

Endnotes

Just How Hazardous is Pentachlorophenol?

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- ⁹ Hill, R. Jr. et al., 1989. Residues of Chlorinated Phenols and Phenoxy Acid Herbicides in the Urine of Arkansas Children, *Arch. Environ. Contam. Toxicol.* 18: 469-474.
- ¹⁰ Murphy R.S., Kutz F.W., Strassman S.C., 1983. Selected pesticide residues or metabolites in blood and urine specimens from a general population survey. *Environ. Health Perspect.* 48: 81-86.
- ¹¹ Gebefügi I., and Korte F., 1983. Pentachlorophenol Contamination of Human Milk Samples. *Chemosphere* Vol. 12, No. 7/8: 1055-1060.
- ¹² From - Pesticide Action Network, "1995 Demise of the Dirty

Dozen," and United Nations, "Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved By Governments," Fifth Issue, 1994.

Chapter One - Introduction and Findings

- ¹ Currently, there are 78,292,000 children between the ages of 0-19. At a risk factor of 2.2×10^{-4} (or 2.2 in 10,000), the number of children contracting cancer totals 17,224.24. Since the annual number of live births is 3,880,894 (1997) and 10,633 children are born every day, applying the risk factor of 2.2 in 10,000 results in over 2 child cancer victims a day just from this use. These statistics are based on tabulations from the U.S. Census Bureau, National Estimates Annual Population Estimates by Age Group and Sex, Selected Years from 1990 to 1999, URL: <http://blue.census.gov/population/estimates/nation/intfile2-1.txt>; and the National Center for Health Statistics, Centers for Disease Control and Prevention, URL: www.cdc.gov/nchs/fastats/births.htm.
 - ² U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), citing Electric Power Research Institute, 1997, Report on the Fate of Wood Preservatives in Soils Adjacent to In-Service Utility Poles in the United States. Prepared by META environmental, Inc., Atlantic Environmental Services, Inc. Utah State University and Science & Technology Managements, Inc., EPRI TR 104968.
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 - ⁵ American Wood Preservers Institute (AWPI). The 1995 Wood Preserving Industry Protection Statistical Report, September 1996, p.7.
 - ⁶ Raminger, Scott. President, American Wood Preservers Institute. Memorandum to All Electric Utility Executives, August 13, 1999.
 - ⁷ Based on information compiled from utility and industry sources, the number of distribution poles was estimated using a weighted average of 28.5 poles/pole mile in cases where the number of poles was not provided.
 - ⁸ U.S. Environmental Protection Agency, National Center for Environmental Assessment, Office of Research and Development, 1998. Report on the Meeting to Peer Review "The Inventory of Sources of Dioxin in the United States" Final Report. EPA Contract No. 68-D5-0028.
 - ⁹ Carson, Rachel. *Silent Spring*, Houghton Mifflin Company (1962), p. 58.
- ## Chapter Two- Utility Company Practices
- ¹ America Wood Preservers Institute, Penta Council web page, URL: <http://www.awpi.org/pentacouncil/home.html>
 - ² U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), p. 39.

³ Marie-Helene Racicot, Bell Canada's Solutions to Pole Storage Yards Contamination (Abstract of presentation), Bell Canada, Environmental Services, 1993-94 data.

⁴ U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), citing Whiticar, D.M. et al. 1994. Evaluation of leadate quality from pentachlorophenol, creosote and ACA wood products. Environment Canada DOE FRAP 1993-36.

⁵ Ibid, citing Electric Power Research Institute, 1997, Report on the Fate of Wood Preservatives in Soils Adjacent to In-Service Utility Poles in the United States. Prepared by META environmental, Inc., Atlantic Environmental Services, Inc. Utah State University and Science & Technology Managements, Inc., EPRI TR 104968.

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⁷ Gurprasad, N, et al., 1995. Polychlorinated Dibenzo-p-dioxins (PCDDs) Leaching from Pentachlorophenol-Treated Utility Poles. *Organohalogen Compounds*, 24: 501-503.

⁸ U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), Table 6. Handler Cancer Risks for Pentachlorophenol (PCP), p. 108.

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Chapter III - The Science of Pentachlorophenol

¹U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), Table 10. Residential Post-application Cancer Risks for Pentachlorophenol (PCP), p. 125.

² Ibid. p. 7.

³ National Research Council, National Academy of Sciences, *Pesticides in the Diets of Infants and Children*, Washington, DC: National Academy Press, 1993.

⁴ These statistics are based on tabulations from the National Center for Health Statistics, Centers for Disease Control and Prevention. See www.cdc.gov/nchs/fastats/births.htm.

⁵ Hill, R. Jr. et al., 1989. Residues of Chlorinated Phenols and Phenoxy Acid Herbicides in the Urine of Arkansas Children, *Arch. Environ. Contam. Toxicol.* 18: 469-474.

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⁸U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), pp. 110-113.

⁹ Ibid. Table 6. Handler Cancer Risk for Pentachlorophenol (PCP), p. 108.

¹⁰ Ibid. p. 112.

¹¹ Ibid. p. 12.

¹² Ibid. p. 14.

¹³ The Antimicrobial Division has informed Beyond Pesticides/NCMP that it is in the process of revising the penta science chapter to include the contaminants of penta.

¹⁴ U.S. Environmental Protection Agency, 1999. Science Chapter for the Reregistration Eligibility Decision Document (RED) for Pentachlorophenol (PC Code: 063001, Registration Case Number 2505), pp. 21-23.

¹⁵ U.S. Environmental Protection Agency, National Center for Environmental Assessment website, URL: <http://www.epa.gov/noeawwl/dioxin.htm>; Mikerjee, D, Health Impact of Polychlorinated Dibenzo-p-dioxins: A Critical Review, *J. Air & Waste Manage. Assoc.* 48: 157-165, (1998); Etoxnet PIP Hexachlorobenzene, URL: <http://ace.orst.edu/cgi-bin/mfs/01/pips/hexachlo.htm>.

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²¹ Dioxins and furans are often found in complex mixtures. For risk assessment purposes, a toxicity equivalency procedure was developed to describe the cumulative toxicity of these mixtures of related compounds. The toxicity of the most highly studied dibenzo-p-dioxin, 2,3,7,8-TCDD, is used as a reference in relating the toxicity of the mixtures. The toxicity estimates of the mixtures of dioxins and furans are expressed in terms of toxic equivalents (TEQs), or equivalent amounts of 2,3,7,8-TCDD.

²²U.S. Environmental Protection Agency, National Center for Environmental Assessment, Office of Research and Development, 1998. Report on the Meeting to Peer Review "The Inventory of Sources of Dioxin in the United States" Final Report, EPA Contract No. 68-D5-0028, p.3-2.

Chapter IV - The History Pentachlorophenol

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² U.S. Environmental Protection Agency, 1984. Notice of Intent to Cancel Registration of Pesticide Products Containing Creosote, Pentachlorophenol (Including its Salts), and the Inorganic Arsenicals. 49 FR 28666, July 13, 1984.

³ U.S. Environmental Protection Agency, 1986. Notice of Settlement Agreement. In the Matter of Chapman Chemical Co., et al., Petitioners. FIFRA Docket Nos. 529, et al. C. Jablon, P. Roberts, M. Winer. Office of General Counsel. U.S. Environmental Protection Agency. November 7, 1986, p. 4.