WATER WARS: WATER CONTAMINATION LITIGATION RUNS AMUCK!

FDCC 2007 Winter Meeting
Fairmont Scottsdale Princess
Scottsdale, Arizona
February 25- March 4, 2006

Presented by:

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Kurtis B. Reeg, former Chair of the FDCC's Toxic Tort and Environmental Law Section and winner of the 2001 Andrew C. Hecker Award, obtained his undergraduate degree from DePauw University (B.A. *cum laude* 1976) and his law degree from The Saint Louis University School of Law (J.D. 1979). Licensed to practice in Missouri (1979) and Illinois (1980), he focuses his litigation practice in the fields of toxic torts, products liability, insurance, environmental law and alternative dispute resolution, having served as the National Chair of the Products Liability Group and Chair of the Tort and Insurance Group of the St. Louis office of one of the nation's largest law firms. For more than twenty-five years, Mr. Reeg has represented product manufacturers, distributors and retailers in a wide range of toxic tort and products liability litigation. While he has handled cases involving many different types of products, he has substantial experience in matters related to asbestos (including 25+ years in the Madison County, Illinois, asbestos litigation), aviation, bio-technology, chemicals, construction equipment, drugs and medical devices, hydraulic equipment, herbicides, insecticides, ladders, lead, machinery, mold, pesticides, safety equipment, toxic torts, and vehicles.

For example, Mr. Reeg was part of the trial team which represented the manufacturer of a dump truck bed, which allegedly failed, causing severe personal injury to a worker who was buried in hot asphalt. After the plaintiff settled with all co-defendants, and following a two week jury trial, the jury exonerated the client with a defense verdict. The case was widely reported and was elected as one of the top ten defense verdicts in the United States in 1996 by the National Law Journal. Mr. Reeg has also been involved in the national litigation involving Goodyear's Entran II hydronic radiant heating rubber hose litigation. In June 2003, following a six week federal jury trial, the jury returned a defense verdict in favor of the client.

Mr. Reeg has also represented multiple insurance clients and their insureds in 19 states before their state and federal courts and regulatory authorities. He litigates many different types of sophisticated coverage claims. For example, Mr. Reeg has served as a Coordinating Counsel for The SAFECO Companies in the toxic tort, environmental, and long-tail claims fields and represented one of the member companies for over ten years in the nationwide W.R. Grace asbestos coverage litigation in the federal courts of New York. He tried and participated in several trials and different phases of the litigation, successfully prevailed on summary judgment, and argued and prevailed in the U.S. Second Circuit Court of Appeals on behalf of his client in this $500 million coverage dispute. Mr. Reeg also represented one of the SAFECO member companies in the massive and landmark Minnesota direct action against the insurance industry, State of Minnesota v. Allstate Insurance Co., et al., a suit brought by the State for cleanup of the first 2 of 106 environmental sites throughout the state. He further represented one of the carriers in the nationwide Burlington Northern noise-induced hearing loss coverage cases in St. Clair County, Illinois. He has worked with and for many insurers. He has also served in various national, regional and other coordinating counsel roles for various clients during his career.

In addition to his trial work, Mr. Reeg has extensive appellate experience. He clerked for two justices of the Illinois Fifth District Appellate Court, including the Chief Justice. He has presented several oral arguments in various state and federal appellate courts, including those in Missouri, Illinois, California and New York. He is a member of the bars of the United States Supreme Court, the Second, Seventh and Eighth United States Courts of Appeal, and the District Courts of the Eastern and Western Districts of Missouri, Central and Southern Districts of Illinois and the Districts of Colorado.

Alternative dispute resolution is also a significant part of Mr. Reeg's practice. He is a Rule 17 certified neutral in the State of Missouri, and is a Qualified Neutral on the panels of the U.S. District Court for the Eastern District of Missouri, the St. Louis County and City Circuit Courts, the St. Charles County Circuit Court and Aviation Mediation and Arbitration Providers, LLC. He has participated in over 100 mediations, arbitrations, early neutral evaluations and mini-trials.

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. 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."[1] Health Canada has also taken this position.

[1] 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.[2]

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.[3]

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.[4]

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.

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[2] http://news.ufl.edu/2005/12/23/arsenic-lumber/. "Researchers: Treated wood poses long-term threat". 12/23/05

[3] *Id.*

[4] 2005 WLNR 20898901. US State News, "Researchers: Treated Wood Poses Long-Term Threat." 12/23/05

B. 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. [5] Other suits are pending. Additionally, the EPA is currently studying the potentially carcinogenic effects of MTBE on humans.[6]

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

[5] http://www.washingtonpost.com/wp-dyn/content/article/2005/07/26/AR2005072601641.html

[6] 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.

C. HERBICIDES: 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.[7]

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.[8]

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[7] http://www.belville.com/mld/belleville/news/local/14080262.htm? "Jay Lehr's Essay on the atrazine lawsuit". March 12, 2006

[8] 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.[9] 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.[10]

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

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[9] http://www.ksgrains.com/triazine/november/index.html. Triazine Online Network, November 1996

[10] *Id.*

studies are scientifically baseless. "Evidence of atrazine's harm to humans is thinner than a rat's whisker".[11]

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.[12] 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.

D. 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

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[11] http://www.fumento.com/investorsatrazine.html. "Anti-Science Policies from the EPA" The Washington Times. Fumento, Michael. July 18, 2000.

[12] 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."[13]

Medicinal and household products, such as shampoo, are flushed down drains and toilets into wastewater sewages 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.[14]

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.[15]

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

[14] http://www.medicalnewstoday.com/medicalnews.php?newsid=39711. *Pharmaceutical Metabolites Found in Wastewater.* 3/19/06.

[15] 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.[16]

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.[17] 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.[18] 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

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[16] 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.

[17] *Id.*

[18] http://www.epa.gov/esd/chemistry/ppcp/images/heberer.pdf. *From Municipal Sewage to Drinking Water: Fate and Removal of Pharmaceutical Resides 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." [19]

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.[20]

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

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[19]http://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

[20] 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.[21]

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.[22] 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.[23]

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.[24]
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

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[21] http://wri.wisc.edu/Projects/FY03_DNR_Projects/FY03_DNR_KarthikeyanBleam.html

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

[23] http://www.msnbc.msn.com/id/6299642

[24] *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.[25]

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 contaminates could contribute to the development of antibiotic-resistant microorganisms is a concern.[26]

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.

E. 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

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[25] 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.

[26] Id.

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 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.[27] 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.[28]

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.[29] Rather, the EPA recommends up to twelve ounces per week of canned light tuna instead because of its lower mercury levels.[30]

"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

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[27] http://www.epa.gov/mercury/health.htm

[28] http://www.epa.gov/mercury/effects.htm#elem

[29] http://www.epa.gov/waterscience/fishadvice/advice.html

[30] *Id.*

Center. According to Dr. Cohen, avoiding fish because of overblown health risks does more harm than good.[31] 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.[32] 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." [33]

F. 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

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

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

[33] *Id.*

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.[34] 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."[35]

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."[36] These are very telling categorizations by persuasive organizations.

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

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

[35] 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

[36] http://www.atsdr.cdc.gov/tfacts19.html. ToxFaqs for TCE

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.[37]

Release of TCE on the surface and then subsurface may result in the chemical making its way to the water table. [38]

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 deaths among women, and eight times the number of gallbladder and biliary cancer deaths among men who had once worked there. [39]

1. 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

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[37] http://www.tceexposure.org/exposure.html

[38] http://www.tceexposure.org/exposure.html

[39] 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

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.[40]

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 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.

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

G. 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!

H. 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.