatment of metals at Savannah River Site. Presented at the Annual Review Meeting of the USDA/ARS Jimmy carter Plant Materials Center. June, 2003. Americus, GA.

Rodgers, J.H., Jr. 2003. Using copper containing algacides and herbicides in aquatic systems. Presented at the Annual Meeting of the Mid-West Aquatic Plant Management Society. March, 2003. Columbus, OH.

Rodgers, J.H., Jr. and J. Thomas. 2003. Evaluation of the fate and effects of pulp and paper mill effluents from a watershed multistressor perspective: Progress to date and future opportunities. Presented at the 5th International Conference on the Fate and Effects of Pulp and Paper Mill Effluents and the 7th International Water Association Symposium on Forest industry Wastewaters. June, 2003. Seattle, WA.

Rodgers, J.H., Jr. 2003. Expanding functional roles for *Schoenoplectus californicus* in constructed wetlands for treating metals. Presented (invited) at the Annual Meeting of the South Carolina Aquatic Plant Management Society. August, 2003. Monks Corner, SC.

Rodgers, J.H., Jr. 2003. *Schoenoplectus californicus*: Expanding role in constructed wetlands for treating metals. Presented at the Annual Meeting of the MidSouth Aquatic Plant Management Society. Oct. 2003. Auburn University, AL.

Johnson, B.M., L.E. Ober, J.W. Castle, and J.H. Rodgers, Jr. 2005. Treating Natural Gas Storage Produced Waters Using Constructed Wetland Treatment Systems. Presented at the International Symposium on Phytotechnology (U.S. EPA), March, 2005. Atlanta, GA.

Eggert, D., J.H. Rodgers, Jr., G.M. Huddleston III, C. Gulde, and F.D. Mooney. 2005. Design Constructed Wetland Treatment Systems for Flue Gas Desulfurization Wastewaters. Presented at the International Symposium on Phytotechnology (U.S. EPA), March, 2005. Atlanta, GA.

Rodgers, J.H., Jr., R. Jones, M. Duke, S. Lankford and W. Anderson. 2005. *Lyngbya* Growth and Control: We Are Working On It? Presented at the Annual Meeting of the Aquatic Plant Management Society. July, 2005. San Antonio, TX.

Duke, B.M., O.R. Tedrow and J.H. Rodgers, Jr. 2005. Site-specific Management of Problematic Algae Using a Copper-containing Algaecide. Presented at the Annual Meeting of the Aquatic Plant Management Society. July, 2005. San Antonio, TX.

Rodgers, J.H., Jr., R. Jones, M. Duke, S. Lankford and W. Anderson. 2005. *Lyngbya* Growth and Control: We Are Working On It? Presented at the 27th Annual Meeting of the South Carolina Aquatic Plant Management Society. August, 2005. Myrtle Beach, SC.

Duke, B.M., O.R. Tedrow and J.H. Rodgers, Jr. 2005. Site-specific Management of Problematic Algae Using a Copper-containing Algaecide. Presented at the 27th Annual Meeting of the South Carolina Aquatic Plant Management Society. August, 2005. Myrtle Beach, SC.

Johnson, B.M., L.E. Ober, J.W. Castle, and J.H. Rodgers, Jr. 2005. Treating Natural Gas Storage Produced Waters Using Constructed Wetland Treatment Systems. Presented at the Annual Meeting of the American Association of Petroleum Geologists, September, 2005. Morgantown, WV.

Rodgers, J.H., J.W. Castle, B.M. Johnson, and L.E. Ober. 2005. Progress of Design of Hybrid Constructed Wetland Treatment Systems for Natural Gas Storage Produced Waters. Presented at the Annual Meeting of the Gas Storage Technology Consortium (U.S. DOE), August, 2005, Pittsburg, PA.

Castle, J.W., J.H. Rodgers, Jr., B.M. Johnson, and L.E. Ober. 2005. A Demonstration-Scale Hybrid Construction Wetland Treatment System for Gas Storage Produced Waters. Presented at the Annual Meeting of the Gas Storage Technology Consortium (U.S. DOE), August, 2005, Pittsburg, PA.

Deardorff, T.L. and J.H. Rodgers, Jr. 2006. The efficacy of a constructed wetland for the pulp and paper industry: From the laboratory to a full-scale trial. Presented at the 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nov. 5-7, 2006, Montreal, CANADA. (ABSTRACTS p. 218).

Damiri, B.R. and J.H. Rodgers, Jr. 2006. Responses of *Typha latifolia* to aqueous boron exposures. Presented at the 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nov. 5-7, 2006, Montreal, CANADA. (ABSTRACTS p.243).

Eggert, D.A., W.C. Bridges and J.H. Rodgers, Jr. 2006. *Ceriodaphnia dubia* exposed to mercuric nitrate: Assessment of sample size and statistical analysis for a 7d static/renewal toxicity test. Presented at the 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nov. 5-7, 2006, Montreal, CANADA. (ABSTRACTS p. 246).

Duke, B.M., O.R. Tedrow and J.H. Rodgers, Jr. 2006. Development of a planktonic algal bioassay using site water and copper containing algaecides. Presented at the 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nov. 5-7, 2006, Montreal, CANADA. (ABSTRACTS p. 245).

Kushner, L.R., J.H. Rodgers, Jr. and D.A. Eggert. 2006. Potential toxicity of aqueous exposures of cadmium, chromium, lead and zinc to *Ceriodaphnia dubia*. Presented at the 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nov. 5-7, 2006, Montreal, CANADA. (ABSTRACTS p. 301).

Johnson, B.M., D.A. Eggert and J.H. Rodgers, Jr. 2006. Treatment of Arsenic, Mercury, Nitrogen and Selenium in Flue Gas Desulfurization Water Using Pilot-Scale Constructed Wetland treatment Systems. Presented at the 27th Annual Meeting of the Society of Environmental Toxicology and Chemistry, Nov. 5-7, 2006, Montreal, CANADA. (ABSTRACTS p. 301).

Rodgers, J.H., Jr. 2007. Do algae spill their guts after treatment with algaecides?: A test of the "leaky cell" hypothesis. Presented at the 8th Annual Meeting of the Northeast Aquatic Plant Management Society, Jan.16-17, 2007. West Dover, Vermont.

Johnson, B.M. and J.H. Rodgers, Jr. 2007. Responses of sentinel non-target species to copper-containing algaecides. Presented at the 8th Annual Meeting of the Northeast Aquatic Plant Management Society, Jan.16-17, 2007. West Dover, Vermont.

Rodgers, J.H., Jr. 2007. Do algae spill their guts after treatment with algaecides?: A test of the "leaky cell" hypothesis. Presented at the 28th Annual Meeting of the South Carolina Aquatic Plant Management Society, Aug. 16-18, 2006. Springmaid Beach, SC.

Rodgers, J.H., Jr. 2006. Adaptive Water Resource Management and Harmful Algal Blooms. Presented at the Annual Meeting of the Texas Aquatic Plant Management Society. Sep. 11-13, 2006. Jasper, TX.

Rodgers, J.H., Jr. 2006. Selecting and managing plants for constructed wetland treatment systems. Presented at the 30th Annual Meeting of the Florida Aquatic Plant Management Society, Oct.30- Nov.2, 2006. St. Petersburg, FL.

Rodgers, J.H., Jr. and J.W. Castle 2006. Demonstration-scale constructed wetland system for treatment of produced waters from underground gas storage. Presented at the Gas Storage Technology Consortium Technology Transfer Workshop, Oct. 4, 2006. San Francisco, CA.

Rodgers, J.H., Jr. 2007. Do algae spill their guts after treatment with an algaecide?; A test of the "leaky cell" hypothesis. Presented at the 27th Annual Meeting of the MidWest Aquatic Plant Management Society, March 3-5, 2007. Milwaukee, WI.

Johnson, B.M. and J.H. Rodgers, Jr. 2007. Responses of sentinel non-target species to copper-containing algaecides. Presented at the 27th Annual Meeting of the MidWest Aquatic Plant Management Society, March 3-5, 2007. Milwaukee, WI.

Rodgers, J.H., Jr. 2007. Toxicology of herbicides. Presented at the 26th Annual Meeting of the Western Aquatic Plant Management Society, March 25-27, 2007. Coeur d'Alene, ID.

Rodgers, J.H., Jr. 2006. Do algae spill their guts after treatment with an algaecide?; A

test of the “leaky cell” hypothesis. Presented at the 25th Annual Meeting of the MidSouth Aquatic Plant Management Society, October 24-26, 2006. Orange Beach, Alabama.

Dorman, L., J.W. Castle and J.H. Rodgers, Jr. 2007. Performance of a pilot-scale constructed wetland for simulated ash basin water. Presented at the Clemson Hydrogeology Symposium, April 17, 2007. Clemson, SC.

Iannacone, M., J.W. Castle and J.H. Rodgers, Jr. 2007. Evaluation of equalization basins as initial treatment for flue gas desulfurization waters. Presented at the Clemson Hydrogeology Symposium, April 17, 2007. Clemson, SC.

Cross, E., J.W. Castle, G.M. Huddleston and J.H. Rodgers, Jr. 2007. Design and construction, and acclimation of a demonstration-scale constructed wetland treatment system for natural gas storage produced waters. Presented at the Clemson Hydrogeology Symposium, April 17, 2007. Clemson, SC.

Bennett, D., J.W. Castle and J.H. Rodgers, Jr. 2007. Boron removal in constructed wetland treatment systems for irrigation waters: A process study. Presented at the Clemson Hydrogeology Symposium, April 17, 2007. Clemson, SC.

Eggert, D.E., C. Hensman and J.H. Rodgers, Jr. 2007. Performance of Pilot-Scale Constructed Wetland Treatment Systems for Flue Gas Desulfurization Waters. Presented at the 68th Annual International water Conference, Oct. 21-25, 2007. Orlando, FL.

C.Murray-Gulde, F.D. Mooney, G.M. Huddleston, III, J.H. Rodgers, Jr. and D. Eggert. 2007. Designing Constructed Wetlands for Mitigating Risks from Flue Gas Desulfurization Wastewater. Presented at the 68th Annual International water Conference, Oct. 21-25, 2007. Orlando, FL.

J.H. Rodgers, Jr. 2008. Why Herbicides and Algaecides Kill Plants and Algae and Not Fish. Presented at the 2008 Bassmaster Classic Conservation Workshop. Feb 23, 2008. Greenville, SC.

J.H. Rodgers, Jr., B.M. Johnson, V. Molina, and W. Bishop. 2008. Choosing an Efficacious Algaecide: Development of a Decision Support System. Presented at the 28th Annual Meeting of the Midwest Aquatic Plant Management Society. Mar. 1-3, 2008. Sandusky, OH.

Bishop, W. and J.H. Rodgers, Jr. 2008. Effective Control of *Lyngbya wollei*: Variance in Response to Algaecides. Presented at the 28th Annual Meeting of the Midwest Aquatic Plant Management Society. Mar. 1-3, 2008. Sandusky, OH.

Pham, M.P.T., J. Horner, S. Chandler, J.W. Castle, J.H. Rodgers, Jr., and J.E. Myers.

2008. Design and construction of pilot-scale wetland treatment systems for beneficial reuse of produced water, Africa. Presented at the 16th Annual David S. Snipes / Clemson Hydrogeology Symposium. Apr. 2-4, 2008. Clemson, SC.

Huddleston, G.M.III, J.E. Heatley, J. Wrynski, B.M. Johnson, D.A. Eggert and J.H. Rodgers, Jr. 2008. Assessment of pesticide attenuation using mesocosm-scale agricultural drainage ditches. Presented at the 16th Annual David S. Snipes / Clemson Hydrogeology Symposium. Apr. 2-4, 2008. Clemson, SC.

Pham, M.P.T., J. Horner, S. Chandler, J.W. Castle, J.H. Rodgers, Jr., and J.E. Myers. 2008. Design and construction of pilot-scale wetland treatment systems for beneficial reuse of produced water, Africa. Presented at the 57th Annual Meeting of the Southeastern Section of the Geological Society of America. Apr. 10-11, 2008. Charlotte, NC.

Rodgers, John H., Jr. 2008. Algae ID, Problems and Control. Presented at the Short Course on Recreational Pond Management. Oct. 8-9, 2008. Clemson University Baruch Institute, Georgetown, SC.

B.M. Johnson and J.H. Rodgers, Jr. 2008. *Lyngbya* in Kings Bay/Crystal River, FL.: Risk Characterization. Presented at the 32nd Annual Meeting of the Florida Aquatic Plant Management Society. Oct. 13-16, 2008. Daytona Beach, FL.

J.H. Rodgers, Jr. and B.M. Johnson. 2008. *Lyngbya* in Kings Bay/Crystal River, FL.: Management Implications. Presented at the 32nd Annual Meeting of the Florida Aquatic Plant Management Society. Oct. 13-16, 2008. Daytona Beach, FL.

Rodgers, John H., Jr. 2008. Algae ID, Problems and Control. Presented at the Short Course on Pond Management. Nov. 5, 2008. NC State University, Mountain Horticultural Crops Research & Extension Center, Mills River, NC.

J. Rodgers, Jr., L. Fuentes, L.J. Moore, W. Bowerman, G. Yarrow, W. Chao and K. Leith. 2008. Ecological risk assessment for anuran species and Roundup[®] herbicides: Laboratory studies. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

W.M. Bishop, B.M. Johnson and J. Rodgers, Jr. 2008. Comparative responses of seven algal species to exposures of a copper-based algaecide. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

L.J. Moore, L. Fuentes, J. Rodgers, Jr., W. Bowerman, G. Yarrow, W. Chao and K. Leith. 2008. Comparative toxicity of the original formulation of Roundup[®] herbicide to three anuran species in laboratory tests. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

L. Fuentes, L.J. Moore, J. Rodgers, Jr., W. Bowerman, G. Yarrow, W. Chao and K. Leith. 2008. Role of sediments in modifying the toxicity of Roundup WeatherMax[®] to anuran species: A laboratory study. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

V. Molina, B.M. Johnson, W.M. Bishop, J. Rodgers, Jr. and A.R. Johnson. 2008. Evaluation of methods for cell disruption and microcystin measurement in *Microcystin aeruginosa*. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

M. Osborne-Koch, D. Eggert, and J. Rodgers, Jr. 2008. Comparative responses (survival and reproduction) of *Ceriodaphnia dubia* to aqueous exposures of sodium selenate and sodium selenite. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

D. A. Eggert, G. M. Huddleston, J. Heatley and J. Rodgers, Jr. 2008. Responses of mature *Schoenoplectus californicus* and *Typha latifolia* to boron exposures in flue gas desulfurization (FGD) waters in the laboratory and the field. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

B.M. Johnson, W.M. Bishop and J. Rodgers, Jr. 2008. Management of *Lyngbya wollei*, an invasive cyanobacterium, in Kings Bay, Crystal River, FL: Restoration of ecosystem services. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

A.D. McQueen, J.H. Rodgers, Jr., and W.R. English. Mitigating risks of campus parking lot stormwater: Use of constructed wetland treatment systems. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

J. Horner, P. Pham, J.W. Castle, J.H. Rodgers, Jr., C. Murray-Gulde and J.E. Myers. 2008. Performance of a pilot-scale constructed wetland treatment system for beneficial reuse of oil field produced water. Presented at the 29th Annual Meeting of the Society of Environmental Toxicology and Chemistry. Nov. 16-20, 2008. Tampa, FL.

Bishop, W.M., B.M. Johnson and J.H. Rodgers, Jr. 2009. Targeted management of problematic algae. Presented at the 10th Annual Meeting of the Northeast Aquatic Plant Management Society. Jan. 19-21, 2009. Saratoga Springs, NY.

J.H. Rodgers, Jr., B.M. Johnson and W.M. Bishop. 2009. Do algae spill their guts when treated with algaecides?: A look at the data and implications for decision making. Presented at the 10th Annual Meeting of the Northeast Aquatic Plant Management Society. Jan. 19-21, 2009. Saratoga Springs, NY.

B.M. Johnson and J.H. Rodgers, Jr. 2009. A risk and management assessment for *Lyngbya wollei* in Kings Bay/Crystal River, Florida. Presented at the 10th Annual Meeting of the Northeast Aquatic Plant Management Society. Jan. 19-21, 2009. Saratoga Springs, NY.

J.H. Rodgers, Jr., B.M. Johnson and W.M. Bishop. 2009. Do algae spill their guts when treated with algaecides?: A look at the data and implications for decision making. Presented at the 29th Annual Meeting of the Midwest Aquatic Plant Management Society. March 1-4, 2009. Lisle, IL.

Bishop, W.M., B.M. Johnson and J.H. Rodgers, Jr. 2009. Targeted management of problematic algae. Presented at the 29th Annual Meeting of the Midwest Aquatic Plant Management Society. March 1-4, 2009. Lisle, IL.

B.M. Johnson and J.H. Rodgers, Jr. 2009. A risk and management assessment for *Lyngbya wollei* in Kings Bay/Crystal River, Florida. Presented at the 29th Annual Meeting of the Midwest Aquatic Plant Management Society. March 1-4, 2009. Lisle, IL.

Rodgers, J.H., Jr., J.W. Castle, J. Horner, M. Spacil, D. Eggert, B. Alley, A. Beebe, P. Pham, Y. Song, J.E. Myers, C. Murray Gulde, M. Huddleston, and D. Mooney. 2009. Constructed wetland treatment systems for renovation of energy produced water for beneficial reuse. Presented at the 17th Annual David S. Snipes/Clemson Hydrogeology Symposium. April 2, 2009. Clemson, SC.

Horner, J., M.P. T. Pham, S. Chandler, J.W. Castle, J.H. Rodgers, Jr., C. Murray Gulde and J.E. Myers. 2009. Performance of a pilot-scale constructed wetland treatment system for beneficial reuse of oilfield produced water. Presented at the 17th Annual David S. Snipes/Clemson Hydrogeology Symposium. April 2, 2009. Clemson, SC.

Spacil, M. and J.H. Rodgers, Jr. 2009. Treatment of selenium in simulated refinery effluent using a pilot-scale constructed wetland treatment system. Presented at the 17th Annual David S. Snipes/Clemson Hydrogeology Symposium. April 2, 2009. Clemson, SC.

Rodgers, J.H., W. Bishop and B. Johnson. 2009. Chelated copper: How they work and differences in formulations. Presented at the 31st Annual Meeting of the South Carolina Aquatic Plant Management Society, Inc. August 12-14, 2009. Clemson, SC.

Johnson, B., W. Bishop and J.H. Rodgers, Jr. 2009. Responses of *Microcystis* to laboratory exposures of algaecides. Presented at the 31st Annual Meeting of the South Carolina Aquatic Plant Management Society, Inc. August 12-14, 2009. Clemson, SC.

Bishop, W., B. Johnson and J.H. Rodgers, Jr. 2009. Comparison of laboratory and field responses of *Lyngbya magnifica* to similar algaecide exposures. Presented at the 31st

Annual Meeting of the South Carolina Aquatic Plant Management Society, Inc. August 12=14, 2009. Clemson, SC.

Rodgers, J.H. 2009. Is an NPDES (National Pollutant Discharge Elimination System) permit in your future? Presented at the 31st Annual Meeting of the South Carolina Aquatic Plant Management Society, Inc. August 12=14, 2009. Clemson, SC.

Rodgers, J.H. and J.W. Castle. 2009. Constructed wetlands application to uranium acid mine drainage (AMD) treatment: Theory and experience. Presented at the Workshop on Constructed Wetland Treatment Systems for Impaired Waters in Saskatchewan. Saskatchewan Research Council. September 15-19, 2009. Saskatoon, Saskatchewan, CANADA.

Castle, J. W. and J.H. Rodgers, Jr. 2009. Geochemical reactions in constructed wetlands for treatment of uranium, arsenic, radionuclides and low pH AMD streams. Presented at the Workshop on Constructed Wetland Treatment Systems for Impaired Waters in Saskatchewan. Saskatchewan Research Council. September 15-19, 2009. Saskatoon, Saskatchewan, CANADA.

Castle, J. W. and J.H. Rodgers, Jr. 2009. Role of toxin-producing algae in phanerozoic mass extinctions: Evidence from modern environments and the geologic record. (Abstract No. 163685) Presented at the Annual Meeting of the Geological Society of America. October 19, 2009. Portland. OR.

Rodgers, J.H., B. Johnson and W. Bishop. 2009. Do algae spill their guts when treated with algaecides? A look at the data and implications for decision making. Presented at the 29th International Symposium of the North American Lake Management Society. October 27-31, 2009. Hartford, Connecticut.

Bishop, W., B. Johnson and J.H. Rodgers, Jr. 2009. Responses of Cyanobacteria to algaecides: Efficacy and microcystin measurements. Presented at the 29th International Symposium of the North American Lake Management Society. October 27-31, 2009. Hartford, Connecticut.

Johnson, B., W. Bishop and J.H. Rodgers, Jr. 2009. A risk and management assessment for a filamentous Cyanobacterium in Kings Bay/Crystal River, Florida. Presented at the 29th International Symposium of the North American Lake Management Society. October 27-31, 2009. Hartford, Connecticut.

Rodgers, J.H., Jr. 2009. Role of Cyanobacteria in mass extinctions – review of paper by Castle and Rodgers. National Public Radio (NPR) Science Friday (Joe Palka), October 23, 2009.

Castle, J.W. and J.H. Rodgers, Jr. 2009. Role of Cyanobacteria in mass extinctions – implications for the present time and the future. New York Public Radio, Leonard Lapate

Show. (New York City) October 29, 2009.

Castle, J.W. and J.H. Rodgers, Jr. 2009. Constructed wetland treatment systems for environmentally friendly drilling. Presented at the 16th Annual Petroleum and Biofuels Conference. November 3-5, 2009. Houston, TX.

Rodgers, J.H., Jr., W. Bishop and B.M. Johnson. 2010. Algae on the move: Recent expansions of noxious algae. Presented at the 30th Annual Conference of the Midwest Aquatic Plant Management Society, February 28 – March 3, 2010. Indianapolis, IN.
Bishop, W., B.M. Johnson and J.H. Rodgers, Jr. 2010. Comparative responses of target and non-target species to exposures of Algimycin-PWF. Presented at the 30th Annual Conference of the Midwest Aquatic Plant Management Society, February 28 – March 3, 2010. Indianapolis, IN.

Castle, J.W., J.R. Wagner, J.H. Rodgers, Jr. and G.R. Hill. 2010. Technology training of engineers, geologists, and technicians for commercial deployment of carbon capture and sequestration: SECARB-Ed. Presented at the 18th Annual David S. Snipes / Clemson Hydrogeology Symposium. April 1, 2010. Clemson, SC.

Castle, J.W., J.H. Rodgers, Jr., B. Alley, M. Spacil, A. Beebe, M. Pardue and Y. Song, 2010. Biogeochemical processes for treating oil and gas produced waters using hybrid constructed wetland treatment systems. Presented at the American Association of Petroleum Geologists 2010 Annual Convention and Exhibition. April 11 – 14, 2010. New Orleans, LA.

Alley, B., A. Beebe, J.H. Rodgers, Jr. and J.W. Castle. 2010. A comparative characterization of produced waters from conventional and unconventional fossil fuel resources. Presented at the American Association of Petroleum Geologists 2010 Annual Convention and Exhibition. April 11 – 14, 2010. New Orleans, LA.

Horner, J., M. Pardue, M.P. Pham, J.W. Castle, J.H. Rodgers, Jr., J.E. Myers and C.W. Gulde. 2010. Design and performance of a pilot-scale constructed wetland treatment system for removing oil and grease from oilfield produced waters. Presented at the American Association of Petroleum Geologists 2010 Annual Convention and Exhibition. April 11 – 14, 2010. New Orleans, LA.

APPENDIX B

PHOTOGRAPHS OF SITE
DURING FIELD INVESTIGATION



Photograph 1. Alligator in the main canal that runs north to south along the Property.



Photograph 2. Main canal that runs north to south along the Property.



Photograph 3. Main canal that runs north to south along the Property.



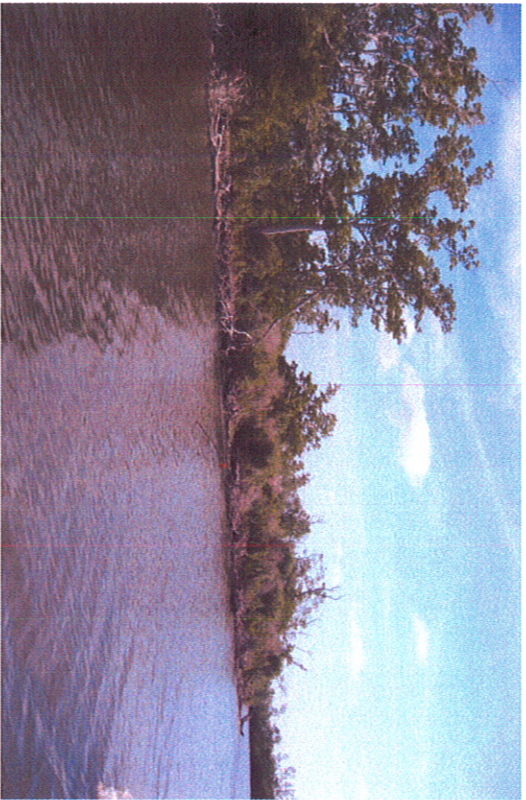
Photograph 4. Main canal that runs north to south along the Property.



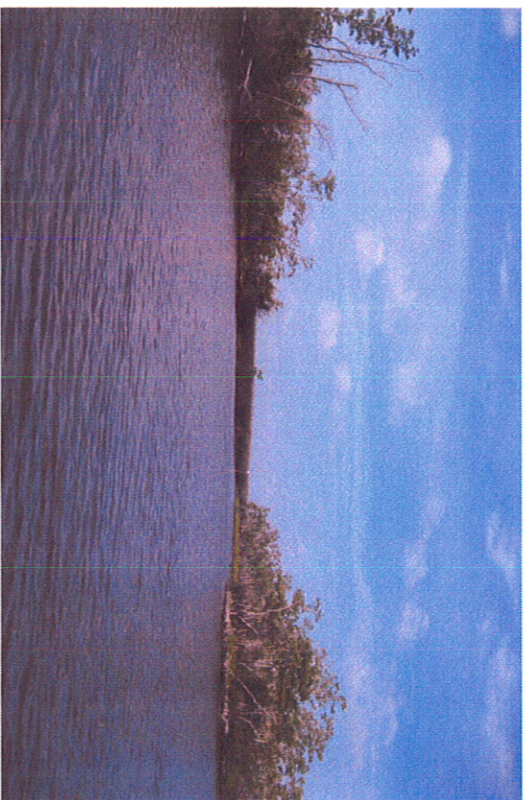
Photograph 5. Main canal that runs north to south along the Property.



Photograph 6. Main canal that runs north to south along the Property.



Photograph 7. Main canal that runs north to south along the Property.



Photograph 8. Main canal that runs north to south along the Property.



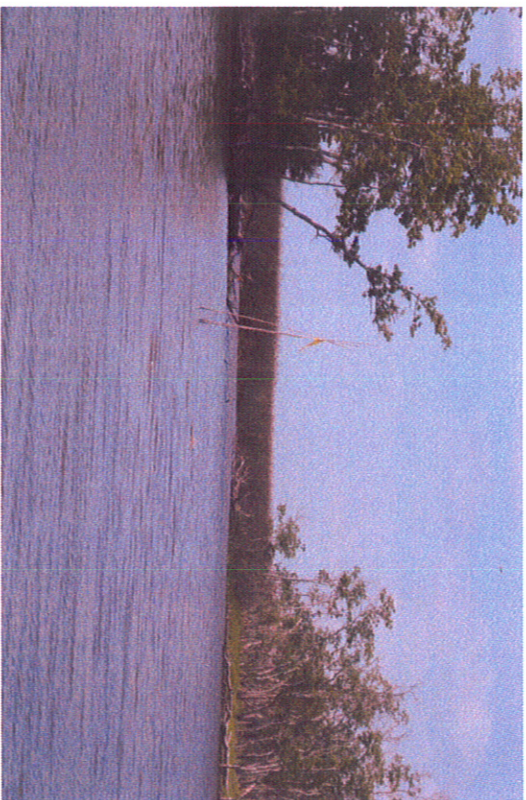
Photograph 9. Observation site Sed-15 facing south.



Photograph 10. Observation site Sed-15 facing south.



Photograph 11. Observation site Sed-15 facing south.



Photograph 12. Observation site Sed-15 facing south.



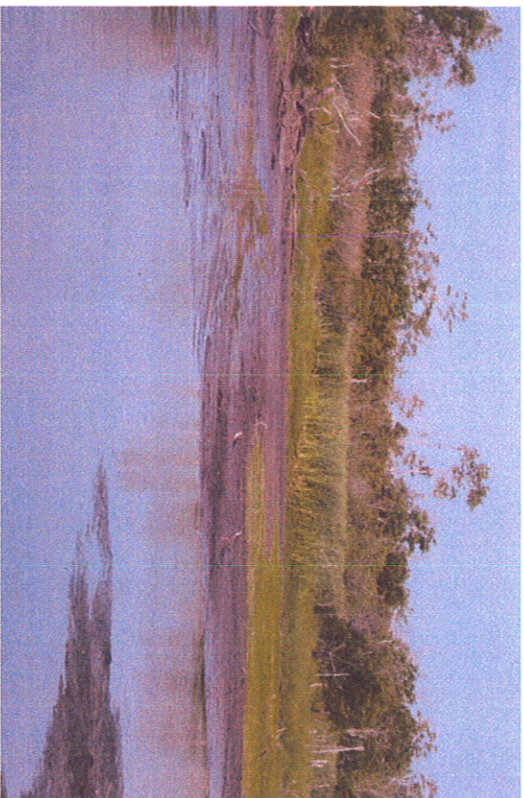
Photograph 13. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 14. Marsh in the vicinity of observation site SW20 (Sed-120).



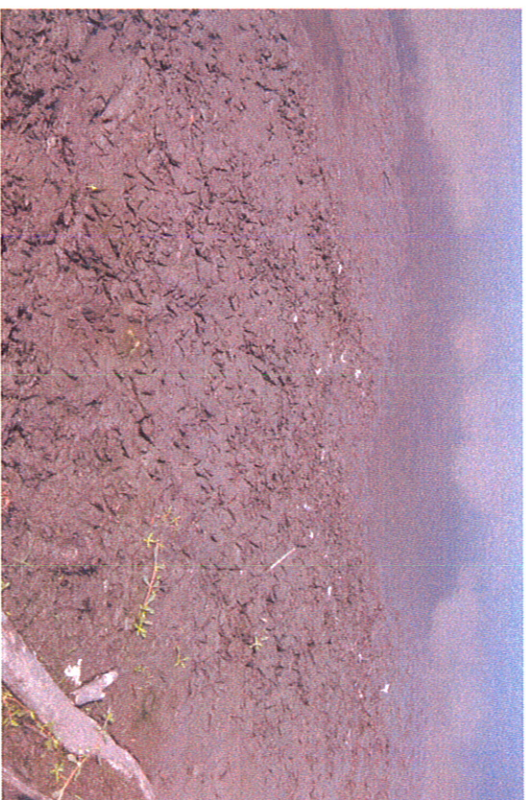
Photograph 15. Marsh in the vicinity of observation site SW20 (Sed-120).



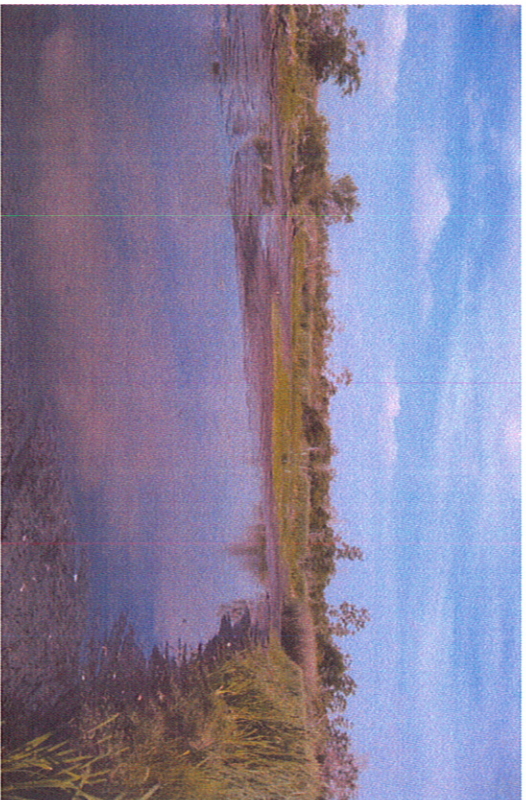
Photograph 16. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 17. Marsh in the vicinity of observation site SW20 (Sed-120). Crabs eaten by raccoon.



Photograph 18. Marsh in the vicinity of observation site SW20 (Sed-120). (Raccoon tracks)



Photograph 19. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 20. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 21. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 22. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 23. Marsh in the vicinity of observation site SW20 (Sed-120).



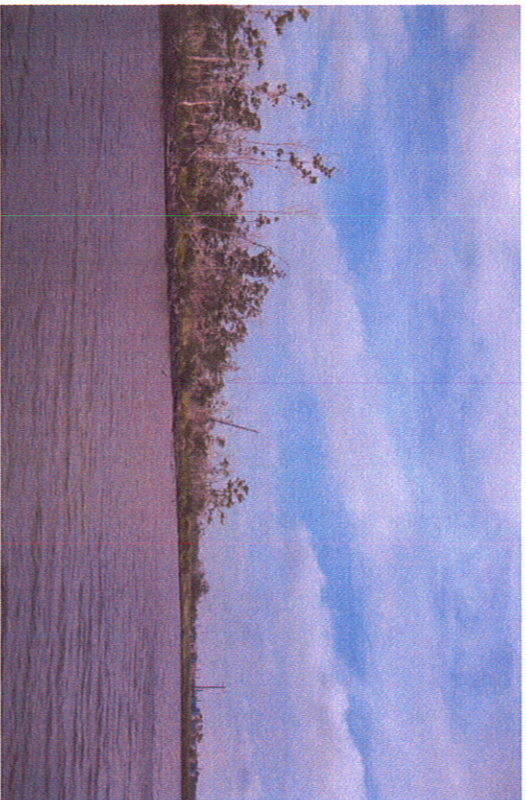
Photograph 24. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 25. Marsh in the vicinity of observation site SW20 (Sed-120).



Photograph 26. Marsh in the vicinity of observation site SW20 (Sed-120). (Deer tracks)



Photograph 27. Observation site SW07 (Sed-13) facing north.



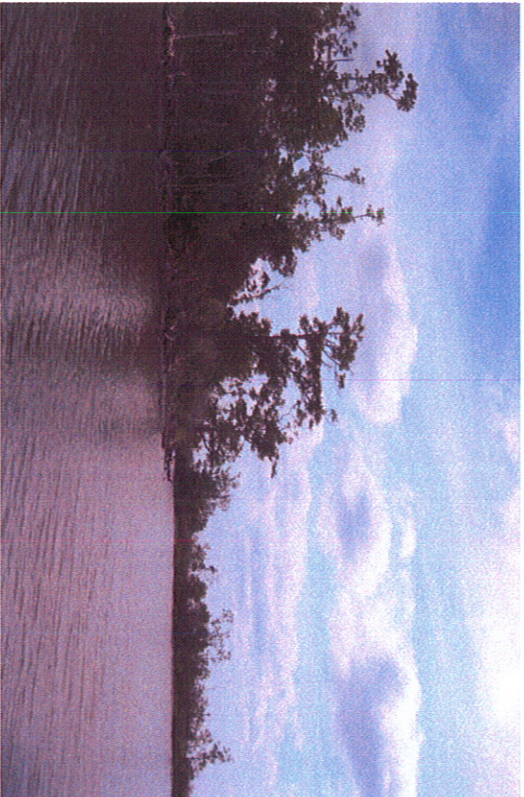
Photograph 28. Observation site SW07 (Sed-13) facing north.



Photograph 29. Southeast corner of the parcel of land southwest of facility.



Photograph 30. Southeast corner of the parcel of land southwest of facility.



Photograph 31. Southeast corner of the parcel of land southwest of facility.



Photograph 32. Southeast corner of the parcel of land southwest of facility.



Photograph 33. Southeast corner of the parcel of land southwest of facility.



Photograph 34. Southeast corner of the parcel of land southwest of facility near SW02.



Photograph 35. Southeast corner of the parcel of land southwest of facility near SW07.



Photograph 36. Facing northeast from southwest corner of northern facility near observation site SW05 (Sec-9) and SW01.



Photograph 37. Observation site SW03 (Sed-31).



Photograph 38. Observation site SW03 (Sed-31).



Photograph 39. Observation site SW03 (Sed-31).



Photograph 40. Observation site SW03 (Sed-31).



Photograph 41. Observation site SW03 (Sed-31).



Photograph 42. Observation site SW03 (Sed-31).



Photograph 43. Observation site SW03 (Sed-31).



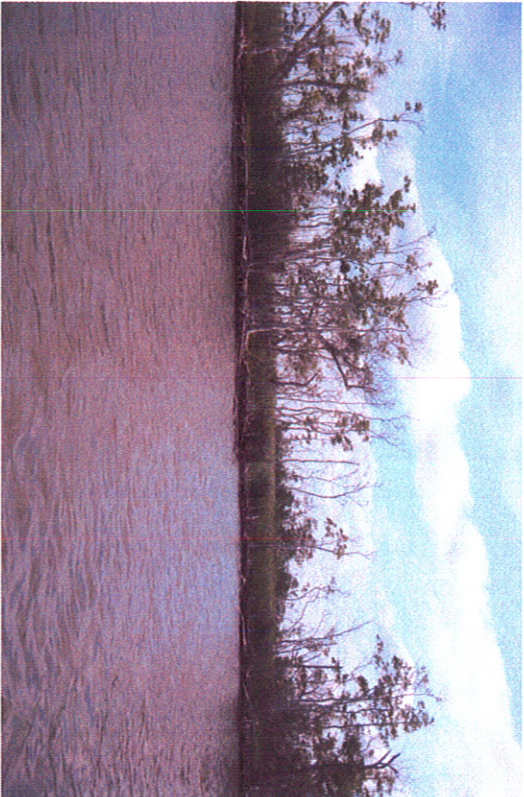
Photograph 44. Observation site SW03 (Sed-31).



Photograph 45. Canal heading south from observation site SW02 (Secd-24).



Photograph 46. Canal heading south from observation site SW02 (Secd-24).



Photograph 47. Canal heading south from observation site SW02 (Secd-24).



Photograph 48. Canal heading south from observation site SW02 (Secd-24).



Photograph 49. Canal heading south from observation site SW02 (Secd-24).



Photograph 51. Canal running east to west between observation sites SW02 (Secd-24) and SW04 (Secd-26).



Photograph 50. Jack-up (lift) barge coring.



Photograph 52. Canal running east to west between observation sites SW02 (Secd-24) and SW04 (Secd-26).



Photograph 53 . Canal running east to west between observation sites SW02 (Sed-24) and SW04 (Sed-26).



Photograph 55. Observation site SW04 (Sed-26).



Photograph 54 . Canal running east to west between observation sites SW02 (Sed-24) and SW04 (Sed-26).



Photograph 56. Observation site SW04 (Sed-26).



Photograph 57. Observation site SW04 (Sed-26).



Photograph 58. Canal running east to west between observation sites SW02 (Sed-24) and SW04 (Sed-26).



Photograph 59. Canal running east to west between observation sites SW02 (Sed-24) and SW04 (Sed-26).



Photograph 60. Canal running east to west between observation sites SW02 (Sed-24) and SW04 (Sed-26).



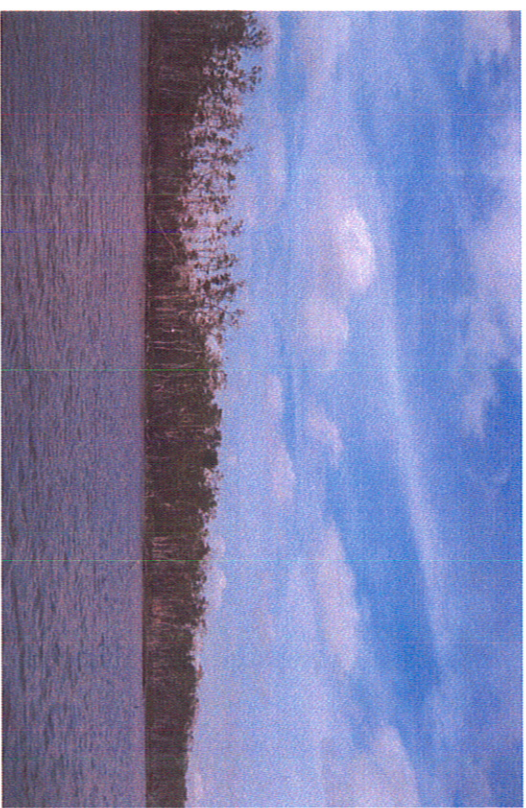
Photograph 61. Jack-up barge in canal running east to west between observation sites SW02 (Sed-24) and SW04 (Sed-26).



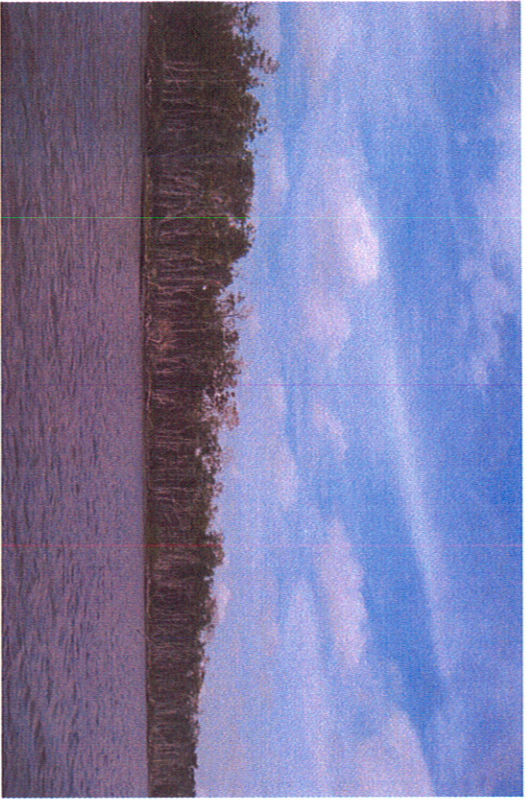
Photograph 62. Schooner Bayou.



Photograph 63. Schooner Bayou (SWBK01).



Photograph 64. Schooner Bayou (SWBK01).



Photograph 65. Schooner Bayou (SWBK04).



Photograph 66. Schooner Bayou.



Photograph 67. Schooner Bayou (SWBK04).



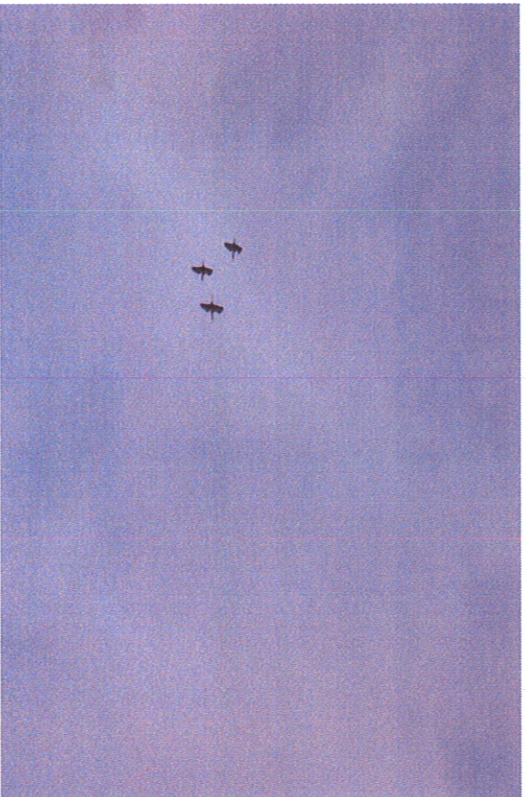
Photograph 68. Schooner Bayou (SWBK-04).



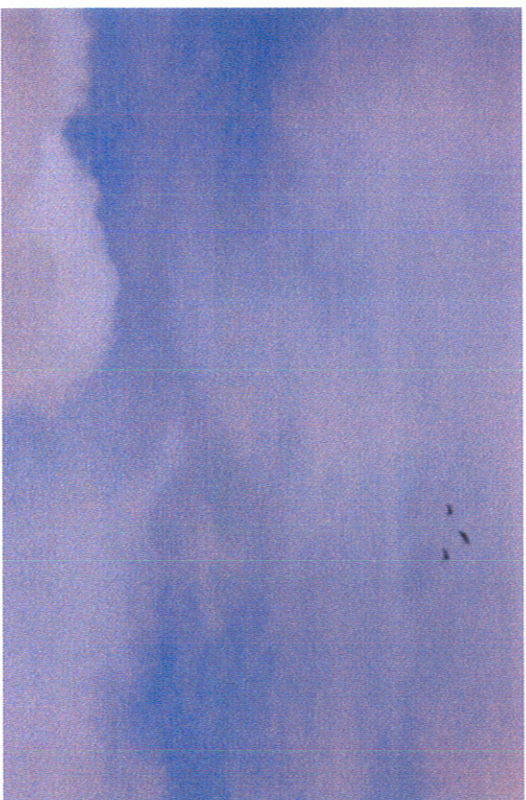
Photograph 69. Schooner Bayou facing west toward White Lake (SWBK02).



Photograph 70. Schooner Bayou facing west toward White Lake (SWBK02).



Photograph 71. Birds in flight near Schooner Bayou.



Photograph 72. Birds in flight near Schooner Bayou.

APPENDIX C

ICON (MILLER, 2010A) TABLE 4-1R
SEDIMENT AND SOIL SUMMARY TABLE
&
MP&A (PISANI AND ANGLE, 2010)
SEDIMENT SAMPLING ANALYTICAL
RESULTS

Table 4
MPA Soil/Sediment Sampling Analytical Results
 East White Lake Oil and Gas Field
 Vermilion Parish, Louisiana

Analytical Parameters	ICON SS-11	ICON SS-11	MPA-SPL-P-1	ICON SS-5	MPA-SPL-P-2	ICON SS-7	ICON SS-7	ICON SS-7	ICON SS-7	MPA-SPL-P-3	ICON SS-8	ICON SS-8	MPA-SPL-P-4
	(0-2.5)	(2.5-3.4)	(1-3)	(0-2.15)	(1-3)	(0-1.4)	(1.4-2.5)	(2.5-3.5)	(1-3)	(0-2)	(2-4)	(2-4)	(2-4)
SPLP													
Depth Interval	mg/kg	mg/kg	mg/L	mg/kg	mg/L	mg/kg	mg/kg	mg/kg	mg/kg	mg/L	mg/kg	mg/kg	mg/L
Utile	2750	2170	1.07	7450	0.89	15700	13500	3780	1.39	--	--	--	--
Barium	--	--	--	117	1.65	67.5	117	20	0.015	B	--	--	--
Lead	--	--	--	--	--	--	--	--	--	--	0.033	0.468	ND(0.0002)
Mercury	--	--	--	--	--	--	--	--	--	--	--	--	U
SPLP	ICON Sed-15	ICON Sed-15	MPA-SPL-P-5	MPA-Sed-15	MPA-Sed-15-N	MPA-Sed-15-W	MPA-Sed-15-W-2	MPA-Sed-15-E	MPA-Sed-15-E-2				
Depth Interval	(0-2)	(2-4)	(0-2)	(6.5-8.5)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)				
Utile	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
Chromium	501	209	0.00053	B									
TPH-D	21,000	23,500	--										
TPH-O				9.34	J	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)				
Aliphatic >C10-C12				96.4	ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)				
Aliphatic >C12-C16				1770	ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)				
Aliphatic >C16-C35				ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)	ND(10.0)				
Aromatic >C10-C12				ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)				
Aromatic >C12-C16				ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)				
Aromatic >C16-C21				ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)				
Aromatic >C21-C35				ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)	ND(15.0)				
Arsenic	MPA-AB6	ICON-AB-6	ICON-AB-6	MPA-AB8	ICON-AB8	MPA-AB13	ICON-AB13	MPA-AB13	ICON-AB13				
Depth Interval	(8-10)	(8-10)	(12-14)	(6-8)	(6-8)	(0-3)	(0-3)	(0-3)	(0-3)				
Utile	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
Arsenic	1.45	12.6	9.9	1.71	11.6	1.45	12.9	1.45	12.9				
Arsenic (dry)	10.4	--	--	7.5	--	11.5	--	--	--				
TPH	MPA-ABS (A)	MPA-ABS (B)	MPA-ABS (C)	ICON-AB-5									
Depth Interval	(4-6)	(4-6)	(4-6)	(4-6)									
Utile	mg/kg	mg/kg	mg/kg	mg/kg									
Aliphatic >C10-C12	ND(15.0)	ND(15.0)	ND(15.0)	--									
Aliphatic >C12-C16	ND(10.0)	ND(10.0)	ND(10.0)	--									
Aliphatic >C16-C35	ND(10.0)	ND(10.0)	ND(10.0)	--									
Aromatic >C10-C12	ND(10.0)	ND(10.0)	ND(10.0)	--									
Aromatic >C12-C16	ND(15.0)	ND(15.0)	ND(15.0)	--									
Aromatic >C16-C21	ND(15.0)	ND(15.0)	ND(15.0)	--									
Aromatic >C21-C35	ND(15.0)	ND(15.0)	ND(15.0)	--									
TPH-DRO	--	--	--	746									
TPH-ORO	--	--	--	481									
Radionuclide	MPA-Ra-1	MPA-Ra-2	MPA-Ra-3										
	pCi/l	pCi/l	pCi/l										
Ra-226													
Ra-228													
Total													

***Results pending laboratory analysis

Notes:
 -MPA confirmation sample results with corresponding ICON results
 -MPA sediment results reported on wet weight basis; ICON reported on dry weight basis
 -ICON sampling conducted 2006 and 2010
 -MPA sampling conducted 2010

Table 5
MPA Soil Sampling Analytical Results-Chloride

East White Lake Oil and Gas Field
Vermilion Parish, Louisiana

SB-1		SB-1C		SB-2		SB-3	
Interval [ft BGS]	Result [mg/kg]	Interval [ft BGS]	Result [mg/kg]	Interval [ft BGS]	Result [mg/kg]	Interval [ft BGS]	Result [mg/kg]
(0-7)	346	(46-48)	176	(0-6)	719	(0-6)	992
(9-11)	519	(51-52)	2380	(9-11)	665	(8-10)	643
(13-15)	197	(53.5-54)	3880	(13-15)	201	(12-14)	183
(17-19)	113	(54-56)	232	(17-19)	192	(16-18)	155
(21-22)	113	(58-60)	123	(21-23)	180	(21-22)	141
(25-27)	94.5			(25-27)	192	(24-26)	102
(29-31)	110			(29-31)	239	(28-30)	224
(33-35)	119			(33-35)	346	(33-34)	265
(37-39)	121			(35-36)	352	(37-38)	1440
(42-43)	109			(41-43)	157	(40-42)	2460
(45.5-46)	750			(54-56)	117	(44-46)	760
(46.6-47)	2670			(58-60)	108	(48-48.5)	175
(58-60)	250			(62-64)	140	(49-49.5)	1150
(62-64)	167			(66-68)	220	(53-54)	3020
(62-64) ¹	125			(70-71.5)	220	(56-58)	633
(66-68)	105			(74-76)	107	(59-60)	796
(70-72)	101			(78-80)	94.1	(64-66)	216
(74-76)	244					(68-68.5)	380
(78-80)	89.1					(72-73)	137
						(77-78)	147
						(81-82)	115

Table 6
MPA Sediment Sampling Analytical Results

East White Lake Field
Vermilion Parish, Louisiana

Analytical Parameters	Units	SED-8	SED-9	SED-11	SED-13	SED-15	SED-115*	SED-19	SED-24	SED-26	SED-31	SED-120
		5/6/2010	5/5/2010	5/6/2010	5/6/2010	5/6/2010	5/6/2010	5/6/2010	5/6/2010	5/5/2010	5/5/2010	5/5/2010
Metals												
Arsenic	mg/kg	1.58	B	2.01	1.38	1.66	1.3	B	0.8	1.61	2.57	0.64
Barium	mg/kg	193		204	250	232	211	110	110	169	351	132
Cadmium	mg/kg	ND(0.2)	U	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	U	ND(0.2)	ND(0.2)	U	0.038
Chromium	mg/kg	5.74		4.24	5.09	4.42	4.62	4.43	4.93	5.39	5.44	6.27
Lead	mg/kg	8.24		6.19	6.06	5.82	6.06	5.06	8.4	7.24	7.92	5.95
Mercury	mg/kg	0.038		0.035	0.029	0.041	0.04	0.038	0.037	0.05	0.051	0.072
Selenium	mg/kg	ND(1.6)	U	ND(1.6)	ND(1.6)	ND(1.6)	ND(1.6)	U	ND(1.6)	ND(1.6)	U	ND(1.6)
Strontium	mg/kg	16		14	15.2	16.1	14.3	12.6	23	16.9	20.2	77.4
Zinc	mg/kg	20.6		16.3	17.9	18	17.8	15.2	20.7	20.1	20.7	72.5
PAHs												
2-Methylnaphthalene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Acenaphthene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Acenaphthylene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Anthracene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Benzo(a)anthracene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Benzo(a)pyrene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Benzo(b)fluoranthene	mg/kg	ND(0.325)	U	0.019	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Benzo(k)fluoranthene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Chrysene	mg/kg	ND(0.325)	U	0.021	ND(0.329)	ND(0.325)	ND(0.328)	U	0.012	ND(0.328)	U	ND(0.33)
Dibenz(a,h)anthracene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Fluoranthene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Fluorene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	0.161
Indeno(1,2,3-cd)pyrene	mg/kg	ND(0.325)	U	0.095	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Naphthalene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Phenanthrene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	0.016	ND(0.328)	U	ND(0.33)
Pyrene	mg/kg	ND(0.325)	U	ND(0.326)	ND(0.329)	ND(0.325)	ND(0.328)	U	ND(0.328)	U	ND(0.327)	ND(0.33)
Total Moisture	%	61.1		69.6	72.5	75.4	73	78.4	66.6	68.6	68	82.5
Total Organic Carbon	mg/kg	53000		36100	45900	67700	40800	48800	45600	94500	54100	284000
Chloride	mg/kg	825		650	974	944	947	1110	829	901	790	1820

Notes:
 U-Indicates the compound was analyzed but not detected
 *SED-115 is a duplicate of SED-15

Table 6
MPA Sediment Sampling Analytical Results

East White Lake Field
Vermilion Parish, Louisiana

Analytical Parameters	Units		SED-BK-01	SED-BK-02	SED-BK-03	SED-BK-04	SED-BK-05	SED-BK-06	SED-BK-07	SED-BK-08	SED-BK-09	SED-BK-10	SED-BK-11											
	5/10/2010	5/10/2010	5/10/2010	5/10/2010	5/10/2010	5/10/2010	5/11/2010	5/10/2010	5/11/2010	5/11/2010	5/11/2010	5/19/2010	5/19/2010											
Metals	Arsenic	mg/kg	0.33	B	1.3	B	1.41	B	0.77	B	0.97	B	0.9	B	1.14	B	2.05		1.22	B			1.97	
	Barium	mg/kg	49		100		212		126		229		106		92.6		63.8		68.8				63.1	
	Cadmium	mg/kg	ND(0.2)	ND(0.2)	0.014	B	0.036	B	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)	
	Chromium	mg/kg	4.16		5.18		4.82		2.34		5.92		4.16		4.29		2.84		5.85				3.68	
	Lead	mg/kg	3.66		6.41		7.38		2.55		8		5.28		5.82		2.77		6.82				4.21	
	Mercury	mg/kg	0.033		0.023		0.035		0.025		0.028		0.13		0.034		0.02		ND(0.01)				ND(0.01)	
	Selenium	mg/kg	ND(1.6)	ND(1.6)	ND(1.6)		ND(1.6)		ND(1.6)		ND(1.6)		ND(1.6)		ND(1.6)		ND(1.6)		ND(1.6)				ND(1.6)	
	Strontium	mg/kg	22		13.2		15.2		27.4		17.7		14		15.6		20.5		25.9				19.8	
	Zinc	mg/kg	9.82		16.8		15.6		6.99		19.3		15.8		14.1		3.98		51.4				18	
	PAHs	2-Methylnaphthalene	mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)
		Acenaphthene	mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)
		Acenaphthylene	mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)
		Anthracene	mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)
Benzo(a)anthracene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Benzo(a)pyrene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Benzo(b)fluoranthene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Benzo(k)fluoranthene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Chrysene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Dibenz(a,h)anthracene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Fluoranthene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Fluorene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Indeno(1,2,3-cd)pyrene		mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)	
Naphthalene	mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)		
Phenanthrene	mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)		
Pyrene	mg/kg	ND(0.328)	ND(0.326)	ND(0.327)	U	ND(0.326)	U	ND(0.327)	U	ND(0.326)	U	ND(0.325)	U	ND(0.327)	U	ND(0.325)	U	ND(0.326)	U	ND(0.326)	U	ND(0.326)		
Total Moisture	%	68.3		71.2		63.6		67.5		70.2		77.1		75.8		75.8		74.9				80.2		
Total Organic Carbon	mg/kg	184000		14400		42700		172000		55000		66000		58800		106000		134000				195000		
Chloride	mg/kg	361		295		250		457		1140		220		472		255		598				322		

Notes:
 U-Indicates the compound was analyzed but not detected
 *Sed-115 is a duplicate of SED-15

Table 7
ICON Sediment Sampling
MPA Split Analytical Results
(February 2010)
East White Lake Oil and Gas Field
Vermilion Parish, Louisiana

Analytical Parameter	Units	SED-1	SED-1	SED-2	SED-2	SED-2	SED-3	SED-3	SED-3	SED-4	SED-5	SED-6	SED-7	SED-7
		(0-2)	(2-4)	(0-2)	(2-4)	(4-6)	(0-2)	(2-4)	(4-6)	(0-2)	(0-2)	(0-2)	(0-2)	(0-2)
TPH														
C10-C28	mg/kg	--	--	--	--	--	--	--	--	--	ND	32.9	ND	294
Wet to Dry weight Conversion	mg/kg	--	--	--	--	--	--	--	--	ND	67.14	49.1	ND	736.84
C28-C35	mg/kg	--	--	--	--	--	--	--	--	ND	100.20	100.20	ND	93.6
Wet to Dry weight Conversion	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	244.59
Aliphatic >C10-C12	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	6.41
Aliphatic >C13-C16	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	60.5
Aliphatic >C16-C35	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	247
Aromatic >C10-C12	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	ND
Aromatic >C13-C16	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	ND
Aromatic >C16-C21	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	ND
Aromatic >C21-C35	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	ND
PCB														
Aroclor-1016	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	--	ND
Aroclor-1221	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	--	ND
Aroclor-1232	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	--	ND
Aroclor-1242	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	--	ND
Aroclor-1248	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	--	ND
Aroclor-1254	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	--	ND
Aroclor-1260	mg/kg	--	--	--	--	--	--	--	--	ND	ND	ND	--	ND
Metals														
Arsenic	mg/kg	0.84	2.98	1.19	1.27	0.88	1.31	2	1.31	0.94	3.09	1.62	1.09	2.14
Barium	mg/kg	81.2	24.1	76.8	48.2	40.9	41.2	23.1	41.2	203	61.4	111	228	497
Cadmium	mg/kg	0.0094	B	0.29	ND	ND	ND	ND	ND	ND	ND	1.03	0.03	0.039
Chromium	mg/kg	0.75	ND	2.01	ND	ND	ND	ND	ND	3.13	ND	1.75	2.17	2.61
Lead	mg/kg	4.81	0.59	6.03	3.85	3.82	5.27	1.19	5.27	7.07	7.43	9.18	6.59	9.61
Mercury	mg/kg	0.02	0.0084	0.014	0.002	0.011	0.016	0.0078	0.016	0.026	0.021	0.43	0.026	0.06
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Strontium	mg/kg	12.8	8.47	12.6	11.4	12	11.4	8.48	12.4	35.1	18.1	39.3	14.8	29.7
Chlorides	mg/kg	1630	1050	1270	743	937	814	814	804	1110	779	771	1660	803
Total Moisture	%	78.6	88.4	77	85.6	65.5	67.2	88.5	67.2	40.6	50	51	68.6	60.1
29B Parameters														
Electrical Conductivity @ 25°C	mmhos/cm	13.9	28.2	15.2	20.8	17.4	19.9	21.1	19.9	9.89	10.1	15.6	15.7	10
Exchangeable Sodium Percentage	%	14.9	25.9	17.8	12.8	11.4	26.8	26.8	9.6	11.5	11.6	13.4	15.4	11.3
HEM, Oil, & Grease	% dry wt									0.305	0.152	1.83	0.223	0.706
Percent Moisture	%													
Sodium Adsorption Ratio	meq	18.5	19.2	20	15.4	12.6	16	16	7.82	18	8.48	11	14.7	7.11
Soluble Calcium	meq	12.8	56.5	12.2	37.5	35.6	32.3	32.3	20.1	16.1	34.1	45.5	21.2	31.3
Soluble Magnesium	meq	29.9	129	32.6	88.1	72.8	79.8	79.8	147	16.4	46.8	91.6	57.5	42.7
Soluble Sodium	meq	85.7	185	94.8	122	93	119	119	71.5	72.6	53.9	90.7	92	43.2
True Total Barium	mg/kg dry	381	349	339	350	186	220	220	169	718	338	915	869	1560

Notes:
(No LDEQ standards for sediment)
1. U: non detect
2. B: result between MDL and LDL.

Table 7
ICON Sediment Sampling
MPA Split Analytical Results
(February 2010)
East White Lake Oil and Gas Field
Vermilion Parish, Louisiana

Analytical Parameter	Units	SED-7	SED-8	SED-8	SED-9	SED-10	SED-10	SED-11	SED-11	SED-12	SED-12	SED-12	SED-13	SED-13
		(4-6)	(0-2)	(2-4)	(0-2)	(2-4)	(0-2)	(2-4)	(0-2)	(2-4)	(0-2)	(2-4)	(4-6)	(0-2)
TPH														
C10-C28	mg/kg	171	ND	147	ND	ND	42.8	J	ND	ND	181	171		
Wet to Dry weight Conversion		602.11		398.37			110.31				637.32	521.34		
C28-C35	mg/kg	46	ND	26	ND	ND	4.91	J	ND	ND	37.1	29.9	J	
Wet to Dry weight Conversion		161.97		70.46			12.65				130.63	91.16		
Aliphatic >C10-C12	mg/kg	ND	--	ND	--	--	--	--	--	--	ND	ND	--	--
Aliphatic >C12-C16	mg/kg	16.5	37.4	ND	--	--	--	10	--	--	47.1	21.3	--	--
Aliphatic >C16-C35	mg/kg	158	123	ND	--	--	54.5	--	--	--	175	125	--	--
Aromatic >C10-C12	mg/kg	ND	ND	ND	--	--	--	--	--	--	ND	ND	--	--
Aromatic >C12-C16	mg/kg	ND	ND	ND	--	--	--	--	--	--	ND	ND	--	--
Aromatic >C16-C21	mg/kg	ND	ND	ND	--	--	--	--	--	--	ND	ND	--	--
Aromatic >C21-C35	mg/kg	ND	ND	ND	--	--	--	--	--	--	ND	ND	--	--
PCB														
Aroclor-1016	mg/kg	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1221	mg/kg	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1232	mg/kg	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1242	mg/kg	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1248	mg/kg	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1254	mg/kg	0.083	ND	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1260	mg/kg	ND	ND	--	--	--	--	--	--	--	--	--	--	--
Metals														
Arsenic	mg/kg	1.16	1.42	B	1.38	B	2.09	2.62	2.93	1.1	B	1.26	B	1.42
Barium	mg/kg	250	238	267	161	224	244	689	498	326	567	477	168	382
Cadmium	mg/kg	ND	ND	ND	--	--	--	--	--	--	--	--	--	--
Chromium	mg/kg	1.64	1.5	1.76	--	--	--	--	--	--	--	--	--	--
Lead	mg/kg	6.84	7.31	7.8	0.022	0.031	0.035	0.029	0.033	0.023	0.031	0.028	0.018	0.015
Mercury	mg/kg	0.03	0.022	0.028	ND	ND	0.31	0.38	0.39	B	0.4	B	0.44	B
Selenium	mg/kg	ND	ND	17.7	--	--	--	--	--	--	--	--	--	--
Strontium	mg/kg	34.9	15.7	17.7	--	--	--	--	--	--	--	--	--	--
Chlorides	mg/kg	785	1480	1280	1410	620	785	1300	649	980	850	486	1710	1430
Total Moisture	%	71.6	67.9	63.1	64.8	59.7	61.2	65.9	63.2	67.9	71.6	67.2	73.4	66.6
20B Parameters														
Electrical Conductivity @ 25°C	mmhos/cm	11.4	14.3	10.9	13.6	11.5	12.2	11.7	8.1	14.4	7.99	8.19	17.6	19.3
Exchangeable Sodium Percentage	%	10.5	15.6	12.7	17.6	9.1	15.8	6.8	5.7	14.2	10.4	7.9	16.9	19.3
HEM, Oil, & Grease	% dry wt	0.518	0.236	0.184	0.11	0.0963	0.184	0.469	0.251	0.298	0.801	0.621		
Percent Moisture	%													
Sodium Adsorption Ratio	meq	7.69	10.1	7.82	10.5	6.92	12.1	10.5	7.4	14	9.35	9.3	17.7	19
Soluble Calcium	meq	28.3	27.3	26.7	27.8	31.9	18.6	19.8	16.4	20.3	15.3	17.8	27.4	43.7
Soluble Magnesium	meq	72	76.5	54.3	77.8	69.1	43.5	46.8	30.4	48.7	23.6	22.7	48.7	36.3
Soluble Sodium	meq	53.8	72.8	50.2	75.9	49.2	67.2	60.3	35.8	82.3	41.3	41.9	109	120
True Total Barium	mg/Kg-dry	1780	844	1180	776	955	1270	2310	1450	1300	2100	2290	1310	1510

Notes:
 (No LDEQ standards for sediment)
 1. U: non detect
 2. B: result between MDL and LDL.

Table 7
ICON Sediment Sampling
MPA Split Analytical Results
(February 2010)
East White Lake Oil and Gas Field
Vermilion Parish, Louisiana

Analytical Parameter	Units	SED-14	SED-14	SED-14	SED-15	SED-15	SED-15	SED-16	SED-17	SED-17	SED-18	SED-18	SED-19	SED-19	SED-20	SED-20	SED-21	
		(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)
TPH																		
C10-C28	mg/kg	--	--	--	15500	84600	ND	ND	ND	ND	807	84.5	738	306	ND	ND	ND	
Wet to Dry weight Conversion	mg/kg	--	--	--	98698.48	152432.43	ND	ND	ND	311.58	206.10	206.10	2141.24	757.43	ND	ND	ND	
C38-C55	mg/kg	--	--	--	3320	8580	ND	ND	ND	6.4	13.2	13.2	153	23.5	ND	ND	ND	
Wet to Dry weight Conversion	mg/kg	--	--	--	7201.74	15459.46	--	--	--	28.71	32.20	32.20	432.80	58.17	--	--	--	
Aliphatic >C10-C12	mg/kg	--	--	--	1220	2850	--	--	--	ND	ND	ND	6.51	5.99	--	--	--	
Aliphatic >C12-C16	mg/kg	--	--	--	9070	20600	--	--	--	11.5	19	19	92.7	72	--	--	--	
Aliphatic >C16-C35	mg/kg	--	--	--	17400	40800	--	--	--	47.3	113	113	442	247	--	--	--	
Aromatic >C10-C12	mg/kg	--	--	--	158	329	--	--	--	ND	ND	ND	ND	ND	--	--	--	
Aromatic >C12-C16	mg/kg	--	--	--	1840	3460	--	--	--	ND	ND	ND	10.4	J	--	--	--	
Aromatic >C16-C21	mg/kg	--	--	--	2170	3730	--	--	--	ND	ND	ND	30.4	ND	--	--	--	
Aromatic >C21-C35	mg/kg	--	--	--	1970	3510	--	--	--	ND	ND	ND	55.1	ND	--	--	--	
PCB																		
Aroclor-1016	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1221	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1232	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1242	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1248	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1254	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor-1260	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																		
Arsenic	mg/kg	1	B	1.45	B	2.77	0.97	B	1.34	B	1.9	1.43	B	1.73	1.8	1.46	B	1.1
Barium	mg/kg	287	448	448	819	1130	60	524	554	838	611	611	1740	860	246	284	154	
Cadmium	mg/kg	--	--	--	0.2	0.27	B	--	--	--	--	--	6.22	--	--	--	--	
Chromium	mg/kg	--	--	--	137	292	--	--	--	--	--	--	13.3	--	--	--	--	
Lead	mg/kg	0.019	0.025	0.025	60.3	76.7	0.016	0.02	0.02	0.033	0.03	0.034	0.074	0.054	0.025	0.025	0.013	
Mercury	mg/kg	0.4	B	0.45	B	0.47	B	0.39	B	0.57	B	0.41	B	0.52	B	0.38	B	0.37
Selenium	mg/kg	--	--	--	62.7	75.4	--	--	--	--	--	--	41.4	--	--	--	--	
Strontium	mg/kg	1110	846	846	996	1080	1240	1150	1370	1040	715	715	844	618	962	789	982	
Chlorides	mg/kg	71.9	63.8	63.8	53.9	44.5	81.5	69.7	74.1	64	59	59	64.6	59.6	69.4	64.8	68.3	
20B Parameters																		
Electrical Conductivity @ 25°C	µmhos/cm	14.5	9.18	9.18	9.89	5.31	14.9	14.4	14.4	9.48	12.5	16.6	14.7	11.4	13.7	6.54	13.1	
Exchangeable Sodium Percentage	%	17.3	9.8	9.8	12.5	7.7	10.2	9.8	9.8	10.6	11.5	8.5	12	6.5	11.1	10.9	7.9	
HEM, Oil, & Grease	% dry wgt	--	--	--	6.31	13.2	0.202	0.327	0.376	0.376	0.411	0.368	0.191	0.336	0.0753	2.26	0.13	
Percent Moisture	%	15	9.53	9.53	8.82	10.7	16	11.6	13.7	13.7	13.5	9.97	9.05	5.71	15	11.1	14.2	
Sodium Adsorption Ratio	meq	13.6	14.5	14.5	42.2	12.2	17.9	26.5	26.5	9.54	21.8	52.4	37.2	26	14.6	5.82	14.6	
Soluble Calcium	meq	50.2	28.9	28.9	35.5	7.74	47.8	75.2	75.2	27.1	35.3	99.2	77.6	78	47.8	14.3	45.8	
Soluble Magnesium	meq	84.9	44.4	44.4	55	33.7	92	82.4	82.4	58.7	72	86.8	68.6	41.2	84	35.1	77.8	
Soluble Sodium	meq	1710	2670	2670	7510	3130	339	3330	4870	4660	4850	4850	8460	3360	953	1460	702	
True Total Barium	mg/kg dry	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Notes:
 (No LDEQ standards for sediment)
 1. U: non detect
 2. B: result between MDL and LDL.

Table 7
ICON Sediment Sampling
MPA Split Analytical Results
(February 2010)
East White Lake Oil and Gas Field
Vermillion Parish, Louisiana

Analytical Parameter	Units	SED-21	SED-21	SED-21	SED-22	SED-22	SED-23	SED-23	SED-24	SED-24	SED-25	SED-25	SED-26	SED-26	SED-27	SED-27
		(2-4)	(4-6)	(6-8)	(0-2)	(2-4)	(0-2)	(2-4)	(0-2)	(2-4)	(0-2)	(2-4)	(0-2)	(2-4)	(0-2)	(2-4)
TPH	C10-C28	ND	137	70.3	ND	ND	414	563	ND	ND	84.4	15.8	2350	299	106	146
	Wet to Dry weight Conversion	ND	346.84	165.02	ND	1169.49	1787.30	110	ND	252.69	48.92	48.92	672.33	1317.18	379.93	481.85
	C28-C35	ND	18.2	ND	ND	310.73	390.48	123	ND	5.38	ND	ND	352	57.9	20	25
	Wet to Dry weight Conversion	ND	46.08	ND	ND	ND	ND	ND	ND	25.09	ND	ND	1014.41	255.07	71.68	82.51
	Aliphatic >C10-C12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31.4	ND	ND	ND
	Aliphatic >C12-C16	ND	19.3	16.4	ND	36.3	71.5	468	ND	21	283	34.5	890	111	76.8	109
	Aliphatic >C16-C35	ND	84.5	48.9	ND	400	468	ND	ND	96.8	ND	ND	5.04	ND	ND	ND
	Aromatic >C10-C12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aromatic >C12-C16	ND	ND	ND	ND	71.8	ND	ND	ND	ND	ND	ND	ND	94.9	8.16	ND
	Aromatic >C16-C21	ND	ND	ND	ND	34	32.2	ND	ND	ND	ND	ND	ND	161	15.5	ND
Aromatic >C21-C35	ND	ND	ND	ND	65.4	71.3	ND	ND	ND	ND	ND	ND	180	7.72	ND	
PCB	Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1248	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1254	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1260	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Aroclor-1232	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Metals	Arsenic	1.66	2.28	1.5	1.43	2.17	1.33	1.11	1.44	1.5	1.38	1.19	1.48	1.2	0.92	1.25
	Barium	335	437	465	257	220	437	429	308	192	484	579	377	222	163	330
	Cadmium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Chromium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Lead	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Mercury	0.011	0.042	0.037	0.022	0.024	0.025	0.02	0.038	0.019	0.026	0.039	0.11	0.022	0.021	0.027
	Selenium	0.31	0.45	0.25	0.48	0.59	0.57	0.54	0.6	0.56	0.52	0.36	0.29	0.27	0.27	0.4
	Strontium	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Chlorides	656	513	549	1710	1160	978	1220	1010	758	1390	1400	825	841	1560	1420
	Total Moisture	64.1	60.5	57.4	68.8	62.4	64.6	68.5	65.2	67.4	66.6	67.7	65.3	77.3	72.1	69.7
20B Parameters	Electrical Conductivity @ 25°C	7.82	6.37	7.2	18.4	11.6	9.24	9.85	8.2	12.5	18.5	18.8	10.6	15.1	22.1	14.4
	Exchangeable Sodium Percentage	6.3	7.1	6.7	10.5	11.3	13.3	9.1	7.6	10.3	17.1	15.2	10.8	18.7	13.4	8.8
	HEM, Oil, & Grease	0.282	0.382	0.34	0.227	0.434	7.53	0.0923	0.208	0.265	0.445	0.0813	4.45	3.25	0.199	0.32
	Percent Moisture	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Sodium Adsorption Ratio	10.7	7.53	8.04	13.6	11.6	14.4	10.1	11.9	8.41	15.6	15.8	138	18.8	17	12.8
	Soluble Calcium	10.2	10.9	13.1	27.6	14.1	10.5	18.2	9.1	31.9	39.5	44.2	36.3	45.1	31.7	26.5
	Soluble Magnesium	19	21.7	27.9	33.1	17.7	17.7	32.1	17.7	68.4	63	69	31.9	34.6	111	57.8
	Soluble Sodium	40.9	30.4	36.4	106	56.3	55.8	50.8	43.4	59.6	112	119	80.3	119	144	83
	True Total Barium	1700	1690	1220	861	835	2530	1670	1120	787	2420	5480	2050	1780	863	1580

Notes:
(No LDEQ standards for sediment)
1. U: non detect
2. B: result between MDL and LDL.

Table 7
ICON Sediment Sampling
MPA Split Analytical Results
(February 2010)
East White Lake Oil and Gas Field
Vermillion Parish, Louisiana

Analytical Parameter	Units	SED-28	SED-29	SED-30	SED-31	SED-32	SED-33	SED-32	SED-33	SED-32	SED-33	SED-32	SED-33	SED-32	SED-33	SED-32	SED-33	SED-32	SED-33	
		(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)	(0-2)	(2-4)	(0-2)
TPH																				
Wet to Dry weight Conversion	mg/kg	5420	1030	153	ND	1770	72.3	441	20.2	905	20.6	155	ND	155	ND	155	ND	155	ND	ND
C10-C28	mg/kg	25327.10	4095.192	1026.85	ND	12733.81	463.46	1804.00	66.01	3220.64	140.14	775.00	ND	775.00	ND	775.00	ND	775.00	ND	ND
C28-C35	mg/kg	906	287	10.5	ND	390	4.81	87	26.8	177	ND	35.3	ND	35.3	ND	35.3	ND	35.3	ND	ND
Wet to Dry weight Conversion	mg/kg	4233.64	1379.81	70.47	ND	2805.76	30.83	295.92	132.67	629.89	ND	176.50	ND	176.50	ND	176.50	ND	176.50	ND	ND
Aliphatic >C10-C12	mg/kg	110	ND	ND	ND	17.9	ND	9.46	22.3	26.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aliphatic >C12-C16	mg/kg	120	53.6	7.72	ND	362	13.7	87.3	98.1	257	ND	40.9	ND	40.9	ND	40.9	ND	40.9	ND	ND
Aliphatic >C16-C35	mg/kg	2690	469	165	ND	1350	59.7	389	190	736	ND	93.2	ND	93.2	ND	93.2	ND	93.2	ND	ND
Aromatic >C10-C12	mg/kg	6.6	ND	ND	ND	25.6	ND	ND	ND	16.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aromatic >C12-C16	mg/kg	169	ND	ND	ND	100	ND	38.7	19.1	66.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aromatic >C16-C21	mg/kg	290	60.4	ND	ND	215	ND	60.4	17.1	98.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aromatic >C21-C35	mg/kg	433	183	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCB																				
Arochlor 1016	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arochlor 1221	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arochlor 1232	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arochlor 1242	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arochlor 1248	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arochlor 1254	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arochlor 1260	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals																				
Arsenic	mg/kg	0.7	ND	0.47	B	0.5	B	0.34	B	0.77	B	0.5	B	0.62	B	0.74	B	0.51	B	0.85
Barium	mg/kg	104	137	56.3	B	140	84.1	160	79.8	133	63.3	134	ND	134	ND	134	ND	134	68.7	35.2
Cadmium	mg/kg	0.048	0.023	ND	B	0.038	B	0.01	B	0.05	ND	0.012	ND	0.012	0.0085	B	0.005	B	0.016	0.004
Chromium	mg/kg	1.4	2.85	0.31	B	3.72	1.05	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	mg/kg	4.16	4.2	1.34	B	4.5	1.97	ND	0.0043	ND	0.0043	B	ND	0.012	B	0.0085	B	0.016	0.004	
Mercury	mg/kg	0.13	0.023	0.015	ND	0.011	ND	0.011	ND	ND	ND	ND	ND	0.012	B	0.0085	B	0.005	B	0.016
Selenium	mg/kg	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	B	ND	0.35	B	ND	0.26
Strontium	mg/kg	62.7	44.5	62.1	ND	52.9	64.5	ND	ND	ND	ND	ND	ND	0.26	B	ND	0.35	B	ND	0.26
Chlorides	mg/kg	1990	2110	1710	B	2550	4500	2730	3380	1910	1450	2840	2780	1910	1450	2840	2780	1910	1450	2840
Total Moisture	%	78.6	79.2	85.1	B	86.1	84.4	70.6	79.8	71.9	85.3	80	83.3	71.9	85.3	80	83.3	71.9	85.3	80
20B Parameters																				
Electrical Conductivity @ 25°C	umhos/cm	23.1	22.5	37.1	B	31.3	51	23.6	48.5	23.8	20.5	28.2	18.9	23.8	20.5	28.2	18.9	23.8	20.5	28.2
Exchangeable Sodium Percentage	%	28.9	27	23.7	B	39.3	47.98	19.4	40.2	12.3	18.8	14.1	14.1	12.3	18.8	14.1	14.1	12.3	18.8	14.1
HEM, Oil, & Grease	% dry wt	7.22	4.87	1.09	B	4.87	0.05	1.61	2.31	4.77	0.186	0.461	0.461	4.77	0.186	0.461	0.461	4.77	0.186	0.461
Percent Moisture	%	22.1	28.5	29.4	B	30.4	73.5	22.7	31.3	17.7	12.3	26	16.2	17.7	12.3	26	16.2	17.7	12.3	26
Sodium Adsorption Ratio	meq	45.5	20.2	82.9	B	50.6	34.7	27.6	70	39.8	26.5	26.5	26.5	39.8	26.5	26.5	26.5	39.8	26.5	26.5
Soluble Calcium	meq	68.3	41.8	112	B	62.1	34.8	68.8	166	104	66.8	66.8	66.8	104	66.8	66.8	66.8	104	66.8	66.8
Soluble Magnesium	meq	166	159	290	B	159	439	158	339	151	118	187	111	151	118	187	111	151	118	187
Soluble Sodium	meq	660	740	496	B	740	857	823	472	524	416	436	416	524	416	436	416	524	416	436
Total Barium	mg/kg dry	660	740	496	B	740	857	823	472	524	416	436	416	524	416	436	416	524	416	436

Notes:
(No LDEQ standards for sediment)
1. U: non detect
2. B: result between MDL and LDL.

Table 7
ICON Sediment Sampling
MPA Split Analytical Results
(February 2010)
East White Lake Oil and Gas Field
Vermilion Parish, Louisiana

Analytical Parameter	Units	SS-08 (0-2)	SS-08 (2-4)	SS-10 (0-2)	SS-10 (2-4)
TPH					
C10-C28	mg/kg	65.8	--	140	159
Wet to Dry weight Conversion		182.27	--	463.58	421.75
C28-C35	mg/kg	ND	--	9.23	13.9
Wet to Dry weight Conversion			--	30.56	36.87
Aliphatic >C10-C12	mg/kg	ND	--	ND	ND
Aliphatic >C12-C16	mg/kg	11.8	--	24.3	18.2
Aliphatic >C16-C35	mg/kg	47	--	61.2	72.2
Aromatic >C10-C12	mg/kg	ND	--	ND	ND
Aromatic >C12-C16	mg/kg	ND	--	ND	8.72
Aromatic >C16-C21	mg/kg	ND	--	ND	17.2
Aromatic >C21-C35	mg/kg	ND	--	ND	10
PCB					
Aroclor-1016	mg/kg	--	--	--	--
Aroclor-1221	mg/kg	--	--	--	--
Aroclor-1232	mg/kg	--	--	--	--
Aroclor-1242	mg/kg	--	--	--	--
Aroclor-1248	mg/kg	--	--	--	--
Aroclor-1254	mg/kg	--	--	--	--
Aroclor-1260	mg/kg	--	--	--	--
Metals					
Arsenic	mg/kg	B	2.85	2.47	2.51
Barium	mg/kg		376	379	301
Cadmium	mg/kg		0.063	0.13	0.094
Chromium	mg/kg		1.79	1.46	1.4
Lead	mg/kg		12.7	9.72	7.04
Mercury	mg/kg		0.59	10.1	0.046
Selenium	mg/kg	B	0.41	0.55	0.4
Strontium	mg/kg		26.9	24.6	18.5
Chlorides	mg/kg				
Total Moisture	%		63.9	63.2	69.8
200 Parameters					
Electrical Conductivity @ 25°C	umhos/cm		NA	NA	NA
Exchangeable Sodium Percentage	%		NA	NA	NA
HFM, Oil, & Grease	% dry wt		0.584	NA	0.343
Percent Moisture	%		NA	NA	NA
Sodium Adsorption Ratio	meq		NA	NA	NA
Soluble Calcium	meq		NA	NA	NA
Soluble Magnesium	meq		NA	NA	NA
Soluble Sodium	meq		NA	NA	NA
Total Barium	mg/kg dry		1790	47.1	1360
Total Barium	mg/kg				2030

Notes:
 (No LDEQ standards for sediment)
 1. U: non detect
 2. B: result between MDL and LDL.