

APPENDIX A
References

The application of any regulations, policies, or other guidance documents would be done in consultation with the appropriate Office of Counsel. There may be differences in application between the various Defense programs.

A.1. Required References.

None.

A-2. Related References.

A.2.1. *Government Publications.*

A.2.1.1, *Code of Federal Regulations.*

29 CFR 1910.29.

29 CFR 1919.120 (b).

29 CFR 1926.65 (b).

40 CFR Part 60.

A.2.1.2. *Joint Service Publications.*

UFGS-23 08 00.00 10

Commissioning of HVAC Systems, Construction Criteria Base.

A.2.1.3. *U. S. Army Publications.*

ER 5-1-11

Management - U.S. Army Corps of Engineers Business Process.

ER 385-1-92

Safety and Occupational Health Document Requirements for HTRW Activities.

ER 385-1-95

Safety and Health Requirements for Munitions and Explosives of Concern (MEC) Operations

ER 1110-1-263

Chemical Data Quality Management for Hazardous Waste Remedial Activities (Appendix D).

ER 1110-1-1300
Cost Engineering Policy and General Requirements.

ER 1110-3-1301
Cost Engineering Policy and General Requirements for Hazardous, Toxic, and Radioactive Waste (HTRW), Remedial Action Cost Estimates.

ER 1110-345-100
Design Policy for Military Construction

ER 1110-345-700
Design Analysis.

ER 1110-345-700
Engineering and Design - Design Analysis, Drawings and Specifications.

ER 1165-2-132
Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works Projects.

ER 1180-1-6
Construction Quality Management.

EM 200-1-2
Technical Project Planning.

EM 200-1-3
Requirements for the Preparation of Sampling and Analysis Plans.

EM 385-1-1
Safety and Health Requirements.

EM 385-1-97
Explosives Safety and Health Requirements Manual

EM 1110-1-4005
In Situ Air Sparging.

EM 1110-1-4007
Safety and Health Aspects to HTRW Remediation Technologies

EM 1110-1-4001
Soil Vapor Extraction and Bioventing, 3 Jun 3003.

EM 1110-1-4015

28 Aug 09

Johansen (1977)

Johansen, O. "Thermal Conductivity of Soils." U.S. Army Cold Regions Research and Engineering Laboratory, Translation, 637.

A.2.1.4. U.S. Air Force Publications.

Wiedemeier et al. (1995)

Wiedemeier, T.H., J.T. Wilson, D.H. Kampbell, R.N. Miller, and J.E. Hanson. Technical Protocol for Implementing Intrinsic Remediation With Long Term Monitoring for Natural Attenuation of Fuel Contamination Dissolved in Groundwater. Vols. 1 and 2. Air Force Center for Environmental Excellence, Brooks Air Force Base, San Antonio, TX.

Wiedemeier et al. (1996)

Wiedemeier, T.H., M.A. Swanson, D.E. Moutoux, E.K. Gordon, J.T. Wilson, B.H. Wilson, D.H. Kampbell, J.E. Hansen, P. Haas, and F.H. Chapelle. Draft Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater. Air Force Center for Environmental Excellence, Brooks Air Force Base, San Antonio, TX.

Earth Tech, Inc. and SteamTech Environmental Services, Inc. (Apr 2003)

Earth Tech, Inc. and SteamTech Environmental Services, Inc. Site 61 Treatability Study Report, Steam Injection, Draft Final. Prepared for U.S. Air Force.

A.2.1.5. U.S. Navy Publications.

U.S. Department of the Navy (1998)

U.S. Department of the Navy. Technical Guidelines for Evaluation Monitored Natural Attenuation of Petroleum Hydrocarbons and Chlorinated Solvents in Ground Water at Naval and Marine Corps Facilities. Prepared by: T.H Wiedemeier and F.H. Chapelle for the Naval Facilities Engineering Command.

Itamura and Udell (1995)

Itamura, M.T. and K.S. Udell. "Pilot Demonstration of Steam Enhanced Extraction to Remediate Soils Containing JP-5 Jet Fuel". NAS Lemoore Final Technical Report, Submitted to Department of NAVY, Port Hueneme, CA.

A.2.1.6. U.S. Department of Energy.

U.S. Department of Energy (2000)

U.S. Department of Energy. Hydrous Pyrolysis Oxidation/Dynamic Stripping: Subsurface Focus Area Report to Department of Energy, DOE/EM-0504.

U.S. Department of Energy (2002)

U.S. Department of Energy. Guidance for Optimizing Ground Water Response Actions at Department of Energy Sites. Office of Environmental Management.

SteamTech Environmental Services (1999)

SteamTech Environmental Services. "Steam Stripping and Hydrous Pyrolysis Pilot Project for the Portsmouth Gaseous Diffusion Plant, Portsmouth, Ohio." Final Report for DoE #DOE/OR/11-3032&D1.

A.2.1.7. *U.S. Environmental Protection Agency.*

Davis (Apr 1997)

Davis, E.L. How Heat Can Enhance In Situ Soil and Aquifer Remediation: Important Chemical Properties and Guidance On Choosing The Appropriate Technique. EPA/540/S-97/502.

Davis (Jan 1998)

Davis, E.L. Steam Injection For Soil and Aquifer Remediation. EPA/540/S-97/505.

Davis (2002)

Davis, E.L. Steam Injection Treatability Study, Wyckoff/Eagle Harbor Superfund Site. Robert S. Kerr Research Laboratory, Ada, OK.

Davis (2003)

Davis, E.L. Steam Injection Treatability Study, McCormick and Baxter Superfund Site, Stockton California. Robert S. Kerr Research Laboratory, Ada, OK.

Dev (Apr 1986)

Dev, H. "Radio Frequency Enhanced In Situ Decontamination of Soils Contaminated with Halogenated Hydrocarbons". In Land Disposal, Remedial Action, Incineration and Treatment of Hazardous Waste. Proceedings of the Twelfth Annual Research Symposium, EPA/600/9-86/022, pp. 402-412.

USEPA (2000)

USEPA. Conceptual Design, Soil and Groundwater Operable Units: Wyckoff/Eagle Harbor Superfund Site. Bainbridge Island, Washington. Report to EPA by U.S. Army Corps of Engineers. Design by USACE Seattle District.

USEPA (1999)

USEPA. Focused Feasibility Study For Thermal Remediation Technologies For the Wyckoff Soil and Groundwater Operable Units: Wyckoff/ Eagle Harbor Superfund Site. Bainbridge Island, Washington. Report to EPA by CH2M Hill Inc.

USEPA (Apr 1977)

USEPA. Toward A National Strategy for Noise Control.
http://www.nonoise.org/epa/title_T.htm

USEPA (1984)

USEPA, Process Design Manual, 600/2/84/139.

EM 1110-1-4015

28 Aug 09

USEPA (1986)

USEPA. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. EPA/SW-846. <http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm>

USEPA (1987)

USEPA. Data Quality Objectives for Remedial Response Activities. EPA/540/G-87/003. (NTIS No. PB88-131370).

USEPA (1991)

USEPA. Guide for Conducting Treatability Studies Under CERCLA, Soil Vapor Extraction. EPA/540/2-91/019A.

USEPA (1992)

USEPA. A Technology Assessment of Soil Vapor Extraction and Air Sparging EPA/600/R—92/173. Risk Reduction Engineering Laboratory, Office of Research and Development, Cincinnati, OH. 63pp.

USEPA (1993)

USEPA. Presumptive Remedies, Site Characterization and Technology Selection for CERCLA Sites with VOCs in Soils. EPA/540/F-93/048.

USEPA (Mar 1995a)

USEPA. Guide to Documenting Cost and Performance for Remediation Projects, EPA-542-B95-002, Member Agencies of the Federal Remediation Technologies Roundtable.

USEPA (1995b)

USEPA. Review of Mathematical Modeling for Evaluating Soil Vapor Extraction Systems. Publication No. EPA/540/R-95/513.

USEPA (Mar 1995c)

USEPA. Guide to Documenting Cost and Performance for Remediation Projects. Member Agencies of the Federal Remediation Technologies Roundtable. EPA-542-B95-002.

USEPA (1996a)

USEPA. Presumptive Response Strategy and Ex-Situ Treatment Technologies For Contaminated Groundwater at CERCLA Sites.

USEPA (1996b)

USEPA. State Policies Concerning the Use of Injectants for In-Situ Ground Water Remediation. Technology Innovation Office, EPA 542-R-96-001.

USEPA (1997)

USEPA. Analysis of Selected Enhancements for Soil Vapor Extraction. EPA/542/R-97/007.

USEPA (1999a)

USEPA. Microbial Processes Affecting Monitored Natural Attenuation of Contaminants in the Subsurface. Office of Solid Waste and Emergency Response, National Risk Management Research Laboratory, Subsurface Protection and Remediation Division, Robert S. Kerr Environmental Research Center, Ada, Oklahoma. EPA/540/S-99/001.

USEPA (1999b)

USEPA. Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites. NTIS PB97-963312.

USEPA (Jul 1999c)

USEPA. Guide to Preparing Superfund Proposed Plans, Records of Decision and Other Remedy Selection Documents. EPA 540-R-98-031.

USEPA (Oct 1999d)

USEPA. Cost and Performance Report, Six Phase[™] Heating (SPH) at a Former Manufacturing Facility, Skokie Illinois. Office of Solid Waste and Emergency Response, Technical Innovation Office.

USEPA (2000)

USEPA. Comprehensive Report, Wyckoff NAPL Field Exploration, Soil and Groundwater Operable Units, Wyckoff/ Eagle Harbor Superfund Site, Bainbridge Island WA. Report to EPA by U.S. Army Corps of Engineers.

USEPA (May 2001a)

USEPA. A Citizen's Guide to In Situ Thermal Treatment Methods. EPA 542-F-01-012.

USEPA (Sep 2001b)

USEPA. Recommendations and Methods to Support Assessment of Soil Venting Performance and Closure, EPA/600/R-01/070.

USEPA (2002a)

USEPA. Final Design Analysis, Thermal Remediation Pilot Study, PN C1871, Soil and Groundwater Operable Units, Wyckoff/ Eagle Harbor Superfund Site, Bainbridge Island WA: Report to EPA by U.S. Army Corps of Engineers.

USEPA (2002b)

USEPA. A Discussion of the Thermal Remediation Treatments on Microbial Degradation Processes. Office of Solid Waste and Emergency Response, Technology Innovation Office, Washington DC. 2002b. <http://www.clu-in.org/download/techdrct/dettmer.pdf>

EM 1110-1-4015

28 Aug 09

USEPA (Mar 2002)

North Atlantic Treaty Organization/ Committee on the Challenges of Modern society.
NATO/CCMS Pilot Study, Evaluation of Demonstrated and Emerging Technologies for the
Treatment of Contaminated Land and Groundwater (Phase III). EPA 542-R-02-002.
http://www.epa.gov/tio/download/partner/phase_iii_overview.pdf

USEPA

Remediation Technologies Screening Matrix Reference Guide. <http://www.frtr.gov/matrix2/>

Vinegar et al. (Dec 1997)

Vinegar, H.J., E.P. deRouffignac, R.L. Rosen, G.L. Stegemeier, M.M. Bonn, D.M. Conley, S.H. Philips, J.M. Hirsch, F.G. Carl, J.R. Steed, D.H. Arrington, P.T. Brunnette, W.M. Mueller and T.E. Siedhoff. "In Situ Thermal Desorption (ISTD) of PCBs". Proceedings of the HazWaste/World Superfund XVIII Conference, Washington, DC.

Wiedemeier et al. (1998)

Wiedemeier, T. H., M. A. Swanson, D. E. Moutoux, E. K. Gordon, J. T. Wilson, B. H. Wilson, D. H. Kampbell, P. E. Haas, R. N. Miller, J. E. Hansen, and F. G. Chapelle. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater. EPA/600/R-98/128.

Wilson et al. (1990)

Wilson, J.L., S.H. Conrad, W.R. Mason, W. Peplinski, and E. Hagan. "Laboratory Investigation of Residual Liquid Organics." Spills, Leaks, and the Disposal of Hazardous Wastes in Groundwater, Report EPA/600/6-90/004. Robert S. Kerr Environmental Research Laboratory, Ada, OK.

A.2.1.8. *Patent and Trademark Office Publications.*

Basile et al. (1994)

Basile, A.J., G.J. Smith and J.W. Aiken. Ground Contamination Remediation Process. US Patent No. 5,279,740.

Udell et al. (1991)

Udell, K.S., N. Sitar, J.R. Hunt, and L.D. Stewart. Process for In Situ Decontamination of Subsurface Soil and Groundwater. US Patent # 5,018,576.

A.3. Nongovernment Publications.

Adams and Smith (May 1998)

Adams, T.V. and G.J. Smith. "LNAPL/DNAPL Removal in Clay Till Using Steam-Enhanced Extraction." Proceedings of the First International Conference on Remediation of Chlorinated and Recalcitrant Compounds. Monterey, CA.

Advanced Applied Technology Development Facility (1997)
Advanced Applied Technology Development Facility (AATDF) Technology Practices, Manual for Surfactants and Cosolvents.. <http://clu-in.org/products/aatdf/toc.htm>

Aines et al. (Mar 1992)

Aines, R., R. Newmark, W. McConachie, K. Udell, D. Rice, A. Ramirez, W. Siegel, M. Buettner, W. Daily, P. Krauter, E. Folsom, A. Boegel, and D. Bishop. "Dynamic Underground Stripping Project, UCRL-JC-109902", Proceedings of the Waste Management Symposium, Tucson, AZ. http://clu-in.org/search/default.cfm?search_term=UCRL-JC-109902&t=all&f=

Andersland and Ladanyi (1994)

Andersland and Ladanyi. An Introduction To Frozen Ground Engineering. Chapman and Hall, New York.

Anderson and Woessner (1992)

Anderson, M.P., and W.W. Woessner, Applied Groundwater Modeling. Academic Press.

ANSI B31.1 /B31.3

American National Standards Institute, Power and Process Piping

ANSI A58.1

American National Standards Institute, Minimum Design Loads for Buildings and Other Structures.

ANSI C80.1

American National Standards Institute, Rigid Steel Conduit, Zinc Coated.

ANSI C80.5

American National Standards Institute, Rigid Aluminum Conduit.

ANSI ISA-S5.1

American National Standards Institute, Test Code for the Measurement of Sound from Pneumatic Equipment.

API 650

American Petroleum Institute, Field Erected Tanks.

API RP500A

American Petroleum Institute, Recommended Practice for Classifications of Areas for Electrical Installations in Petroleum Refineries.

API RP500B

American Petroleum Institute, Recommended Practice for Classifications of Areas for Electrical Installation at Drilling Rigs and Production Facilities on Land and on Fixed Marine Platforms.

EM 1110-1-4015

28 Aug 09

API RP500C

American Petroleum Institute, Electrical Installation at Petroleum and Gas Pipeline Transportation Facilities.

ASTM C150-07

American Society for Testing and Materials, Standard Specification for Portland Cement.

ASTM E1943-98 (2004)

American Society for Testing and Materials, Standard Guide for Remediation of Ground Water by Natural Attenuation at Petroleum Release Sites.

ASTM D6170 - 97 (2004)

American Society for Testing and Materials, Standard Guide for Selecting a Groundwater Modeling Code. D6170.

ASTM D422 - 63 (2007)

American Society for Testing and Materials, Standard Test Method for Particle-Size Analysis of Soils.

ASTM D698-07e1

American Society for Testing and Materials, Test Method for Laboratory Compaction Characteristics of Soils Using Standard Effort.

ASTM D971-99a (2004)

American Society for Testing and Materials. Standard Test Method for Interfacial Tension of Oil Against Water by the Ring Method.

ASTM D1217-93 (2007)

American Society for Testing and Materials. Standard Methods for Density and Relative Density (Specific gravity) of Liquids by Bingham Pycnometer.

ASTM D1296-01 (2007)

American Society for Testing and Materials. Standard Test Method for Odor of Volatile Solvents and Diluents.

ASTM D1586-08

American Society for Testing and Materials, Standard Method for Penetration Test (SPT) and Split-Barrel Sampling of Soils.

ASTM D1587- 00, (2007)e1

American Society for Testing and Materials, Standard Practice for Thin-Walled Tube Sampling of Soils for Geotechnical Purposes.

ASTM D1785-06

American Society for Testing and Materials, Specifications for Poly Vinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120.

ASTM D2216-05

American Society for Testing and Materials, Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock.

ASTM D2241-05

American Society for Testing and Materials, Specifications for Poly Vinyl Chloride (PVC) Pressure Rated Pipe (SDR-Series).

ASTM D2321-05

American Society for Testing and Materials, Standard Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.

ASTM D2325 (Withdrawn 2007)

American Society for Testing and Materials, Test Method for Capillary-Moisture Relationships for Coarse-and Medium-Textured Soils by Porous-Plate Apparatus.

ASTM D2487 (Withdrawn 2007) D6836-02

American Society for Testing and Materials, Classification of Soils for Engineering Purposes.

ASTM D2488

American Society for Testing and Materials, Practice for Description and Identification of Soils (Visual Manual Procedure)

ASTM D2850

American Society for Testing and Materials, Test Method for Unconsolidated, Undrained Strength of Cohesive Soils in Triaxial Compression.

ASTM D3350

American Society for Testing and Materials, Standard Specifications for Polyethylene Plastics Pipe and Fitting Materials, D3350.

ASTM D3416

American Society for Testing and Materials, Standard Test Method for Total Hydrocarbons, Methane, and Carbon Monoxide in the Atmosphere (Gas Chromatographic Method), D3416.

ASTM D5092

American Society for Testing and Materials, Practice for Design and Installation of Ground Water Monitoring Wells in Aquifers.

EM 1110-1-4015

28 Aug 09

ASTM D5126

American Society for Testing and Materials, Guide for Comparison of Field Methods for Determining Hydraulic Conductivity in the Vadose Zone.

ASTM D6033 (1996)

American Society for Testing and Materials, Standard Guide for Describing the Functionality of a Groundwater Modeling Code. D6033.

ASTM F480

American Society for Testing and Materials, Thermoplastic Well Casing Pipe/ Couplings Made in Standard Dimension Ratios (SDR) Schedule 40/ 80, specifications, F480.

Atkins (1990)

Atkins, P.W. Physical Chemistry, 4th ed. Freeman, New York.

Atlas and Bartha (1993)

Atlas, R.M and R. Bartha. Microbial Ecology, Fundamentals and Applications, Third Edition. Benjamin/Cummings Publishing Co., Redwood City, CA.

AWWA A100

American Water Works Association, Water Wells.

Baker and Bierschenk (Jun 2001)

Baker, R.S., and, J.M. Bierschenk, "In Situ Thermal Destruction Makes Stringent Soil And Sediment Cleanup Goals Attainable." Proceedings of the Fourth Tri-Service Environmental Technology Symposium. San Diego, CA.

Baker and Kuhlman (Nov 2002)

Baker, R. S., and M. Kuhlman. "A Description of the Mechanisms of In-Situ Thermal Destruction (ISTD) Reactions". Current Practices in Oxidation and Reduction Technologies for Soil and Groundwater: 2nd International Conference on Oxidation and Reduction and Technologies for Soil and Groundwater, Toronto Canada.

Baker et al. (Jun 2001)

Baker, R.S., J.P. Galligan, H. McLaughlin, R. Semenak, M.P. Pologruto, and K.R. Weeks. "In-Situ Thermal Destruction Treatability Study of Explosives-Contaminated Soil from Massachusetts Military Reservation". Proceedings of the Fourth Tri-Service Technology Symposium. San Diego, CA.

Barbash and Reinhard (1989)

Barbash, J.E. and M. Reinhard. " Abiotic "Dehalogenation of 1,2-dichloroethane and 1,2-dibromoethane in Aqueous Solutions Containing Hydrogen Sulfide." Environmental Science and Technology, Volume 23, 1989, pp 1349-1358.

Betz et al. (1998)

Betz, C., A. Farber, C.M. Green, H.P. Koschitzky, and R. Schmidt. Removing Volatile and Semivolatile Contaminants From The Unsaturated Zone By Injection of Steam/Air Mixture in Contaminated Soil. Thomas Telford, London.

Beyke et al. (May 2000)

Beyke, G., G. Smith, and V. Jurka. "DNAPL Remediation Closure with Six-Phase Heating". Proceedings of the Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA.

Beyke et al. (May 2006)

Beyke, G., D. Seiler, and C. Crownover, "VOC and SVOC Remediation Using Thermally Enhanced Hydrolysis." In Proceedings of the Fifth International Conference on Remediation of Chlorinated and Recalcitrant Compounds, 22-25 May 2006, Monterey, CA

Bigger and Cheung (1973)

Bigger, J.W. and M.W. Cheung. "Adsorption of Picloram (4-amino-3, 4, 6-trichloropicolinic acid) on Panoche, Ephrata, and Palouse Soils, A Thermodynamic Approach to the Adsorption Mechanism". Soil Sci. Soc. Am. Proc., 37, 863-868.

Bontoen et al. (1999)

Bontoen, L.T.C., T.C. Grotenhuis and W.H. Rulkens. "Enhancement of PAH biodegradation in soil by physiochemical pretreatment." Chemosphere, 38:3627-3636.

Bossert and Bartha (1984)

Bossert, I. and R. Bartha. "The Fate of Petroleum in Soil Ecosystems". Petroleum Microbiology, R. Atlas, ed., pp. 435-473. MacMillan, New York.

Brücher and Bergström (1996)

Brücher, J., and L. Bergström. "Temperature Dependence of Linuron Sorption to Three Different Agricultural Soils." J. Environ. Qual., 26, 1327-1335.

Cao et al. (1993a)

Cao, W., K. Knudsen, A. Fredenslund, and P. Rasmussen. "Simultaneous Correlation Of Viscosity And Vapor-Liquid Equilibrium Data". Ind. Eng. Chem. Res., 32, 2077-2087.

Cao et al. (1993b)

Cao, W., K. Knudsen, A. Fredenslund, and P. Rasmussen. "Group-Contribution Viscosity Predictions Of Liquid Mixtures Using UNIFAC-VLE Parameters". Ind. Eng. Chem. Res., 32, 2088-2092.

Carslaw and Jaeger (1959)

Carslaw, H. S. and Jaeger, C. H. Conduction Of Heat In Solids. Oxford University Press, New York.

EM 1110-1-4015

28 Aug 09

Cengel and Boles (1998)

Cengel, Y. A., and Boles, M. A. Thermodynamics, An Engineering Approach. John Wiley and Sons, Inc.

Committee on Intrinsic Remediation (2000)

Committee on Intrinsic Remediation. Natural Attenuation for Groundwater Remediation. National Academies Press.

Daubert and Danner (1997)

Daubert, T.E. and R.P. Danner. Physical and Thermodynamic Properties Of Pure Chemicals: Data Compilation. Taylor and Francis, London.

Davis (1994)

Davis, E.L. "Effect of Temperature and Pore Size On The Hydraulic Properties and Flow Of A Hydrocarbon Oil In The Subsurface." J. Contam. Hydrol., 16, 55-86.

Davis (Jun 1998)

Davis, E. "Dynamic Underground Stripping of Creosote Removal" EPA Groundwater Currents.

De Vries (1963)

De Vries, D.A. "Thermal Properties Of Soils." W.R. van Wijk, Physics of Plant Environment.

Divincezon and Sparks (2001)

Divincezon, J.P., and D.L. Sparks. "Sorption Of The Neutral and Charged Forms Of Pentachlorophenol On Soil, Evidence For Different Mechanisms." Arch. Environ. Contam. Toxicol., 40, 445-450.

Dolfing and Janssen (1994)

Dolfing, J. and D.B. Janssen. "Estimates of Gibbs Free Energies Of Formation Of Chlorinated Aliphatic Hydrocarbons." Biodegradation, 5, 21-28.

Domenico and Schwartz (1997)

Domenico, P.A., and F.W. Schwartz. Physical and Chemical Hydrogeology. John Wiley and Sons, Inc.

Dullien (1992)

Dullien, F.A.L. Porous Media, Fluid Transport and Pore Structure. Academic Press.

Evans et al. (1986)

Evans, R., U.M.B. Marconi, and P. Tarazona. "Fluids In Narrow Pores, Adsorption, Capillary Condensation and Critical Points." J. Chem. Phys., 84, 2376-2399.

Falta et al. (1992)

Falta, R.W., K. Pruess, I. Javandel, and P.W. Witherspoon. "Numerical Modeling of Steam Injection For The Removal of Nonaqueous Phase Liquids from the Subsurface." *Water Resour. Res.*, 28, 433-449.

Faybishenko (1983)

Faybishenko, B. "Effect of Temperature on Moisture Content, Entropy, and Water Pressure in Loam Soils." *Pochvovedenie*, 12.[In Russian].

Freeze and Cherry (1979)

Freeze and Cherry. *Groundwater*. Prentice Hall.

Gaberell et al. (May 2002)

Gaberell, M., A., Gavaskar, E. Drescher, J. Sminchak, L. Cummings, W.S. Yoon, and S. De Silva. "Soil Core Characterization Strategy at DNAPL Sites Subjected Strong Thermal or Chemical Remediation." *Proceedings of the Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Monterey, CA.

Gerdes et al. (1998)

Gerdes, K.S., S. Kaslusky, and K.S. Udell. "Containment of Downward Migration of DNAPLs During Steam Enhanced Extraction." *Proceedings of the First International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. Monterey, CA.

Grant (2003)

Grant, S.A., "Extension of a temperature-effects model for capillary-pressure saturation relations." *Water Resources Research* 39, 1003.

Grant and Salehzadeh (1996)

Grant, S.A., and A. Salehzadeh. "Calculation of Temperature Effects on Wetting Coefficients of Porous Solids and their Capillary Pressure Functions." *Water Resour. Res.* 32, 261-270.

Grant and Bachmann (2002)

Grant, S.A. and J. Bachmann. "Effect Of Temperature On Capillary Pressure". *Environmental Mechanics, Water, Mass and Energy Transfer in the Biosphere*. American Geophysical Society, Geophysical Monograph Series Volume 129, Washington, DC, 199-212.

Hadim et al. (1993)

Hadim, AF, H. Shah, and G.P. Korfiatis. "Laboratory Studies of Steam Stripping of LNAPL-Contaminated Soils." *J. Soil Contamination*. 2(1):37-58.

Hansen et al. (1998)

Hansen, K.S., D.M. Conley, H.J. Vinegar, J.M. Coles, J.L. Menotti, and G.L. Stegemeier. "In Situ Thermal Desorption of Coal Tar." *Proceedings of the Institute of Gas Technology/Gas Research Institute International Symposium on Environmental Biotechnologies and Site Remediation Technologies*. Orlando, FL, December 7-9.

EM 1110-1-4015

28 Aug 09

Heron et al. (1998a)

Heron, G., T.H. Christensen, and C.G. Enfield. "Henry's Law Constant for Trichloroethylene between 10 and 95°C. *Environmental Science and Technology*, 32 (10), 1433-1437.

Heron et al. (1998b)

Heron, G., T.H. Christensen, T. Heron, and T. Larsen. "Thermally Enhanced Remediation at DNAPL Sites: The Competition Between Downward Mobilization and Upward Volatilization." *Proceedings of the First International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Monterey, CA, 193-198.

Heron et al. (2002)

Heron, G., D. LaBrecque, and H. Sowers. "Steam Stripping/Hydrous Pyrolysis Oxidation for In-situ Remediation of a TCE DNAPL Spill." *Proceedings of the Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Monterey, California. Volume C2-5, pp. 149-156.

Heron et al. (Dec 2005)

Heron, G., S. Carroll and S. Nielsen, "Full-Scale Removal of DNAPL Constituents Using Steam-Enhanced Extraction and Electrical Resistance Heating." *Ground Water Monitoring and Remediation*, 24(4), 92-107.

Hilberts (1986)

Hilberts, B. "In-situ steam stripping". In *Proceedings of the First International TNO Conference on Contaminated Soil*, pp.680-686, Assink and van den Brink, Mortin Nuhoff, Dordrecht, N.L., Eds.

Horvath et al. (1999)

Horvath, A, F.W. Getzen, and Z. Maczynska. "Halogenated Ethanes and Ethenes With Water." *J. Phys. Chem. Ref. Data*, 28, 395-627.

Hubbert (1956)

Hubbert, M.K. "Darcy's Law and The Field Equations Of The Flow Of Underground Fluids." *Trans. Am. Min. Met. Engrs.* 207, 222-239.

Huesemann et al. (May 2002)

Huesemann, M.H., T.S. Hausmann, T.J. Fortman and M.J. Truex. "Evidence of Thermophilic Biodegradation for PAHs and Diesel In Soil". *Proceedings of the Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Monterey, CA.

Hulscher and Cornelissen (1996)

Hulscher, E.M. and G. Cornelissen. "Effect of temperature on sorption equilibrium and sorption kinetics of organic micropollutants - a review." *Chemosphere*, 32:609-626.

Hunt et al. (1988)

Hunt, J.R., N. Sitar, and K.S. Udell. "Nonaqueous Phase Liquid Transport and Cleanup, Experimental Studies." *Water Resour. Res.*, 24(8): 1259-1267.

IEEE 141 (2005)

Institute of Electrical and Electronics Engineers, Recommended Practices for Electrical Power Distribution for Industrial Plants.

Imhoff et al. (1997)

Imhoff, P.T., A. Frizzel, and C.T. Miller. "Evaluation of thermal effects on the dissolution of a nonaqueous phase liquid in porous media". *Environmental Science and Technology*, 31(6), 1615-1622.

Incopera and DeWitt (1996)

Incopera, P. F., and D. P. DeWitt, *Introduction To Heat Transfer*. John Wiley and Sons, Inc.

Integrated Water Resources (Sep 2002)

Integrated Water Resources. Deployment of a Dynamic Underground Stripping-Hydrous Pyrolysis/Oxidation System at the Savannah River Site 321-M Solvent Storage Tank Area, Final Report. Prepared for Westinghouse Savannah River Company. September.

Integrated Water Resources (Mar 2003)

Integrated Water Resources. Deployment of a Steam Injection/Extraction System at LC34, Cape Canaveral Air Station, as part of the Interagency DNAPL Consortium Demonstration, Final Report. Prepared for MSE-Technology Applications Inc.

Interstate Technology Regulatory Cooperation (1999)

Interstate Technology Regulatory Cooperation. *Natural Attenuation of Chlorinated Solvents in Groundwater: Principles and Practices*.

Interstate Technology Regulatory Cooperation (Apr 2002)

Interstate Technology Regulatory Cooperation. *Regulatory Overview: DNAPL Source Reduction: Facing the Challenge*.

Jacob (1940)

Jacob, C. E. "On The Flow Of Water In An Elastic Artesian Aquifer" *Transactions of The American Geophysical Union: Reports and Papers*. 21, 574-589.

Jayaweera et al. (May 2002)

Jayaweera, I.S., M. Marti-Perez and J. Diaz-Ferrero. "Solubility of Polycyclic Aromatic Hydrocarbons Under Hydrothermal Conditions". *Proceedings of the Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, CA*.

EM 1110-1-4015

28 Aug 09

Jeffers et al. (1989)

Jeffers, P.M., L.M. Ward, L.M. Woytowitch, and N.L. Wolfe. "Homogeneous Hydrolysis Rate Constants for Selected Chlorinated Methanes, Ethanes, Ethenes, and Propanes." *Environmental Science Technology*, Volume 23, No.8, 965-969.

Kaslusky and Udell (2002)

Kaslusky, S.F., and K.S. Udell, "A Theoretical Model of Air and Steam Co-Injection to Prevent the Downward Migration of DNAPLs During Steam-Enhanced Extraction." *J. Contaminant Hydrol.*, 55,213-232.

Kersten (1949)

Kersten, M.S. "Thermal Properties of Soils". *Bulletin of the University of Minnesota, Inst. Tech. Eng. Exp. Sta.*, 28.

Knaus et al. (1999)

Knaus, K.G., M.J. Dibley, R.N. Leif, D.A. Mew, and R.D. Aines. "Aqueous Oxidation Of Trichloroethylene: A Kinetic Analysis". *Appl. Geochem.*, 14, 531-541.

Knaus et al. (2000)

Knaus, K.G., M.J. Dibley, R.N. Leif, D.A. Mew, and R.D. Aines. "The Aqueous Solubility Of Trichloroethylene (TCE) and Tetrachloroethylene (PCE) As a Function Of Temperature." *Appl. Geochem.*, 15, 501-512.

LaGrega et al. (1994)

LaGrega, Buckingham, Evans, and The Environmental Resources Management Group. *Hazardous Waste Management*. McGraw-Hill.

Lawrence Livermore National Laboratory (1994)

Demonstration of Dynamic Underground Stripping at the LLNL Gasoline Spill Demonstration Site. Final Report no. UCRL-ID-116964, Volume 1-4.

Lenhard and Parker (1987)

Lenhard, R.J. and J.C. Parker. "Measurement and Prediction of Saturation-Pressure Relationships in Three Phase Porous Media Systems." *J. Contam. Hydrol.*, 1, 407-424.

Lide (1999)

Lide, D.R. *CRC Handbook of Chemistry and Physics*. CRC Press, Boca Raton, FL.

Lupis (1983)

Lupis, C.H.P. *Chemical Thermodynamics of Materials*. Elsevier.

Majer and Svoboda (1985)

Majer, V., and V. Svoboda. *Enthalpies of Vaporization of Organic Compounds*. Blackwell Scientific Publishers, Oxford, England.

Majer et al. (1989)

Majer, V., V. Svoboda, and J. Pick. Heats of Vaporization of Fluids. Elsevier.

Marx and Langenheim (1959)

Marx, J. W. and Langenheim, R. H. "Reservoir Heating by Hot Fluid Injection." AIME Transactions, 216, 312-315.

Massman (1995)

Massman, J. W. "Applying Groundwater Flow Models in Vapor Extraction System Design." Journal of Environmental Engineering, 115, N. 1, 129-149.

McCloskey and Bayer (1987)

McCloskey, W. B., and D. E. Bayer. "Thermodynamics of Fluridone Adsorption and Desorption On Three California Soils." Soil Sci. Soc. Am. J., 51, 650-612.

McWhorter and Kueper (1966)

McWhorter, D.B., and B.H. Kueper. "Mechanics and Mathematics Of The Movement Of Dense Non-Aqueous Phase Liquids (DNAPLs) In Porous Media." Dense Chlorinated Solvents and Other DNAPLs In Groundwater: History, Behavior, and Remediation. Portland, Oregon: Waterloo Press, 89-128..

Montgomery and Welkom (1990)

Montgomery, J.H., and L.M. Welkom. Groundwater Chemicals Desk Reference. Lewis Publishers, Boca Raton, FL.

Moreale and van Bladel (1979)

Moreale, A., and R. van Bladel. "Soil Interactions Of Herbicide-Derived Aniline Residues, A Thermodynamic Approach. " Soil Sci., 127, 1-9.

NFPA 30

National Fire Protection Association, Flammable and Combustible Liquids Code.

NFPA 70

National Fire Protection Association, National Electrical Code.

NFPA 496

National Fire Protection Association, Purged and Pressurized Enclosures for Electrical Equipment in Hazardous Locations.

NFPA 497

National Fire Protection Association, Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas.

EM 1110-1-4015

28 Aug 09

NSF Standard 14

National Sanitary Foundation, Plastics, Piping Components and Related Materials.

Newmark and Aines (Apr 1995)

Newmark, R.L. and R.D. Aines. Summary of the LLNL Gasoline Spill Demonstration—Dynamic Underground Stripping Project, UCRL-ID-120416. Berkeley Environmental Restoration Center, Lawrence Livermore National Laboratory, Livermore, California.

Ochs et al. (2003)

Ochs, S.O., R.A. Hodges, R.W. Falta, T.F. Kmetz, J.J. Supar, N.N. Brown, and D.L. Parkinson, “Predicted heating patterns during steam flooding of coastal plain sediments at the Savannah River Site.” Environmental & Geological Geoscience, Vol IX, No. 1, pp. 51-60.

Parker et al. (1987)

Parker, J. C., R.J. Lenhard, and T. Kuppusamy, “A Parametric Model for Constitutive Properties Governing Multiphase Flow in Porous Media.” Water Resources Research, v. 23, no. 4, pp 618-624.

Piatt et al. (1996)

Piatt, J.J., D.A. Backus, P.D. Capel, and S.J. Eisenreich. “Temperature-Dependent Sorption of Naphthalene, Phenanthrene, and Pyrene to Low Organic Carbon Aquifer Sediments.” Environ. Sci Technol., 30, 751-760.

Pickell et al. (1966)

Pickell, J.J., B.F. Swanson, and W.B. Hickman. Soc. Pet. Eng. J. 6, 55.

Poling et al. (2001)

Poling, B.E., J.M. Prausnitz, and J.P. O’Connell. The Properties of Gases and Liquids. McGraw-Hill.

Rafai et al. (1995)

Rafai, H.R., Borden, J. Wilson, and C.H. Ward. “Intrinsic Bioattenuation for Subsurface Restoration.” pp 1-30 in Hincee, R.E., J. Wilson, and D. Downey (eds.) Intrinsic Bioremediation, Battelle Memorial Institute, Columbus, Ohio.

Ramey (1966)

Ramey Jr., H.J. “A Current Review of Oil Recovery By Steam Injection,” Proceedings, Seventh World Petroleum Congress. 3, 471-476.

Reid et al. (1987)

Reid, R. C., Prausnitz, J. M., Poling, B. E. The Properties Of Liquids And Gases. New York NY: McGraw-Hill Inc.

Rice et al. (1994)

Rice, D.W., B.P. Doohar, S.J. Cullen, L.G. Everett, W.E. Kastenberg, R.D. Grose, and M.A. Marino. Recommendations to Improve the Cleanup Process for California's Leaking Underground Fuel Tanks. Submitted to the California State Water Resources Control Board Underground Storage Tank Program and the Senate Bill 1764 Leaking Underground Fuel Tank Advisory Committee. UCRL-AR-121762.

Richardson (2002)

Richardson, R. E. Final Report on Post-Steam Microbial Experiments Performed at U.C. Berkeley for the Wyckoff/Eagle Harbor Superfund Site. Submitted for publication.

Sageev et al. (1980)

Sageev, A., B.D. Gobran, W.E. Birgham, and H.J. Ramey, Jr. "The Effect of Temperature on Absolute Permeability to Distilled Water of Unconsolidated Sand Cores." Proceedings, 6th Workshop on Geothermal Reservoir Engineering, SGP-TR-50, Stanford University, Stanford, California, 297-300.

Sanyal (1972)

Sanyal, S.K. The Effect of Temperature on Electrical Resistivity and Capillary Pressure Behavior of Porous Media, Ph.D. Diss. Stanford Univ. DA No. 32/12-B:7079.

Schmidt et al. (1998)

Schmidt, R., C. Betz, and A. Farber. Behaviour During Steam Injection into the Unsaturated Zone. Institut Fur Wasserbau Universitat Stuttgart, Pfaffenwaldring Stuttgart, Germany: LNAPL and DNAPL, 61, D-70569.

Schmidt et al. (2002)

Schmidt, R., J. Gudbjerg, T.O. Sonnenborg, and K.H. Jensen. "Removal of NAPLs from The Unsaturated Zone Using Steam: Prevention of Downward Migration By Injecting Mixtures of Steam and Air." J. Contaminant Hydrol., 55, 233-260.

Schwarzenbach et al. (1993)

Schwarzenbach, R., P.M. Gschwend, and D.M. Imboden. Environmental Organic Chemistry. John Wiley and Sons, Inc.

Sengers and Watson (1986)

Sengers, J.V., and J.T.R. Watson. "Improved International Formulations for the Viscosity and Thermal Conductivity of Water Substance." J. Phys. Chem. Ref. Data. 15, 1291.

Severtson and Banerjee (1996)

Severtson, S.J. and S. Banerjee. "Sorption of Chlorophenols To Wood Pulp." Environ. Sci Technol. 30, 1961-1969.

EM 1110-1-4015

28 Aug 09

She and Sleep (1998)

She, H.Y. and B. Sleep. "The Effect of Temperature On Capillary Pressure-Saturation Relationships For Air-Water and Perchloroethylene-Water Systems." *Water Resour. Res.*, 34, 2587–2597:

Sinnokrot (1969)

Sinnokrot, A.A. The Effect of Temperature on Oil-Water Capillary Pressure Curves of Limestones and Sandstones. Ph.D. dissertation, Stanford Univ. DA No. 30/12-B:5529.

Smith et al. (1998)

Smith, G.J., T.V. Adams and V. Jurka. "Closing a DNAPL Site Through Source Removal and Natural Attenuation." *Proceedings of the First International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. Monterey, CA.

Smith et al. (May 2000)

Smith, G., D. Fleming, V. Jurka, and T. Adams. "Closure of a Trichloroethene and 1,1,1-Trichloroethane DNAPL Remediation Using Thermal Technologies." *Proceedings of the Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. Monterey, CA.

Stegemeier and Vinegar (Mar 1995)

Stegemeier, G.L., and H.J. Vinegar. "Soil Remediation By Surface Heating And Vacuum Extraction." *Proceedings, 1995 SPE/EPA Exploration & Production Environmental Conference*. Houston, Texas.

Stegemeier and Vinegar (2001)

Stegemeier, G.L. and H.J. Vinegar. "Thermal Conduction Heating For In Situ Desorption of Soils." *Hazardous & Radioactive Waste Treatment Technologies Handbook*.

Stewart and Udell (Nov 1988)

Stewart, L.D. and K.S. Udell. "Mechanisms of Residual Oil Displacement By Steam Injection." *SPE Res. Eng.* 1233-1424:

Sturchio et al. (May 2000)

Sturchio, N.C., L. Heraty, B.D. Holt, L. Huang, T. Abrajano, and G. Smith. "Stable Isotope Diagnostics of Chlorinated Solvent Behavior in Contaminated Aquifers". *Proceedings of the Second International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Monterey, CA.

Sundberg (1988)

Sundberg, J. "Thermal Properties of Soils and Rocks." *Swedish Geotechnical Institute Report Number 35*, Linköping: SGI.

TerraTherm and Weston (Dec 1997)

TerraTherm and Weston. "Final RCRA Closure Plan, Basis for Design/Final Report."
TherraTherm Environmental Services, Inc., The Woodlands, TX and Roy F Weston Inc., Vernon Hills, IL.

Theis (1935)

Theis, C.V. "The Relationship Between The Lowering Of The Piezometric Surface and The Rate and Duration of Discharge of a Well Using Ground-Water Storage". Transactions of the American Geophysical Union Sixteenth Annual Meeting, Part I, 519-524.

Thiem (1906)

Thiem, G. "Hydrologische Methoden." Leipzig, Gebhardt, as presented in Davis S.N. and Dewiest, R.J.N. (1966) Hydrogeology. John Wiley & Sons, Inc.

Udell (1996)

Udell, K.S. "Heat and Mass Transfer In Clean-Up of Underground Toxic Wastes". Annual Review of Heat Transfer, 7, 333-405.

Udell et al. (2001)

Udell, K.S., G. Heron and T. Heron, "Field Demonstration of Steam Enhanced Extraction at Alameda Point, California." In Proceedings of the 2001 Containment and Remediation Technologies Conference, 10-13 June 2001, Orlando, FL. <http://www.containment.fsu.edu/>

Udell and Stewart (Jun 1989)

Udell, K.S., and L.D. Stewart, Jr. Field Study of In Situ Steam Injection and Vacuum Extraction for Recovery of Volatile Organic Solvents. Department of Mechanical Engineering.

Udell and McCarter (Feb 1996)

Udell, K.S. and R. McCarter, Treatability Tests of Steam Enhanced Extraction for the Removal of Wood Treatment Chemicals from Visalia Pole Yard Soils. Final Report, Berkeley Environmental Restoration Center.

UL-58 (1996)

Underwriters Laboratory, Steel Underground Tanks for Flammable and Combustible Liquids.

UL-80 (2004)

Underwriters Laboratory, Steel Tanks for Oil Burner Fuel.

UL-142 (2006)

Underwriters Laboratory, Steel Aboveground Tanks for Flammable and Combustible Liquids.

Uzgiris et al. (1995)

Uzgiris, E.E., W.A. Edelstein, H.R. Philipp, and I.E.T. Iben. "Complex Thermal Desorption of PCBs from Soil." Chemosphere, 30(2): 377-387.

EM 1110-1-4015

28 Aug 09

Van Genuchten (1980)

Van Genuchten, M. Th. "A Closed-Form Equation for Predicting the Hydraulic Conductivity of Unsaturated Soils." *Soil Sci. Soc. Am. J.* 44, 892-898.

Van Lookeren (Jun 1983)

Van Lookeren, J. Calculation Methods for "Linear and Radial Steam Flow in Oil Reservoirs". *Journal of the Society of Petroleum Engineers*, pp 427-439.

Viamajala et al. (Aug 2007)

Viamajala, S., B. Peyton, L. Richards, and J. Petersen, "Solubilization, Solution Equilibria, and Biodegradation of PAHS under Thermophilic Conditions." *Chemosphere*, 66(6), 1094-1106.

Vinegar et al. (Dec 1997)

Vinegar, H.J., E.P. deRouffignac, R.L. Rosen, G.L. Stegemeier, M.M. Bonn, D.M. Conley, S.H. Philips, J.M. Hirsch, F.G. Carl, J.R. Steed, D.H. Arrington, P.T. Brunnette, W.M. Mueller and T.E. Siedhoff. "In Situ Thermal Desorption (ISTD) of PCBs." *Proceedings of the HazWaste/World Superfund XVIII Conference*, Washington, DC.

Vinegar et al. (1999)

Vinegar, H.J., G.L. Stegemeier, F.G. Carl, J.D. Stevenson, and R.J. Dudley. "In Situ Thermal Desorption of Soils Impacted with Chlorinated Solvents". *Proceedings of the Annual Meeting of the Air and Waste Management Association*, Paper No. 99-450.

Wattiau (2002)

Wattiau, P. "Microbial Aspects in Bioremediation of Soils Polluted by Polyaromatic Hydrocarbons." *Biotechnology for the Environment, Strategy and Fundamentals*, S.N. Agathos and W. Reineke, Editors, pp. 69-89.

Weintraub et al. (1986)

Weintraub, R.A. G.W. Jex, and H.A. Moyer. "Chemical and Microbial Degradation of 1, 2-Dibromoethane (EDB) in Florida Ground Water, Soil, and Sludge". *American Chemical Society* 0097-6156/86/0315-0294.

Wu (1977)

Wu, C.H. "A Critical review of Steam flood Mechanisms". *Society of Petroleum Engineers Paper SPE 6550*.

Yoon et al. (Apr 2005)

Yoon, W.S., A. Gavaskar, S. McCall, J. Sminchak, S. Carroll, G. Heron, and J. Hicks, "Performance Evaluation of Technology Demonstration for Dynamic Underground Stripping with Hydrous Pyrolysis Oxidation (DUHS/HPO) Using a Single Well at Beale Air Force Base, Final Report, ESTCP Project ER-0014" 7 April 2005.