
Part 6: REFERENCES

- Abdul, A.S., T.L. Gibson, and D.N. Rai. 1987. Statistical correlations for predicting the partition coefficient for nonpolar organic contaminants between aquifer carbon and water. *Hazardous Waste and Hazardous Materials* 4(3):211-223.
- AECL (Atomic Energy of Canada Limited). 1990. *A Critical Compilation and Review of Default Soil Solid/Liquid Partition Coefficients, K_d , for Use in Environmental Assessments*, by D.H. Thibault, M.I. Sheppard, and P.A. Smith, Whiteshell Nuclear Research Establishment, Pinawa, Manitoba.
- Aller, L., T. Bennett, J.H. Lehr, R.J. Petty, and G. Hackett. 1987. *DRASTIC: A Standardized System for Evaluating Ground Water Pollution Potential Using Hydrogeologic Settings*. EPA-600/2-87-035. Prepared for U.S. EPA Office of Research and Development, Ada, OK. National Water Well Association, Dublin, OH.
- Allison, J. 1993. *Review and Evaluation of the MINTEQA2 K_d Results for Mercury in the Finite Source Methodology*. Prepared by Allison Geoscience Consultants, Inc., for the U.S. Environmental Protection Agency, Environmental Research Laboratory, Athens, GA.
- ASTM (American Society for Testing and Materials). 1994. Risk-Based Corrective Action Guidance. Philadelphia, PA. (Draft).
- Baes, C.F. (III), and R.D. Sharp. 1983. A proposal for estimation of soil leaching and leaching constants for use in assessment models. *J. Environ. Qual.* 12(1):17-28.
- Baes, C.F. (III), R.D. Sharp, A.L. Sjoreen, and R.W. Shor. 1984. *A Review and Analysis of Parameters for Assessing Transport of Environmentally Released Radionuclides through Agriculture*. Oak Ridge National Laboratory Report ORNL-5786. ORNL, Oak Ridge, TN.
- Battelle Memorial Institute. 1989. *Chemical Data Bases for the Multimedia Environmental Pollutant Assessment System (MEPAS): Version 1*. Prepared for the U.S. Department of Energy under Contract DE-AC06-76RKI 1830, by Pacific Northwest Laboratory, operated by Battelle Memorial Institute.
- Boyd, S.A. 1982. Adsorption of substituted phenols by soil. *Soil Science*, 134(5):337-343.
- Brady, N.C. 1990. *The Nature and Properties of Soils*. Macmillan Publishing Company, New York, NY.
- Calabrese, E.J., H. Pastides, R. Barnes, et al. 1989. How much soil do young children ingest: an epidemiologic study. In: *Petroleum Contaminated Soils*, Vol. 2. E.J. Calabrese and P.T. Kosteki, eds. pp. 363-417. Chelsea, MI, Lewis Publishers.
- Carsel, R.F., and R.S. Parrish. 1988. Developing joint probability distributions of soil water retention characteristics. *Water Resources Research*, 24(5):755-769.

- Carsel, R.F., R.S. Parrish, R.L. Jones, J.L. Hansen, and R.L. Lamb. 1988. Characterizing the uncertainty of pesticide leaching in agricultural soils. *J. of Contam. Hyd.* 2:111-124.
- Chen, L. 1995. Testing the mean of skewed distributions. *Journal of the American Statistical Association* 90(430):767-772.
- Coughtry, P.J., D. Jackson, and M.C. Thorne. 1985. *Radionuclide Distribution and Transporting Terrestrial and Aquatic Ecosystems: A Compendium of Data*. A.A. Balkem, Netherlands, Vol. 6.
- Cowherd, C., G. Muleski, P. Engelhart, and D. Gillette. 1985. *Rapid Assessment of Exposure to Particulate Emissions from Surface Contamination*. EPA/600/8-85/002. NTIS PB85-192219. Office of Health and Environmental Assessment, U.S. Environmental Protection Agency, Washington, DC.
- Criscenti, L.J., S.B. Christian, E.Z. Hosseinipour, and V.M. Gorokhovski. 1994. *Evaluation of Unsaturated Zone/Vadose Zone Models for Superfund Sites. Draft Report*. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens, GA.
- Curtis, G. P., P. V. Roberts, and M. Reinhard. 1986. A natural gradient experiment on solute transport in a sand aquifer. *Water Resources Research* 22(13):2059-2067.
- Davis, S., P. Waller, R. Buschom, J. Ballou, and P. White. 1990. Quantitative estimates of soil ingestion in normal children between the ages of 2 and 7 years: population-based estimates using Al, Si, and Ti as soil tracer elements. *Archives of Environmental Health* 45:112-122.
- Di Toro, D.M. 1985. A particle interaction model of reversible organic chemical sorption. *Chemosphere* 14(10):1503-1538.
- Dragun, J. 1988. *The Soil Chemistry of Hazardous Materials*. Hazardous Materials Control Research Institute, Silver Spring, MD.
- EQ (Environmental Quality Management). 1992. *Limited Validation of the Hwang and Falco Model for Emissions of Soil-Incorporated Volatile Organic Compounds*. Contract No. 68-D8-0111. Prepared for Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, DC.
- EQ (Environmental Quality Management). 1993. *Evaluation of the Dispersion Equations in the Risk Assessment Guidance for Superfund (RAGS): Volume I—Human Health Evaluation Manual (Part B, Development of Preliminary Remediation Goals)*. Contract No. 68-02-D120. Prepared for Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, DC.
- EQ (Environmental Quality Management). 1994. Revisions to VF and PEF Equations. Memorandum #5099-3. Prepared for Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, DC.
- EQ (Environmental Quality Management) and Pechan (E. H. Pechan and Associates). 1994. *A Comparison of Soil Volatilization Models in Support of Superfund Soil Screening Level Development*. Contract No. 68-D3-0035. Prepared for Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, DC.

- EQ (Environmental Quality Management). 1995. *Limited Validation of the Jury Infinite Source and Jury Reduced Solution Finite Source Models for Emissions of Soil-Incorporated Volatile Organic Compounds*. Prepared for Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, Washington, DC.
- Farmer, W. J., and J. Letey. 1974. *Volatilization Losses of Pesticides from Soils*. EPA-660/2-74/054. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC.
- Feenstra, S., D.M. MacKay, and J.A. Cherry. 1991. A method for assessing residual NAPL based on organic chemical concentrations in soil samples. *Ground Water Monitoring Rev.* 11(2):128-136.
- Gee, G.W., and J.W. Bauder. 1986. Particle size analysis. In: A. Klute (ed.), *Methods of Soil Analysis. Part 1. Physical and Mineralogical Methods. 2nd Edition*, 9(1):383-411, American Society of Agronomy, Madison, WI.
- Gelhar, L.W., and C.J. Axness. 1981. *Stochastic Analysis of Macro-Dispersion in Three-Dimensionally Heterogeneous Aquifers*. Report No. H-8. Hydraulic Research Program. New Mexico Institute of Mining and Technology, Socorro, NM.
- Gilbert, Richard O. 1987. *Statistical Methods for Environmental Pollution Monitoring*. New York: Van Nostrand Reinhold.
- Hardin, J.W., and R.O. Gilbert. 1993. *Comparing Statistical Tests for Detecting Soil Contamination Greater than Background*. Pacific Northwest Laboratory (PNL-8989), Richland, WA.
- Heath, R.C. 1984. *Ground-Water Regions of the United States*. USGS Water Supply Paper 2242. U.S. Geological Survey, Reston, VA.
- Howard, P. H. 1989. *Handbook of Environmental Fate and Exposure Data for Organic Chemicals. Vol. I. Large Production and Priority Pollutants*. Lewis Publishers, Chelsea, MI.
- Hwang, S. T., and J. W. Falco. 1986. *Estimation of Multimedia Exposure Related to Hazardous Waste Facilities*. Y. Cohen, Ed. Plenum Publishing.
- Johnson, N.L. 1978. Modified t tests and confidence intervals for asymmetrical populations. *Journal of the American Statistical Association* 73(363):536-544.
- Johnson, P.C. and R.A. Ettinger. 1991. Heuristic model for predicting the intrusion rate of contaminant vapors into buildings. *Environmental Science and Technology* 25(8):1445-1452.
- Jury, W.A., W.F. Spencer, and W.J. Farmer. 1983. Behavior assessment model for trace organics in soil: I. Model description. *J. Environ. Qual.* 12(4):558-564.
- Jury, W.A., W.J. Farmer, and W.F. Spencer. 1984. Behavior assessment model for trace organics in soil: II. Chemical classification and parameter sensitivity. *J. Environ. Qual.* 13(4):567-572.
- Jury, W.A., D. Russo, G. Streile, and H.E. Abd. 1990. Evaluation of volatilization by organic chemicals residing below the soil surface. *Water Resources Research* 26(1):13-20.
- Karickhoff, S.W. 1984. Organic pollutant sorption in aquatic systems. *J. Hydraul. Eng.* 110(6):707-735.

- Kollig, H.P. 1993. *Environmental Fate Constants for Organic Chemicals under Consideration for EPA's Hazardous Waste Identification Projects*. Office of Research and Development, U.S. Environmental Protection Agency, Washington, DC.
- Kukowski, H. 1989. *Adsorption and Desorption of Ionizable Organic Chemicals by Soils*. Ph.D. Dissertation, University of Kiel.
- Land, C.E. 1971. Confidence intervals for linear functions of the normal mean and variance. *Annals of Mathematical Statistics* 42:1187-1205.
- Land, C.E. 1975. Tables of confidence limits for linear functions of the normal mean and variance. *Selected Tables in Mathematical Statistics*, 3:385-419. American Mathematical Society, Providence, RI.
- Lee, L. S., P. S. C. Rao, P. Nkedi-Kizza, and J. J. Delfino. 1990. Influence of solvent and sorbent characteristics on distribution of pentachlorophenol in octanol-water and soil-water systems. *Environ. Sci. Tech.* 24:654-661.
- Lee, L. S., P. S. C. Rao, and M. L. Brusseau. 1991. Nonequilibrium sorption and transport of neutral and ionized compounds. *Environ. Sci. Tech.* 25:722-729.
- Lyman, W. J., W. F. Reehl, and D. H. Rosenblatt. 1982. *Handbook of Chemical Property Estimation Methods*. McGraw-Hill, New York.
- Marshall, J. 1971. Drag measurements in roughness arrays of varying density and distribution. *Agricultural Meteorology*, 8:269-292.
- McCarty, P.L., M. Reinhard, and B.E. Rittmann. 1981. Trace organics in ground water. *Environ. Sci. Technol.* 15:40-51.
- McLean, E.O. 1982. Soil pH and lime requirement. In: A.L. Page (ed.), *Methods of Soil Analysis. Part 2. Chemical and Microbiological Properties. 2nd Edition*, 9(2):199-224, American Society of Agronomy, Madison, WI.
- Meylan, W., P.H. Howard, and R.S. Boethling. 1992. Molecular topology/fragment contribution method for predicting soil sorption coefficients. *Environ. Sci. Technol.* 26(8):1560-1567.
- Miller, R.G. 1991. *Simultaneous Statistical Inference*. 2nd edition. Springer-Verlag, New York.
- Millington, R. J., and J. M. Quirk. 1961. Permeability of porous soils. *Trans. Faraday Soc.* 57:1200-1207.
- Nelson, D.W., and L.E. Sommers. 1982. Total carbon, organic carbon, and organic matter. In: A.L. Page (ed.), *Methods of Soil Analysis. Part 2. Chemical and Microbiological Properties. 2nd Edition*, 9(2):539-579, American Society of Agronomy, Madison, WI.
- Newell, C.J., L.P. Hopkins, and P.B. Bedient. 1989. *Hydrogeologic Database for Ground Water Modeling*. API Publication No. 4476. American Petroleum Institute, Washington, DC.
- Newell, C.J., L.P. Hopkins, and P.B. Bedient. 1990. A hydrogeologic database for ground water-modeling. *Ground Water*, 28(5):703-714.

- Nofziger, D.L., J. Chen, and C.T. Haan. 1994. *Evaluation of Unsaturated/Vadose Zone Models for Superfund Sites*. EPA/600/R-93/184. Office of Research and Development, U.S. Environmental Protection Agency, Robert S. Kerr Environmental Research Laboratory, Ada, OK.
- Piwoni, M. D., and P. Banerjee. 1989. Sorption of volatile organic solvents from aqueous solution onto subsurface solids. *J. Contam. Hydrol.* 4(2):163-179.
- Radian. 1989. *Short-term Fate and Persistence of Motor Fuels in Soils*. Report to the American Petroleum Institute, Washington, DC.
- RTI (Research Triangle Institute). 1994. *Chemical Properties for Soil Screening Levels. Draft Report*. Prepared for Office of Emergency and Remedial Response, U.S. Environmental Protection Agency, Washington, DC.
- Salhotra, A.M., P. Mineart, S. Sharp-Hansen, and T. Allison. 1990. *Multimedia Exposure Assessment Model (MULTIMED) for Evaluating the Land Disposal of Wastes—Model Theory*. Environmental Research Laboratory, U.S. Environmental Protection Agency, Athens, GA.
- Schellenberg K., C. Leuenberger, and R.P. Schwarzenbach. 1984. Sorption of chlorinated phenols by natural sediments and aquifer materials. *Environ. Sci. Technol.* 18(9):652-657.
- Schwarzenbach, R. P., and J. C. Westall. 1981. Transport of non-polar organic compounds from surface water to ground water. *Environ. Sci. Tech.* 15(11):1360-1367.
- Shan, C., and D.B. Stephens. 1995. An analytical solution for vertical transport of volatile chemicals in the vadose zone. *Journal of Contaminant Hydrology* 18:259-277.
- Sharp-Hansen, S., C. Travers, P. Hummel, and T. Allison. 1990. *A Subtitle D Landfill Application Manual for the Multimedia Exposure Assessment Model (MULTIMED)*. EPA Contract No. 68-03-3513. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens, GA.
- Shimizu, Y., N. Takei, S. Yamakazi, and Y. Terashima. 1993. *Sorption of Organic Pollutants onto Natural Solids: Ionizable Organics in a Saturated System and Volatile Organics in an Unsaturated System*. Selected Papers on Environmental Hydrogeology, 29th International Geologic Congress, Kyoto, Japan, Volume 4, August 24-September 3, 1993.
- U.S. EPA (Environmental Protection Agency). 1980. *Land Disposal of Hexachlorobenzene Wastes Controlling Vapor Movement in Soil*. EPA-600/2-80-119. Office of Research and Development, Cincinnati, OH. NTIS PB80-216575.
- U.S. EPA (Environmental Protection Agency). 1988. *Superfund Exposure Assessment Manual*. OSWER Directive 9285.5-1. EPA/540/1-88/001. Office of Emergency and Remedial Response, Washington, DC. NTIS PB89-135859
- U.S. EPA (Environmental Protection Agency). 1989a. *Methods for Evaluating the Attainment of Soil Cleanup Standards. Volume 1: Soils and Solid Media*. EPA 230/02-89-042. Statistical Policy Branch, Office of Policy, Planning and Evaluation, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1989b. *Risk Assessment Guidance for Superfund, Volume 1: Human Health Evaluation Manual, Part A, Interim Final*. EPA/540/1-89/002. Publication 9285.7-01A. Office of Emergency and Remedial Response, Washington, DC. NTIS PB90-155581/CCE.

- U.S. EPA (Environmental Protection Agency). 1990. *Guidance on Remedial Actions for Superfund Sites with PCB Contamination*. Office of Solid Waste and Emergency Response, Washington, DC. NTIS PB91-1921206CDH.
- U.S. EPA (Environmental Protection Agency). 1990. *Sampler's Guide to the Contract Laboratory Program*. Office of Emergency and Remedial Response, Washington, DC. NTIS-PB91-921330CDH.
- U.S. EPA (Environmental Protection Agency). 1991a. *Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors*. Publication 9285.6-03. Office of Emergency and Remedial Response, Washington, DC. NTIS PB91-921314.
- U.S. EPA (Environmental Protection Agency). 1991b. *Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part B, Development of Risk-Based Preliminary Remediation Goals). Interim*. Publication 9285.7-01B. Office of Emergency and Remedial Response, Washington, DC. NTIS PB92-963333.
- U.S. EPA (Environmental Protection Agency). 1991c. *Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions*. Publication 9355.0-30. Office of Emergency and Remedial Response, Washington, DC. NTIS PB91-921359/CCE.
- U.S. EPA (Environmental Protection Agency). 1991d. *User's Guide to the Contract Laboratory Program*. Office of Emergency and Remedial Response, Washington, DC. NTIS-PB91-921278CDH.
- U.S. EPA (Environmental Protection Agency). 1992a. *Background Document for Finite Source Methodology for Wastes Containing Metals*. HWEP-S0040. Office of Solid Waste, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1992b. *Dermal Exposure Assessment: Principles and Applications*. Interim Report. EPA/600/8-91/011B. Office of Research and Development, Cincinnati, OH.
- U.S. EPA (Environmental Protection Agency). 1992c. *Estimating the Potential for Occurrence of DNAPL at Superfund Sites*. Pub. 9355.4-07FS. Office of Solid Waste and Emergency Response, Washington, DC. R.S. Kerr Environmental Research Laboratory, Ada, OK. NTIS PB92-963358.
- U.S. EPA (Environmental Protection Agency). 1992d. *Technical Support Document for Land Application of Sewage Sludge. Volumes 1 and 2*. EPA 822/R-93-001A,B. Office of Water, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1992e. *Handbook of RCRA Ground-Water Monitoring Constituents: Chemical and Physical Properties*. EPA/530-R-92-022. Office of Solid Waste, Washington, DC. NTIS PB92-233287.
- U.S. EPA. (Environmental Protection Agency). 1992f. *Preparation of Soil Sampling Protocols: Sampling Techniques and Strategies*. Office of Research and Development, Washington, DC. EPA/600/R-92/128.
- U.S. EPA (Environmental Protection Agency). 1993a. *Background Document for EPA's Composite Model for Leachate Migration with Transformation Products, EPACMTP*. Office of Solid Waste, Washington, DC. July.

- U.S. EPA (Environmental Protection Agency). 1993b. *Data Quality Objectives for Superfund: Interim Final Guidance*. EPA 540-R-93-071. Publication 9255.9-01. Office of Emergency and Remedial Response, Washington, DC. NTIS PB94-963203.
- U.S. EPA (Environmental Protection Agency). 1993c. *Provisional Guidance for the Quantitative Risk Assessment of Polycyclic Aromatic Hydrocarbons*. Office of Health Effects Assessment, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1993d. *Quality Assurance for Superfund Environmental Data Collection Activities*. Quick Reference Fact Sheet. Office of Emergency and Remedial Response, Washington, DC. NTIS PB93-963273.
- U.S. EPA (Environmental Protection Agency). 1993e. Science Advisory Board Review of the Office of Solid Waste and Emergency Response draft *Risk Assessment Guidance for Superfund (RAGS), Human Health Evaluation Manual (HHEM)*. EPA-SAB-EHC-93-007. Science Advisory Board, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1993f. *The Urban Soil Lead Abatement Demonstration Project. Vol I: Integrated Report Review Draft*. EPA-600/AP93001/A. NTIS PB93-222-651.
- U.S. EPA (Environmental Protection Agency). 1994. *Revised Interim Soil Lead Guidance for CERCLA Sites and RCRA Corrective Action Facilities*. Office of Solid Waste and Emergency Response, Washington, DC. Directive 9355.4-12.
- U.S. EPA (Environmental Protection Agency). 1994a. *Framework for Assessing Ground Water Modeling Applications*. EPA-500-B-94-004. Resource Management and Information Staff, Office of Solid Waste and Emergency Response, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1994b. *Ground Water Modeling Compendium, Second Edition*. EPA-500-B-94-003. Resource Management and Information Staff, Office of Solid Waste and Emergency Response, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1994c. *Guidance for the Data Quality Objectives Process*. EPA QA/G-4. Quality Assurance Management Staff, Office of Research and Development, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1994d. *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry*. EPA/600/8-90/066F. Office of Research and Development, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1994e. *Methods for Evaluating the Attainment of Cleanup Standards—Volume 3: Reference-Based Standards for Soils and Solid Media*. EPA 230-R-94-004. Environmental Statistics and Information Division, Office of Policy, Planning, and Evaluation, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1994f. Risk Assessment Issue Paper for: Derivation of a Provisional RfD for *1,1-Dichloroethane (75-34-3)*. Environmental Criteria Assessment Office, Cincinnati, OH.
- U.S. EPA (Environmental Protection Agency). 1994g. Risk Assessment Issue Paper for: Provisional Oral RfD for *Naphthalene (91-20-3)*. Environmental Criteria Assessment Office, Cincinnati, OH.

- U.S. EPA (Environmental Protection Agency). 1994h. *Soil Screening Level Guidance*. Quick Reference Fact Sheet. Draft. Office of Emergency and Remedial Response, Washington, DC. NTIS PB93-963508.
- U.S. EPA (Environmental Protection Agency). 1994i. *Technical Background Document for Soil Screening Guidance*. Draft. EPA/540/R-94/106. Office of Emergency and Remedial Response, Washington, DC. NTIS PB95-963532.
- U.S. EPA (Environmental Protection Agency). 1995a. *Drinking Water Regulations and Health Advisories*. Office of Water, Washington, DC.
- U.S. EPA (Environmental Protection Agency). 1995b. Integrated Risk Information System (IRIS). Cincinnati, OH. December.
- U.S. EPA (Environmental Protection Agency). 1995d. *Health Effects Assessment Summary Tables: FY-1995 Annual*. EPA540/R-95-036. Office of Research and Development. Office of Emergency and Remedial Response, Washington, DC. NTIS PB95-921199.
- U.S. EPA (Environmental Protection Agency). 1996. *Soil Screening Guidance: User's Guide*. EPA/540/R-96/018. Office of Emergency and Remedial Response, Washington, DC. NTIS PB96.9634501
- Van der Heijde, P.M. 1994. *Identification and Compilation of Unsaturated/Vadose Zone Models*. EPA/600/R-94/028. R.S. Kerr Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Ada, OK.
- Van Wijnen, J.H., P. Clausing, and B. Brunekreef. 1990. Estimated soil ingestion by children. *Environmental Research*, 51:147-162.
- Wester, R.C., H.I. Maibach, D.A.W. Bucks, L. Sedik, J. Melendres, C. Liao, and S. DiZio. 1990. Percutaneous absorption of [¹⁴C]DDT and [¹⁴C]Benzo[*a*]pyrene from soil. *Fund. App. Toxicol.* 15:510-516.
- Wester, R.C., H.I. Maibach, and L. Sedik. 1993. Percutaneous absorption of pentachlorophenol from soil. *Fundamentals of Applied Toxicology*, 20.
- Will, M.E. and G.W. Suter II. 1994. *Toxicological Benchmarks for Screening Potential Contaminants of Concern for Effects on Terrestrial Plants: 1994 Revision*. ES/ER/TM-85/R1. Prepared for the U.S. Department of Energy by the Environmental Sciences Division of the Oak Ridge National Laboratory.