

## Partial Publication List

Freeman, M.H. 1986. The Prevention of Emulsions and Formation of Sludges in Oil-Borne Pentachlorophenol Treating Solutions. Technical Report. Wood Protection Products. Forshaw Chemicals, Inc. 12 pp.

Freeman, M.H. 1986. The Investigation into Phenol Content of Point Source Water Streams using 4-AAP and Other Methods. Technical Report for the POTW and NPDES Program. Wood Protection Products. Forshaw Chemicals, Inc. 16 pp.

Freeman, M.H. and Dunlap, B.J. 1991. Environmental Considerations at the Sawmill. In Proceedings: Nineteenth Annual Hardwood Symposium of the Hardwood Research Council. National Hardwood Lumber Assoc. and Mississippi State Univ., Starkville, MS.

Freeman, M.H. and Amburgey, T.L. 1996. CuRap 20: An Update on the Copper Naphthenate-Boron Remedial Treatment Paste. In Proceedings of the Second International Diffusible Preservatives Conference, Forest Products Society, Madison, WI. In Press.

Freeman, M.H. and Amburgey, T.L. 1994. A Copper Naphthenate-Boron Wood Preservative Remedial Treatment Paste. IRG Document No. ----- . Paper presented at the 1994 Meeting in Orlando, Fl. International Research Group on Wood Preservation, Stockholm, Sweden.

Freeman, M.H. and Amburgey, T.L. 1994. The Nine Year Update on the Copper Naphthenate-Boron Wood Preservative Remedial Treatment Paste. IRG Document No. ----- . Technical Forum presented at the 1994 Meeting in Orlando, Fl. International Research Group on Wood Preservation, Stockholm, Sweden.

Freeman, M.H., Kamdem, P.D. and Jun Zhang. 1997. The Effect of Post-Steamming on Copper Naphthenate Treated Southern Pine. Wood and Fiber Science. Madison, WI.

Kamdem, P.D. , Freeman, M.H., and Jun Zhang. 1996. The Effect of Post-Steamming on Copper Naphthenate Treated Southern Pine Wood. IRG Document No. 97-40086. Paper presented at the 1996 Meeting in Whistler, British Columbia, CAN. International Research Group on Wood Preservation, Stockholm, Sweden.

Freeman, M.H., Stokes, D.K., Woods, T.L. , Arsenault, R.D., and A. C. .Gallacher. 1994. An Update on the Wood Preservative : Copper Dimethyldithiocarbamate. AWWPA Proceedings Vol. 90. pp. 67-87. American Wood Preservers Association, Granbury, TX.

Freeman, M.H. 1992. Copper Naphthenate: An Effective Wood Pole and Crossarm Preservative. In Proceedings of the First Southeastern Pole Conference, Starkville, MS. FPRS Proceedings 7314. Forest Products Society, Madison, WI.

Freeman, M.H. and Amburgey, T.L. 1996. An Update on the Copper Naphthenate-Boron Remedial Treatment Paste - 13 Year Results. Technical Forum presented at the Second International Diffusible Preservatives Conference, Forest Products Society, Madison, WI.

## Partial Publication List

Freeman, M.H. 1991. PQ-8: The Use of Copper 8-Quinolinolate in the Prevention of Sapstain and Mold on Western Canadian Wood Species. In Proceedings entitled Lumber Protection in the 90's. Forintek Canada Corporation; Western Laboratory, Vancouver, BC. Canada.

Freeman, M.H. 1991. The Sta-Brite System: A Formulation to Disperse Biocides for Sapstain and Mold Prevention. In Proceedings entitled Lumber Protection in the 90's. Forintek Canada Corporation; Western Laboratory, Vancouver, BC. Canada.

Freeman, M.H. and TL Woods. 1991. Rodewood 300 SC-TU: An Experimental Wood Preservative System: An Update. In Proceedings entitled Lumber Protection in the 90's. Forintek Canada Corporation; Western Laboratory, Vancouver, BC. Canada.

Freeman, M.H. and TL Woods. 1994. Thermal Degradation of Chlorothalonil Treated Wood and a Study of its By-Products. American Wood Preservers Assoc. Annual Meeting. American Wood Preservers Assoc. Granbury, TX.

Freeman, M.H. 1997. Prevention of Brown Stain in Eastern White Pine: Three Detailed Case Studies in Wisconsin, Maine, and Minnesota. Paper prepared for the New England Kiln-Drying Association 1997 Spring Meeting. NEKDA, Syracuse, NY.

Freeman, M.H., Woods, T.L., and Peter E. Laks. 1992. Chlorothalonil: A Potential Wood Pole and Crossarm Preservative. In Proceedings of the First Southeastern Pole Conference, Starkville, MS. Proceedings 7314. Forest Products Society, Madison, WI. pp. 189-197.

Arsenault, R.D., Freeman, M.H., Stokes, D.K., Woods, T.L., and A. C. Gallacher. 1994. Copper Dimethyldithiocarbamate: A Wood Preservative for the Future. IRG Document No. ----- Paper presented at the 1994 Meeting in Bali, Indonesia, International Research Group on Wood Preservation, Stockholm, Sweden.

Freeman, M.H., West, M.H., and R.S. Gross. 1992. Remedial Treatments with a Borate-Copper Naphthenate Paste. Proceedings of the Second International Conference on Wood Poles and Piles, Colorado State University Press and Engineering Data Management, Ft. Collins, CO.

Freeman, M.H., R.S. Gross, and M. Manning. 1994. Laboratory and Field Studies with a Borate-Copper Naphthenate Paste. Proceedings of the Third International Conference on Wood Poles and Piles, Colorado State University Press and Engineering Data Management, Ft. Collins, CO.

Wood, Mike., and M.H. Freeman. 1991. AWWPA Standard A3-13-91. Method for Determining the Penetration of Pentachlorophenol in Poles using X-Ray Fluorescence. Annual Book of Standards, American Wood Preservers Assoc., Granbury, TX.

## Partial Publication List

Freeman M.H. et al. 1988. AWPA Standard A3-4-88. Determination of Penetration of Pentachlorophenol using a Complex known as Penta Check. Annual Book of Standards, American Wood Preservers Assoc., Granbury, TX.

Freeman M.H. and T.J. Leech,. 1993. A Copper Naphthenate Treated Wood Consumer Information Sheet(CIS) and Hazardous Goods Shipping Label Prototype. Submitted to the American Wood Preservers Institute, Vienna, VA. ISK Biosciences, Inc. Memphis, TN.

Freeman M.H. et al. 1990. AWPA Standard F2-90. Standard Abridged Volume and Specific Gravity Correction Tables for Petroleum Oils and Pentachlorophenol or Copper Naphthenate Solutions. Annual Book of Standards, American Wood Preservers Assoc., Granbury, TX.

Freeman .M.H. 1993. AWPA Standard A3-14-93. Method for the Determination of Penetration of Copper containing Wood Preservatives. Annual Book of Standards, American Wood Preservers Assoc., Granbury, TX.

Freeman .M.H. et al. 1993. AWPA Standard A20-1-93. Method for the Determination of Chlorothonil Assay by Lime-Ignition. Annual Book of Standards, American Wood Preservers Assoc., Granbury, TX.

Freeman .M.H. et al. 1993. AWPA Standard A20-2-93. Method for the Determination of Chlorothonil Assay by Capillary Gas Chromatography. Annual Book of Standards, American Wood Preservers Assoc., Granbury,

Freeman, M.H. 1988. The Prevention of Emulsions and Formation of Sludges in Oil-Borne Treating Solutions. Technical Note No. 61. Chapman Chemical Company, Memphis, TN.

Freeman, M.H. 1992. The Prevention of Emulsions and Formation of Sludges in Copper Naphthenate Treating Solutions. Technical Note in Copper Naphthenate -Technical Specifications and Use Manual, ISK Biotech, Memphis, TN

Freeman .M.H. et al. 1991.Sta-Brite P Technical Bulletin. ISK Biotech Corporation Bulletin No. PB-0691. ISK Biosciences Corp.-Industrial Biocides Division, Memphis, TN.16 pp.,

Freeman .M.H. et al. 1992. CuRAP 20 Technical Bulletin. ISK Biotech Corporation Bulletin No. PB-0492. ISK Biosciences Corp.-Industrial Biocides Division, Memphis, TN.14 pp.,

Freeman .M.H. et al. 1995. NeXgen™ Technical Bulletin. ISK Biosciences Corporation Bulletin No. PB-0695. ISK Biosciences Corp.-Industrial Biocides Division, Memphis, TN.16 pp.,

## Partial Publication List

Freeman .M.H., and R.D. Fears.1996. Vacate 4EC: "Control Of Wood Infesting Insects" Technical Bulletin. ISK Biosciences Corporation Bulletin No. PB-0695. ISK Biosciences Corp.-Industrial Biocides Division, Memphis, TN.3 pp.,

Woods, T.L., M.H. Freeman, And C.R. McIntyre. 1996. CHLOROTHALONIL :A Proposal and Efficacy Update to AWPA. Report to AWPA Sub-Committees P-3, T-4, P-General, and T-General. ISK Biosciences, Corp. - Industrial Biocides Division, Memphis, TN.

McIntyre, C.R., D.K. Stokes, M.H. Freeman, and R.D. Arsenault. 1994. CDDC- Copper Dimethyldithiocarbamate :A Proposal and Efficacy Update to AWPA. Report to AWPA Sub-Committees P-4, T-2, P-General, and T-General. ISK Biosciences, Corp. -Industrial Biocides Division, Memphis, TN.

Freeman, M.H., and T.J. Leech. 1994. A Summary of Environmental Regulations Affecting the Wood Treating Industry. Textbook for Graduate instruction at Mississippi State University - College of Forest Resources. ISK Biosciences Corp.-Industrial Biocides Div, Memphis, TN.

Arsenault, R.D., M.H. Freeman, and D.K. Stokes. 1993. CDDC: Copper Dimethyldithiocarbamate- A Proposal to Adopt as Standrd the Wood Preservative CDDC by AWPA. Report to AWPA Sub-Committees P-4, T-2, P-General, and T-General. ISK Biosciences, Corp. - Industrial Biocides Division, Memphis, TN.331 pp.

Freeman, M.H., R.D. Arsenault, and D.K. Stokes. 1993. CDDC: Copper Dimethyldithiocarbamate - The Submission of CDDC- Copper Dimethyldithiocarbamate, as a listed Standard Preservative by ASTM. Report to American Society of Testing and Materials Committee D-07,, Parts 1 and 2. ISK Biosciences, Corp. - Industrial Biocides Division, Memphis, TN.331 pp.

Freeman, M.H. 1992. Copper Naphthenate- Technical Speciafication and Use Manual: A Compilation of Data and Technical References into the Use of Copper Naphthenate as a Wood Preservative. ISK BIOTECH, Corp. - Industrial Biocides Division, Memphis, TN. 240 pp.

Schmidt, E.L., M.H. Freeman, T.L. Highley, and T.L. Woods, 1996. Controlling Brown Stain In Eastern White Pine(*Pinus strobus spp.*) IRG Document No. -----.Paper presented at the 1996 Meeting in Helsingor, Denmark . International Research Group on Wood Preservation, Stockholm, Sweden

Freeman M.H. 1993. AWPA Draft Standard A-2-6-xx-93. Standard Method for the Analysis of Copper in Copper 8- Quinolinolate. Report and Method submitted to AWPA Sub-Committee P-5, American Wood Preservers Assoc., Granbury, TX

## Partial Publication List

Freeman, M.H. 1992. PQ-8 / Copper 8-Quinolinolate - A Compilation of Data and Technical References into the Use of Copper as a Wood Preservative and Copper Levels in the Environment. ISK BIOTECH, Corp. - Industrial Biocides Division, Memphis, TN. 260 pp.

Kamdern, D. P., K. Gruber, M. Freeman, 1995 "Laboratory Evaluation of the Decay Resistance of Red Oak (*Quercus rubra*) Pressure Treated with Copper Naphthenate," *Forest Prod. J.* 45(9):74-76

Kamdern, D. P., L. Murdoch, M. Freeman and P. Chow, 1995, "Pressure Treatment of Hardwoods" in *Wood Preservation in the 90's and Beyond*, Forest Products Society, pp. 89-94

Kamdern, D. P., R. Fair and M. Freeman, 1996, "Efficacy of Waterborne Emulsion of Copper Naphthenate as Preservative for Northern Red Oak (*Quercus rubra*) and Soft Maple (*Acer rubrum*), in press in *Holz als Roh-und Werkstoff*

Craciun, R. , D.P. Kamdem and M. Freeman, 1996, "X-ray Photoelectron Spectroscopy and FTIR Spectroscopy Applied to the Study of Waterborne Copper Naphthenate Wood Preservative,". *Holzforschung*

Kamdern, D.P., R. Craciun, C. Weitzsacker, and M.H. Freeman. 1996. Investigation of Copper (bis)-dimethyl-dithio-carbamate(CDDC) Treated Wood with Environmental Scanning Electron Microscopy and other Spectroscopic Techniques. *AWPA Proceedings Vol. 92*. American Wood Preservers Association, Granbury, TX.

Freeman, M.H., et al. 1997. Comparison of Biocides Under Laboratory and Field Conditions. Paper presented at the 1997 FRS-IRG Joint Sapstain Symposia in Whistler, British Columbia, CAN. Forest Products Society, Madison, WI.

Freeman, M.H., 1993. Copper Dimethyldithiocarbamate: An Effective Wood Preservative. Paper presented at the 1993 Annual Fall Meeting of the Canadian Wood Preservers' Association(CWPA), Vancouver, British Columbia, CAN.

Gallacher, A.C., C.R. McIntyre, M.H. Freeman, D.K. Stokes, and W.B. Smith. 1995. Standard and New Analytical Techniques for CDDC Preserved Wood Analysis. *AWPA Proceedings Vol. 91*. American Wood Preservers Association, Granbury, TX.

Kamdern, P.D. , M.H. Freeman, C. R. McIntyre and Jun Zhang. 1998. The Effect of Post-Steamng on Copper Naphthenate Treated Southern Pine. *AWPA Proceedings Vol. 91*. American Wood Preservers Association, Granbury, TX.

Freeman, M.H., et al. 1997. U.S. Patent. Compositions for Controlling Brown Stain in Drying Wood

Freeman, M.H. 1991. Environmental Considerations when Using Wood Preservative Pesticide/Fungicide Chemicals. Paper presented at the Second Louisiana Periodic Re-Certification Training Workshop for Wood Treatment. Alexandria, LA.

## Partial Publication List

Freeman M.H. and Wessner, P. 1995. AWPA Draft Standard A-xx-96. Standard Method for the Analysis of Naphthenic Acid and Naphthenic Acid Derivatives by Gas Chromatography. Report and Method submitted to AWPA Sub-Committee P-5, American Wood Preservers Assoc., Granbury, TX

Freeman, M.H. , H.M. Barnes, et al. 1999. A Preliminary Evaluation Of Copper Naphthenate-Treated Poles In Service. Forest Products Society Annual Meeting, Boise, ID. For. Prod. Soc., Madison, WI.

Barnes, H. M., M.H. Freeman et al. 1999. A Preliminary Evaluation Of Copper Naphthenate-Treated Poles In Service. AWPA Annual Meeting, Ft. Lauderdale, FL. American Wood Pres. Assoc., Granbury, TX.

Rei, N., M.H. Freeman, and J. Koob. 1999. The Determination Of Oxine-Copper (Copper-8-Hydroxyquinoline) In Treatment Solutions And Treated Wood By Potentiometric Bromination Titration. Submission to AWPA Sub-Committee P-5. AWPA, Granbury, TX.

Freeman, M.H. 1999. AWPA Draft Method A3-xx-99 Determination of Penetration of Oil-Soluble Preservatives by the Use of Biocide Dye Cards. Report and Method submitted to AWPA Sub-Committee P-5. AWPA, Granbury, TX.

Amburgey, T.L. and Freeman, M.H. 2000. An Update on the Efficacy and Performance of A Copper Naphthenate-Borax Preservative Paste. Paper/Abstract submitted to the Fifth Annual International Conference on Wood Poles and Piles, Univ. of Colorado and EDM Publications, Ft. Collins, CO. In press.

Nicholas, D.D. and Freeman, M.H. 2000. A Comparison of Pentachlorophenol and Copper Naphthenate in Field Stake Tests. . Paper/Abstract submitted to the Fifth Annual International Conference on Wood Poles and Piles, Univ. of Colorado and EDM Publications, Ft. Collins, CO. In press.

Barnes, H.M. and Freeman, M.H. 2000. The Performance of Copper Naphthenate Treated Wooden Pole Stubs after 12 Years of Field Exposure. Paper/Abstract submitted to the Fifth Annual International Conference on Wood Poles and Piles, Univ. of Colorado and EDM Publications, Ft. Collins, CO. In press.

Freeman, M.H. 1998. Report of Sub-Committee P-3; Organo and Organometallic Wood Preservatives and Systems. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

Freeman, M.H. 1997. Report of Sub-Committee P-3; Organo and Organometallic Wood Preservatives and Systems. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

Freeman, M.H. 1996. Report of Sub-Committee P-3; Organo and Organometallic Wood Preservatives and Systems. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

## Partial Publication List

Freeman, M.H. 1995. Report of Sub-Committee P-3; Organo and Organometallic Wood Preservatives and Systems. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

Freeman, M.H. and D. Bruck . 1994. Report of Sub-Committee P-3; Organo and Organometallic Wood Preservatives and Systems. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

Freeman, M.H. and D. Bruck . 1993. Report of Sub-Committee P-3; Organo and Organometallic Wood Preservatives and Systems. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

Gallacher, A.C. , M.H. Freeman, et al. 1994. Identification and Characterization Of Copper (bis) Dimethyldithiocarbamate in Wood Using the X-Ray Diffraction Technique. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

Freeman, M.H. 1999. Environmental Regulations Affecting the Wood Treating and Wood Processing Industry. Paper presented at the Fourth Louisiana Periodic Re-Certification Training Workshop. Alexandria, LA.

Freeman, M.H. 1999. Wood Preservative Chemicals and Wood Preservation Processes. Paper presented at the Fourth Louisiana Periodic Re-Certification Training Workshop. Alexandria, LA.

Freeman .M.H. 1991. A Novel Surface Indicator for the Presence of Copper Containing Biocides by the use of 1-(2-pyridylazo)-2-Naphthol. A Technical Forum presented at the 1991 AWPA Annual Meeting in Seattle, WA. American Wood Preservers Assoc., Granbury, TX.

Freeman, M.H. 1996. An Overview of Microbial Stain Control. Forest Products Society Annual Meeting, Minneapolis, MN. For. Prod. Society, Madison, WI.

Freeman, M.H. 1999. Report of Sub-Committee P-3; Organo and Organometallic Wood Preservatives and Systems, including Creosote and Creosote Solutions. American Wood Preservers Assoc. Annual Proceedings, Granbury, TX.

Barnes, H.M. and Freeman, M.H. 2000. The Performance of Copper Naphthenate Treated Wooden Pole Stubs after 12 Years of Field Exposure. Technical Forum/Abstract submitted to the 2000 Annual Meeting of the Forest Products Society, Lake Tahoe, NV. FPS, Madison, WI. In press.

Freeman, M.H., H.M. Barnes, J.A. Brient, and C.Kerr. 2000. Performance of Copper Naphthenate-treated Poles in Service Technical Forum/Abstract submitted to the 2000 Annual Meeting of the Forest Products Society, Lake Tahoe, NV. FPS, Madison, WI. In press.

Barnes, H.M., D.P. Kamdem, and M. H. Freeman. 2000. Chemical Characterization of Copper Naphthenate-treated Pole Stubs After Field Exposure .Technical Forum/Abstract submitted to the 2000 Annual Meeting of the Forest Products Society, Lake Tahoe, NV. FPS, Madison, WI. In press.

## Partial Publication List

Barnes, H.M., D.P. Kamdem, and M. H. Freeman, 2000. Copper Naphthenate-Treated Southern Pine Pole Stubs in Field Exposure. Part II: Chemical Characterization of Full Size Pole Stubs 12 Years After Treatment IRG Document No. ----- .Paper presented at the 2000 IRG Meeting held in Kona, HI . International Research Group on Wood Preservation, Stockholm, Sweden. In Press.

Freeman, M.H., H.M. Barnes, J.A. Brient, and C.Kerr. 2000. Performance of Copper Naphthenate-treated Poles in Service Technical Forum/Abstract submitted to the the 2000 IRG Meeting held in Kona, HI . International Research Group on Wood Preservation, Stockholm, Sweden. In Press.

Barnes, H.M. and Freeman, M.H. 2000. The Performance of Copper Naphthenate Treated Wooden Pole Stubs after 12 Years of Field Exposure. IRG Document No. ----- .Paper presented at the 2000 IRG Meeting held in Kona, HI . International Research Group on Wood Preservation, Stockholm, Sweden.

Brient, J.A., R. E. Moyer, M.H. Freeman, H. Jiang, and M.J. Kennedy. 2000. Copper Naphthenate: An Analysis of the Materials Found in the Worldwide Marketplace Using A New Analytical Technique IRG Document No. ----- .Paper presented at the 2000 IRG Meeting held in Kona, HI . International Research Group on Wood Preservation, Stockholm, Sweden.

Amburgey, T.L. and Freeman, M.H. 2000. An Update on the Efficacy and Performance of A Copper Naphthenate-Borax Preservative Paste. Technical Forum/Abstract submitted to the American Wood Preservers Assoc. Annual Meeting in San Francisco, CA. AWPAA, Granbury, TX. In press.

Nicholas, D.D. and Freeman, M.H. 2000. A Comparison of Pentachlorophenol and Copper Naphthenate in Field Stake Tests. . IRG Document No. ----- .Paper presented at the 2000 IRG Meeting held in Kona, HI . International Research Group on Wood Preservation, Stockholm, Sweden. In Press.

Amburgey, T.L., and M.H. Freeman. 1993. Groundline treatments with a water-borne copper naphthenate-boron paste. In: Proc., 89<sup>th</sup> Annual Meeting of the American Wood-Preservers' Assoc., Newport Beach, CA. May 2-5, 1993, 89:105.

Amburgey, T.L., and M.H. Freeman. 1993. Ten year field test with a copper-borate ground line treatment for poles. International Research Group on Wood Preservation, Document No. IRG/WP93-30017.

Amburgey, T.L., and M.H.. Freeman. 1997. Groundline treatments with a water-borne copper naphthenate-boron paste. In: Proc., 2<sup>nd</sup> Southeastern Pole Conference, MS State, MS. Jan 22-25, 1996. p. 157.

Freeman, M.H., and T. L. Amburgey. 1997. Groundline treatments with a waterborne copper naphthenate-boron paste. In: Proc., Forest Products Society, 2nd International Conference on Wood Protection with Diffusible Preservatives and Pesticides. pp. 148.

## Partial Publication List

Freeman, M.H. 2000. An Update on the Performance and Efficacy of Copper Naphthenate. Paper presented at the 2000 NorthEast Pole Conference, Binghamton, NY. Sponsored by AWWPA, NYSEG and Oregon State University. 27 pp.

Freeman, M.H. 2000. External Remedial Treatments. Paper presented at the 2000 NorthEast Pole Conference, Binghamton, NY. Sponsored by AWWPA, NYSEG and Oregon State University. 9 pp.

Field Performance of Copper Naphthenate-Treated Hardwoods . 2001.  
H. M. Barnes, T. L. Amburgey, Mike H. Freeman, and J.A. Brient. A Technical Forum presented at the 33<sup>rd</sup> Annual Meeting of the Forest Products Society in Baltimore, MD. FPS, Madison, WI.

Freeman, Mike H. , H.M. Barnes , T. L. Amburgey, and J.A. Brient. 2001. Field Performance of Copper Naphthenate-Treated Hardwoods . A paper presented at the 2001 Annual Meeting of the American Wood Preservers Assoc. in Minneapolis, MN. AWWPA, Granbury, TX.

Freeman, M.H., and D.P. Kamdem. 2001. Water-Borne Copper Naphthenate: An Emerging New Technology. A Technical Forum presented at the 2001 Annual Meeting of the American Wood Preservers Assoc. in Minneapolis, MN. AWWPA, Granbury, TX.

Barnes, H.M., T. L. Amburgey, Mike H. Freeman, and J.A. Brient. 2001. Field Performance of Copper Naphthenate-Treated Hardwoods . A paper presented at the International Research Group on Wood Preservation Annual Meeting in Nara, Japan. IRG, Stockholm, Sweden.

D. Pascal Kamdem, Mike H. Freeman, Elmer L. Schmidt and Justin Zyskowski. 2001. Waterborne Copper Naphthenate: A New Preservative for Hardwoods, Softwoods, and Composites. A Technical Forum presented at the 33<sup>rd</sup> Annual Meeting of the Forest Products Society in Baltimore, MD. FPS, Madison, WI.

Freeman, M.H. and J. A. Brient. 2001. An Update on the Performance and Efficacy of Copper Naphthenate. Paper presented at the 2001 North West Public Power Assoc. Annual Wood Pole Workshop Conference, Reno, NV. Sponsored by NWPPA and Oregon State University. 27 pp.

Baileys, R. T., and M.H. Freeman. 2002. Thermal Treatment of Western Red Cedar with Copper Naphthenate. Paper presented at the 2002 ICULS Pole Conference, Ft. Collins, CO.. Sponsored by EDM International , and Colorado State University. 11 pp.

Freeman, M. H., R.P. Loechner, and W. Scott McNair. 2002. Now Is The Time For You To Re-Evaluate Copper Naphthenate for Your Wood Poles Needs. T & D Magazine. April 2002. 14 pp.

## Partial Publication List

Freeman, M.H. 2002. Remedial Treatment: Economic Benefits, Justification, and Auditing Techniques. Paper presented at the 2002 NorthEast Pole Conference, Binghamton, NY. Sponsored by AWWA, NYSEG and Oregon State University. 22 pp.

McIntyre, C.R. and M. H. Freeman. 2002. Copper Naphthenate –An Update On New Trends And Changes In The Last Decade. Paper presented at the 2002 NorthEast Pole Conference, Binghamton, NY. Sponsored by AWWA, NYSEG and Oregon State University. 11 pp.

Brient , J.A., M.H. Freeman, and C.R. McIntyre.2003. Copper Naphthenate: An Update to the AWWA.. Paper presented at the 2003 Annual Meeting of the American Wood Preservers Assoc. in Boston, MA. AWWA, Selma, AL (in Press). 22 pp.

Freeman, M.H., D.D. Nicholas, Dave Renz, and Rich Buff. 2003. PXTS: A Metal Free Oligomer Wood Preservative System. A Technical Forum presentation presented at the 99<sup>th</sup> Annual Meeting of the American Wood Preservers Assoc. in Boston, MA. AWWA, Selma, AL (in Press).

Freeman, M.H. , and D.D. Nicholas. 2003. PXTS; A Metal Free Oligomer Wood Preserving Compound. A Technical Forum presented at the 35<sup>rd</sup> Annual Meeting of the Forest Products Society in Bellvue, WA. FPS, Madison, WI.

Freeman, M.H., D.D. Nicholas, Dave Renz, and Rich Buff. 2003. PXTS: A Metal Free Oligomer Wood Preservative System. A Paper and presentation presented at the 35<sup>rd</sup> Annual Meeting of the Forest Products Society in Bellevue, WA. FPS, Madison, WI.

Freeman, M.H., H.M. Barnes, T.F. Shupe, and R. Vlosky.2003.Past, Present, and Future of the Wood Preservation Industry. Invited Cover and Feature Article. For. Prod. Journal October 2003. FPS, Madison, WI. 15 pp.

M. H. Freeman, C.R. McIntyre, and J.A. Brient. 2004. Copper Naphthenate –Trends And Changes In The Last Decade. Paper presented at the 2004 ICULS Pole Conference, Ft. Collins, CO.. Sponsored by EDM International , and Colorado State University. 11 pp.

M. H. Freeman, C.R. McIntyre, and D.D. Nicholas. 2004. PXTS: Proposal and Data Package submitted to AWWA Subcommittee P-3 and the General Preservatives Committee. 47 pp. AWWA Website: <http://www.awpa.com>

M. H. Freeman, C.R. McIntyre, and J.A. Brient. 2004. Copper Naphthenate –Trends And Changes In The Last Decade. Paper presented at the 2004 ICULS Pole Conference, Ft. Collins, CO.. Sponsored by EDM International, and Colorado State University. 11 pp.

## Partial Publication List

Freeman, M.H., C.R. McIntyre, and D.D. Nicholas. 2004. PXTS: Proposal and Technical Data Package submitted to AWWA Subcommittee P-3 and the General Preservatives Committee. AWWA, Vancouver, BC 100<sup>th</sup> Annual Meeting. 47 pp. AWWA Website URL: <http://www.awpa.com>

VanHoven, Ray, and M. H. Freeman. 2004. .AWWA Draft Standard A-xx-04.. Standard Method For Determination of PXTS In Treated Wood By HPLC With UV Detection. A new Analytical Method submitted to AWWA Subcommittee P-5 and the General Preservatives Committee. AWWA, Vancouver, BC 100<sup>th</sup> Annual Meeting. 8 pp. AWWA Website URL: <http://www.awpa.com>

VanHoven, Ray, and M. H. Freeman. 2004. .AWWA Draft Standard A-xx-04.. Standard Method For Determination of PXTS In Treating Solutions By HPLC With UV Detection. A new Analytical Method submitted to AWWA Subcommittee P-5 and the General Preservatives Committee. AWWA, Vancouver, BC 100<sup>th</sup> Annual Meeting. 6 pp. AWWA Website URL: <http://www.awpa.com>

Freeman, M.H., D.D. Nicholas, D. Renz, and Richard Buff. 2004. PXTS: A Metal Free Oligomer Wood Preserving Compound for Lumber, Timber, Ties, and Piles. A presentation given at the 2004 Annual Meeting of the Forest Products Society, Grand Rapids, MI. FPS, Madison, WI.

Freeman, M.H., Douglas Crawford, Patti Lebow, and J.A. Brient. 2004. An Update to FPL-01: A Comparison of Wood Preservatives in Posts in Southern Mississippi. A Technical Forum given at the FPS Annual Meeting in Grand Rapids, MI. FPS, Madison, WI.

Freeman, M.H., R.S. Gross, and J.A. Brient. 2004. Copper Naphthenate: The Perfect Treatment Option for Wood Fence Posts by Pressure and Non-Pressure Methods. A Technical Forum given At Smallwood 2004 Conference, Sacramento, CA. FPS, Madison, WI.

Freeman, M.H., R.S. Gross, and J.A. Brient. 2004. Copper Naphthenate: The Perfect Treatment Option for Wood Fence Posts by Pressure and Non-Pressure Methods. A Technical Forum given at the AWWA Annual Meeting, Vancouver, BC, Canada. AWWA, Selma, AL.

Freeman, M.H., C.R. McIntyre, and D.D. Nicholas. 2004. PXTS: Proposal and Technical Data Package submitted to AWWA Subcommittee P-3 and the General Preservatives Committee. AWWA, Colorado Springs, CO Fall Technical Meeting. 44 pp. AWWA Website URL: <http://www.awpa.com>

Brient, J.A. , and M. H. Freeman, 2004. A Copper Naphthenate Update. American Wood Preservers' Assoc Annual Proceedings, AWWA, Selma, AL. Vol. 100. pp. 106-118.

Freeman, M.H., Douglas Crawford, Patti Lebow, and J.A. Brient. 2005.. A Comparison of Wood Preservatives in Posts in Southern Mississippi: Results from A Half-Century of

## Partial Publication List

Testing. AWWA Annual Proceedings. American Wood Preservers' Assoc., Selma, AL. 11 pp. .

Freeman, M.H., C.R. McIntyre, and John Makuvek. 2005.. The Use of Barrier Wraps to Increase Service Life of Treated and Untreated Wood in Ground Contact  
AWWA Annual Proceedings. American Wood Preservers' Assoc., Selma, AL. 9 pp.

McIntyre, C.R., M. H. Freeman, and H.M. Barnes. 2005. 40-Year Assays Of Pentachlorophenol Treated Posts in DeQueen, Arkansas. A paper and Report to AWWA Subcommittee P-3 on Organic and Organo-metallic wood Preservative Systems, including Creosote. AWWA Proceedings Volume 101. 6 pp..

Freeman, M. H. and Hank Jacoby. 2005. The Federal Insecticide, Fungicide and Rodenticide Act and Its Impact on the Development of Wood Preservatives: Registration Requirements. Chapter in: ACS Book: Development of Wood Preservative Systems and Mold in Homes. Editors: Nicholas, Freeman, Goodell, Schultz and Militz. American Chemical Society, Wash. DC. 14 pp. (in press).

Freeman, M. H. 2005. Wood Preservation Formulation Development: Organic and Inorganic Based Systems. Chapter in: ACS Book: Development of Wood Preservative Systems and Mold in Homes. Editors: Nicholas, Freeman, Goodell, Schultz and Militz. American Chemical Society, Wash. DC. 14 pp. (in press).

Nicholas, D.D. and M. H. Freeman. 2005. PXTS: A New Totally Organic Wood Preservative for Above Ground and Ground Contact Uses. Presentation and Paper presented at American Chemical Society Annual Meeting in San Diego, CA. ACS, Wash. DC.

Freeman, M.H., D.D. Nicholas, and T.P. Schultz. 2005. Non-Arsenical Wood Protection: Alternatives For Cca, Creosote, And Pentachlorophenol. Chapter 2 in Environmental Impacts of Preservative Treated Wood. Edited by T. Townsend and H. Solo-Gabriele. CRC Press. 36 pp.

Freeman, M. H. 2005. An Update on the Efficacy of the Wood Preservative PXTS. Report to AWWA Subcommittee P-3. American Wood Preservers' Assoc. Annual Technical Meeting, Asheville, NC. 15 pp.

Freeman, M.H., D.D. Nicholas, D. Renz, and R. Buff. 2005. PXTS: An Update on A Metal Free Oligomer Wood Preserving Compound. A paper presented at the FPS Annual Meeting, Quebec City, Quebec, Canada. Forest Products Society, Madison, WI.

Freeman, M.H., D. P. Kamdem, and J.A. Brient. 2005. Water-Borne Copper Naphthenate: An Update on an Arsenic and Chromium Free Preservative for Wood. A paper presented at the FPS Annual Meeting, Quebec City, Quebec, Canada. Forest Products Society, Madison, WI.

Freeman, M. H., C.R. McIntyre and J. Makuvek. 2006. Freeman, M.H. 1986. The Use of PostSaver Barrier Wraps to Increase The Service Life of Wood In Ground Contact. AWWA Proceedings 2006. Vol. 102. p 112-116. AWWA, Birmingham, AL.

## Partial Publication List

Freeman, M.H. 2006. Leaving Creosote and Penta: investigations into New products for Remedial Treatment. . Proceedings of the 2006 Intl. Conf. on Utility Line Structures. EPRI, Col. State Univ. and EDM. EDM Intl Press. 12 pp.

Freeman, M. H. 2006. Remedial Treatments: What's Out There To Help Your Aging Pole Plant Extend Its Life. Proceedings of the 2006 Northeastern Utility Pole Conf., Binghamton, NY. Sponsored by AWWA, NYSEG and Oregon State University. Oregon State Univ. Press. 12 pp.

Freeman, M. H. 2006. Wood Preservative and Treated Wood Standardization: AWWA and The Building Codes. A paper presented at the FPS Annual Meeting, Newport Beach, CA. Forest products Soc., Madison, WI.

Freeman, M.H . 2006. Chemical Control of Fungal Discoloration: How to Get the Most Out of It. A Paper and Presentation of the Wood Protection 2006 Meeting. Wood Protection 2006 Proceedings, For. Prod. Soc., Madison, WI

Freeman, M.H and Manning.M. 2006.An Overview of Non-Pressure Treating Processes. A Paper and Presentation of the Wood Protection 2006 Meeting. Wood Protection 2006 Proceedings, For. Prod. Soc., Madison, WI

Brient. J, Freeman, M.H and Kamdem. 2006. Waterborne Copper Naphthenate: A New Formulation of an Old Time Tested Biocide. A Paper and Presentation of the Wood Protection 2006 Meeting. Wood Protection 2006 Proceedings, For. Prod. Soc., Madison, WI

Pinchuk, O., Pinchuk, L., Ismail, A. and Freeman, M.H .2006. Metal-Polymer Fungicidal and Biocidal Protection Systems. A Paper and Presentation of the Wood Protection 2006 Meeting. Wood Protection 2006 Proceedings, For. Prod. Soc., Madison, WI

Nicholas, D.D. and Freeman, M.H. 2006. PXTS: A New Environmentally Friendly Metal Free Oligomer Wood Preserving System. A Paper and Presentation of the Wood Protection 2006 Meeting. Wood Protection 2006 Proceedings, For. Prod. Soc., Madison, WI.

Freeman, M.H. and Bingel, N. 2007. Pole Maintenance and Remedial Treatment: Picking The Right Preservative. Southeastern Utility Pole Conference 2007 Proceedings. For. Prod. Soc. Madison, WI. 235 pp.

McIntyre, C.R. , Freeman, M.H. and Barnes.H.M 2007. What's New? Pros And Cons Of Future Preservative Systems.Southeastern Utility Pole Conference 2007 Proceedings. For. Prod. Soc. Madison, WI. 235 pp.

Freeman, M.H., Diana N. Obanda, and T.F. Shupe. 2007. Permethrin: An Effective Wood Preservative Insecticide. AWWA Proceedings 2007. Vol. 103. p 36-48. AWWA, Birmingham, AL.

## Partial Publication List

Barnes, H.M., McIntyre, C.R., Bullock, D., Freeman, M.H., and B. Lindsey. 2007. Penta Analysis: is XRF Good Enough?. AWPA Proceedings 2007. Vol. 103. p 101-108. AWPA, Birmingham, AL.

McIntyre, C.R., and Freeman, M.H. 2007. Developing a New Wood Preservative and Potential Fire Retardant. AWPA Proceedings 2007. Vol. 103. p 128-131. AWPA, Birmingham, AL.

Freeman, M.H. 2007. Wood Preservative Systems and Treated Wood Now in Queue to Gain Bldg Code Acceptance. A paper presented at the FPS Annual Meeting in Knoxville, TN. . Forest Products Soc., Madison, WI.

Smith, W.B., Hwanmyeong Yeo, Benjamin Morey and Christopher Stark , Cihat Tascioglu, Philip F. Schneider ,Douglas J. Herdman , and Mike Freeman. 2007. Developing Moisture Meter Correction Factors for Treated Wood.. AWPA Proceedings 2007. Vol. 103. p 131-142. AWPA, Birmingham, AL.

Freeman, M.H. Bill Woods and Karen Winkowski. 2007. Updated Testing on the Fungicide Folpet including New Insecticidal Discoveries. AWPA Proceedings 2007. Vol. 103. p 143-149. AWPA, Birmingham, AL.

Freeman, M. H. 2007. Wood Pole and Crossarm Maintenance and Remedial Treatment: A State of The industry Review. AWPA Proceedings 2007. Vol. 103. p 151-178. AWPA, Birmingham, AL.

Smith, W.B., H. Yeo, B. Morey, C. Stark, Cihat Tascioglu, P. F. Schneider, D. J. Herdman, and M.H. Freeman. 2007. Use of Moisture Meters with Treated Wood. Paper presented at the IRG 38 Intl Meeting of the IRG-WP in Jackson Hole, WY. IRG-07-40382. 12 pp. IRG. Stockholm, Sweden. 16 pp.

H M Barnes, C R McIntyre, D W Bullock , M H Freeman, G B Lindsey. 2007. Assaying Pentachlorophenol-Treated Wood Using XRF. IRG/WP 07-20362. IRG. Stockholm, Sweden. 16 pp.

M H Freeman, D. N. Obanda, T. F. Shupe. 2007. Permethrin: A Critical Review of an Effective Wood Preservative Insecticide. IRG/WP 07-30413. IRG, Stockholm, Sweden. 23 pp.

Freeman, M.H., R.S. Gross and W. Abbott. 2008. Barrier Wrap Technology: Enhancing Preservative Performance In Wood Utility Poles. Proceedings of the 2008 Intl. Conf. on Utility Line Structures. EPRI, Col. State Univ. and EDM. EDM Intl Press. 14 pp.

Freeman, M.H., R.S. Gross and W. Abbott. 2008. Dazomet: A Review of an Efficacious, Safe And Cost-effective Fumigant for Wood Poles. Proceedings of the 2008 Intl. Conf. on Utility Line Structures. EPRI, Col. State Univ. and EDM. EDM Intl Press. 19 pp.

## Partial Publication List

Freeman, M.H. 2008. Tribromophenol and Its Sodium Salts: An Anti-Sapstain Chemical Critical Literature Review and Update. AWWPA Annual Proceedings 2008. (In Press) Birmingham, AL. 27 pp.

Freeman, M.H., G.P. Merrick, and J.A. Brient. 2008. Investigations Into The Efficacy of Waterborne Copper Naphthenate Treated PSL (Parallam). . AWWPA Annual Proceedings 2008. (In Press) AWWPA, Birmingham, AL. 11 pp.

Freeman, M.H. and C.R. McIntyre. 2008. Cyproconazole: A Critical Review and Update. Paper and Technical Forum presented at the AWWPA Annual Meeting in Portland, OR. AWWPA Proceedings 2008 (In Press). AWWPA, Birmingham, AL. 28 pp.

Voitier, M. Curole, J.P., Shupe, T.F, Ring, D, Wu, Q., Freeman, M.H. 2008. The Process of Becoming an ISO 17025 Accredited Testing Laboratory – The LSU Perspective. Paper and Technical Forum presented at the FPS 62<sup>nd</sup> Intl. Conf. St. Louis, MO.

Qinglin Wu, Jay Curole, Todd Shupe, Matthew Voitier and Dennis Ring, Louisiana State University, and Mike Freeman, 2009. Termite Resistance Properties of Extruded Bagasse Fiber Plastic Composites. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Todd Shupe, Jay Curole, Qinglin Wu, Kevin Ragon, Matt Voitier, Dennis Ring and W. James Catallo, and Mike Freeman . 2009. Potential of Tabasco© Waste as a Termiticide. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

McIntyre, C.R. & Freeman, M. H 2009. Micronized Copper. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H and A. H. H. Wong. 2009. Apitong and Keruing, The Perfect Choice for Crossarms. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H . 2009. Radiata Pine: An Exemplary Species for LOSP-Millwork Treatment for Joinery, Millwork and Cladding Applications. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Qinglin Wu, Todd Shupe, Jay Curole, Matt Voitier, Dennis Ring, and Mike Freeman,. 2009. Termite Resistant Properties of Bagasse Fiber Plastic Composites -. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H 2009. A Critical and Comprehensive Review of Boron in Wood Preservation - Mike H. Freeman, Craig R. McIntyre, and R. E Jackson, Consultants . . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H. 2009. AWWPA Oilborne CuNap Re-Affirmation Data Package and Proposal. . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

## Partial Publication List

Freeman, M.H. 2009. AWP Waterborne CuNap Re-Affirmation Data Package and Proposal. . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H , and Douglas Herdman. 2009. MP-400 EXT: A Components and Efficacy Review of an Innovative Product for Remedial Treatment. . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H 2010. .IPBC - EFFICACY AND BIOTRANSFORMATION. Appendix to AWP Subcommittee P-3 Annual report 21 pp.. . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Pascal Kamdem, Mike Freeman , Craig McIntyre, and Elaina Jackson 2010. Stability of Biodiesel/diesel blends as Solvent/Carrier for Wood Preservatives. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H, J. Brient, C. McIntyre. 2010. Investigation into Copper Indicators for Treated Wood . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H , Cyndi Fink, and Navnit Uphaduyhay.2010. Preventol Insecticide for Expanded Polystyrene Foam Products. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Kevin Ragon, Matt Voitier, Todd Shupe, Qinglin Wu, Mike Freeman and Craig McIntyre. 2010. Investigations into Micronized and Amine-based Copper Preservative Systems -. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Ragon, K., Todd Shupe, Qinglin Pat Donohoe and Mike Freeman.2010.The Electrical Properties of Treated Wood With a Focus on Utility Pole Conductivity -. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H, J. Brient, C. McIntyre. 2010. Investigation into Copper Indicators for Treated Wood . Technical Forum. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

D. Pascal Kamdem Mike Freeman and Craig McIntyre .2010. Laboratory Investigations into Biodiesel Stability. Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H 2010. Imidiclopid: A Critical Review of An Effective Wood Preservative Insecticide - Mike Freeman (Independent Wood Scientist). . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

Freeman, M. H 2010. The Insecticide/Termiticide Imidiclopid: A Sound Choice for Sustainability . Proceedings of the American Wood Protection Assoc. 2010. Birmingham, AL.

## Partial Publication List

Freeman, M.H. 2010. AWPAs Penta Re-Affirmation Data Package and Proposal. 234 pp. [www.awpa.com](http://www.awpa.com)

Freeman, M.H. 2010. AWPAs CuNap Re Affirmation Data Package and Proposal. 133 pp. [www.awpa.com](http://www.awpa.com)

Freeman, Mike H. and Steve Smith. 2010. Wood Pole Engineering Aspects: For The Non-Engineer. Proceedings of the 2010 Southeastern Wood Pole Conf. FPS, Madison, WI

McIntyre, C.R. & Mike H. Freeman. 2010. Pole Specs: What Do They Mean? .Proceedings of the 2010 Southeastern Wood Pole Conf. FPS, Madison, WI

Freeman, M. H and K. Ragon. 2010. A Review of Wood Pole Testing Equipment Compared to Visual and Excavation Techniques Used in Test and Treat Programs. . Proceedings of the 2010 Southeastern Wood Pole Conf. FPS, Madison, WI

Freeman, Mike H. & Craig R. McIntyre. 2010. Copper Naphthenate: An Update & Review . Proceedings of the 2010 Southeastern Wood Pole Conf. FPS, Madison, WI

Freeman, M.H and J. Wilkinson. 2010. Pentachlorophenol: A Comprehensive Review of Its Efficacy and Use-Patterns as a Wood Preservative with a Focus on Oil-Borne Systems. Proceedings of the 2010 Southeastern Wood Pole Conf. FPS, Madison, WI

Freeman, M.H. 2011. A Critical Review and Survey of the US Wooden Pallet Industry: Focusing on Market Segmentation & N. American Trends. RG/WP 11-40545. Stockholm, Sweden

McIntyre, C.R. and M. H. Freeman. 2011. Standardized Field Trials with Micronized Copper. IRG/WP 11-30564. IRG, Stockholm, Sweden.

Freeman, M. H. and Paul Kovacs. 2011. Metal and Fastener Corrosion in Treated Wood from an Electrochemical - Thermodynamic Standpoint. AWPAs Proceedings. 2011. Birmingham, AL. In Press. 46 pp.

Freeman, M. H. 2011. Biodiesel Analytical Methods: A Brief Review. A White Paper submitted to AWPAs Subcommittee P-5 for Appending to Annual Report. 23 pp. AWPAs Proceedings. 2011. Birmingham, AL. In Press.

McIntyre, C.R. and M. H. Freeman. 2011. An Update on Standardized Field Trials with Micronized Copper. AWPAs Proceedings. 2011. Birmingham, AL. In Press. 19 pp.

Freeman, M. H. 2011. Furfurylated Wood: A Critical Alternative Protection Technology Overview. . AWPAs Proceedings. 2011. Birmingham, AL. In Press. 22 pp.