

CRESP II YEAR 3 SCHOLARLY PRODUCTS

CRESP Reports

Burger, J., C.W. Powers, M. Greenberg and M. Gochfeld. 2003. The role of risk and future land use in cleanup at the Department of Energy. CRESP Report 03-001.

Peer Review Committee. 2003. Review of the Amchitka Independent Assessment Science Plan, DRAFT. CRESP Report August 29, 2003.

Powers, C.W., L. Bliss, J. Burger, J.H. Clarke, B.R. Friedlander, M.A. Gallo, P. Georgopoulos, M. Gochfeld, B.D. Goldstein, M. Greenberg, D. Kosson, P. Liyo and V. Vyas. 2003. A Literature Guide Supporting the Planning and Implementation of a Risk-based End State Program, (Prepared for the Department of Energy Environmental Management Corporate Project: "A Cleanup Program Driven by Risk-based End States Project") CRESP Report, June 10.

CRESP Researcher Reports

Burger, J. 2003. Recreational Rates and Future Land Use Preferences about Four Department of Energy Sites: Consistency Despite Demographic and Geographical Differences.

Burger, J. 2003. Assessment methods for Concerns about Contaminated Sites.

Burger J. and M. Gochfeld. 2003. Bioindicators for Assessing Human and Ecological Health.

Carletta, M.A., K. Lowrie, K.T. Miller, M. Greenberg and J. Burger. 2003. Guidance for Determining the Best Use for Decommissioned Lands, Report 73, Social and Economic Center, CRESP Report.

Georgopoulos, P.G. 2003. Data Analysis for Determining Background Soil Concentrations of Certain Constituents of Potential Concern at the Savannah River Site. CRESP Report. (Draft report was submitted for review by EPA Region IV & SCDHEC. Collaboration with CRESP Remediation Center and SREL on development of background level identification methods.)

Georgopoulos, P.G. 2003. Estimation of Non-Detected Measurement Values for Soils in the Savannah River Site, SC. CRESP Report. (Updated report was released to EPA Region IV and SCDHEC for soliciting their comments. Collaboration with CRESP Remediation Center and SREL on development of background level identification methods.)

Georgopoulos, P.G., M. Lazaridis, and P.G. Kevrekidis, 2003A. Atmospheric Dispersion and Resuspension of Particulate Matter: Critical Evaluation of Modeling Techniques and New Developments. CRESP Report. (Working updated report)

Georgopoulos P.G., Shade P., Broday D.M., Kevrekidis P.G., and Lazaridis M. 2003. Inhalation Dosimetry of Fine Airborne Particulate Matter: Evaluation of Modeling Approaches for Respiratory Tract Aerosol Deposition and New Developments. CRESP Report. (Working update draft report).

Greenberg, M., K. Lowrie, H. Mayer, D. Lewis, J. Burger, and C.W. Powers, and D. Kosson. 2003. Social Science Tools for Analyzing the Impacts of Alternative Land Use End States of U.S. Department of Energy Sites, Report 74 of Social and Economic Center, CRESP Report, February.

Mayer, H., R. Keren, C. Danis, M. Greenberg, V. Vyas, C. Powers, M. Gochfeld, J. Burger, David

Kosson and Paul Lioy. 2003. Risk-Based End State Guidance: Geospatial Mapping Tool, Report Prepared for DOE – HQ, Report 82 of Social and Economic Center, CRESF Report, May.

Powers, C.W., D. Kosson, J. Burger and M. Gochfeld. 2003. Geospatial Mapping for End-State Use Applications At U.S. Department of Energy Sites, Preliminary Report Prepared for DOE-HQ, Report 81 of Social and Economic Center, CRESF Report, May.

Published Manuscripts

Burger, J. and M. Gochfeld. 2003. Lead in young herring gulls: paradoxical effects of exercise on tissue concentration. *J. Toxicol. Environ. Health* 66:181-197.

Burger, J., B. B. Johnson, S. Shukla, and M. Gochfeld. Perceptions of recreational fishing boat captains: knowledge and effects of fish consumption advisories. *Risk. Anal.* 23:368-378.

Clarke, J.H., L. Everett and S. Kowall. 2003. Engineering Challenges Associated with Long-Term Management of Legacy Nuclear and Hazardous Waste. International Seminar on Nuclear War and Planetary Emergencies, World Scientific, August 2003.

Garrabrants, A.C., and Kosson, D.S. (2003). Modeling moisture transport from a Portland cement-based material during storage in reactive and inert atmospheres. *Drying Technology* 21(5): 775-805.

Garrabrants, A.C., Sanchez, F. and Kosson, D.S. (2003). Leach model for a cement mortar exposed to intermittent wetting and drying. *AIChE Journal* 49(5): 1317-1333.

Punshon. T., K. F. Gaines, P. M. Bertsch and J. Burger. 2003. Bioavailability of uranium and nickel to vegetation in a contaminated riparian ecosystem. *Environ Tox. Chem.* 22:1146-1154.

Sanchez, F., Garrabrants, A.C. and Kosson, D.S. (2003). Effects of intermittent wetting on concentration profiles and release from a cement-based waste matrix. *Environmental Engineering Science* 20(2): 135-153.

Sanchez, F., Massry, I.W., Eighmy, T.T. and Kosson, D.S. (2003). Multi-regime transport model for leaching of heterogeneous porous materials. *Waste Management* 23(3):219-224.

In Press Manuscripts

Chien, C., A.Gatchett and G. Chamberlain (eds), Performance and Verification of Barriers Through Prediction and Monitoring, contributor to Chapter One - Damage and System Performance Prediction (in press).

Clarke, J.H., M. M. MacDonell, E. D. Smith, R. J. Dunn and W. J. Waugh, Engineered Containment and Control Systems: Nurturing Nature", *Risk Analysis* (In press).

Garrabrants, A.C., Sanchez, F. and Kosson, D.S. (2003). Changes in constituent equilibrium leaching and pore water characteristics of a Portland cement mortar as a result of carbonation. *Waste Management* (in press).

Georgopoulos P.G., et al. 200X. Uncertainty Reduction and Characterization of Complex Environmental Fate and Transport Models: An Empirical Bayesian Framework Incorporating the Stochastic Response Surface Method. *Water Resources Research Journal*. (Accepted for publication).

Gervais, C., Garrabrants, A.C., Sanchez, F., Barna, R., Moszkowicz, P. and Kosson, D.S. (2003). The effects of carbonation and drying during intermittent leaching on the release of inorganic constituents from a cement-based matrix. *Cement & Concrete Research* (in press).

Greenberg, M., K. Lowrie, M. Frisch and D. Lewis. 2003. "National Government Policy Options for Contributing to Regional Economic Stability: U.S. Department of Energy's Major Nuclear Weapons Site Regions," *Policy Studies Review* (in press).

Submitted Manuscripts

Balakrishnan, S. Uncertainty Reduction and Characterization of Complex Environmental Fate and Transport Models: An Empirical Bayesian Framework Incorporating the Stochastic Response Surface Method. *Water Resources Research Journal*.

Burger, J., M. Greenberg, C. Powers and M. Gochfeld. 200X. Reducing the footprint on contaminated Land. *Environmental Management*.

Burger, J. and M. Gochfeld. 200X. Mercury in Canned Tuna: White versus Light and Temporal Trends. *Environmental Research*.

Carletta, M., K. Lowrie, K.T. Miller, M.Greenberg, and J. Burger. 200X. Guidance for Determining the Best Disposition of Large Tracts of Decommissioned Land. *Journal of Environmental Planning and Management*.

Georgopoulos, P.G., M. Gochfeld, P.J. Liroy, N. Sussman, V.M. Vyas. 2003. Application of Risk Assessment Principles to Site Remediation: A Case Study for a Gas Works Plant in New Jersey (Draft).

Lewis, D., H. Mayer and M. Greenberg. 200X. Stochastic Modeling of Life-Cycle Costs: A Preliminary Assessment of the West Valley Site, Waste Management (under review).

Lowrie, K., M. Greenberg, D. Simon, L. Solitare, M. Killmer and H.Mayer. 200X. Remediation and Stewardship: Co-Existing Process to Protect Human Health and the Environment, Remediation (under review).

Lowrie, K., L. Solitare and M. Greenberg. 200X. Long-term Stewardship of Highly Contaminated Properties: Turning Lemons into Lemonade, *Environmental Practice* (under review).

Miller, K.T., D. Lewis, M. Frisch and M. Greenberg. 200X. Innovative Worker Separation and Severance Policies: The Economic Impact, Economic Development and Applied Research (under review).

Punshon, T., B.P. Jackson, P.M. Bertsch, J. Burger. 200X. Mass Loading of Nickel and Uranium on Plant Surfaces: Application of LA-ICP-MS.

Simon, D., K. Lowrie and M. Greenberg. 200X. "Approaches to Collaborative Stewardship by the U.S. Forest Service," *Land Use Policy*, ms, (under review).

Presentations, Posters and Abstracts

Greenberg, M. 2003. Participant in Panel on Cleanup and Reuse of DOD Former Chemical Weapons Sites," Centers for Disease Control, Atlanta, GA, February 25-26.

Parker, F. 2003. Deep-Well Injection of High-Level Radioactive Waste in Russia. National Ground Water Association Conference on Subsurface Monitoring & Modeling Issues: Hydrogeologic Model Calibration, Uncertainty and Confirmation. Nashville, TN, September 18-19, 2003.

Parker, F. 2003. Impact of Atmospheric Transport of Radioactive Pollutants from Russian Nuclear Pacific Fleet. WM'03. Tucson, AZ, February 2003.

Powers, C.W. 2003. Risk, Cleanup and EM Completion at the NFP Sites: An Independent Perspective. National Focus Project Summit, Hamilton, OH, April 22, 2003.

Powers, C.W. 2003. Whence and Whither the Amchitka Independent Assessment Science Plan. Las Vegas, NV, February 19, 2003.

Wang, S.W. and P.G. Georgopoulos. 2003. High Dimensional Model Representation (HDMR) and Its Application in Environmental Exposure & Dose Assessment. 2nd Annual Workshop on Reliability and Risk, Nashville, TN, May 12-13.