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Toxic Goulash: The Latest Ingredients of Toxic Tort Soup

By:

**© Kurtis B. Reeg*
President and Managing Partner
Reeg & Nowogrocki, L.L.C.
120 South Central Avenue, Suite 750
St. Louis, MO 63105
Phone: (314) 446-3350
Fax: (314) 446-3360
kreeg@reeglawfirm.com
www.reeglawfirm.com**

**Michael Hinchey
Saint Louis University
School of Law
Class of 2007
Summer Associate
Reeg & Nowogrocki, L.L.C.**

***Mr. Reeg, through a former firm, is a charter member of the former Midwest Environmental Claims Association n/k/a The National Forum for Environmental and Toxic Tort Issues. The authors note that this paper is intentionally heavy on Internet citations so that non-attorneys can more easily utilize the Internet to check sources and link to more research.**

KURTIS B. REEG

**Reeg & Nowogrocki, LLC
120 S. Central Ave.
Suite 750
St. Louis, MO 63105**

**314.446.3350
314.446.3360 (fax)
kreeg@reeglawfirm.com
www.reeglawfirm.com**

Kurtis B. Reeg is the President and Managing Partner of Reeg & Nowogrocki, LLC, in St. Louis, MO, having served as the National Chair of the Products Liability Group of one of the nation's largest law firms. For twenty-five (25) years, Mr. Reeg has focused his litigation practice in the fields of toxic torts, products liability, insurance, environmental law and alternative dispute resolution. Mr. Reeg is a member of, frequent lecturer at meetings and seminars for, and has published numerous articles for DRI, the Federation of Defense and Corporate Counsel (FDCC) (former chair of the Toxic Torts and Environmental Law Section), the International Association of Defense Counsel (IADC), the ABA, and the Missouri and Illinois Bars. He has numerous reported cases to his credit, and was the recipient of the FDCC's 2001 Andrew C. Hecker Award for the most outstanding article in the Federation's *The Quarterly*.

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During any given afternoon or evening television intermission, you will likely see several commercials in quick succession advertising plaintiff's personal injury law firms. Some bring up mesothelioma and asbestos. One eerie black and white advertisement shows how the firm "scares" defense firms into settling. Another advises people to call if they have been exposed to a drug that has not yet shown to be hazardous, although it *might be*. Plaintiff's firms have become more and more aggressive, and continue to jump at potential hazards and evolving trends. As a result, defense firms, the insurance industry and their insureds must stay one step ahead of the curve to protect their interests. The following are but a few of the current trends of which we believe Corporate America, their insurers and their defense counsel should be aware.

A. BENZENE

1. Petrochemical, Rubber and Tire Workers

Most claims adjusters are familiar with the multitude of benzene-related claims coming from workers in the petrochemical, rubber manufacturing and transport industries. Benzene is the 20th most produced chemical in the United States by volume.¹ It is used to make resins, plastics, certain synthetic and nylon fibers, some types of rubbers, lubricants, dyes, detergents, drugs and pesticides. It also occurs as a by-product of crude oil, gasoline and cigarette smoking and occurs naturally via volcanoes and forest fires. The Agency for Toxic Substances and Disease Registry claims that 2-3 million U.S. workers may be “at risk” of benzene exposure. OSHA estimates that approximately 238,000 workers in the U.S. may be exposed to benzene, with about 4% (or 10,000) being exposed beyond the permissible TWA (time-weighted average) of 1 ppm.² The USEPA has set a maximum contaminant level (MCL) of benzene in drinking water at 5 ppb, so most Americans are exposed to a certain amount of benzene on a daily basis.

Long term benzene exposure has a major impact on the blood and decreases the red blood cell count leading to anemia and effects on the immune system. It has been linked to various forms of leukemia, but most directly to acute myelogenous leukemia, or AML, a cancer of the blood forming organs. The International Agency for Research on Cancer (IARC), USEPA and the U.S. Department of Health and Human Services have all listed benzene as carcinogenic to humans.

Benzene claims continue to be asserted by printers, rubber workers, tire builders, steel workers, shoe makers, lab workers and gas station employees, to name but a few.

¹ www.atsdr.cdc.gov/tfacts3.html

² www.atsdr.cdc.gov/HEC/CSEM/benzene.whosat_risk.html

Given this past, wide experience, we note that the parade of benzene claims is likely to continue, along with those related to silica, as the toxic torts *de jure* which we believe will ultimately replace asbestos litigation as the most widely litigated toxic tort claims.

2. Soft Drink Manufacturers

Benzene can allegedly form at the parts per billion (ppb) level in some beverages that contain both benzoate salts and ascorbic acid (vitamin C) or erythorbic acid (a closely related substance [isomer] also known as d-ascorbic acid). There is no actual benzene in soft drinks, but elevated temperatures and light can stimulate benzene formation in the presence of benzoate salts and vitamin C.³ While there is no federal rule regarding the standard for benzene contents in soft drinks, recall that the federal rules limit levels of benzene in drinking water to 5 parts per billion. The mainstream media has latched onto this issue with a vengeance.

An FDA report, released in May 2006, found benzene levels in 5 of 100 beverages tested that exceeded federal standards. FDA analysis found benzene levels as high as 79 parts per billion in one lot of Safeway Select Diet Orange.⁴ Dr. Laura Tarantino, M.D., director of the FDA's Office of Food Additive Safety, advised that drinking sodas high in benzene do not pose a health risk. Dr. Tarantino stated that drinking the beverages "is likely an occasional exposure, [but] it's not chronic exposure. The amount of benzene you are getting in a soda is very, very small compared to what you're being exposed to every day from environmental sources."⁵ According to Dr.

³ <http://www.cfsan.fda.gov/~dms/benzdata.html>

⁴ <http://www.forbes.com/forbeslife/health/feeds/hscout/2006/05/21/hscout532835.html>

⁵ <http://www.foxnews.com/story/0,2933,196501,00.html>

Tarantino, companies that produce Safeway beverages, Crystal Light and others, that have shown higher levels of benzene, as well as all manufacturers, have reformulated and reintroduced the products or are currently doing so.

In April 2006, attorneys on behalf of parents filed class action lawsuits in Suffolk Superior Court in Boston and Leon Circuit Court in Tallahassee, Fla. against Polar Beverages and In Zone Brands, Inc., complaining that there might be cancer-causing benzene in kids' drinks. The lawsuits accused the companies of failing to take steps to keep benzene from forming in their beverages.⁶

Suits have also been filed in Washington, D.C., California, New Jersey, and Kansas against Pepsico, Coca-Cola, Safeway and Kraft Foods. They seek, among other things, the removal of these products from the shelves and damages. As urged by Larry Gornick of Levin, Simes, Kaiser & Gornick, L.L.P., attorney for the California plaintiff, charged: "Safeway must immediately notify consumers that these beverages contain unsafe levels of benzene, inform consumers of the serious health risks associated with exposure to benzene, remove these beverages from store shelves, and issue refunds to all purchasers."⁷ Yeah, right!

B. PCBs

The manufacture of PCBs ended in the U.S. in 1977 because of evidence they build up in the environment and can cause harmful health effects. Products made prior to 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors, and old hydraulic oils in products like electrical

⁶ <http://abcnews.go.com/Health/wirestory?id=1832515>

⁷ <http://biz.yahoo.com/prnews/060524/new029.html?v=54>

transformers.⁸ The major North American producer, Monsanto, marketed PCBs under the trade name Aroclor from 1930 to 1977. General Electric marketed a similar product under the trade name Pyranol.⁹

The EPA has indicated that “data strongly suggest that PCBs are probable human carcinogens.”¹⁰ Current cohort studies are divided and often the studies have been severely limited. In 1999, General Electric funded a study of 7,000 employees who worked at their factories from 1946-76 in Upstate New York. The study, published in the *Journal of Occupational and Environmental Medicine*, found that even though PCB-exposed workers in the study had high levels of the chemical in their blood, the rate of cancer deaths was lower than the national average.¹¹

Another study published in January of 2006 by NIOSH found an increase in brain cancer and melanoma in workers who were exposed to PCBs at an Indiana capacitor manufacturing plant, but the study did not control for sun exposure or any type of lifestyle hazards.¹² The paper acknowledges that nine (9) other cohort studies of electrical capacitor and transformer manufacturers found no increases in the Standard Mortality Rates. PCB litigation ranges on and the defense has had mixed success at best. We believe this litigation will continue for some time, especially with respect to medical monitoring claims.

⁸ <http://www.atsdr.cdc.gov/tfacts17.html>

⁹ http://en.wikipedia.org/wiki/Polychlorinated_biphenyl

¹⁰ <http://www.epa.gov/pcb/pubs/effects.html>

¹¹ <http://query.nytimes.com/gst/fullpage.html?res=9A03E7DB1E3FF933A25750C0A96598>. Cushman, John H. Jr. “Study Finds Little Risks From PCB’s.” *The New York Times*

¹² Ruder, Avima M., et al “Mortality among Workers Exposed to Polychlorinated Biphenyls (PCBs) in an Electrical Capacitor Manufacturing Plant: An Update.” *Environmental Health Perspectives* Volume 114, Number 1, January 2006.

1. Recent Cases

a. Indiana: PCB Medical Monitoring Absent Physical Injury:
Allgood, et al vs. General Motors Corporation, 2005 WL 2218371
(Slip Copy) (S.D.Ind. September 12, 2005)

Defendant General Motors owned and operated an aluminum casting facility. Since 1965, GM allegedly polluted plaintiff's property, including soil contamination and ground and surface water, with PCBs. Plaintiffs further alleged that they have been exposed to PCBs discharged into the air and by dust carried onto their property. None of the plaintiffs alleged any specific illness or adverse physical effects resulting from exposure to PCBs. Plaintiffs demanded medical monitoring damages. Defendant claimed that under Indiana law there is no claim for medical monitoring relief absent proof the plaintiff had suffered some present bodily injury and moved to dismiss. The court refused to dismiss the claim, holding that Indiana courts are likely to recognize a claim for medical monitoring damages as a part of the remedy for a nuisance claim even if there is no evidence of a present physical injury.

b. New York: PCB \$2 Billion Class Action: *Abbatiello v. Monsanto Co.*, No. 05116920, (N.Y. Supreme Ct., New York County Dec. 6, 2005)

In December 2005, 590 General Electric workers at a Schenectady, N.Y. plant filed a \$2 billion lawsuit against Monsanto, Solutia and Pharmacia for allegedly exposing them to PCBs. The complaint alleges that Monsanto designed, manufactured and sold PCBs, knowing them to be hazardous for the last forty (40) years. Plaintiffs contend that because of PCB exposure, the workers are suffering from cancer, liver disease, diabetes, hypertension and other problems. The workers also sued for the costs of medical monitoring.

c. Illinois: Expert Witness: *Krutsinger v. Pharmacia Corporation*, 2005 WL 1458251 (Slip Copy) (S.D.ILL. June 16, 2005)

Plaintiff alleged that she was injured when exposed to PCBs designed, manufactured and sold by Pharmacia. The Court denied Defendant's Motion to Exclude Plaintiff's Expert and Motion for Summary Judgment. The court held that a board certified medical toxicologist has the education, background and training sufficient to opine regarding PCB exposure and its causative effects.

C. MOLD

While mold litigation is a fairly recent phenomenon, mold and the problems it can cause have been known since biblical times.

And he [a priest] shall examine the disease; and if the disease is in the walls of the house with greenish or reddish spots, and if it appears to be deeper than the surface, then the priest shall go out of the house to the door of the house, and shut up the house seven days. [If only this technique would work today.] Leviticus 14:34-46

There is no dispute that bodily injury and property damage claims from mold are increasing at a staggering pace. Other than the implementation of recent mold exclusions, the insurance industry has yet to develop a unified and effective litigation strategy for dealing with this growing exposure.¹³ Nevertheless, following initial losses, the litigation trend continues to favor the insurance industry.

¹³ Bruner & O'Connor: Construction Law §11:87.40. Database Updated May 2006. Bruner, Philip L. and O'Connor, Patrick J. Jr.. Chapter 11, Insurance. Reeg, K., "Mold Litigation – It's Not Asbestos Déjà Vu All Over Again," 17 Environmental Compliance and Litigation Strategy 4 (November 2001).

1. Recent Cases

a. **Michigan:** *Ortiz v. Allstate Insurance Co.*, 2006 WL 889378 (Mich. Ct. App. Apr. 6, 2006)

In 2000, a couple's home caught fire and firefighters used water to put out the blaze. Plaintiffs later claimed that the house suffered extensive damage, including mold growth, where insulation and other building materials were not fully dried before reconstruction was completed. Plaintiffs filed suit against Allstate for breach of contract and negligence. Plaintiffs claimed Allstate bore responsibility under the terms of the insurance policy for mold damage and for personal injuries resulting from exposure to mold. The Michigan Appeals Court, reversing a lower court decision, held that because mold was excluded under the policy at issue, it was not covered even if it resulted from a covered loss.¹⁴

b. **California:** *Benavides v. State Farm General Insurance Co., et al.*, 2006 WL 416364 (Cal. Ct. App., 2d. Dist., Div. 5 Feb 23, 2006)

Plaintiff purchased a ground floor condominium in Santa Monica, CA. Seven years later she discovered mold and submitted a claim to State Farm for additional living expenses. The all-risk insurance policy excluded coverage for mold unless its growth was caused by a covered peril. Plaintiff filed a claim against State Farm for bad faith and negligence that the insurer failed to properly investigate her claim, which resulted in erroneous denial of claim. In reversing a \$260,000 jury award, the Court of Appeals held that an insurer cannot be held liable for bad faith or negligence for improperly investigating a mold-damage claim because there was no coverage owed under the

¹⁴ 24 No. 8 Andrews Toxic Torts Litigation Reporter, May 26, 2006. "Policy Exclusion Bars Coverage for Mold Caused by Covered Peril."

policy: “The insured who is not entitled to insurance proceeds has suffered no injury as a result of the manner in which the insurer’s investigation was conducted.”

- c. **Texas:** *State Farm Lloyds v. Chandler, et al.*, 2005 WL 2467071 (E.D. Tex. Oct. 6, 2005)

Tenants brought suit against owner alleging that a faulty air conditioner fostered mold growth in the apartment. Plaintiffs claimed that mold caused their infant daughter’s death and caused physical injuries to her twin brother. They were insured by State Farm Lloyds, which refused to defend the action and sought a judgment that a mold exclusion policy precluded coverage. The federal court granted summary judgment to the insurer finding that the policy exclusion precluded coverage for mold; since Plaintiff’s petition alleged bodily injury and death that originated or was due to mold, this meant that the policy’s mold exclusion applied to plaintiff’s claims.

Given that mold constitutes 1/3 of the world’s biological mass, it is reasonable to assume that mold litigation will be with us for some time.

D. DIESEL

1. Highway

Effective June 1, 2006, EPA required refiners and fuel importers to cut the sulfur content of highway diesel fuel by 97%, from 500 parts per million to 15 ppm. The EPA believes this regulation will prevent 8,300 premature deaths and tens of thousands of cases of respiratory ailments such as bronchitis and asthma.¹⁵

a. Cancer Studies

Dr. Johannes Guo, of the Finnish Institute of Occupational Health, completed a study in late 2004 of a cohort of all economically active Finns born between 1906 and

¹⁵ <http://yosemite.epa.gov/opa/admpress.nsf.68b5f2d54f3eefd28525701500527fbf/597>

1945 who participated in the 1970 census. The study followed a cohort of individuals from 1971-1975 who were divided by occupation. Twenty-three (23) occupations were related to diesel exhaust exposure and 17 related to gasoline. Thirteen (13) occupations were exposed to both diesel and gasoline exhaust. The study was controlled for smoking, alcohol consumption and obesity. For occupations related to diesel exhaust exposure, the study observed 51 testicular, 710 kidney, and 775 bladder cancer cases respectively.

Elevated incidence ratios of kidney cancer were observed among male taxi drivers, male road-building machine operators and bladder cancer was seen in bus drivers. Significantly, however, an inverse increase in the relative risk was observed for kidney cancer among the men with the *lowest*, not highest, cumulative exposure to diesel exhaust.

The study concluded: “Earlier results concerning cancers other than the lung are scarce and inconsistent, and exposure-response relationships have seldom been reported. Our study suggests a positive relationship to diesel exhaust (or a factor related to diesel exhaust) and ovarian cancer. Our results do not support previous findings suggesting an association between engine exhausts and risk of esophageal, testicular, kidney or bladder cancers, or that of leukemia.”¹⁶

The United States Environmental Protection Agency classifies diesel fumes as a probable carcinogen that is “likely” to cause cancer in humans. The question then becomes: Who is likely to develop cancer from diesel exhaust and what type of cancer will they likely develop? This is particularly critical as the world’s work force now includes a significant number of women.

¹⁶ Int.J. Cancer 2004; 111: 286-92

The nature of the world's changing work force may have an impact on occupational diseases. Dr. Guo's study found only an increase in ovarian cancer due to diesel exhaust, an obviously gender-specific disease. Recently, 7 female officers who work at the Ambassador Bridge in Windsor, Ontario at the U.S.-Canada Border Crossing developed breast cancer. The crossing handles around 9,500 trucks per day, most of which are diesel powered. The union has commissioned a study to determine if exhaust is a factor in these cancers.¹⁷

2. Mines

In May 2006, the Mine Safety Health Administration (MSHA) issued a final rule to enhance safety of underground metal and non-metal mines. The protection is aimed at exposure to Diesel Particulate Matter (DPM). The rule phases in a DPM limit of 160 micrograms of total carbon per cubic meter of air by 2008.

Research led by scientists at The Institute of Cancer Research on a newly discovered chemical in diesel exhaust fumes, 3-NBA, shows that it forms a bond with the DNA which can lead to genetic damage, an early step in the cancer process. 3-Nitrobenzathrone (3-NBA) is a compound in diesel exhaust which seems to be largely absent from other sources of airborne pollution. The main metabolite of 3-NBA has been found in urine samples of salt-mine workers who are exposed through their work to diesel emissions, demonstrating that human exposure to 3-NBA in diesel emissions is detectable and can be significant.¹⁸

¹⁷ <http://www.canada.com/topics/news/national/story.html?id=b144b6c> "Exhaust Raised Concern Among Border Guards": McGregor, Glen. CanWest News Service; Ottawa Citizen.

¹⁸ <http://www.icr.ac.uk/press/2005/3101.shtml>

While the rules for exposure to diesel exhaust in mine have been tightened, workers have been exposed to the fumes for many years and anecdotally report problems. USA Today reported on Curtis Layman, a 66 year old worker at the Morton Salt Mine in Fairport, Ohio, who never smoked. When he went to his doctor for a check up, he was informed that his lungs were black. The mine where Layman worked utilized many heavy-duty diesel machines. Wes Smith, 49, a Morton Salt Worker and president of the United Steelworkers Local 5-966, stated that he has seen many union members with lung damage, heart disease and other ailments. He also notes the presence of acrid smoke in the mines from front-end loaders, bulldozers and cutting machines.¹⁹ We expect litigation over diesel fumes to escalate in the next decade.

E. CHROMIUM

Chromium is a naturally occurring element found in rocks, animals, plants, soil, and in volcanic dust and gases. Industrial processes, including welding, chrome plating, dye manufacturing and leather and wood preservation, generally produce another form of chromium, commonly known as Chromium VI or hexavalent chromium.^{20 21} *Breathing* high levels of Chromium VI can cause irritation to the nose, including runny nose, nosebleeds, and ulcers and holes in the nasal septum. *Ingesting* large amounts of Chromium VI can cause stomach upsets and ulcers, convulsions, kidney and liver damage, and even death. Several studies have shown that Chromium VI compounds can

¹⁹ <http://www.hy-drive.com/main/filelib/USATODAY2006-04-03-mine-diesel.pdf>. Morris, Jim. "Another Possible Threat for Miners: Diesel Exhaust." USA Today, April 4, 2006

²⁰ <http://www.atsdr.cdc.gov/tfacts7.html>

²¹ http://clu-in.org/contaminantfocus/default.focus/sec/chromium_VI/cat/Overview/

increase the risk of lung cancer. The EPA has determined that Chromium VI in air is a human carcinogen.²²

The chromium industry is currently facing problems other than the health effects of this product. In February 2006, the Occupational Safety and Health Administration (OSHA) set a new "permissible exposure limit" -- five micrograms of chromium dust per cubic meter of air, averaged over an eight-hour period -- which is about one-tenth the level that has been permitted since the 1940s. The limit of 5 micrograms is about five times the original limit proposed by OSHA in 2004.²³ The industry estimates that the new standard will cost it around \$300 million to implement; whereas the original one microgram limit would have cost nearly \$3 to \$5 billion and precipitated the closure of scores of small factories.²⁴

The Environmental Protection Agency has initiated an investigation of the chromium industry for withholding from the government a key study supporting a stricter standard for chromium. EPA is considering filing suit under the Toxic Substances Control Act (TSCA), which requires companies to report new substantial risk information about chemicals to the government in a timely manner.²⁵ "The industry commissioned a study of the mortality experience of workers at four low-exposure chromium plants, but did not make the results available to OSHA in a timely manner, despite multiple agency

²² <http://www.atsdr.cdc.gov/tfacts7.html>

²³ <http://www.washingtonpost.com/wp-dyn/content/article/2006/02/27/AR2006022701507.html>. "OSHA Sets Limit on Workplace Chromium." Weiss, Rick. 2/28/06

²⁴ http://www.forbes.com/business/manufacturing/2006/03/28/elementis-chromium-pollution-cz_ms_0329beltway.html. "Chromium Wars: The Sequel". Swibel, Matthew. 3/29/06

²⁵ *Id.*

requests for precisely these sorts of data.”²⁶ Kate McMahon-Lohrer, a lawyer speaking for the pro-industry group Chrome Coalition, countered, saying the allegation that industry hid a key study “just doesn’t hold water.” She noted that an industry trade group submitted comments about a portion of the study to OSHA in April, 2005, during the agency’s rulemaking hearings on new standards for workplace exposure to chromium. “We got in under the wire.”²⁷

Considering the vast use of chromium in industrial settings, and the critical eye with which government agencies are investigating its hazards, we believe this is a fertile ground for future toxic tort litigation.

F. CCA WOOD (Pressure-Treated Lumber)

The EPA announced a voluntary decision by industry to move consumer use of treated lumber products away from a variety of pressure-treated wood that contained arsenic by December 31, 2003, in favor of new alternative wood preservatives. The Agency stated that it “has not concluded that CCA-treated wood poses any unreasonable risk to the public or the environment” and has advised consumers *not* to “replace or remove existing structures made with CCA-treated wood or the soil surrounding those structures.”²⁸ Health Canada has also taken this position.

²⁶ <http://www.ehjournal.net/content/5/1/5>. “Selected science: an industry campaign to undermine an OSHA hexavalent chromium standard”. Michaels, David et al. 2/23/06

²⁷ http://www.forbes.com/business/manufacturing/2006/03/28/elementis-chromium-pollution-cz_ms_0329beltway.html. “Chromium Wars: The Sequel”. Swibel, Matthew. 3/29/06

²⁸ http://www.epa.gov/pesticides/factsheets/chemicals/cca_transition.htm

1. Consumer Actions

a. Class Certification

Texas: *Wilson v. Home Depot, U.S.A*, 225 F.R.D 198 (W. Dist. Tex. October 12, 2004)

Plaintiff homeowners brought a putative class action suit in Travis County Texas District Court against Home Depot alleging breach of express and implied warranties, strict liability and violation of the Texas Deceptive Trade Practices Act. Home Depot removed the case to federal court. Plaintiffs sought to certify a state-wide class of “owners of private residential real property in the State of Texas who have on their property a wood deck or playground equipment constructed of CCA wood that was purchased, either directly or indirectly, from Home Depot.”

The court denied class certification. The court held that because no two pieces of treated wood are alike, Plaintiff’s claims cannot be tried with common proof. There is also material variance in the manufacture of treated wood. Put simply, treated wood is not all the same and class certification could be denied on these grounds alone. The court further found that each potential injury to property would be unique and thus was not amenable to class certification.

Louisiana: *Eula Guidry Ardoin, et al vs. Stine Lumber Company, et al.*, 220 F.R.D 459 (W.Dist La., Lake Charles Division, March 17, 2004)

Plaintiff consumers filed a class action suit following discovery that wood they purchased from various defendant retailers contained “CCA” which allegedly contained harmful chemicals as active ingredients. The court held that the individualized nature of the claims prevented the simultaneous resolution of all or a significant portion of the potential class’ complaints. The retailers also had individualized defenses against each

consumer. The federal court granted the retailers' motions to vacate state court rulings, cross-motions to strike class allegations and denied class certification. The court held that the variance in wood, soil, usage and environmental conditions rendered it nearly impossible to claim that the class members truly shared common issues of fact, because some pieces of wood may pose more of a potential threat than others.

b. Actual Injury

Texas: *Wilson v. Home Depot U.S.A*, 369 F.Supp. 2d. 887 (W.Dist. Tex., March 31, 2005)

As noted above, Plaintiffs alleged defects in CCA wood they purchased from Home Depot to construct decks. The complaint charged that arsenic leached from the wood onto the surface of the decks and into underlying soil, posing a health risk. Plaintiffs did not allege the wood actually harmed their health or that the CCA treated wood had in any way failed to perform its intended purpose. Indeed, under Texas law, there is no cognizable claim based solely upon increased health risks, absent a manifest injury. Moreover, the EPA advised that removing the wood and soil remediation was not needed, but many consumers did so. The court granted summary judgment for the retailer on breach of express and implied warranty, strict liability, misrepresentation and violations of the Texas Deceptive Trade Practices Act.

2. Potential Disposal Solutions

As of the year 2000, the State of Florida alone had imported 28,000 metric tons of arsenic via CCA wood, 4,600 tons of which had already leached into the environment. Researchers predicted that as much as 11,000 additional tons will leach from wood decks and other structures in the next forty (40) years. Researchers created a mathematical model which estimated that between twenty (20) and fifty (50) tons of

arsenic may have leached from construction and demolition landfills by 2000, with an expected twenty (20) to forty (40) fold increase in the next thirty-five (35) years.²⁹

A University of Miami team of environmental engineers studied rainwater runoff from a CCA-treated deck for one year. They concluded that arsenic contamination was 100 times higher than runoff from an untreated deck. The wood products industry phased out CCA Wood in 2003, but the wood from this large number of decks was not removed and the CCA wood is and can still be used in utility poles and industrial timbers.³⁰

As can be seen, disposal of this large bulk of material is problematic. Florida law does not require construction and demolition landfills to be equipped with linings. John Schert, director of the Florida Center for Solid and Hazardous Waste Management, suggests that requiring linings in landfills will prevent arsenic contamination. The problem with this proposed solution is twofold: the costs of such a project would put many landfills out of business, and such a regulation would likely lead to illegal dumping in rural areas by the construction and demolition industry.³¹

The authors believe that the existence of millions of wooden boat docks and landings in and around lakes and ponds offers the potential for arsenic levels in excess of the maximum contaminant levels (MCL) permitted in drinking water by the Safe Water Drinking Act, and thus portends a tidal wave of water contamination litigation.

²⁹ <http://news.ufl.edu/2005/12/23/arsenic-lumber/>. "Researchers: Treated wood poses long-term threat". 12/23/05

³⁰ *Id.*

³¹ 2005 WLNR 20898901. US State News, "Researchers: Treated Wood Poses Long-Term Threat." 12/23/05

G. MTBE: Gasoline Spills and Ground Water Contamination

MTBE was a federal legislatively-mandated gasoline additive. In 2005, the Senate proposed a bill that would have required oil companies to pay around \$3 billion to help clean up drinking water allegedly fouled by MTBE. The plan would have shielded petroleum industry manufacturers from product liability lawsuits. The bill failed, but twenty-one states have banned MTBE, and the industry has paid out \$485 million to settle eight lawsuits since 1998.³² Other suits are pending. Additionally, the EPA is currently studying the potentially carcinogenic effects of MTBE on humans.³³

In the watershed case of *In Re Methyl Tertiary Butyl Ether ("MTBE") Products Liability Litigation*, 2006 WL 928997 (S.D.N.Y, April 7, 2006), plaintiffs filed a class action suit against Exxon and a gas station owner alleging real and threatened contamination of ground water with MTBE. The court refused to dismiss state law claims of: (1) public nuisance, (2) private nuisance, (3) trespass to property, (4) negligence, (5) strict liability for an abnormally dangerous activity, and (6) medical monitoring for early detection and treatment of potential diseases caused by exposure to MTBE. The court found plaintiffs' allegations sufficient to establish a credible threat of harm where Plaintiffs alleged that (1) at a certain point MTBE taste and odor make water unfit for human consumption, and (2) MTBE is a known animal carcinogen and has been linked to human health problems. The court also refused to dismiss claims of property owners whose water had yet to be affected, because the neighbors' groundwater

³² <http://www.washingtonpost.com/wp-dyn/content/article/2005/07/26/AR2005072601641.html>

³³ <http://www.epa.gov/mtbe/water.htm>

contamination demonstrated a future threat of injury. The outcome of this litigation will likely dictate, in large measure, the course of future MTBE litigation.

H. OTHER WATER CONTAMINATION – Atrazine

Atrazine is the most widely used corn herbicide in the U.S. The EPA has established a drinking water MCL standard for atrazine of 3 parts per billion, a level that contains a 1000-fold safety factor. Six (6) lawsuits in Madison County, Illinois, have pleaded actions to certify classes on behalf of some 1,800 water districts in Illinois based on the allegations that levels of atrazine in finished potable water are unsafe, even though the water the named Plaintiff sells meets current MCL standards set by the U.S. Environmental Protection Agency.³⁴

1. Frogs

Most studies and the EPA have concluded that atrazine at current levels is safe in drinking water. But select animal studies have been utilized as a springboard to promote litigation. One activist herpetologist has alleged that atrazine can work as an ‘endocrine disrupter’ in frogs, causing them to become hermaphrodites, among other malformations. While he claims that this is not just a species-specific finding, the EPA has called his and other industry-sponsored studies ‘flawed.’ That same academician has accused the EPA of being unduly influenced by a manufacturer of atrazine and practicing bad science.³⁵

³⁴ <http://www.belville.com/mld/belleville/news/local/14080262.htm>? “Jay Lehr’s Essay on the atrazine lawsuit”. March 12, 2006

³⁵ http://pubs.acs.org/subscribe/journals/esthag-w/2004/feb/science/rr_controversy.html. “Controversy Clouds Atrazine Studies.” Environmental Science & Technology Online, February 19, 2004

2. Rats

Nearly 10 years ago, Atrazine was tested in two strains of laboratory rats and three strains of mice to determine whether the herbicide contributes to increased incidences of any types of tumors. In these tests, 50 or more laboratory animals were fed high daily levels of Atrazine over their lifetimes - about two years - and compared to animals fed none.

Only in the female Sprague-Dawley rat strain did Atrazine cause an effect. Females exhibited an increased incidence and earlier onset of mammary tumors. However, female Sprague-Dawley rats have a high spontaneous incidence of mammary tumors in the absence of any test chemical and were a poor test species, as more than half of the Sprague-Dawley females usually develop the tumors as they age. These tumors develop because of a unique deficiency in the control of their reproductive cycles. Significantly, humans do not have this same deficiency, so the Sprague-Dawley mammary tumor response is not directly relevant to humans.³⁶ A later laboratory study confirmed that lifetime atrazine feeding to female Sprague-Dawley rats at levels more than 10,000 times higher than the trace amounts to which humans are potentially exposed in food and drinking water produced no effect on the animals.³⁷

Some scientists continue to rely upon the Sprague-Dawley rat findings to attempt to link atrazine with human health problems. The EPA has again determined that such

³⁶ <http://www.ksgrains.com/triazine/november/index.html>. Triazine Online Network, November 1996

³⁷ *Id.*

studies are scientifically baseless. “Evidence of atrazine's harm to humans is thinner than a rat's whisker”.³⁸

3. 2006 EPA Study- Atrazine Not Harmful to Humans

On June 22, 2006, the EPA completed a lengthy cumulative risk assessment for the chlorinated triazine pesticides atrazine, simazine and propazine. EPA has concluded that, with the labeling, application and mitigation measures implemented with respect to atrazine and simazine, the cumulative risks associated with the triazine pesticides are below the Food Quality Protection Act of 1996 (FQPA) regulatory level of concern. Triazine tolerances - residue limits in food and feed - have been evaluated on the basis of cumulative risk and found to meet the safety standards established by the FQPA, i.e., the risks pose a reasonable certainty of no harm in humans.³⁹ Nevertheless, we find it likely that this type of litigation, pleading damages and harm from a product dispute into compliance with applicable government regulations, will continue.

I. ANTIBIOTICS IN DRINKING WATER

1. Human Pharmaceuticals

“Persistent pharmaceuticals are discharged into the aquatic environment from municipal sewage treatment which act as point sources. Due to their polarity and their

³⁸ <http://www.fumento.com/investorsatrazine.html>. “Anti-Science Policies from the EPA” The Washington Times. Fumento, Michael. July 18, 2000.

³⁹ http://www.epa.gov/oppsrrd1/cumulative/triazine_fs.htm. “Triazine Cumulative Risk Assessment and Atrazine, Simazine, and Propazine Decisions”. June 22, 2006.

relatively high water solubility these residues are not significantly absorbed in the subsoil and can leach into the ground water.”⁴⁰

Medicinal and household products, such as shampoo, are flushed down drains and toilets into wastewater sewage systems. Pharmaceuticals are passed down toilets or through the human body, are not completely broken down, and then are passed onto treatment plants. Currently, treatment plants do not filter all of these chemicals and many end up in streams and lakes. There are no current known human health effects from most of these pharmaceutical drugs and most of the chemicals are detected in miniscule amounts of parts per trillion in the water. However, antibiotics and their metabolites can significantly increase antibiotic resistance in the population. Synthetic hormones can act as endocrine disruptors, by mimicking or blocking hormones and disrupting the body's normal functions. Additionally, the cumulative effects of the numerous chemicals on the human population is unknown.⁴¹

David Sedlak, an engineer at the University of California at Berkeley, estimates that there are one hundred twenty-nine (129) widely used drugs in municipal wastewater nationwide, forty-nine (49) at levels above a key cutoff point for potential regulation. In New Mexico, water engineers detected low concentrations of birth control hormones, the anti-seizure medicine Dilantin, the antidepressant Elavil and the painkiller Darvon.⁴²

⁴⁰ <http://www.epa.gov/esd/chemistry/ppcp/images/heberer.pdf>. *From Municipal Sewage to Drinking Water: Fate and Removal of Pharmaceutical Residues in the Aquatic System of Berlin*. Thomas Heberer, et al Institute of Food Chemistry, Berlin. 1997

⁴¹ <http://www.medicalnewstoday.com/medicalnews.php?newsid=39711>. *Pharmaceutical Metabolites Found in Wastewater*. 3/19/06.

⁴² http://archive.salon.com/tech/feature/2001/10/25/drugs_water/index.html. *Free drugs from your faucet: How did tiny amounts of nearly every drug under the sun get into our drinking water -- and what are they doing to us?* Salon.com. Uehling, Mark D. 10/25/2001

Timothy S. Gross, a highly regarded USGS toxicologist, has spent several years studying how fish downstream from Las Vegas are affected by pharmaceuticals in waterways. He examined three species -- carp, largemouth bass and the endangered razorback sucker -- and detected "a very large and marked decrease in sperm quality and quantity" in all three populations.⁴³

Thomas White, an environmental consultant for the Pharmaceutical Research and Manufacturers of America (PhRMA), noted that industry studies show "no appreciable human health risks" and no "appreciable impacts on the aquatic environment" linked to drugs in the water.⁴⁴ On the other hand, Germany and other European countries are taking steps to eliminate certain of the chemicals. Dr. Thomas Heberer conducted a large study of the water systems in Berlin and found pharmaceutical products present. He indicated that charcoal or membrane filtration at wastewater facilities may remove most of these residues.⁴⁵ Whether this fairly simple solution is workable to thwart what is becoming a contentious issue remains to be seen.

On July 19, 2006, London's *Daily Mail* newspaper published an article claiming that 1/3 of male fish in English rivers are changing sex due to "gender-bending" pollution. Tests showed the males developed female sex organs and were producing eggs, i.e., hermaphroditism. Such fish also produce less sperm and sperm that is of low

⁴³ <http://www.washingtonpost.com/wp-dyn/content/article/2005/06/22/AR2005062201988.html>. *Pharmaceuticals in Waterways Raise Concern: Effect on Humans, Wildlife Questioned*. Eilperin, Juliet. Washington Post, 1/23/05.

⁴⁴ *Id.*

⁴⁵ <http://www.epa.gov/esd/chemistry/ppcp/images/heberer.pdf>. *From Municipal Sewage to Drinking Water: Fate and Removal of Pharmaceutical Residues in the Aquatic System of Berlin*. Thomas Heberer, et al Institute of Food Chemistry, Berlin. 1997

quality. Research Professor Charles Tyler said that the fish are swimming in a soup of estrogen-like compounds, found in the Pill and in HRT (hormone therapy). Estrogen is produced naturally by women, but heavy exposure to males can cause them to be “in between sexes”. It is unclear whether the impact on fish translates to humans, but such statistics are being touted by advocates. British men's sperm counts are reported by some to have dropped by almost a third between 1989 and 2002, and one in six couples are now having alleged difficulty in conceiving. Professor Tyler said: “There is certainly the potential for it to have an effect in humans - and possibly a marked effect.”⁴⁶

2. Animal Antibiotics

In 2003, the nation's 238,000 feeding operations produced 500 million tons of manure. The U.S. Environmental Protection Agency estimates that a small percentage of those facilities—called concentrated animal feeding operations (CAFOs)—accounted for more than half of the manure. In studies of CAFOs, the CDC has shown that chemical and infectious compounds, including antibiotics, from swine and poultry waste are able to migrate into soil and water near the CAFOs. Scientists do not yet know whether or how the migration of these compounds affects human health.⁴⁷

The problem of antibiotics entering the environment from municipal sources and confined animal feeding operations is well recognized and is a matter of growing concern. There is an increasing interest among scientists, policy makers and industry

⁴⁶http://www.dailymail.co.uk/pages/live/articles/news/news.html?in_article_id=396612&in_page_id=1770. *Third of Male Fish in Rivers are Changing Sex*. The Daily Mail. Macrae, Fiona. 7/19/06

⁴⁷ <http://www.cdc.gov/cafos/about.htm>. “Concentrated Animal Feeding Operations”

personnel in the United States to survey the nation's water resources for human and veterinary pharmaceuticals, steroidal hormones, etc.⁴⁸

At several sites along Colorado's Cache la Poudre River, a research team led by Ken Carlson, a Colorado State University civil engineering professor, discovered the presence of at least three antibiotics used only on food animals. The amount of antibiotics discovered were miniscule - about 50 parts per trillion at most. But their presence raises three concerns: a possible contamination of drinking water; an impact on fish and other aquatic animals susceptible to long-term exposure; and the drugs' potential ability to provide increased resistance to waterborne bacteria.⁴⁹ Ellen Silbergold, a Johns Hopkins University professor of environmental health sciences who studies the impact of animal antibiotics on humans, said the largest worry is that otherwise harmless bacteria in streams and rivers — which concentrate in sediment, where the largest amounts of antibiotics were detected — might develop better antibiotic resistance when exposed to ambient levels of drugs used by livestock producers.⁵⁰

Ed Furlong, a USGS research chemist, said the latest findings are helpful in narrowing possible sources of contamination and developing better water management policies, but should not be used to start assigning blame. "Little is known about what effect these concentrations have on humans or ecosystems," Furlong said.⁵¹

Recent state and independent tests of ground water wells in a Weiser, Idaho, neighborhood detected traces of hormones and antibiotics typically used in the treatment

⁴⁸ http://wri.wisc.edu/Projects/FY03_DNR_Projects/FY03_DNR_KarthikeyanBleam.html

⁴⁹ <http://www.msnbc.msn.com/id/6299642>. "Livestock Antibiotics in Waterways: Study Detects Chemicals Near Farms in Colorado River". Bonne, John. 10/25/04.

⁵⁰ <http://www.msnbc.msn.com/id/6299642>

⁵¹ *Id.*

and production of cattle. Scientists are looking at the cattle feedlot that sits, in some cases, just several hundred feet from wells testing positive for detectable amounts of hormones and antibiotics.⁵²

Science has yet to catch up with the known effects of cattle pharmaceuticals on human and environmental health, and state and federal regulations lag even further behind. Diana Aga, assistant professor of Chemistry at the State University of New York at Buffalo, notes the science on antibiotic water contamination does not point to an acute health concern. But since long-term health and environmental effects are unknown, the possibility that antibiotic contaminants could contribute to the development of antibiotic-resistant microorganisms is a concern.⁵³

As can be seen, the potential sources of water contamination and concomitant litigation are numerous and growing. The authors believe that water litigation will occupy the toxic tort arena for decades to come.

J. MERCURY

1. Health Effects

Mercury is a neurotoxin. Symptoms of methyl mercury poisoning may include: impairment of the peripheral vision; disturbances in sensations ("pins and needles" feelings, usually in the hands, feet, and around the mouth); lack of coordination of movements; impairment of speech, hearing, walking; and muscle weakness. The factors that determine the severity of health effects from mercury exposure include: the chemical form of mercury (methyl mercury is more toxic than elemental mercury); the dose; the

⁵² <http://www.boiseweekly.com/gyrobase/Content?oid=oid%3A158137>. "DIRTY WATER: Ag pollution in rural wells runs deep". *Boise Weekly*, Wolf, Carissa. 2/1/06.

⁵³ *Id.*

age of the person exposed (the fetus is the most susceptible); the duration of exposure; the route of exposure -- inhalation, ingestion, dermal contact, etc.; and the health of the person exposed.⁵⁴ People in the U.S. are mainly exposed to methyl mercury, an organic compound, when they eat fish and shellfish containing it. Almost all people have at least trace amounts of methyl mercury in their tissues, reflecting its widespread presence in the environment. Recent findings in 1999 and 2000 by the CDC show that most people have blood mercury levels below levels associated with adverse health effects.⁵⁵

2. Fish

According to the USEPA, some fish and shellfish contain higher levels of mercury that may harm an unborn baby or young child's developing nervous system. The risks associated with mercury in fish and shellfish depend on the amount of fish and shellfish eaten and the levels of mercury therein. The Food and Drug Administration (FDA) and EPA are advising women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish such as shark and albacore tuna.⁵⁶ Rather, the EPA recommends up to twelve ounces per week of canned light tuna instead because of its lower mercury levels.⁵⁷

"Just two 4-ounce servings of fish a week can lower the risk of heart disease and stroke," says Joshua T. Cohen, Ph.D., a researcher at the Tufts New England Medical Center. According to Dr. Cohen, avoiding fish because of overblown health risks does

⁵⁴ <http://www.epa.gov/mercury/health.htm>

⁵⁵ <http://www.epa.gov/mercury/effects.htm#elem>

⁵⁶ <http://www.epa.gov/waterscience/fishadvice/advice.html>

⁵⁷ *Id.*

more harm than good.⁵⁸ The article reiterates the EPA's point that canned light tuna is fine for human consumption and that pregnant women should indeed avoid albacore tuna.

A recent article in Consumer Reports analyzed the FDA findings and found that most cans of light tuna had only a third as much mercury, on average, as white tuna, also known as albacore. But 6 percent of the light-tuna samples contained at least as much of the metal--in some cases more than twice as much--as the average in albacore.⁵⁹

According to David Acheson, M.D., the chief medical officer at the agency's Center for Food Safety & Applied Nutrition, the FDA has not warned consumers about those occasionally higher mercury levels because it believes the levels don't pose any significant threat. When asked about fetal safety, Acheson said: "If you eat a single can of something that's a little higher than the average, it's not going to do any acute harm."⁶⁰

3. Dental Fillings

In April of 2006, a group known as "Consumers for Dental Choice" (www.toxicteeth.org) sued the FDA in the U.S. Court of Appeals for the District of Columbia to ban mercury amalgams in dental fillings. The group claims that mercury is toxic to humans and causes birth defects and central nervous system damages. The same group refers to a Chicago Tribune article which cites: a professional musician who suffers from mysterious rashes and lip blisters; a dental hygienist who battles migraines; and a social worker diagnosed with multiple sclerosis. All three claimed that after having

⁵⁸ http://www.findarticles.com/p/articles/mi_m0846/is_7_25/ai_n16102204. "The Real Deal on Fish and Mercury". Gumper, Bethany. 3/2006

⁵⁹ http://www.consumerreports.org/cro/food/tuna-safety/overview/0607_tuna_ov.htm. "Mercury in Tuna: New Safety Concerns." 7/2006

⁶⁰ *Id.*

mercury amalgam fillings removed, their health improved within a week.⁶¹ These are entertaining and interesting claims indeed, but scientifically worthless.

A pair of studies conducted by the National Institute of Health, and published in the April 19, 2006, issue of the *Journal of the American Medical Association*, found no detectable loss of cognitive or renal function in children who received amalgam fillings containing mercury. At five (5) years of post-treatment, the New England study found significantly higher mean urine mercury levels in the amalgam group. But according to David C. Bellinger Ph.D., M.Sc., of The Department of Neurology at Children's Hospital in Boston and Harvard Medical School, increased mercury exposure was still "well within established background population levels." There was no evidence to support a link between exposure to mercury in dental fillings and lower scores on standard IQ tests.⁶²

4. Autism: Thimerosal in Vaccines

Autism is a severe developmental disorder in which children seem isolated from the world around them. There is a broad spectrum of symptoms, but the disorder is marked by poor language skills and an inability to handle social relations. The National Resource Defense Council (NRDC) claims that there is "mounting evidence" to suggest that thimerosal, a mercury-based preservative in children's vaccines, may be responsible for the exponential growth of autism, attention deficit disorder, speech delays, and other childhood neurological disorders now epidemic in the United States. The MMR vaccine

⁶¹ http://www.toxicteeth.org/pressroom_articles_tribune_122005.cfm. *Are your teeth toxic? The mercury in 'silver' fillings would be hazardous waste in a river -- yet it's sitting in your mouth.* Chicago Tribune. Dierdorf, Julie. 12/11/05

⁶² <http://www.medpagetoday.com/PrimaryCare/DentalHealth/dh/3116>. *Mercury Fillings Held Health Harmless in Kids.* Miner, Jeff. 4/18/06

is widely used for measles, mumps, rubella, and the DPT vaccine is prescribed for diphtheria, tetanus and whooping cough. The organization claims that the number of cases of autism has risen from one (1) in 2,500 ten (10) years ago to one (1) in 166 today.⁶³

While the best available evidence indicates that thimerosal is safe in the levels found in vaccines, the Food and Drug Administration, the Public Health Service, and the American Academy of Pediatrics recommended the removal of thimerosal from childhood vaccines in 1999. Since 2001, thimerosal has been removed from all routine pediatric vaccines.⁶⁴

A 2006 study in Quebec of 28,000 children stands in stark contrast to the claims of the National Resources Defense Council. Eric Fombonne, chief of pediatric psychiatry at the McGill University Health Centre, says that there is absolutely no link between the mercury-containing vaccine and autism: "According to our data, the incidence of autism was higher in children who were vaccinated after thimerosal was eliminated from vaccines."⁶⁵

Like many diseases, some believe it is not clear that the rates of autism are increasing, but that the definition of the disease may be expanding and detection methods are improving. A report by the Institute of Medicine of the National Academies, a private nonprofit governmental advisory group, indicates that neither the mercury-based vaccine preservative thimerosal nor the measles-mumps-rubella vaccine cause autism.

⁶³ *Autism, Mercury and Politics*. Boston Globe. Kennedy, Robert Jr. 7/1/05

⁶⁴ "SCHWARZENEGGER SIGNS BILL TO LIMIT USE OF PRESERVATIVE IN VACCINES" 20 No. 8 Andrews Pharmaceutical Litig. Rep. 12. 10/28/04

⁶⁵ www.globalnational.com. *Study: Mercury in Vaccines Not Cause of Autism*. 7/4/06.

Committee chair Marie McCormick of the Harvard School of Public Health said that the overwhelming evidence from several well-designed studies indicates that childhood vaccines are not associated with autism.⁶⁶

In addition to the studies of vaccination and autism, a recent study has attempted to link autism and exposure to airborne mercury. Raymond Palmer of the University of Texas Health Science Center in San Antonio studied individual school districts in Texas. His group of epidemiologists found that the districts with the highest levels of mercury in the environment also had the highest rates of special-education students and autism diagnoses. The findings were described by the author as “provocative.” California has both the highest rate of autism and the highest air-mercury levels. These findings could be attributed to better detection through the state’s reputed superior mental health education system. This article claims that the vaccination-autism link has been largely debunked, but that debate has not ended.⁶⁷ Instead, the debate on mercury in the air and autism has just begun.

The National Vaccine Injury Compensation Program established by the National Childhood Vaccine Injury Act of Congress protects manufacturers of thimerosal, from civil suits in the first instance and mandates that claimants must first pursue an administrative claim through the Federal Vaccine Court before filing suit against a manufacturer. There is no such fund for mercury exposure in the air, so the new issue of mercury and autism linked through airborne exposure will undergo much evolution and litigation.

⁶⁶ *STUDY FINDS NO LINK BETWEEN AUTISM, VACCINES* 20 No. 4 Andrews Pharmaceutical Litig. Rep. 13. 5/25/04

⁶⁷ <http://www.foxnews.com/story/0,2933,151065,00.html>. *Mercury in Air Pollution: A Link to Autism?* DeNoon, Daniel. 3/21/05

K. TCE- TRICHLOROETHYLENE

Trichloroethylene, or TCE as it is more commonly known, is a man-made chemical. It is a clear, colorless, nonflammable liquid that evaporates quickly and has a sweet chloroform-like scent. The chemical is used primarily as a large-volume degreasing agent for metal and electronic parts. It was used extensively on aircraft at military bases. Recall that in the movie “A Civil Action,” John Travolta played a lawyer who attempted to prove (mostly unsuccessfully) that TCE deposited into the water supply by two large companies was the cause of severe health problems in the New England town’s population.

TCE exposure can be associated with several adverse health effects, including neurotoxicity, immunotoxicity, developmental toxicity, liver toxicity, kidney toxicity, endocrine effects, and several forms of cancer.⁶⁸ Several high profile U.S. Senators have gone on record saying: "TCE...is known to cause cancer and damage the nervous and immune systems. Children and seniors are especially vulnerable to TCE's toxic effects... Today, thousands of Americans may be exposed to unhealthful levels of TCE."⁶⁹

The National Toxicology Program (NTP) determined that TCE is “reasonably anticipated to be a human carcinogen.” The International Agency for Research on Cancer (IARC) has determined that TCE is “probably carcinogenic to humans.”⁷⁰ These are very telling categorizations by persuasive organizations.

⁶⁸ [http://www.cluin.org/contaminantfocus/default.focus/sec/Trichloroethylene_\(TCE\)/cat/Overview](http://www.cluin.org/contaminantfocus/default.focus/sec/Trichloroethylene_(TCE)/cat/Overview)

⁶⁹ Senators Hillary Rodham Clinton, Barbara Boxer, Christopher J. Dodd, Frank Lautenberg, Joseph I. Lieberman, Gordon Smith, Ron Wyden in Written Appeal to EPA for better public protection against TCE. October 5, 2005

⁷⁰ <http://www.atsdr.cdc.gov/tfacts19.html>. ToxFaqs for TCE

Industrial processes are the main sources of TCE in the environment. It is commonly found in air and water. TCE breaks down more slowly in surface water and soil than in air, and it can pass through the soil into groundwater. The federal allowable standard is 5 parts per billion, the equivalent of five drops in an Olympic-size swimming pool.

According to Air Force documents, TCE is the most widespread water contaminant in the nation, present at 1,400 Defense Department pollution sites. According to a 2003 EPA report, TCE is 2-40 times more harmful to overall human health when ingested than previously thought. Yet no direct causal connection between exposure to TCE in drinking water and the development of illnesses in humans has yet been proven.⁷¹

Release of TCE on the surface and then subsurface may result in the chemical making its way to the water table.⁷²

1. National Incidents: View Master

The TCE at the View-Master factory in Beaverton, Oregon, was used to degrease parts in cameras, slide projectors and toys. It was dumped on the ground between 1951 and 1980. Levels in the plant's water supply were more than 300 times the Environmental Protection Agency's permissible level.

A preliminary investigation by the Oregon Department of Human Services and the ATSDR did not find more cancer deaths among former plant workers than in the general population. But the same study did find six times the number of kidney cancer

⁷¹ <http://www.tceexposure.org/exposure.html>

⁷² <http://www.tceexposure.org/exposure.html>

deaths among women, and eight times the number of gallbladder and biliary cancer deaths among men who had once worked there.⁷³

2. Military Bases

A 2-part, front-page article in the *Los Angeles Times* reports that on nearly every block surrounding the former Kelly Air Force Base in San Antonio Texas, small purple crosses sprout from front lawns, marking the homes where cancer has struck. The residents call their neighborhood the "toxic triangle," alleging that the Air Force poisoned it with TCE. It was dumped at the base for decades and spread for miles through a shallow aquifer under 22,000 nearby houses.

TCE contaminated a shallow aquifer about 14 feet below the surface. The aquifer is not used by the city and little proof has surfaced that the TCE-tainted water ever penetrated down to the 1,000-foot-deep water drawn for the municipal drinking supply. Mark A. Weegar, senior project manager at the Texas Commission on Environmental Quality, said it was impossible for the contaminated water to migrate from the shallow aquifer into the city's water supply. However, people in the community dug their own unauthorized wells into the contaminated soil and used the water for drinking and bathing.⁷⁴

Texas health authorities have found elevated rates of liver cancer among residents, as well as higher-than-normal rates of birth defects. State health officials say it is impossible to prove that TCE caused the sicknesses seen. The community that lives over the "plume" has about double the expected rate of liver cancers, said Melanie

⁷³ <http://tce.tribe.net/thread/58bda808-3626-4472-b718-de5ba3340b6d>. The Death of My Boss, Gary Evans at View Master. Pasadena Star. Geis, Sonya. 5/28/05

⁷⁴ *TCE, Health and Community Impact*. L.A. Times. Fischbein, Neil. 3/30/06

Williams, senior cancer epidemiologist at the Texas Department of State Health Services. A twofold rate of excess cancer is "not a huge margin," Williams said, but she noted that the excessive cancers have continued for 10 years.

TCE was a widely used product across America from major industrial sites to small 'Mom and Pop' shops. Litigation regarding this substance is likely to continue for some time.

L. OTHER AGENTS, SUBSTANCES, MIXTURES AND PRODUCTS TO LOOK FOR IN THE FUTURE

With the National Toxicology Program's last 11th Report on Carcinogens (released on January 31, 2005) containing 246 entries (17 of which are new), 58 of which are listed as *known to be human carcinogens* and the remaining 188 listed as *reasonably anticipated to be human carcinogens*, it is anyone's guess as to what material will spawn the next great toxic tort trend. However, in addition to the subjects of interest/concern addressed above, we believe there is a reasonable probability of substantial future litigation involving the following agents, substances, mixtures and products (in no particular order):

1. Ionizing radiation (X-radiation, gamma-radiation and neutrons [sunlamps]);
2. Radiofrequency radiation emitted by cell phones;
3. Tungsten trioxide or suboxide (WO), (yielding asbestos-like "whiskers" (mining agents));
4. 1-Amino-2,4-dibromoanthraquinone (vat dye);
5. Cobalt salts (used in electroplating and electrochemical industries, etc.);
6. Diazoaminobenzene (used in the production of dyes, etc.);

7. Certain heterocyclic amines (“BBQ Cancer”);
8. Lead and lead compounds;
9. Naphthalene (intermediate chemical and ingredient in moth balls);
10. Nitrobenzene (used in the production of aniline and dyes);
11. 4,4’-Thiodianiline (used in production of dyes);
12. Wood dust;
13. Beryllium (compounds and ores used in the production of nuclear weapons, spacecraft, instruments, mirrors, specialty ceramics, autos, computers, sports equipment and dental bridges);
14. Cadmium (natural element used in batteries, pigments, metal coatings and plastics);
15. Steroidal estrogens (hormone replacement therapy);
16. Nickel and nickel compounds (used to make stainless steel; alloys for coins, jewelry, valves and heat exchangers; nickel compounds used for nickel plating, batteries, and catalysts);
17. Silica;
18. Alternative Abrasive blasting materials;
19. Radon;
20. Polybrominated biphenyls (PBBs) (used to make plastics; look out if you live in the lower peninsula of Michigan, due to contaminated animal feed);
21. Disinfection by-products (DBPs) of water treatment;
22. Metalworking fluids;
23. Methyl Isobutyl Ketones (MBK) (solvent in protective coatings);
24. Triethylamine (industrial catalyst for foundry mold resins, etc.);
25. Flame retardants (polybrominated diphenyl ethers (PDBE) a/k/a carpet pads and foam padding);

26. Perfluorooctanic acid (PFOAs) (used to make fluoropolymers);
27. Perchloroethylene (PCE, perc or tetrachloroethylene) (dry cleaning solvent);
28. Endocrine disrupting chemicals (EDCs);
29. Perchlorate (used for rocket propellant and thyroid treatment [really]);

So, pick your poison!

L. Conclusion

New sources of toxic tort litigation are limited only by the evolution of science and medicine (on the one hand) and the ingenuity of the Plaintiffs' Bar (on the other). Here we have touched on but a few of the more popular and likely topics of evolving toxic tort lawsuits. Underwriters considering renewed or new risks, adjusters handling incoming claims, in-house corporate counsel and outside litigation counsel would be well-served to be on the lookout for claims and suits involving these products and substances.