ACTS FACTS

THE MONTHLY NEWSLETTER FROM
ARTS, CRAFTS AND THEATER SAFETY (ACTS)
181 THOMPSON ST., # 23, NEW YORK, NY 10012-2586 PHONE 212/777-0062

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ACTS wishes you a healthy, happy 2006

20 YEAR ANNIVERSARY OF *ACT FACTS*

Editorial

We'd like to acknowledge you, our subscribers. Whether you have been with us for all or part of the last 20 years or have just joined us, your small subscription fee enables us to break-even on the newsletter's expenses--which is all we ask. In a sense, you enable us to keep in touch with all of you without taking resources from ACTS' other projects. And many of our articles were written in response to clippings you sent us or from comments in your calls, e-mails, and hand written notes on your renewal blanks. We think of the newsletter as a joint venture with you. Thank you.

LATEST THEATRICAL FOG STUDY

"Exposure to Atmospheric Effects in the Entertainment Industry," Kay Teschke, et. al., *Journal of Occupational & Environmental Hygiene*, 2:277-284, May, 2005.

A new study of special effects was published in May, 2005 in the *Journal of Occupational & Environmental Hygiene (JOEH)*. The study included a very important statement in its conclusion:

> *Exposures to theatrical fogs are just beginning to be measured. It is important to consider these exposures in light of any health effects observed, since existing occupational exposure limits were developed in other industries where the aerosol composition differed from that of theatrical fogs.* p. 277.

This statement should be considered by those who set standards for exposure to theatrical effects such as the Entertainment Services Technology Association (ESTA). ESTA's standards are based on outdated Occupational Safety & Health Administration standards for mineral oil and glycols. The data used to set these OSHA standards came from industrial applications in which the mists were very different in aerosol size and composition.

Worse, OSHA's standards, by definition, are applicable to healthy adult workers only. They do not apply to the elderly, infirm, handicapped, or children who may be on stage or in the audience. ACTS strongly opposes exposure of children and other high risk individuals to glycol and mineral oil special effects.

THE DATA. The JOEH study compared the levels of airborne haze and fogs used in TV, film, live theater, and concerts. It monitored 19 different sites for a total of 32 sampling days. Eight sites were TV or movie productions, six were live theater productions, three were live music shows, and two were a dog show and a video arcade.

The most common effect in these productions was hazing throughout entire set. Researchers found that the average inhalable haze concentration was 0.70 mg/m^3 (ranging from 0.02 to 4.1 mg/m^3). The mean proportion of total aerosol mass was under 3.5 microns meaning that deposition deep in the lung (the alveoli) is likely.

Aldehydes were also measured. Those aldehydes consistently above detection limits were formaldehyde and acetaldehyde with mean concentrations of 0.039 and 0.025 mg/m^3. Acetaldehyde was found at levels consistently higher in venues using glycol fluids compared with those using mineral oils. (Formaldehyde and acetaldehyde are allergens and are listed by most health agencies as carcinogens.)

Those planning to study special effects can use the JOEH study as guidance for monitoring procedures. But researchers in this field must always be aware that various productions use different fog/haze products in different amounts, in different machines, and under different conditions. And they must remember that proper exposure standards for these aerosols have not been set.

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LADDER RECALL

www.cpsc.gov & www.louisvilleladder.com

The US Consumer Product Safety Commission (CPSC) issued a warning and recall of Multi-Purpose, Step-to-Straight, Combination, Manhole and Extension Trestle Ladders manufactured by Louisville Ladder. No injuries have been reported, but the manufacturer has received two reports of rungs on the ladder breaking near the side rail.

ACTS suggests that if any of your ladders are fiber glass and metal and were manufactured by Louisville Ladder that you go to the recalls at www.cpsc.gov and search for "ladders." Pictures and model numbers of the recalled ladders are there. ACTS is especially concerned for our theatrical readers since the step-to-straight manhole and extension ladders are often used for setting lights.

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TOXIC TOYS FOR ADULTS

Grist Magazine, Emily Gertz, 12/6/05, http://grist.org/cgi-bin/

A subscriber e-mailed an article about studies of soft vinyl plastic sex toys. The studies showed that the toys contained potentially toxic phthalate plasticizers at the highest levels ever found in commercial plastics. Since the sex toy market is unregulated, this is unlikely to be corrected.

These studies are not art-related, but the findings are consistent with research on vinyl children's toys, miniblinds, lunch boxes, and the like. The article illustrates two principles: 1) vinyl plastics often contain additives such as phthalates and lead that can migrate to the surface; and 2) the less regulated the industry, the higher the amounts of toxic additives are likely to be.

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BEWARE OF "GLITTER LUNG"

http://www.theonion.com/content/node/42814/print, Issue 41-49, 11/23/05

A subscriber sent us an article called "Cases Of Glitter Lung On The Rise Among Elementary-School Art Teachers" from the November 23, 2005 issue of *the Onion*. It described in gory detail a disease cause by inhalation of the glitter flakes used in many elementary school art projects.

The article includes a picture of a doctor observing a lung scan of a "sufferer," a diagram of glitter-ladden lungs and statistics about the nearly 8,000 cases reported in 2004. It also states that a "safe" OSHA permissible exposure limit of 0.4 flakes per cubic centimeter of air was established in 1970 (a year before the Occupational Safety & Health Administration existed!).

The article is beautifully patterned after legitimate studies of real hazards. At the end, the author talks about other dreaded elementary school teacher diseases such as "macaroni elbow," "modeling clay palsy," "crayon flu," and "googly-eye." The off-beat, edgy *Onion* was founded in 1988 by two university students in Madison, Wisconsin. It has about 990,000 weekly readers.

REAL PROBLEMS. ACTS receives legitimate complaints about glitter. While the particles are too large to be inhaled in significant amounts, it can get into the eyes occasionally when it gets air-borne or when children rub their eyes with flakes on their hands. Glitter flakes made of substances such as anodized aluminum are safe for all but the very young. On the other hand, powdered metals such as aluminum and bronze are not safe. They can be inhaled and they can burn rapidly or explode when suspended in air when exposed to a static discharge, spark, or flame.

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HISTORIC LANCASTER GLASS CO. CITED BY OSHA

BNA-OSHR, 35(48), 12/8/05, 1117 & www.osha.gov (news release)

December 2, the Occupational Safety and Health Administration (OSHA) proposed $121,000 in fines for Columbus Ohio-based Lancaster Glass Corporation for 36 alleged serious violations of federal workplace safety and health standards.

OSHA opened an inspection in June, 2005. The inspection revealed violations, classified as serious, of regulations dealing the guard rails for open-sided floors, platforms and runways; proper construction of fixed ladders; appropriate personal protective equipment; adequate machine guarding; electrical and welding hazards; grinding wheel safety, and storage or welding cylinders.

Lancaster Glass has been inspected 13 times since 1986, resulting in 62 serious and six other-than-serious violations prior to 2005. In January of this year, the company was cited for overexposing workers to lead and other potential employees' health hazards.

Lancaster glass has been in business since about 1915. In the 1930s, Lancaster was one of the manufacturers of so-called "depression glass" which is now considered highly collectable. Its products are in the Ohio Glass Museum and other museums.

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LEGIONNAIRES DISEASE FACTS AND FIGURES

ASHRAE J., 11/05, pp.7 & 56, *ACTS FACTS* 3/97, 2/99 & 10/00 & other sources

Legionnaires disease (LD) was so named because the disease was identified first in 1976 in elderly American Legion conventioneers at a hotel whose faulty air conditioning system released bacteria. As a result, people assume the disease is rare, seen only in occasional outbreaks, and affects primarily older men.

THE FACTS. Actually, there are an estimated 25,000 cases and 4,000 deaths from LD every year in the US. On average, 11 people die each day from LD and another 57 people are infected. Those who recover may have long-term debilitating effects in brain or kidney function and/or reduced lung capacity. There are nearly as many deaths each year from LD as there are deaths from workplace accidents.

About a third of LD victims are women and thousands of victims are people younger than 50 years old. Only about 55% of the cases are outbreak associated. Most cases are one or two at a time and do not make public notice. Most cases are never diagnosed, so the victims and their families don't know LD was the cause.

CAUSES. When water is misted or evaporates into the air, the common Legionnella bacteria may be made airborne, inhaled, and infect the lungs. Sources of infection include air conditioning systems, humidifiers, swamp coolers, whirl pool spas, decorative fountains, and water used for cooling tools or for wet grinding. This can happen anywhere: hotels, hospitals, factories and even in homes.

Soil contaminated with the bacteria can also cause the disease. Infections have been caused by dust raised during earth-moving operations and during gardening with contaminated potting soil.

RECOMMENDATIONS. Infections are preventable by proper installation, maintenance, and disinfecting of water-using equipment or by avoidance of soil dust. When pneumonia does strike, patients should ask for tests to determine if LD could be the cause. If it is LD, the source should be found and the problem fixed.

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ACTS' financial support is primarily earned income from industrial hygiene services, lectures, and courses provided at below market value to schools, art and theater organizations, museums, and other art-related entities. Other income is from sale of publications and unsolicited donations from individuals and foundations. ACTS takes no money from industry or any party having a financial interest in our opinions about art products.

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February 2006 Vol. 20, No. 02

CONSUMERS BETRAYED AGAIN BY THE PETROLEUM INDUSTRY

J. Occup. & Envir. Hyg., Vol 3, pp. 1-8, ISN1545-9632 online

A bombshell article appeared in the January 2006 issue of the *Journal of Occupational and Environmental Hygiene*, which is jointly published by the American Conference of Governmental Industrial Hygienists (ACGIH) and the American Industrial Hygiene Association (AIHA). The writer, Melvyn Kopstein, scoured the literature and found roughly 40 citations to support his contention that common petroleum distillate solvents are contaminated with benzene at levels that can easily expose users of these products to benzene in excess of the Occupational Safety & Health Administration's permissible exposure limit (OSHA PELs) or the ACGIH Threshold Limit Values (TLVs). Kopstein makes two major points:

1. The OSHA hazard communication standard (1910.1200) requires the listing of cancer-causing chemicals such as benzene at 0.1% by weight in their products on the product's material safety data sheet (MSDS). Yet a table in Kopstein's article list the references and analytical data from study after study showing benzene at levels as high as 10 times the 0.1% limit (1%) in common products such as hexane, petroleum benzine, petroleum naphtha, Stoddard solvent, VM & P naphtha, Rubber solvent, Varsols, toluene, and alkyd paints. The studies, dating from 1955 to 2005, also show that the benzene levels in common solvents have not changed significantly over the years.

2. OSHA also requires manufacturers to list cancer-causing chemicals at any level that is known to result in exposure of workers to benzene in amounts over the PEL or TLV. Kopstein uses a study published in 2003* in which benzene exposure was assessed during use of a mineral spirits-based parts washing operation. A worker using a fluid containing only 58 parts per million (about 0.0058%**) could experience exposures that would approach the TLV. This means that even solvents containing benzene in concentrations between one and two orders of magnitude below OSHA's 0.1% threshold can result in significant exposure under some common conditions of use.

COMMENTS. ACTS thanks Kopstein for pulling together these forty old and new studies. Clearly, ACTS can no longer recommend use of common petroleum distillates until this issue is resolved. Until now, we have trusted ACGIH TLVs for petroleum distillates and have recommended products such as benzine and VM&P naphtha with TLV-TWAs of 300 ppm over products such as unrefined mineral spirits and Stoddard solvent with more restrictive TLV-TWAs of 100 ppm. But this is all useless if MSDSs fail to disclose significant levels of benzene. And artists use these distillates in ways that are very likely to overexpose them during processes such as "turp washes" in painting, during cleaning plates and presses in printmaking, and worst of all: working at home.

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* Feddoruk, M., R. Bronstein, and B. Kerger: Benzene exposure assessment for use of a mineral spirits-based degreaser, *Appl. Occup. Environ. Hyg*,. 18:764-781 (2003).

** Percent is a weight/weight calculation and ppm is volume/volume so this is not exact but it is in the same ball park.

SOLVENT EXPOSURE DURING PREGNANCY: ANOTHER STUDY

Occup. & Environ. Medicine, J.L. Zhu, L.E. Knudsen, A-M.N. Andersen, N.H. Hjollund and J. Olsen, 2006; **63**:53-58

A study comparing laboratory workers' and teachers' and pregnancy outcomes within the National Birth Cohort in Denmark showed no significant differences between laboratory technicians and teachers except for a slight increase in preterm births and congenital malformations in lab technicians who worked with radioactive materials doing radioimmunoassays or radiolabelling. However, when an across-the-board exposure matrix was applied to both categories of workers, "an increased risk of "major" malformations for exposure to organic solvents was seen."

ACTS FACTS has reported three other studies showing adverse pregnancy outcomes from solvent exposure in our July 1998, May 1999, and December 2004 issues. The first two studies (one in a Russian medical journal and the other in the *Journal of the American Medical Society*) showed major malformations in children born to solvent-exposed mothers. A third study in the *Archives of Pediatric & Adolescent Medicine* (Vol. 158, Oct 2004, pp 956-961) looked at apparently normal children born to moderately solvent-exposed mothers. When compared with children of unexposed mothers, these children were found to have poorer language, memory and attention skills and they were more hyperactive and impulsive. ACTS recommends avoiding all solvents during pregnancy.

NIOSH INVENTS BOOTH TO CLEAN DUSTY CLOTHES

BNA-OSHR, 35(24), 6-16-05, P. 561, *NIOSH eNews*, 6/05

The National Institute for Occupational Safety and Health developed a new method to clean dust-soiled clothing. Reducing exposure to respirable dusts is an ongoing goal in mining and many other industries. A significant dust exposure source is known to come from contaminated work clothes.

In the mining industry, the only currently approved method to clean clothes is to vacuum them with a HEPA filter system. "This is very difficult and time-consuming and, in most instances, not very effective," NIOSH said. Most workers, NIOSH found, preferred to use a single compressed air hose to blow dust from their clothes. This is prohibited by mining law because it creates a dust cloud in the workplace and contaminates coworkers. This method is also prohibited under both the OSHA General Industry and Construction Standards unless the pressure in the hose has been reduced to 30 pounds per square inch (psi) or lower and the worker is wearing protective goggles.

The NIOSH invention uses an enclosed booth containing a wall of 26 spray nozzles spaced two inches apart with enough space to allow a worker to rotate in front of the nozzles. Air is exhausted to create negative pressure in the booth to prevent dust from escaping to the work environment. All workers using the cleaning booth are required to wear a half-mask respirator with an N100 filter, hearing protection, and unvented goggles, the institute added.

Testing showed the booth was 10 times faster and able to remove 50% more dust than vacuuming or using a single air hose. An average cleaning time in the booth during field testing was about 18 seconds, NIOSH said. This compares to nearly 400 seconds for vacuuming and nearly 200 seconds for using a single air hose. The booth system costs about $3,000, excluding the cost of the exhaust ventilation component.

This booth also should be useful to workers doing clay mixing, stone sculpting and others art processes that create highly toxic dusts. More info is available at:

http://www.cdc.gov/niosh/mining/pubs/pdfs/tn509.pdf

$1 MILLION AWARDED WELDER FOR MANGANESE EXPOSURE

BNA-OSHR, 36(3), 1/19/06, p. 52

Two years ago in the January 2004 *ACTS FACTS*, we covered an Illinois Circuit Court jury award affirming welder Lawrence E. Elam's claim that welding rod manufacturers should be liable for his parkinsonism (*Elam v. BOC Group Inc.*, Ill. Cir. Ct., No 01 L 1213, *verdict* 10/29/03). Elam claimed that inhaling manganese fume which gets airborne during welding caused his parkinsonism.

The jury awarded $1 million to 65-year-old Elam. But this decision was appealed by the defendants. On December 20, 2005, the Illinois Appeals Court upheld the Elam verdict (*Elam v. Lincoln Electric Co.*, App. Ct., No. 5-04-10120, 12/20/05). This is probably the final chapter in this battle and a victory for the thousands of other plaintiffs who have filed suits for similar illnesses.

FAILURE TO WARN. In affirming Elam's claim, Judge Ralph Mendelsohn with the Illinois Appellate Court, Fifth District, said evidence presented during the 4-week trial supported Elam's claim that Lincoln Electric Company and others in the welding rod industry failed to adequately warn workers about the dangers of manganese-containing fumes released during the welding process.

"Here, the evidence indicates defendants packaged the relevant warnings in a way that virtually guaranteed plaintiff and others within the welding trade would not read them," Mendelsohn said. Rather than placing exposure warnings on the welding rods themselves where welders were likely to see them, Mendelsohn said, "these warnings were placed on the cartons that contained the welding rods" and "the evidence showed that the welders seldom saw the cartons because the rods had been already removed from the cartons by the time they were used by the welders."

FAILURE TO INVESTIGATE. Judge Mendelsohn also found adequate credible scientific evidence to allow a link between Elam's manganese exposure and his Parkinson's disease. "The record is replete with articles, scientific papers, and testimony showing a correlation between welding and Parkinsonism," the judge said. Additionally, Mendelsohn held that Lincoln Electric and others in the welding rod industry knew about the possibility of such a link for decades but they failed to carry out any epidemiological studies or to otherwise investigate the issue.

In particular, Mendelsohn pointed to a study that supported the link between Parkinson's and welding fume published in 1979 by the industry-backed American Welding Society. Known as the Franklin report, the society reportedly said that because of a number of cases of manganese-related problems among welders "in future epidemiology studies of various welding populations, the prevalence of this disease should be investigated" yet "no epidemiology study was conducted" and the "defendants failed to investigate the health hazards of manganese in the welding fumes," Mendelsohn said.

COMMENT. The two crucial points in this decision are 1) that labeling must be done in such a way that the end user is assured access the warnings; and 2) industries have an obligation to investigate the potential hazards of their products when there is credible evidence of risk.

Art and theater welders also use welding rods which are not in their original cartons where warning labels may be found. Worse, I have never known of a theater, film, or TV producer/employer that has warned their welders or those working around the welders about manganese hazards. And schools often do not inform art teachers and students about manganese hazards. Employers and schools also must provide exhaust ventilation for welding to prevent diseases from exposure because justice is very slow. This case has been in the courts now for over 5 years.

NFPA PROVIDES MISLEADING CARBON MONOXIDE DATA

NFPA website, search Carbon Monoxide Poisoning

The National Fire Protection Association's web site has information on Carbon Monoxide (CO) detectors which, in ACTS opinion, is misleading. Most notably, NFPA presents a chart of CO symptoms which says there are no ill effects for average, healthy adults at 50 parts/million (ppm):

CO concentration	Symptoms
50 parts/million (ppm)	No adverse effects with 8 hours of exposure
200 "	Mild headache after 2-3 hours of exposure
400 "	Headache and nausea after 1-2 hours of exposure
Table continues up to death at 12,800 ppm	

AVERAGE HEALTHY ADULTS. The American Conference of Governmental Industrial Hygienists (ACGIH) sets an 8-hour threshold limit value (TLV) of 25 ppm to protect healthy adults from anoxia (lack of oxygen), cardiovascular, central nervous system and reproductive effects. This is ½ of the level at which NFPA claims there are no adverse effects. But healthy adults are not the only people NFPA should consider. Children, pregnant women, the elderly and infirm can be exposed in homes. Instead, NFPA should consider the Environmental Protection Agency's limits for these individuals:

EPA AIR QUALITY INDEX FOR CO

description	8-hour (ppm)
good	4
moderate	9
unhealthy for sensitive groups	12
unhealthy	15
very unhealthy	30
hazardous	40-50

As we can see, the NFPA's standard of 50 ppm certainly cannot be considered safe. So one would think that household carbon monoxide detectors should alarm at levels that would protect people from carbon monoxide's ill effects. They do not. Instead, household detectors alarm only after high levels are detected. These levels are listed in the table at bottom of this article.

HOUSEHOLD CO DETECTOR LIMITS

100 ppm averaged for less than 90 minutes
200 ppm averaged for less than 35 minutes
400 ppm averaged for less than 15 minutes.

Consumers should remember that: CO detectors will alarm in time to to save your life–but not in time to to save your health. Contact ACTS about a detector that alarms at 11 ppm.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee; Staff: John Fairlie, OES.

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JEWELRY: MAJOR RETAILERS AGREE TO GET THE LEAD OUT

Press releases: Center for Envir. Health-1/27/06; California Attorney General, Sacramento, 306-009, 1/27/06; Washington Post, 2/1/06; & Good Afternoon Toxicology Consulting, Brian Lee, 2/4/06

On January 27, the California Attorney General, Bill Lockyer, and the Center for Environmental Health (CEH) announced a settlement with major retailers calling for swift action to end sales of lead-containing jewelry in California by reformulating their products. Assisting in the development of the settlement was Brian Lee, PhD of Good Afternoon Toxicology Consultants.

In the past there were numerous cases of children suffering from lead poisoning due to jewelry exposures. These poisonings prompted health warnings and many national recalls by the Consumer Product Safety Commission. An example occurred in 2004 when a 6-year-old Sand Jose girl suffered lead poisoning after putting a charm in her mouth. That case lead to a recall of 2.8 million metal charms.

In addition to national and state recalls, California has a law called Proposition 65 which allows the Attorney General and citizens groups to sue companies that violate the State's product safety standards. CEH initiated a Prop 65 legal action against the jewelry companies in late 2003 and, with the California Attorney General, sued the companies who sold the lead-containing jewelry.

Seventy one of the companies named in the lawsuits signed the settlement filed in Alameda County Superior Court. Included were Target, Kmart, Macy's West, Nordstroms, Claires, Mervyns, Sears, Toys R Us, Disney, Burlington Coat Factory, J.C. Penney, Federated Department Stores, and dozens of other companies.

Five companies did not agree to remove lead from their jewelry: Wal-Mart, Jordache, Cornerstone Apparel (Papaya stores), the Gerson Company, and Royal Items.

LEAD LIMITS. The settlement sets strict standards for lead levels in all jewelry components, and requires that lead levels in children's jewelry be reduced to trace amounts. Under the settlement terms, metal components in, and coatings on children's jewelry must contain less than 600 parts per million (ppm) of lead, while plastic (PVC) components can contain no more than 200 ppm. In lab testing commissioned by CEH, lead levels in PVC cords on costume jewelry ranged from 1400 to 20,000 ppm, and lead levels in a coating on one child's bracelet tested at over 165,000 ppm. In tests conducted by CPSC and others, metal components often tested at over 500,000 ppm, and as high as 950,000 ppm (95%).

The defendants have agreed to pay a total of $1.875 million, including $100,000 in civil penalties; $250,000 for a jewelry testing fund; $325,000 to educate consumers about the health risks from exposure, and the remainder in attorneys fees.

RECOMMENDATIONS.

* Avoid children's jewelry that has plastic cords, dull metallic components, or white fake pearls. These have often tested positive.

* View pictures of the exact items that have tested positive for lead at www.cpsc.gov. Throw away these items if you have them.

* Test your child's jewelry with a home lead test kit. Various lead test kits are available at hardware stores and web sites including the Lead Check brand at www.leadcheck.com

* Do not purchase children's jewelry at those stores that have not entered the agreement.

HILTON SETTLES MOLD SUIT

Honolulu Star-Bulletin, http://starbulleting.com/2005/12/24/business/story01.html

A class-action lawsuit, filed by a Florida man who accused Waikiki's Hilton Hawaiian Village of failing to disclose a mold problem at its Kalia Tower, could compensate many previous guests for a total of $1.8 million. The settlement offers guests either $150 in travel coupons or $50 cash for each night of their stay.

The lawsuit alleges that Hilton failed to disclose the existence of mold contamination in the Kalia Tower to guests who stayed at the 25-story, 453-room tower in June and July of 2002. Approximately 2,900 Hilton guests around the world are entitled to participate in the settlement.

The original class representative in the lawsuit, Jeff Moffett, sought a refund of the money he paid during an 18-day stay at the Kalia Tower in July 2002. According to the original lawsuit, Moffett, his wife and son asked Hilton employees to move them four times after the family noticed damp bed sheets, and they were given four different reasons which they could not be moved.

Hilton closed the Kalia Tower in July 2002 after mold investigators said the found evidence of *Eurotium* mold in the guest rooms. Hilton has sued more than a dozen companies and individuals, blaming architects, engineers, construction companies and inspection firms for the massive mold problems, which cost millions to clean up and resulted in a 13-month closure of the property and millions of dollars in lost revenue.

"The settlement is an important victory for consumers and for their rights to be fully informed when they are buying services and products," said Thomas Grande, a Honolulu-based attorney who represented the class. Currently, all class members are being notified at Hilton's expense. Once the class is identified, the settlement must go back to court for final approval.

"The class members are from almost every state and many countries around the world – it's going to be important to make sure that as many class members as possible are informed of their right to participate in the settlement," Grand said.

ASHRAE MEMBERS QUALIFY. One of the groups of people who have been notified are those members of the American Society of Heating, Refrigerating & Air-conditioning Engineers (ASHRAE) who attended their annual conference at the hotel in the covered time period. The presence of these engineers at the hotel may be more than coincidental, since ASHRAE sets the design standards for ventilation and air-conditioning systems that control indoor climate and mold.

A 13-YEAR OLD CLEANS UP KATRINA MOLD

Newton TAB, a Newton Mass. weekly newspaper, alert from Ellie Goldberg,
www.townonline.com/newton/artsLifestyle/view.bg?acticleid=424224&format=textM

On February 8, a "special" report in the Newton, MA weekly newspaper featured 13 year-old Alex Rubin. Alex told readers about a winter vacation trip he, other local teenage students, and their parents took to Iberia, Louisiana. All 15 people on the trip had volunteered to clean out a flood damaged house. Alex said that the stench inside the house was overwhelming and brought tears to their eyes. Everything was covered with green, red, black and white mold. Alex noted that their hair and clothing were full of mold when they carried all the damaged furniture and possessions out to the street. Dust flew as Alex used an axe to break out damaged wall board.

Overall, Alex and his teen-aged friends enjoyed their stay, felt they had done something useful, and they hope to do it again. However, many people have been permanently injured from exposure to mold when doing work like this. People often can work around mold without adverse effects for a time and then suddenly develop adverse reactions and life-long allergies. ACTS strongly recommends that only adults trained to wear proper protective gear do this work.

MAKER OF PYRO PRODUCTS FOR FILM/TV CITED

Cal-OSHA Reporter, flash report, Wednesday, February 22, 2006 www.cal-osha.com

California's Division of Occupational Safety and Health (DOSH) has charged a pyrotechnic manufacturer with three willful and six serious violations following an August 2005 incident in which an underage worker was severely burned. The temporary agency that employed the worker was also cited. DOSH has proposed almost $250,000 in penalties against the manufacturer and more than $40,000 against the temp agency.

The 17-year-old worker was performing "kegging" operations at MP Associates (MPA), a Sierra Nevada foothills manufacturer of pyrotechnic products for the film industry, when the accident occurred. Kegging involves placing the dried pellets into a fiberboard cylinder known as a keg and securing the lid. The worker was moving a keg when it ignited, resulting in second- and third-degree burns over 80 percent of his body including serious burns to his face, according DOSH

The three willful violations, each carrying a $70,000 fine, allege that MPA failed to 1) protect employees from the risk of eye injuries, 2) ensure that workers wore appropriate protective clothing, and 3) ensure that they wore flame-retardant gloves. California's General Industry Safety Orders (GISO) §3382(a), requires employers to provide face and eye protection for employees. And GISO §3384(a) requires protection for workers whose tasks involve "unusual and excessive exposure of hands to cuts, burns, harmful physical or chemical agents or radioactive materials." DOSH charges that the injured worker was wearing rubber gloves, which were "inadequate and inappropriate."

The additional six serious violations against MPA were issued under GISO §5189, the Cal/OSHA standard for control of hazardous substances. The temporary agency, known as Xanterra, Ltd., was cited for a general violations plus three alleged serious violations that are similar to charges against MPA, including failing to provide protective clothing, gloves, and eye and face protection.

COMMENT. Only adults who are properly trained and wearing proper protective gear should work with pyrotechnic materials. This young man has been seriously and permanently harmed.

"AIDA" PERFORMANCE CANCELED: STAGE TECHNICIAN INJURED

ABC4 News, TV, Utah, Story by Elizabeth Hur/Reed Cowan-local reports on 2/22/06 & 2/23/06, data collection by Pamela Dale

On February 21, the Hale Centre Theater in West Valley City, Utah, cancelled a production of Elton John's musical, "Aida," in mid-performance because a stage technician was seriously injured during the show. The victim, 32 year-old Will Phillips, was flown to a near by hospital after suffering a broken jaw, ear, head and chest injuries. He is expected to recover.

The accident occurred when Phillips was working underneath the stage where there is an hydraulic lift system to raise and lower platforms. James Pattee, the stage manager, reportedly said, "The center section went up just as it was expected [to] and unfortunately, one of the technicians got caught between the section that was going up and the section that was already up." In another report, Pattee said, "The number went on and it wasn't until about a minute later when we looked and realized that our stage technician was stuck, and that he was completely unable to move." He said further that the hydraulic system is normally equipped with sensors to prevent this kind of incident, but a sensor was blocked by an addition to the stage that was specially added for this production.

Theater spokesman, Chris Thomas added, "they've been in this theater with this moving stage for seven and a half years. There has not been an incident in more than 3,000 showed where an actor or a cast member was injured." Now, due to the accident, the show will do away with the moving stage sequence and replace it with a new dance until further notice.

COMMENT: Foreseeable hazards from hydraulic lifts come under the Occupational Safety and Health (OSHA) rules. An acceptable way to comply with these regulations is to provide sensors which will cut power to the hydraulic lifts if someone is in a dangerous area. There also must be written procedures and documented training to ensure that all workers on site are familiar with the hazards and the precautions that must be taken. If the Stage Manager is correct and the sensors were knowingly blocked by scenery, there should be OSHA citations issued in this case.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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ACTS FACTS

THE MONTHLY NEWSLETTER FROM

ARTS, CRAFTS AND THEATER SAFETY (ACTS)

181 THOMPSON ST., # 23, NEW YORK, NY 10012-2586 PHONE 212/777-0062

April 2006 Vol. 20, No. 04

ANTHRAX FROM GOAT HIDES FELLS DRUMMER

Multiple news accounts and *MMWR*, CDC, 55(10), pp. 280-282

On February 21, 2006, a case of anthrax was reported to the media. Dancer/drum maker, Vado Diomande, was diagnosed with the disease after he collapsed during a performance in Pennsylvania. For a moment, it was thought this might be a replay of the 2001 anthrax terror attack. But tests showed that Vado had inhaled anthrax spores from animal hides he had brought back from Africa to make the drums for his troupe's dance performances.

VADO'S WORKSHOP. The dried hides were wrapped in plastic and transported in Vado's van to his storage facility workplace in Brooklyn, NY. The space was 12 x 10 x 30 feet with no operating air conditioning or windows. On February 12, he worked on the hides. He razored off the hairs and scrapped the hides. This process generates aerosolized dust. He wore no protective gear.

On February 15, Vado cleaned his shop by sweeping and vacuuming up the hairs. Dry sweeping and vacuuming would only have raised more dust. The filters in ordinary vacuums do not effectively capture anthrax spores. As a result, tests showed the workshop was highly contaminated. Even inactive air-conditioning ducts 12 feet above the floor were contaminated. Spores on his shoes and clothing were also tracked into his van and his home in Greenwich Village in NYC.

TYPES & HISTORY OF ANTHRAX. There are three forms of anthrax: 1) inhalation, 2) gastric (from ingesting anthrax), and 3) cutaneous (skin) anthrax. Between 1955 and 1999, the Centers for Disease Control reports there were 236 anthrax cases. The commercial processing of animal hair or hides accounted for 153 of these plus an additional 5 cases from working with commercial animal hair or hide products. The majority of the total 158 cases were cutaneous anthrax. One of these cases of skin anthrax was associated with use of a goat hide drum purchased in Haiti in 1974.

Only 10 of the 158 cases were inhalation anthrax. The last one of these cases occurred in 1976.

THE 1976 CASE. California weaver, Dennis Friend, died from inhalation anthrax contracted when he was working with legally imported Pakistani wool that was infested with the spores. I wrote about this case at the time. And then in 1980, I developed and taught the first course in art hazards ever taught in the US. Dennis' widow, Kathleen, came to the University of Wisconsin to take that class. On the last day, she told us how Dennis at first had flu-like symptoms. He went to the hospital when they got worse. Within 48 hours of the onset of serious symptoms and even before the doctors were able to diagnose his illness, Dennis died.

Kathleen was also a weaver whose loom was next to her husband's in the home they shared. She had not worked much prior to Dennis' death because she had given birth to their child a few weeks before this. For a month after this she lived in fear, wondering if she or the baby would also fall ill. There weren't very effective treatments in 1976 and luckily she and the child remained well. •

ANTHRAX TODAY. Today, prophylactic treatments can be administered to people exposed to anthrax. Four people who were present in Vado's drum-making workplace were given such treatments and they remained well. Vado's treatment also was successful. On March 22, after more than a month in hospital, Vado held a press conference prior to his release. He says he will go back to making drums, but he will make sure his workspace is well-vented and he will protect himself.

RECOMMENDATIONS. The Department of Agriculture recommends that people eliminate the risk for inhalation anthrax by working with hides that have been tanned or otherwise treated to render the spores nonviable. Artists who insist on working with the dried hides can minimize (but not eliminate) the potential for exposure by:

- regularly washing hands thoroughly with soap and warm water;
- wearing durable protective gloves and a designated pair of shoes in the workplace;
- providing good ventilation;
- inactivating spores on hides and tools by heating them to 158 ° F or by placing them in boiling water for 30 minutes or longer;
- removing and laundering clothes worn during work before leaving the workspace;
- using a HEPA vacuum for cleaning;
- never raising dust by shaking or beating hides, dry sweeping, using compressed air, etc.; and
- never allowing other persons in the workspace

Drum makers, owners, and users should report new skin lesions or serious respiratory illnesses to their health-care providers and describe any contact with animal hide or hair products.

UNIVERSITY PAYS $300,000 PENALTY FOR ASSAULT ON CAMPUS

Knoxville News Sentinel, Saturday March 18

The University of Tennessee at Knoxville has been ordered to pay $300,000 to a former student who suffered brain damage in a mugging that was said to have been facilitated in part by poor lighting near the campus garage where it took place. The $300,000 penalty, which was announced on March 17 by a commissioner with the Tennessee Claims Commission, was the largest that state law permits. The university argued that the student's assailant bore the sole responsibility for the vicious attack and they are considering an appeal. The attacker is currently serving a 16-year sentence in prison.

NY JURY ORDERS COLLEGE TO PAY $16 M INJURED STUDENT

Chronicle of Higher Education, Tuesday march 21, 2006

A New York State Jury ordered Union College in Schenctady to pay $15.8 million to a student who asserted that she was permanently injured when she fell into a manhole on the college's campus. The accident occurred in January 2003 when student Mary Ann Nolan, crossed a dark campus parking lot at night. Ms Nolan stepped into an open manhole and fell, hip-deep. A Union spokesman says it is believed that the manhole cover had been scrapped off by snow plows.

The jury awarded Ms Nolan $300,000 for past pain and suffering, $7.5 million for future pain and suffering, and $8 million for future medical costs. The school is considering an appeal.

UPDATE: LEAD JEWELRY KILLS CHILD

CPSC press release # 06-119, march 23, 2006

Last month *ACTS FACTS* covered the recalls of children's jewelry that contains lead. Readers can add to that information the fact that the death of a child is now associated with these items. A bracelet with a small heart-shaped charm with the word "Reebok" on it was given free to children whose parents purchased certain footwear. One child, unknown to his parents, ingested the tiny charm. The 4 year-old died before hospital tests could isolate the cause of his lead poisoning.

ZUBBLES: A NEW COLORED BUBBLE NOVELTY PRODUCT

C&EN January 2, 2006, p.48; *Popular Science*, November 2005 & Zubbles website

Tim Kehoe, a St. Paul, MN, toy inventor, spent 11 years pursuing his quest for colored bubbles for a children's novelty product. He tried many dyes. He even tried nitric acid once because of the red fumes it produced at room temperature--showing a lack of concern for the toxicity of his product.

Eventually, Kehoe found a washable dye which attached evenly to the surfactant molecules of a soap bubble. But at the unveiling of his invention in July 2004, moms weren't so excited about the vivid splotches of color left behind on their kids, no matter how washable.

The problem was resolved for Kehoe by Ram Sabnis, holder of a Ph.D. in dye chemistry. Sabnis synthesized a dye that loses its color with friction, water, or exposure to air. This innovation in dye chemistry is based on a structure called the lactone ring. When the ring is open, the dye molecule reflects visible light in range of the bubble's color. When the ring is closed, all light passes through making the dye invisible. As a result, the color vanishes when the bubble bursts.

The new product is called "Zubbles." Their website says Zubbles is a combination of a dye molecule and a detergent molecule. Whether it is described as a dye/detergent or a lactone molecule, consumers can be sure that the new dye has never been studied for long term effects such as its ability to cause cancer. These tests take several years to complete and the dye was just synthesized. This lack of long term data is disturbing because lactone chemicals vary greatly in toxicity. Some lactones appear to be of low toxicity. But priopiolactone, one of the few lactones on which there is significant amounts of data, has been listed by many agencies as a carcinogen.

Parents should be aware that when the Zubbles' color disappears, the dye does not. The dye chemical is just in its invisible state. And Kehoe is planning more uses for this dye such as for keeping track of where you've mopped the floor, in tooth paste to make sure kids have brushed their teeth properly, or to test wall paint colors without permanently altering the wall color.

ACTS is always saddened when consumers enthusiastically embrace new children's products without demanding that manufacturers provide studies of the substance's toxicity.

CRAFTING IS BIG BUSINESS

ACMI Newletter, 48(1), March 2006

The Craft & Hobby Association published a Consumer Usage & Attitude Study. The study indicates that the craft industry had an all time high of over $30 billion in annual retail sales and confirms that 75% of US households contain at least one member who is a crafter.

COMMON ELECTRICAL PROBLEM KILLS UNIVERSITY PROF

NEWS, John Dudley Miller, 3/7/06, http://www.the-scientist.com/news/display/23216/

The state of Ohio issued seven citations to Cleveland State University (CSU) for unsafe electrical conditions in the lab after associate professor Tarun Mal died last August when he plugged a defective fluorescent light into a two-prong adapter plug leaving the lamp ungrounded. Experts say that the use of the electrical equipment that led to Mal's death was unsafe, and some say these practices are common at other American universities, suggesting more lab workers are at risk.

According to an Ohio Bureau of Workers Compensation (BWC), Mal plugged a three-prong (grounded) plug into the wall socket using a two-prong adapter connected to a two-prong electrical timer that controlled the amount of light the plants growing under the lamp received. He thus interrupted the emergency electrical path to ground from the metal exterior of the lamp, which he didn't realize was electrified, the report said.

The BWC report cited CSU for seven electrical problems in Mal's lab, including three not involved in the accident -- a broken ground plug on a centrifuge, a missing metal cover on a switch, and extension cords used instead of permanent wiring. An eighth citation said the lab was infected with cockroaches. CSU has fixed all the problems except instituting an electrical training program, according to a BWC spokesman.

Jim Kaufman, CEO of the Lab Safety Institute, said that the problem that killed Mal -- using a two-prong adapter in a three-prong outlet -- is common. "When you inspect labs," he said, "it's not unusual to find anywhere from one to seven that way."

COMMENT. Jim Kaufman's observations are consistent with mine. And I find it almost impossible to convince teachers, administrators, artists, and craftspeople that the practice of using two pronged adapters in a three prong outlet is dangerous. They don't believe it because they often get away with it. Cheap two wired electrical lights and devices for home use don't belong in shops and schools at all. Such workplaces should only use grounded or double insulated appliances.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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May 2006 Vol. 20, No. 05

ARENA CITED: $75,000 FOR FALL PROTECTION VIOLATIONS

The Blade, April 28, 2006, toledoblade.com or Gary Pakulski: gpakulski@theblade.com

As managers of the Toledo Sports Arena were preparing for the third day of Disney on Ice performances in late January, they got a visit from federal Occupational Safety and Health Administration (OSHA) inspectors. OSHA determined that arena employees who did preshow setup work high above the ice surface were not adequately protected from falling. This infraction and other violations identified during follow-up visits (including one on the day of a February concert by the rock act Nine Inch Nails) led OSHA to issue $75,000 in fines against Sports Arena Inc.

The citations, involving one incident classified as willful and six as serious, were issued March 29. But OSHA provided copies to the local newspaper (The Blade) only after the newspaper filed a request under federal open-records laws.

The citations state that workers erecting rigging near the ceiling, 48 feet above the arena floor, did not use required fall-protection on the opening days of the ice show and rock concert. That alone accounted for $63,000 of the fine.

Other citations included failing to provide proper gates and railings for catwalks, failing to provide a proper ladder for workers erecting stage scaffolding for the Nine Inch Nails Concert, and failing to take required measures to ensure that electricity was not inadvertently turned on while employees were replacing light fixtures.

The arena disputes the allegations and managers have asked the agency to reduce or drop the citations and fines. The arena's attorney said that the alleged incidents occurred as shows were being set up and that audience members and performers were not endangered. He declined further comment saying that it would be inappropriate while discussions with OSHA were being held.

COMMENT. Operators of arenas and theaters often think that OSHA fall protection rules do not apply to them. They are wrong. Operators of older arenas and theaters in particular may need to renovate their catwalks and access ladders to comply with OSHA standards. If the guard rails, cages, and barriers on these items do not meet the OSHA requirements, the workers that use them must be in fall arrest harnesses and lanyards attached to 5000 pound anchorage. The venue also must have a written fall protection program and effective procedures.

We further suggest that arenas and theaters have their riggers certified under the Entertainment Services Technology Association's new rigging program. ESTA has certification tests for both arena and theatrical rigging. ACTS congratulates ESTA for developing this much-needed program. The first certification tests were given in November of 2005. Riggers should go to www.esta.org for information on how to qualify to take the next exam.

HIGH COURT UPHOLDS VERDICT: LINKS WELDING & PARKINSON'S

BNA-OSHR, 36(15), 4/13/06, p. 344, *BNA-OSHR*, 33(48), 12/4/03, pp. 1166-1167, *BNA-OSHR*, 25(27), 12/6/95, p. 950

The Illinois Supreme Court has declined to review the welding industry's appeal in a groundbreaking 2003 verdict (see *ACTS FACTS*, 1/04) in which jurors backed a welder's claim that exposure to manganese in welding fumes caused central nervous system injuries consistent with Parkinson's disease (*Elam v. Lincoln Electric Co.*, Ill., no. 102015, petition to appeal denied 3/29/06).

In the original decision, a jury affirmed the welder's claim that welding equipment makers should be held liable for his medical condition (*Elam v. BOC Group Inc.*, Ill. Cir. Ct., No 01 L 1213, verdict 10/29/03). The jury awarded $1 million to 65-year-old Larry Elam: $100,000 for disfigurement; $100,000 for future disability; $70,000 for emotional distress; $30,000 for care and treatment; and $700,000 for future care and treatment.

This verdict was the first* victory for a welder suing the manufacturers of welding equipment for Parkinson's disease even though the first cases were filed more than a decade ago. Welding manufacturers appealed the verdict to the Illinois Fifth District Appellate Court. They argued that the trial court erred as a matter of law because of the lack of "credible scientific literature or expert testimony" linking manganese in welding fumes to Parkinson's disease. But the court said:

> *We agree with plaintiff that to the extent there is a disagreement among experts about the precise symptoms associated with manganese exposure, it was the jury's function to resolve any disagreement..... The jury's resolution of any disagreement in favor of plaintiff is supported by the record before us. It was within the jury's province to decide the central issue in this case: whether plaintiff's central nervous system injury was, in fact, idiopathic or whether it was caused by manganese in welding fumes. The evidence here supports the jury's finding that plaintiff suffers from a central nervous system injury caused by the manganese in welding fumes. Therefore, we will not overturn the jury's verdict on the basis that no causal link between welding fumes and Parkinson's disease exists.*

COMMENT. This is good news for the approximately 10,000 welders across the country who seek to hold welding equipment manufacturers responsible for their Parkinson's disease. This should also give hope to a number of artist welders and to some potters who have claimed manganese nervous system damage from exposure to manganese glaze colorants.

It is expected that the welding industry will appeal to the Supreme Court next. However, their claim that there is no credible evidence linking manganese exposure and Parkinson's-like syndromes flies in the face of large and growing number of studies to the contrary. *ACTS FACTS* has covered some of these studies (e.g., *ACTS FACTS* 2/93 & 9/05). It is likely that the Supreme Court will also refuse to review the juries decision.

* FOOTNOTE: ACTS thinks there was another successful case in which welder Delmas Hose was awarded $1.2 million, but the injury was called "manganese encephalopathy"(*Hose v. Chicago Northwestern Transportation Co.*, CA 8, No. 94-3300, 11/22/95). This verdict was also upheld by a federal appeals court after it was challenged by the defendants. Delmas Hose was exposed to manganese fumes and dust between 1976 and 1991 at Chicago Northwestern Council Bluffs, Iowa, reclamation center. Physicians diagnosed manganese encephalopathy after Hose collapsed at work.

ROSE ART PRODUCT RECALL: A DEATH & 4 SERIOUS INJURIES

CPSC, Press Release #06-127, 3/31/06

The US Consumer Product Safety Commission (CPSC) announced a voluntary recall of a product called "All Magnetix Magnetic Building Sets." About 3.8 million of these sets were imported by Rose Art Industries of Livingston, NJ, the well-known crayon and art materials manufacturer.

The tiny magnets inside the product's plastic building pieces and rods can fall out. Magnets found by young children can be swallowed or aspirated. The CPSC said they are:

> *...aware of 34 incidents involving small magnets, including one death and four serious injuries. A 20-month-old boy died after he swallowed magnets and twisted his small intestines and created a blockage. Three children ages ranging from 3 to 8 had intestinal perforations that required surgery and hospitalization in intensive care. A 5-year old child aspirated two magnets that were surgically removed from his lung.*

Consumers should return the magnet sets to Rose Art for a free replacement product.

COMMENT. Rose Art has a history of recalls. In 2005, they had to pay a $300,000 penalty to the CPSC for failing to report 10 incidents in which children were burned during use of a soap-making kit they made and sold in 2002 (ACTS FACTS, 5/02 & 8/05). However, the magnet sets were not made by Rose Art--they were imported from China. Most of the recalled products year after year are China-made. *ACTS FACTS* has covered many recalls of China-made products including the huge recall of children's jewelry made with lead in which a death was also involved (*ACTS FACTS*, 3/06). ACTS is now concerned about US-made art paints because many of the pigments used in them are manufactured in China and other third world countries. (See also page 4 story.)

WIDOW SUES SAFETY-KLEEN FOR DEATH OF HER HUSBAND

BNA-OSHR, 36(16), 4/20/06, p. 364

The widow of a deceased automechanic filed suit April 6 against Safety-Kleen Systems, claiming an industrial solvent the company produced caused the mechanic's death *(Aida Dinkjian v Safety-Kleen Systems*, Cal. Super. Ct., No. BC350276, 4/6/06). The mechanic died of myelodysplastic syndrome and other maladies allegedly caused by exposure to the Safety-Kleen 105 Solvent. The suit claims the solvent is not a refined petrochemical product. Instead, it is a refined hazardous waste containing toxic chemicals that include benzene, perchlorethylene, trichloroethylene, methylene chloride, chlorinated benzenes, and polycyclic aromatic hydrocarbons.

Also named as defendants were Union Oil of California, Chevron Corporation, BC Stocking Distributing, Calsol Incorporated, Kern Oil & Refining Company, and Petrol Source Refining Corporation. These companies allegedly supplied the Texas-based Safety Kleen company with "mineral spirits" waste incorporated into the recycled solvent pool from which the Safety Kleen 105 Solvent was extracted. According to the complaint, Safety-Kleen "is the world's largest recycler of automotive and industrial fluid wastes." It markets a "parts washer machine" for de-greasing automotive components as well as the necessary solvents.

COMMENT: This company's machine and solvent are used in many art schools and shops. ACTS will watch for further information on this suit. Currently, California has banned solvent parts washing. As a result there are many water-based parts washing fluids now on the market (e.g., AquaWorks solvents). These should be safer for art schools and shop to use.

THIRD AGREEMENT ON IMPORTED CHINESE CERAMICS

53 *FR* 17764-17766, 5/18/88; *ACTS FACTS*, June 1988; 64 *FR* 40603-40611, 7/27/99; *ACTS FACTS*, September 1999 & June 2000, & 71 FR 15188-15210, 3/27/06

The June, 1988, *ACTS FACTS* carried an article about the Memorandum of Understanding (MOU) between the US Food and Drug Administration (FDA), the US Department of Health & Human Services and the People's Republic of China regarding testing of ceramicware. It specified the tests for lead and cadmium release that the Chinese must employ to certify that the ware they export to the US meets our FDA standards.

The next MOU was published in the Federal Register in 1999. This one was had an interesting provision regarding traditional Chinese ceramicware. Traditional ceramicware was defined as:

> *...ceramic dinnerware, spoons and other ware that might be used to contain or store foods and beverages. Such items are usually porcelain items, hand-painted with soft lead-containing enamels, and highly decorated with vivid colors and intricate patterns, which have been found to leach unacceptable levels of lead. The patterns are of red, yellow, and green, and referred to as "Longevity," "Flowers on Black," and "One Thousand Flowers," for example.*

The MOU requires the Chinese to " Prevent, to the extent practicable, the export to the United States of ceramicware which is not produced in a ..... certified factory, such as Chinese traditional ceramicware."

Then in March, 2006, another MOU was published. The name of the Chinese agency that is responsible for implementing the MOU is changed, but most of the wording is almost identical. As in all of the MOUs, China oversees testing at their own factories. They are charged with developing lists of manufacturers that comply with our regulations, using shipping cartons that are not easy to break into, and taking other actions to protect US customers from hazards associated with daily-use ceramicware from China.

COMMENT. In ACTS' opinion, none of these MOUs have worked well and we are still seeing China from China that leaches too much lead and cadmium. In addition, the MOU enforces the FDA standards for lead and cadmium. FDA standards are not as stringent as the California standards which are now met by most US manufacturers. Your odds of obtaining ceramics that leach little or no lead or cadmium are best if you buy dishes from large manufacturers who sell their products nationally, including in California. For advice about using or producing craft pottery, send a SASE to ACTS and ask for the Ceramic Ware Hazards data sheet.

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NONTOXIC WOOD TREATMENT

C&EN, Environmental Science & Technology Online News, ACS, 4/19/06

Two American Chemical Society publications report that a new, nontoxic lumber treatment has been developed. ACS says it employs sodium silicate to combat rot, decay, and other common lumber problems. This treatment reportedly improves the durability of lumber and is designed for interior, exterior, aboveground, and in-ground use, including docks. The product, TimberSIL®, is also fire-resistant and can be stained or painted.

INVENTOR. Environmental toxicologist Karen Slimak investigated the relationships between human health and chemicals exposure for more than 30 years. After a fire in her garage peaked her interest, she researched, developed, and patented the sodium silicate treatment for wood. She also helped found a company, Timber Treatment Technologies, to launch the product.

HOW IT WORKS. The article in Environmental Science & Technology Online News, written by Mary Kathleen Flynn, describes Slimak's in confusing terms. We understand that for competitive reasons, Slimak does not want to describe the process in great detail. But in one instance, the article says that "when wood infused with TimberSil® is heated, the compound polymerizes to form larger and large molecules. In the process, the silicate molecules are rendered insoluble, thereby eliminating the treated wood's attractiveness to insects and microbial organisms."

In another place in the article, Flynn says that Slimak claims the wood is first infused with a water-based formula containing various ingredients, including sodium silicate, and then heated under certain conditions. Flynn quotes Slimak as saying that as a result, "we surround the millions of fibers that comprise wood with layers of amorphous glass that are only a few molecules thick," and that organisms perceive the finished product as amorphous glass, not wood, and lose interest.

There is a huge difference between these explanations. One is polymerization of a compound to an insoluble silicate which sounds like an organic silicon resin process. The other method forms amorphous glass from sodium silicate, an inorganic process.

Either way, Slimak probably is right when she claims TimberSil® is an improvement over the toxic arsenic and chromium pressurized wood treatments. She also claims it is better than the boron wood treatments because it doesn't bleed through stains and coatings the way boron compounds do.

AVAILABILITY. Retail prices for the new product are expected to fall between those of traditional pressure-treated wood and composite decking material. It is scheduled to be available this summer at lumber retailers and home retail chain stores in New England and the Midwest.

COMMENT. Since many aspects of this new wood treatment process are not yet known, ACTS will not recommend the product at this time. But TimberSil® certainly sounds like it could be the answer for replacement of the more toxic pressure treatments.

RENEWED CONCERN OVER ASBESTOS

Andrew Schneider, Baltimore Sun, 6/3/06

Investigative reporter Andrew Schneider found that there has been an 83% rise in the number of imported brakes that contain asbestos over the passed decade. Most U.S. automakers stopped making and installing brakes containing asbestos in the 1990s. As a result, government warnings to mechanics about the risks of asbestos-related cancers and lung diseases has decreased. Today, most auto mechanics are not concerned about asbestos hazards and some are not even aware that the brakes they clean or repair may expose them to asbestos.

GOVERNMENT RESPONSE. Even though the government knows about the problem, there has been no renewed effort by the Occupational Safety and Health Administration (OSHA) to notify mechanics about the dangers.

The last time mechanics were formally warned about asbestos brake linings was 20 years ago when the Environmental Protection Agency (EPA) published a gold-colored pamphlet called "Guidance for Preventing Asbestos Disease Among Auto Mechanics." Thousands of copies of the "Gold Book" were distributed to high schools, technical colleges, neighborhood garages, auto dealers and unions. EPA's new version of the out-of-print 1986 guild is about two years overdue. Now Susan B. Hazen, the EPA's acting assistant administrator for toxic substances, said the agency is working on a revised version of the Gold Book and "hopes to make it available for public comment this summer."

EXPOSURE. Mechanics are exposed to the new imported asbestos-containing brakes when they work on cars in which the brakes were installed as replacements by corner gas stations, backyard mechanics, and auto repair shops. Consumers can go to almost any auto parts outlet and buy these brakes. There are asbestos warnings on the boxes the brakes are sold in, but when the auto mechanic works on a car, he has no way to tell if that black dust on the brakes contains lethal amounts of asbestos or not.

Schneider reported that an OSHA supervisor, who asked that his name not be used because he is not authorized to speak with reporters, said that even if a meaningful ban were imposed on asbestos imports, the danger to mechanics would still continue for decades as old stocks of brakes were being installed on vehicles. These brakes would come from two sources: the new imported brakes and the brakes made by US manufacturers before the ban. The US-made brakes are ones that auto parts stores still have in stock to repair older cars from the 1990s and earlier.

COMMENT. ACTS covers this subject because so many artists do their own repairs on cars, because so many of our subscribers are from technical colleges and high schools where car repair might be taught, and because sculptors use junkyard materials in their work.

PAINT THINNER-CIGARETTE ERROR CAUSES FIRE

ABC-TV News, 16/15/06, AP wire service, Denver

ABC-TV news reported that a man burned down his house after trying to snuff out a cigarette in a bowl of paint thinner. Stevie Spencer said he put the bowl on his coffee table before taking a smoke break from painting about 10 pm Saturday, May 13. "I forgot paint thinner was in the bowl," Spencer said, "I thought it was water." The fire from the thinner ignited some papers, Spencer said. He got his wife out of the house, then tried to extinguish the flames with a hose. Spencer suffered minor injuries. The Fire Chief said the house was too far gone to save when firefighters arrived.

AUSSIE SCHOOL FINED FOR ACCIDENT

The Border Mail, newspaper, NSW, Australia, 5/19/06

The New South Wales education department has been fined $115,000A for failing to ensure the safety of an eight year student who had the top joint of her left index finger severed during metalworking class. The department pleaded guilty to breaching the Occupational Health & Safety Act of the NSW Industrial Relations Commission.

The 14-year-old student at Arthur Phillip High School in Parramatta lost part of her finger while she was helping another student who was using the foot pedal-operated guillotine on September 12, 2002. The teacher was at the front of the classroom.

COMMENT. These foot pedaled guillotines are common in schools and universities in the US. ACTS is not sure about the best way to guard these pieces of equipment. Since they are hand-powered, they are not as likely to cause accidents as electrically driven guillotines. But they still come under the guarding regulations.

One method of guarding is to install laser guards which alarm when any part of the body gets near the blade during use. If readers have any other ideas, we'd like to hear about them.

MYSTERIOUS ART STUDENT FIRE FATALITY

Campus Firewatch, April, 2006, page 17-18

Nancy Douglas, 68, died Thursday, April 25, from burn injuries sustained in an incident on the Southwestern Oregon Community College campus in Coos Bay. Douglas, a metal sculpting artist for the past five years, was engaged in an independent study art project. She was working in a fenced-in area just outside the Eden hall art building when her clothing apparently caught fire. With her clothing on fire, she entered the ceramics room in the building. Art professor Melanie Schwartz and student Ryan Jensen were working in the building lobby and smelled smoke. When they entered the ceramics area, they reportedly discovered Douglas engulfed in flames from the waist up.

Jensen grabbed two fire extinguishers and the extinguished the flames while another student, Zephra Moses, called 911. Metzger ran for help at neighboring Summer Hall, where he found nursing instructor Susan Walker and a couple of nursing students who immediately responded. The Coos Bay Fire Department arrived only minutes later because they were already at the school on another errand. They were flagged down just as they were about to leave the campus.

Douglas was transported to Bay Area Hospital. Later, she was flown to Legacy Emanual Burn Center in Portland. But all the rapid response and medical help could not save her. She died the following Thursday.

Official haven't yet been able to identify the ignition source. A representative of Amerigas of North Bend inspected the propane equipment at the art department after the incident and found no indication of flashover, explosion, leaking gas or any fire at all. All manual shut-offs on the nearby kiln and forge were closed and the dust on the handles was undisturbed, indicating it hadn't been used recently. The small propane cylinders and acetylene torch nearby also showed no signs of leakage, according to the Amerigas report.

RIGGER INJURED IN SYRACUSE UNIVERSITY THEATER PIT

Channel 9 WSYR-TV News, Syracuse, NY, 5/25/06 & Syracuse Univ. News, 5/24/06

A rigger removing and replacing a stage lift in the 1500-seat Goldstein Auditorium in Syracuse University's Schine Student Center was critically injured around 10am when his head got pinned between the stage and a wall. The worker is 49-year-old John St. Germain from New Woodstock, NY. He was working for JPW Riggers, and was the foreman at the site.

St. Germain and two co-workers were in the second day of dismantling an existing stage lift to make way for a new lift. The lift was a mechanical platform measuring 19 feet across by 10 feet wide at the front of the stage that can be raised to stage level or lowered into a pit depending on the production needs of events in the auditorium. These are also known as "orchestra pits" since these lifts are commonly used to place musicians in front of and below the level of the stage.

Syracuse Police say St. Germain's head was pinned when he unhooked a fastener, and the pit platform shifted horizontally. St. Germain was in the pit portion of the lift when it was unfastened. The lift swung toward St. Germain and pinned him against a concrete wall in the pit. He was trapped for about five minutes as co-workers came to his aid, using a hydraulic jack to push the lift away.

St. Germain was treated at the scene and transported to University Hospital with head injuries. By the afternoon he had stabilized and listed in critical condition.

Inspectors from the Occupational Safety and Health Administration (OSHA) were called to the scene by SU's Office of Design and Construction and the contractors on the project. By early afternoon, OSHA inspectors had completed their on-site investigation, returned control of the work site to the University, and given clearance for the project to continue. However, the work site was closed by the university and work is not expected to resume for several days.

COMMENT. This accident shows that even professionals in theatrical renovation and rigging risk serious accidents. Theater faculty and students should never be involved in such work. Yet ACTS is aware of incidents in which grids and rigging elements were installed as student/faculty projects.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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181 THOMPSON ST., # 23, NEW YORK, NY 10012-2586 PHONE 212/777-0062

July 2006 Vol. 20, No. 07

RHODE ISLAND NIGHTCLUB FIRE: AN UPDATE

Editorial based on a Grand Jury testimony, exhibits, and the sentencing hearing transcript

The young man that lit the pyrotechnics at the Great White's performance at the Station Nightclub in Warwick, Rhode Island, on February 20, 2003, started a fire that resulted in 100 deaths. He was charged with 100 counts of manslaughter. And on May 10, 2006, he was sentenced to 15 years: 4 years in jail and 11 years suspended with 3 years probation.

Relatives of some of the victims wanted to see road company manager, Dan Biechele, put away for life. I didn't feel that way. As one of the expert witnesses for Dan Biechele, I raised issues in my testimony that were cited at the sentencing hearing by both the State's attorney and the defense lawyer. This is public record now, so I can discuss the points I made in my opinion.

Essentially, I said that many sectors of the entertainment industry and it's regulators supported and enabled Dan's illegal activity. They also should be indicted. Included are:

AGENTS & MANAGERS. The people who hired Dan Biechele fresh out of high school rewarded him for taking jobs for which he was unqualified. He worked his way up from truck loader to Production/Tour Manager learning each job by the seat of his pants.

Dan was only 26 years old at the time of the fire. He had been doing pyrotechnics for about 4 years by this time. In fact, he had used the same effect (15x15 gerbs) without any trouble in the Station Nightclub two and-a-half years before the fire. The people who hired Dan knew he was using pyrotechnics, but they never required any licenses, certifications, or proof of competence. They never provided any type of training, supervision, or oversight.

In almost any other profession, Dan's employers would have been directly responsible for his misdeeds. But Dan was hired as an "independent contractor," which means that those who hired him accept no liability for his actions.

THE NIGHTCLUB OWNERS gave Dan "permission" to use pyrotechnics. They never told him that they had no right to give permission–that Dan needed permission from the local fire marshal who would require someone with a Rhode Island pyrotechnic license to do the shoot.

Even more important, the club owners failed to install proper fire-resistant acoustic foam in the band shell area, Instead, they installed cheap flammable urethane packing foam which was the direct cause of the propagation of the fire. The foam also releases cyanide gas when it burns. Autopsies of twenty of the victims found near the stage had cyanide in their systems. Cyanide paralyzes people when it is breathed in, making escape impossible.

PERFORMERS. Several years before the fire, the lead singer in a band called W.A.S.P.taught Dan how to use pyrotechnics in order to enhance his shows. The singer never considered that he was not qualified to teach this craft and that Dan was not qualified to do the job.

PYROTECHNIC SUPPLIERS sold pyrotechnic materials to Dan despite the fact that he did not possess the knowledge or expertise to properly handle and use them. To their credit, they did tell him he needed to meet certain requirements and needed a license in certain cities, but they never checked to see if their advice was followed. They just kept supplying the pyrotechnics.

FIRE MARSHALS failed to enforce the state's pyrotechnic regulations. Living in a small town like West Warwick, it is hard to believe that they did not know that for years, various bands at the Station were using pyrotechnics. Yet no one was contacting them for permission as required.

In a report, one inspector revealed that he also knew the club had ceased hiring trained "fire details" from the marshal's office–a requirement whenever crowds there exceeded 317 people. There were 400 people at the Station the night of the fire.

And the inspector did not notice the newly installed defective acoustic foam. His report on the nightclub after the foam was installed makes no mention of it.

STATE & LOCAL REGULATORS throughout the US failed to set up consistent rules regarding pyrotechnic use. As a result, there is a maze of different standards that vary from state to state, and even from city to city. It is almost impossible to negotiate this maze. And it is common practice industrywide to ignore these rules.

NFPA & I failed him as well. I am one of the people on the National Fire Protection Association's committee that sets the "Standard for the Use of Pyrotechnics before a Proximate Audience." We have not managed to address the need to get this standard, NFPA 1126, in the hands of pyrotechnicians at every level or to get consistent local regulations based on NFPA 1126 requirements. NFPA has no budget for this kind of outreach.

SUMMARY. Dan Biechele is young man with only a high school education and a deep love of the entertainment field. He followed the directions of those who hired him and those in authority. He knew he should have had a license in some of the venues where he worked, but his employers and the bands were pleased with his work anyway. Using pyrotechnics without a license is only a misdemeanor and Dan's failure to follow the rules is consistent with common practices I have observed in this field.

At the sentencing hearing, the State's Attorney stated that Heidi Longley, the surviving party of Ty Longley, Great White's Guitarist, has observed that this unregulated use of pyrotechnics is still going on in the band industry. If this is true, I can assure the people doing this that they will not get the light sentence that Dan Biechele got if things go wrong. Now that this case has come to national attention, no one can claim ignorance of the rules or the horrendous potential consequences. And this trial's public record includes my testimony listing all of the other people that I think should also be indicted.

TRAPEZE INVOLVED IN SCHOOL ELECTRICAL ACCIDENT

Auburn Journal, Friday June 2, 2006, http://www.auburnjournal.com

A man was nearly electrocuted at a Meadow Vista, California school, Wednesday May 31. He was setting up a trapeze for and end-of-school event. According to Captain Tim Robinson of the Placer Hills Fire Protection District, James Montiont, 39 who works for Trapeze Art in Oakland, was setting up a circus-style trapeze scaffold directly below a high-tension wire at the school.

"The entire support is made of metal and the worker was 30 feet up in the air sitting on the metal stabilizer pole," Robinson said. "He used the metal pole in his hand and grabbed the electrical lines above him." Montiont was shocked and knocked off the pole falling 30 feet into a safety net below, officials said. He bounced out of the net and fell another eight feet to the ground. "The electricity entered through his left hand where he was holding the pole and exited through his right arm," Robinson said. "He received second-, if not third-degree burns." Montiont was transported by air ambulance to UC Davis Medical Center. *Editor: I was unable to find further information on the injured man's condition.*

COMMENT. A trapeze scaffold should be erected in compliance with the same rules that apply to other forms of scaffolds. The federal Occupational Safety and Health Administration (OSHA) regulations mandate the distance that scaffolds should be from power lines in 29 CFR 1926.451(f)(6). In most cases, this distance is 10 feet or greater for lines carrying more than 300 volts. The CalOSHA regulations applicable in California are similar. Robinson estimated the location of the apparatus to be 5 feet from the high-voltage power line.

NEW MEXICO SCULPTOR KILLED WHILE WORKING IN HIS STUDIO

The Albuquerque Tribune, Associated Press, Jun 14, 2006. www.abqtrib.com

Luis Jimenez, a successful sculptor whose work has been displayed at the Smithsonian and the Museum of Modern Art, died in what authorities are calling an industrial accident. The Lincoln County Sheriff's Office said part of a sculpture was being moved with a hoist at Jimenez's studio Tuesday when it came loose and struck the artist, pinning him against a steel support. He was taken to the Lincoln County Medical Center, where he was later pronounced dead.

Jimenez, 65, was known for his large and colorful fiberglass sculptures that depicted fiesta dancers, a mourning Aztec warrior, steelworkers and illegal immigrants. More recently, Jimenez completed a mud casting of firefighters and three fiberglass flames as part of a memorial for the city of Cleveland, and he was working on a piece that was destined for the Denver International Airport.

Jimenez grew up in El Paso and learned to paint and to fashion large works out of metal in his father's sign shop. He graduated in fine arts from the University of Texas and lived in New York City for a time. In 1969, he created "Man on Fire," a sculpture of a man in flames that drew its inspiration from Buddhist monks in South Vietnam who burned themselves and the Mexican story of Cuahtemoc, set afire by Spanish conquerors. The sculpture was displayed at the Smithsonian.

COMMENT. Crushing accidents like this are common in the construction industry. Great care and good training in the use and limitations of hoists and other mechanical equipment should be a part of every sculpture school's program.

HAZARDS OF DAMAGED HALIDE LIGHTS: UPDATE

BNA-OSHR, 35(5), 2/3/05, pp. 97-98 & OR-OSHA Hazard Alert, 2/1/05, "Metal Halide Lights," www.orosha.org *The Oregonian*, 6/20/02, www.oregonlive.com

The April, 2005 *ACTS FACTS*, reported on an alert published by Oregon's Occupational Safety and Health Administration (OR-OSHA) about ultraviolet (UV) radiation hazards associated with broken metal halide lights after they investigated an incident in 2004 in which teachers were injured after being seated for several hours beneath a broken light fixture in a school gymnasium.

On June 20, 2006, four of the injured teachers, backed by the Oregon Education Association and the Oregon Trial lawyers Association, held a press conference aimed at ensuring that schools and the public understand the dangers of these lights. They claim that many schools still use the defective halide lights–ones that do not self-extinguish when their cover is damaged. The teachers will also push to repeal Oregon's law limiting the time that manufacturers can be held liable.

HISTORY. In November of 2004, teachers at Bryant Elementary in Lake Oswego, had skin and eye problems after attending a training session for a few hours in the school's gymnasium. Symptoms reported included burned and swollen eyes, temporary blindness, and irritated skin.

The protective glass covering one of the gym's ceiling-mounted metal halide lights had been broken after being struck by a volleyball the previous month, but the light continued to operate. As a result, staff members were exposed to a full day's ultraviolet (UV) radiation exposure in as little as eight minutes, according to testing reports in the OR-OSHA inspection narrative.

In January, 2005, OR-OSHA closed its investigation of the light breakage incident by sending a hazard letter to the school district. A concurrent investigation into the school's safety procedures ended in December with a $300 penalty after it was determined that the district had not held required monthly safety committee meetings since 2002. *EDITOR: Low fines like this are one reason that schools don't bother to follow the regulations.*

TODAY. The four teachers claim their eyes have not improved. According to the women's doctor, the UV radiation damaged their eyes, made them hypersensitive to light and limits their ability to produce tears. So far, doctors have not found a remedy. Three of the teachers were sitting directly under the damaged light and received the highest dose of UV. The fourth is a physical education teacher who spent several hours a day under the defective light.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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August 2006 Vol. 20, No. 08

THEATER WORKER DIES OF ASBESTOS CANCER: CASE SETTLED

Editor's report

Some of the most important lawsuits filed in the courts are not covered by newspapers and TV. This is because confidentiality issues and agreements prevent the parties from freely discussing the case. Often the parties are constrained from writing about the suit or even talking to friends about it. This also means that the lessons illustrated by these cases are not being learned.

I was recently involved as an expert witness in one of these important cases. And now that it has settled, I can only talk in generalities about it. But I am hoping I can still say enough to make the some important points.

THIS CASE was filed after a union theatrical stagehand/electrician contracted a fatal disease. She died in 2003 at age 50, leaving a husband and two children ages 6 and 9. Clearly, workers' compensation would not be enough to restore her family to normalcy or get those two kids through college.

In order to help this family, the firm of Levy, Phillips & Konigsberg here in New York City, took the case. This firm specializes in cases involving the disease this woman died of–mesothelioma.

MESOTHELIOMA is a cancer of the lining of the chest, heart or abdomen. It is essentially 100% fatal, and most experts think it is caused almost exclusively by exposure to asbestos or other tiny inert fibers from natural minerals or synthetic products. While some experts think it can spontaneously occur in rare cases, this is questionable because there are small amounts of asbestos fibers in all of us. We get these fiber from many sources such as from inhaling road dust containing brake lining fibers. It may be that all cases of mesothelioma are associated with inert fiber exposure of some kind.

ASBESTOS EXPOSURE. It is also important to note that most cases of mesothelioma occur 20 to 40 years after exposure. Allegedly, this stagehand/electrician could have inhaled asbestos fibers 20 to 40 years ago in the theaters in which she worked from:

* asbestos curtains that were raised, lowered, damaged, and patched;
* asbestos coated wires that she routinely cut and spliced on lighting instruments;
* asbestos cloth used to shield drapes from hot lights;
* asbestos gloves used to manipulate the follow spot; and
* asbestos insulated pipes that got damaged during work.

TESTIMONY. The case entered the phase where pre-trial depositions are taken. Witnesses for the plaintiff included various experts on asbestos and the medical aspects of the case. My own deposition was in the area of potential asbestos exposures and theatrical work environments. The defendant's experts were also deposed.

And as is often done in these cases, the lawyers had video taped the deposition of the victim herself shortly before her death. In her powerful testimony, she candidly discussed her life, her work in the theater, the many treatments she had undergone, her family, and her pain and suffering. How I wish other theater workers could see her video.

THE TRIAL date was set in May, 2006. All of us had the dates held on our calendars and were ready to go. My theater friends and colleagues had even sent me plastic bags containing frayed old asbestos pig tail and twofer wires from theatrical lighting instruments to show jurors how these shed fibers. But in a dramatic move the night before trial, the case was settled.

THE LESSON. I can't tell you anything about the amount of the settlement. I can't name the defendants or tell you more than I've told here. But I want theater workers and other artists to know, that should anything really terrible happen to you or your loved ones, don't give up. Good lawyers will take on the case and people will come forward to help.

MANGANESE EXPOSURE FROM A CERAMIC GLAZE

Editor's report

Texas potter, Doug Brown, e-mailed me recently about a glaze formula he saw in a magazine.[1] The glaze contained 10% manganese dioxide and 10% copper carbonate and it was being recommended for use on foodware. Doug was concerned about the glaze's potential toxicity.

First, Doug did a simple test on the glaze. He left vinegar on the glazed surface for 24 hours which made a dramatic difference in the glaze's appearance. Next he sent a sample to Alfred Analytical laboratory to be tested with the FDA leach procedure.[2]

CERAMIC LEACHING STANDARDS. Manganese can leach from glazes into food and drink. However, the Food and Drug Administration (FDA) only regulates lead and cadmium in ceramics. FDA proposed setting standards for other metals in the 1980s, but when they called for data on leaching of other metals there was none reported. The proposal was dropped.

Until there are regulations for metals other than lead and cadmium, ACTS recommends using the EPA drinking water standards as rough guidelines to interpret ceramic leach tests The water standards are not perfect for this purpose, but there is common sense in assuming that ware which doesn't leach more than is allowed in a poor public water supply probably will not be harmful.

DRINKING WATER STANDARDS. EPA has two major types of drinking water standards: maximum contaminant levels (MCLs) which are enforceable; and health advisory levels (HALs) for unregulated metals. In 2002, EPA set a HAL for manganese.[3] At this time, EPA noted that manganese is needed for normal growth and function in small amounts, but that several diseases are associated with manganese.

CANCER & DEVELOPMENT. "There is no information available on the carcinogenic effects of manganese in humans, and animal studies have reported mixed results," EPA said.[3] The data did suggest, however that manganese can affecting the fetus and development of young children.

NEUROLOGICAL DAMAGE. In 2002, EPA found only one study of neurological effects that met their scientific standards. This study was of symptoms and deaths in 25 people who ingested high levels (~ 29 mg/L) of manganese in well water contaminated by dry cell batteries buried near the wells over a three month period in 1941. Autopsies revealed changes in brain tissue.

DIETARY EXPOSURES. EPA also considered dietary studies of many large human populations. Manganese is found naturally in many vegetables, fruits and nuts. EPA determined that people should not ingest more than 10 milligrams per day (mg/day) of manganese. EPA noted that this limit may easily be exceeded, especially among individuals eating a vegetarian diet. (ACTS also worries about vitamin/mineral supplements which add manganese to the diet.)

THE HEALTH ADVISORY LEVEL (HAL). After considering all of this data, EPA set a HAL for manganese in drinking water of 0.3 mg/L in 2002.

NEW DATA. Today, there is data indicating that this 0.3 mg/L level may not be protective enough for some children. A study of 142 children in Bangladesh published this year[4] found a relationship between the amount of manganese in water and children's intelligence. This appears to be similar to the loss of IQ seen in children whose water contains lead.

THE GLAZE TEST RESULTS. To return to Doug Brown's glaze test, Alfred Analytical reported[2] the results for manganese and copper:

Metal	Lab results	HAL	MCL-Action Level
Manganese	5.11 mg/L	0.3 mg/L	N/A
Copper	23.70 mg/L	N/A	1.3 mg/L

Clearly, the manganese level is well above the 0.3 mg/L HAL. Further study should be done on such glazes, especially because this glaze was recommended for use in casseroles that are heated in the oven and/or may contain acid foods like tomatoes. It may be that the entire daily dietary limit of 10 mg per day could be exceeded by such uses.

The copper also was 18 times above the EPA MCL of 1.3 mg/L. EPA says[5]:

> *Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level [1.3 mg/L] over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.*[6]

CONCLUSION. The amounts of manganese and copper that leach from this glaze appear to be of concern. We can address these kinds of glaze leaching problems by:

1. Using glazes on the insides of foodware that only contain metals of negligible toxicity such as calcium, magnesium, potassium, sodium, and aluminum[7]; and/or

2. Developing and maintaining a regular laboratory glaze testing program to ensure that toxic metals leach from our foodware in only very small amounts. This applies whether we make our own glazes or use premixed "food safe" glazes. Glaze manufacturers should provide potters with basic formulas of their premixed glazes so they will know what metals to test them for.

The ceramics community owes Doug Brown a round of applause for his efforts.

FOOTNOTES:

1. April 2006 issue of *Ceramics Monthly*, pp. 40-43.
2. Alfred Analytical Laboratories report to Potters Brown, 6/23/2006, Roland D. Hale, Lab Director.
3. *Federal Register*: 67 *FR* 38222-38244, June 3, 2002–manganese data on pages 38235-6)
4. *Environmental Health Perspectives*, 114:124-129 (2006)
5. 40 CFR Part 9 et al., National Primary Drinking Water Regulations
6. Author's Note: People with Wilson's Disease can be seriously harmed or even die from exposure to copper at levels that other people tolerate well. Such people need to avoid all sources of dietary copper. Currently I advise these people not to use craft ceramics unless test data indicates that copper is not released.
7. The MCL for aluminum is 0.2 mg/L, but it is set primarily for taste and odor protection. Toxic effects were not considered. However, EPA put aluminum on a list of chemicals for which additional research is needed due to its potential for chronic neurotoxicity. I have data from antique ware showing aluminum leaching at well over the MCL, but no data from modern ware.

OZONE CAUSES RESPIRATORY SYMPTOMS IN INFANTS

Environmental Health Perspectives, Vol 114, No. 6, June 2006 & *Science News*, Vol 169, 6/17/06, p. 381

A team headed by Elizabeth Triche of the Yale University School of Medicine studied 691 women with 3-to-5-month-old infants from nonsmoking households around Roanoke VA. Sixty-one moms had asthma, signaling that their babies were at risk of developing the disease. The researchers collected daily respiratory data, as reported by the mothers, on all the children for 83 days in summer–the peak ozone season. These data were correlated with outdoor air pollutant levels.

As ozone rose, so did the risk of wheezing and troubled breathing in the babies. Other pollutants, such as fine particulates, didn't show that correlation. Each 11.8 parts per billion (ppb) increase in average daily concentrations in ozone increased the likelihood of wheezing by 41% in all infants and in 91% in those with asthmatic moms. Each 11.8 ppb increase in ozone also increased the risk of labored breathing by almost 30% of all of the infants. Ozone was not associated with cough.

The mean concentration for maximum 8-hour average ozone levels during the 166 days of the study was 54.5 ppb. Peak measurements averaged 60.8 ppb. These levels do not exceeded EPA's moderate air quality 8-hour standard for ozone of 80 ppb or the one hour peak limit of 120 ppb.

COMMENT. The EPA ozone standards do not appear to be protective of infants. We can't control outdoor air pollution, but we can eliminate added sources of ozone in the home, such as ozone-producing air purifiers (e.g., negative ion generators and ESPs), copy machines, and laser printers.

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ANTHRAX FELLS ANOTHER ARTIST: THIS ONE DIES

Gareth.Walsh@Sunday-Times.co.uk (Aug 16, 2006) & 6 articles from http://news.scotsman.com

A self-employed Scottish artist who made sculptures, decorative items, and bongo drums contracted anthrax. It is assumed he contracted the disease from working with untreated imported animal hides. *ACTS FACTS* reported last April on a New York drum maker who contracted anthrax from imported hides. The US artist recovered, but the Scotsman died on July 8 in Edinburgh Royal Infirmary.

Fifty-year-old Christopher Pascal Norris became the first person in Britain to die of anthrax in 30 years. Mr. Norris' home was sealed off by police and there is an 8-foot steel fence around his garden. Authorities from Health Protection Scotland said the disease is not passed from person to person, but they asked anyone who visited the artist's home before July 17 to contact the National Health Service (NHS) for further information. As of August sixth, 162 people were checked for the infection. None have symptoms, but preventive antibiotic treatment was given to74 people. The NHS advises anyone experiencing flu-like symptoms, a dry cough, or unusual skin lesions for up to 2 months after visiting the artist's home to seek further medical counsel.

The NHS also urged musicians who have bought a bongo drum in recent months to investigate its origins. Although it is believed that Norris did not sell the drums he made, it is feared that people to whom he had given the drums as gifts may have sold them to others. NHS urged anyone who thinks they own a drum that Norris may have made to double-bag it and call their helpline.

2005 FATAL OCCUPATIONAL INJURIES DATA RELEASED

Bureau of Labor Statistics

Data from 2005 National Consensus of Fatal Occupational Injuries was released August 10th by the Labor Department's Bureau of Labor Statistics. Of a total of 5,702 deaths in 2005, the following numbers are of interest to art and theater workers:

Arts, design, entertainment, sports, & media occupations Total: 52
Art & design workers 10
Entertainers & performers, sports & related workers 29
Media & communication workers 4
Media & communication equipment workers 9

Architecture & engineering occupations total 53
Architects, surveyors, and cartographers - 9
Engineers - 29
Drafters, engineering and mapping technicians - 15

Education, Training & Library Occupations total 25
Post secondary teachers - 11
Primary, secondary & special ed school teachers - 6
Other teachers & instructors - 3
Librarians, curators, & archivists - 3

Since these are all workplace accidents, it would be helpful to know the stories behind each of these deaths so we could prevent such accidents in the future.

GRAND FIREWORKS FINED BY OSHA

BNA-OSHR, 236(33), 8/17-06, pp 755-756

The *Bureau of National Affairs* reports that Grand Fireworks, Clarksville, NY, is contesting a serious citation and a $10,500 penalty for alleged violations of eight items, including: 1910.109(b)(1), failure to ensure that explosives or blasting agents were not stored, handled, or transported in a manner that did not constitute an undue hazard to life; 1910.119(d)(3)(ii), failure to document that the equipment in a process complied with recognized and generally accepted good engineering practices; and 1910.199(f)(1), failure to develop and implement written procedures that provided clear instructions for safely conducting activities in each covered process consistent with process safety information and that addressed at least the elements listed in 1910.119(f)(1)(I) through 1910.119(f)(1)(v).

The employer also is contesting alleged violations of five other items, including: 1910.119(g)(3), for failure to prepare a record of the means used to verify that an employee understood the training required by 1910.119(g); 1910.134(c)(1), for failure to establish and implement a written respiratory protection program with worksite specific procedures; and 1910.1200(e)(1), for failure to develop, implement and maintain at the workplace a written hazard communication program that describes how the criteria specified in 1910.1200(f), (g), and (h) would be met. ACTS is concerned when the manufacturers of dangerous products such as pyrotechnics do not follow safety rules precisely.

ADULT BLOOD LEAD SURVEILLANCE FIGURES OUT FOR 2003-2004

Mortality & Morbidity Weekly Report, CDC, 55(32) 8/18/06, pp. 876-9

The Centers for Disease Control and Prevention (CDC) tracks adult blood lead levels in the 37 states that currently report this data. The good news is that the number of adults with elevated blood lead levels (BLLs) has declined steadily. Today, adults with BLLs of 25 micrograms/deciliter (μg/dL) or greater in 2004 is estimated at 7.5 per 100,000 people. Only 1.2 per 100,000 adults were ≥ 40 μg/dL in 2004. Most of the people with elevated BLLs worked in manufacturing, construction, and mining. The specific industries with the highest numbers were manufacture of storage batteries (2,499), painting, paperhanging, and decorating (626), and mining of lead ores (482).

Of interest to artists is the nonoccupational sources of exposure reported by 32 of the states. This data shows that during 2003 and 2004, nonoccupational sources identified 442 and 400 adults respectively who had BLLs ≥ 25 μg/dL. Among these, an annual average of:

23% were exposed from shooting firearms,
13% from remodeling or renovation activities,
11% from hobbies (e.g., casting, ceramics, or stained glass),
5% from retained bullets or gunshot wounds, and
3% from pica (i.e., an abnormal craving or appetite for nonfood substances such as dirt, paint, or clay), ingesting lead-contaminated food or liquids, or ingesting tradition or folk medicines; another
3% were retired (and probably were former lead workers), and
36% were determined to have nonoccupational exposure from unknown sources.

This means between 49 and 44 adults each year reported with high BLLs from hobbies and crafts. The data is only from 32 states and only on people who went to doctors for testing. It's time that lead is removed from these sources–especially since there are so many good replacements for it.

STUNT MAN IS SHOT: WHO DUNNIT?

The Star Ledger, Brendan Berls, 4/14/06; www.roadsideamerica.com/tnews, 7/23/06; *The Daily Record*, Abbott Koloff, 7/13/06; & *The Daily Record*, matt Manochio, 8/23/06.

During a fake gunfight between 8 or 9 cowboy actors at Wild West City in Netcong, NJ, on July 7th, one of the actors suddenly collapsed. Scott Harris was transported unconscious to the University of Medicine in Newark. CT scans revealed that a projectile had pierced his forehead and lodged in his brain. The scan shows an object consistent in size and shape with a bullet. Harris was put into a medically induced coma until July 21st. Then in early August, he was moved to Kessler Institute for Rehabilitation in early August. So far he has a three word vocabulary: "Mom," "Yes" and "No." He can make gestures with his left hand.

At the time of the gun fight, it was not clear to anyone that Harris had been shot, so the police investigation didn't begin until hours later. It also is still unclear who has jurisdiction. The federal Occupational Safety and Health Administration (OSHA) may be involved because Harris was injured on his job. But OSHA area director Phil Peist said that OSHA doesn't have any gun-related standards. The Byram police and the Sussex County Prosecutor's Office are trying to determine whether they have any regulations that govern the type of gunplay that Wild West City stages.

The state Department oaf Community Affairs oversees most theme parks but has jurisdiction only over rides. The state Department of Law and Public Safety apparently has no jurisdiction either.

Edward J. Zohn, a Watchung attorney who specializes in gun law, said he believes that any actor who brought his own gun to use in the shows was probably breaking the law. Gun owners need to obtain "carry permits" to have firearms anywhere but on their own properties unless they are going hunting or traveling to or from a firing range or similar locations. Zohe doesn't think that the Wild West City shows qualify for any of those exemptions.

Sussex County Assistant Prosecutor William Fitzgibbons says his agency has determined that there were nine cowboy actors, at least four of whom carried .22-caliber pistols loaded with blank cartridges. The rest were cap guns, starter pistols, or real guns with filled-in-barrels. Some of the guns were owned by the actors themselves, others by the park. Fitzgibbons also said that it is against the law to point a firearm at another person. Most of the actors interviewed by investigators said they point their weapons above their fellow actor' heads, Fitzgibbons said.

Since all four guns used in the show were fired, it would be difficult to know if one of them been loaded with a live round. The guns were supposed to be loaded with wadded up paper blanks which quickly break apart in the air, becoming harmless. There was no reason to have a real bullet anywhere in the show.

The guns used in the show have been seized by local investigators, and ballistics tests are under way. But the bullet remains lodged in Harris' head, which means making a match between the guns and the bullet will not be possible.

Fitzgibbons said the outcome could range from finding there was no wrongdoing to charging the shooter with second degree aggravated assault. Clearly, this incident is pointing up a need for gun handling regulations for outdoor theme parks.

LAVENDER & TEA TREE OIL ACT LIKE HORMONES

Science News, Vol. 170, July 1, 2006, p. 6

Since the mid 1990s, Denver-area pediatric endocrinologist Clifford Block treated enlarged male breasts (gynecomastia) in a series of boys age 10 or younger. Most had normal ratios of sex hormones in their blood, indicating that hormone production was not the problem. Block learned that at least 5 boys had been using toiletries containing lavender oil. One of the products contained tea tree oil and a couple of patients were putting pure lavender oil on their skin. The doctor advised the boys to stop using these products. Amazingly, the gynecomastia disappeared in a few months.

Block contacted Derek Henley and Kenneth Korach of the National Institute of Environmental Health Sciences in Research Triangle Park, NC. In their lab, the two investigators exposed human-breast cells to lavender oil, and separately to tea tree oil. They found that both oils turned on estrogen-regulated genes and inhibited an androgen-regulated gene. Henley reported these findings at the Endocrine Society meeting in Boston in July.

COMMENT. ACTS wonders if these plant essences may be responsible for some of the premature breast development seen in very young girls as well. And this story reminds us that promotors, who tout plant essences for everything from curing diseases to aroma therapy, don't really know what they are selling. Tea tree oil in particular was in great vogue recently.

EVEN WORMS KNOW LIMONENE IS TOXIC

C&EN, June 26, 2006, p. 56

Tiger worms inhabit compost heaps and help to recycle stale bread, fruit and vegetable waste, used teabags, and other organic waste. But the worms do not like the peel of fresh lemons, oranges, and grapefruit. The worms "are put off by the antiseptic properties of a substance called d-limonene," notes gardening expert Lia Leendertz in the British newspaper the *Guardian*. Leendertz suggests that if you have a lot of citrus peel, you can keep it in a separate bin until it turns furry and green. Then the d-limonene will be degraded and the peels will be accepted by the worms.

COMMENT. D-limonene is another nasty plant oil. I have complied a data sheet summarizing the toxicity data on this substance. Readers who want a copy can send an SASE for a free copy.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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ESTA STANDARDS FOR GLYCERIN THEATRICAL FOG EFFECTS

Editorial

The Entertainment Services Technology Association (ESTA) is a group of manufacturers, product users, and others who develop standards for theatrical equipment and processes. Their standard for theatrical fog is called E1.23 *Design and Execution of Theatrical Fog Effects.* It sets protocols for use of the oil, glycols, glycerin and other chemicals used in theatrical fog, haze and smoke effects.

ACTS has expressed disapproval of some aspects of this standard in the past. But this article is a response to a battle ragging, as I write, between performers, directors and producers in an important US theater. For political reasons, I will not identify the theater.

THE STORY. The dancers in this theater have objected to chemical fog effects on the grounds that there are health risks associated with their use. They fought long and hard for a contract which bars use of chemical fogs. That should be the end of the story. But now, a famous artist insists on a certain hazy look or the theater will not be allowed to put on the artist's production. The dancers are being pressured to ignore their contract and engage in their strenuous and athletic work on stage for almost 40 minutes enveloped in the glycerin mist produced by a particular fog effect.

The theater's technical staff say they are using ESTA's standards to keep mists to an "acceptable level" and that ensuring that these levels are not exceeded renders the effect harmless. To understand why this is not true, we need to look at the background for ESTA's air quality limits.

HISTORY OF AIR QUALITY LIMITS. Over 60 years ago, the American Conference of Governmental Industrial Hygienist's (ACGIH) began evaluating available human and animal exposure data for various industrial chemicals in order to develop science-based guidelines for workplace air quality limits. The limits they set are called threshold limit values (TLVs).

In 1971, the Occupational Safety and Health Administration (OSHA) was formed. They adopted the 400 TLVs that were available in 1971, renamed them "permissible exposure limits" (PELs), and began to enforce them. Since this time, ACGIH has updated their TLVs many times and added many new toxic substances. Today there are about 800 TLVs, yet most of OSHA's ~400 PELs remain frozen at 1971 levels. Only a few PELs have been updated to reflect current knowledge.

OSHA made it clear that they don't think their PELs are adequate each time they tried to update them. And each time, the process was stopped by legal actions brought by various industrial coalitions. So it is extremely disheartening that ESTA, in section 3.5.3.1, of their fog standard cites the OSHA PELs as those that should be consulted by US users of their standard.

WHO IS PROTECTED?. The OSHA PELs and the TLVs on which they are based are designed to protect "nearly all" adult healthy workers. ACGIH italicized "nearly all" in it's definition to emphasize that: *TLVs® will not adequately protect all workers. Some individuals may experience discomfort or even more serious adverse health effects when exposed to a chemical substance at the TLV® or even at concentrations below the TLV®.*

ACGIH explains that this is due to risk factors such as age, gender, ethnicity, lifestyle, health and more. They also cite other factors such as the amount of air breathed during light versus heavy work or during exercise. Clearly, ACGIH would not claim TLVs are protective of the general public or workers like singers, dancers, and athletes who must function at peak efficiency without respiratory symptoms or impairments. And it is obscene to suggest that TLVs apply to child performers.

The dancers in this dispute were told the fog will be kept below the "safe" Ceiling limits. The TLV-Ceiling limits are concentrations of airborne contaminants that should not be exceeded for even an instant during any part of the working exposure. ACGIH set these limits because there "*is increasing evidence that physical irritation may initiate, promote, or accelerate adverse health effects.....*" And glycerine is a known respiratory system irritant.

EPA STANDARDS. In recognition of the fact that the TLVs and PELs are only applicable to healthy industrial workers, the Environmental Protection Agency sets their Air Quality Indices for the public. For example, EPA's carbon monoxide AQI is 9 parts per million (ppm) while the TLV is 25 ppm and the PEL is 50 ppm–levels EPA says are unhealthy or hazardous for the public.

Carbon Monoxide - 8 hour time weighted average limits

description	EPA - AQI	ACGIH- TLV	OSHA-PEL
good	4	25	50
moderate	9		
unhealthy for sensitive groups	12		
unhealthy	15		
very unhealthy	30		
hazardous	40-50		

ASHRAE STANDARDS. The American Society for Heating, Refrigerating and Air-conditioning Engineers sets ventilation standards for buildings. ASHRAE also acknowledges that TLVs and PELs are not protective of nonindustrial populations. Their 2001 standard (ASHRAE 62-2001) suggested using of 1/10th of the TLV for substances for which there are no public health standards. Then their 2004 standard (ASHRAE 62-2004) changed this advice saying:

> *...one approach has been to assume that some fraction of TLV® is applicable and would not lead to adverse effects or complaints in nonindustrial populations. This approach should not be followed without assessing its suitability for the contaminant of concern. ...expertise must be sought or research needs conducted to determine...exposures that are acceptable.*

In other words, each of the theatrical fog chemicals would need to be researched for its effects on different activities such as singing and dancing before a proper limit can be set. And the data must be evaluated by a group with the expertise to set such a limit----not ESTA, not individual doctors. When this limit is found, in ASHRAE's opinion, it will be some fraction of the TLV.

SUMMARY. Clearly, ASHRAE, ACGIH, OSHA, and EPA all know that TLVs and PELs are not protective of nonindustrial workers or workers doing high risk activities. And these organizations are all more technically qualified to set air quality limits than ESTA. Perhaps ESTA chose the higher OSHA PELS because lower, more protective levels might not give directors the "look" they want. But dancers should not be forced to risk their health and careers for a "look."

And does ESTA consider the audience? Children, elderly, asthmatics sensitive to very low levels, and people with their life support systems in their wheel chairs, can be present. To think that the fog and haze stays on stage is like believing a section of a swimming pool can be reserved for peeing.

SO-CALLED "SAFE" BLOOD LEAD LEVELS LINKED TO EARLIER DEATHS

www.americanheart.org Journal Report, 9/18/06 & Andy Menke; MPH, Paul Muntner, PhD; Vecihi Batuman, MD; Elen K. Silbergeld, PhD; Eliseo Guallar, MD, DrPH, *Circulation: Journal of the American Heart Association*, 2006; 114:1388-1394

Blood lead levels generally considered safe actually may be associated with an increased risk of death from many causes, including cardiovascular disease and stroke, according to a report in *Circulation: Journal of the American Heart Association.* In the study, researchers looked at effects of lead levels below 10 micrograms per deciliter (μg/dL)–a level assumed to be safe in adults.

"Our study found the association of blood lead with cardiovascular death to be evident at levels as low as 2 μg/dL," researcher, Paul Muntner, PhD, said. Muntner is associate professor of epidemiology and medicine at Tulane University School of Public Health in New Orleans.

The Muntner and the other researchers used data from the Third National Health and Nutrition Examination Survey Mortality Follow-Up Study, involving 13,946 adults whose blood lead levels were collected and measured between 1988 and 1994. When researchers studied those who died by December 31, 2000, they found that death from any cause, cardiovascular disease, heart attack and stroke increased progressively at higher lead levels.

Compared to participants with blood lead below 1.9 μg/dL, participants with blood lead between 3.6 μg/dL and 10 μg/dL had:

- a 25% higher risk of death from any cause;
- a 55% higher risk of death from cardiovascular diseases;
- an 89% higher risk of death from heart attack; and
- a two and a half times the risk of death from stroke.

"The increased risk of all-cause and cardiovascular deaths with increased lead levels affected all groups we studied: non-Hispanic whites, non-Hispanic blacks and Mexican Americans, as well as males and females," Muntner said. "The risk of death from cancer did not increase at the blood lead levels that our study investigated."

COMMENTS. For many years, ACTS has routinely told adults to take steps to identify sources of lead exposure and reduce those exposures if their blood lead tests are found to be in access of the mean average of unexposed adults in the US. This level was 1.2 μg/dL in women and 2.0 μg/dL in men in 1999-2000--the last year this mean average was calculated. It is wonderful to see that our intuitive advice regarding lead exposure appears to be supported by this study.

It has not always been easy to justify giving this advice. Callers have pointed out that:

- OSHA regulations still allow workers to have blood lead levels above 40 μg/dL;
- Health departments usually don't record adult lead tests that are lower than 25 μg/dL; and
- And many laboratory forms sent to patients list 0-10μg/dL as "normal" for lead.

ACTS also has been warning pregnant women that their blood lead levels will be roughly the same as that of the fetus and that no level of lead has been found at which children do not lose mental acuity. Now the Centers for Disease Control also say that pregnant women's blood lead should be below 10 μg/dL. We think that level should be lower if possible.

OWNERS SENTENCED FOR RHODE ISLAND NIGHTCLUB FIRE

Editorial - sources: numerous news reports

The two brothers who owned the Station nightclub where pyrotechnics started a fire that killed 100 and injured over 200 people were sentenced on October 27. The sentences were handed down by Judge Francis Darigan. The brother pled no contest to 100 counts of involuntary manslaughter. As a result, there will be no trial.

The judge gave Michael Derderian four years in prison and let his brother Jeff off with a 10-year suspended sentence, three years probation and 500 hours of community service. The brothers pleaded guilty primarily to installing the charcoal-grey, egg crate-patterned, polyurethane foam which had not been fire-retarded on the walls which was ignited by the pyrotechnics.

The victims were outraged by the judge's leniency. The judge explained that the plea agreements were in everyone's best interest to avoid the emotion of a trial which would expose them to the terrible details of how people died. But no trial also means that the conditions and factors that allowed this to happen will not come to light.

Readers may remember that we covered the sentencing of Dan Biechele, the young pryotechnician who set off the effects, in the July issue of *ACTS FACTS*. Since I was an expert witness in defense of Dan Biechele, I saw a great deal of the pertinent Grand Jury testimony, police reports, and exhibits. In my opinion, there is a huge story in those boxes of papers.

The material I saw indicates that basic changes need to be made in the way many people do their jobs including club owners, agents who book road shows, road managers, performers, pyrotechnic suppliers, the salesman who sold the flammable packing foam, foam manufacturers, and even the local Fire Marshal who missed the installation of the foam during his inspection and who may have known that pyrotechnics were being used at the club for years in violation of the laws. There were failures all around. And unless these failures are brought to light and corrected, we are only waiting for the next fire.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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EPA ENVIRONMENTAL HEALTH & SAFETY BOOKLET

Review/commentary

Environmental Health & Safety in the Arts: A Guide for K-12 Schools, Colleges and Artists is a new publication that should be available to every artist, teacher, school administrator and safety professional. The booklet was prepared as a supplemental environmental project by Pratt Institute in conformance with a compliance agreement with Region 2-US Environmental Protection Agency.

THE INTRODUCTION begins with a section on "Proper Waste Management and Disposal" and then addresses "Art Instructors Obligations." It says the instructor's legal obligations include:

- *Creating and maintaining a safe environment;*
- *Keeping an inventory of potentially hazardous art materials;*
- *Informing others of the potential risks by:*
  - *providing Material Safety Data Sheets (MSDSs) for review by anyone who will be using the product;*
  - *alerting school officials and other emergency responders to assist them in emergency response planning;*
  - *Submitting annual reports to government agencies as required; and*
  - *Ensuring proper disposal of hazardous wastes.*

Many K-12 and college instructors are not able to do all of this. But they should take heart. This booklet, like every other art safety publication I've read that is produced by schools or written by school administrators, does not make it clear that it is employers, that is, school administrators that are legally responsible for getting these and other regulatory tasks done. Schools can delegate tasks to the teachers and instructors, but only after training them to do this work properly on paid time, providing time in the teaching schedule to carry out these duties, and more.

Both the EPA and OSHA regulations require training of workers. The problem is that the rules do not require employers and administrators to be trained. There seems to be an incorrect assumption that employers already know about MSDSs, toxicity, waste disposal, etc.

My advice is that employed teachers and instructors should read and enjoy this well-written booklet, secure in the knowledge that their employers must provide training for them on any part of these rules they don't understand. On the other hand, school administrators, independent contractors, and art business owners may read this booklet with concern unless they have hired environmental safety professionals to run their EPA and OSHA programs. These employers and contractors might want to take advantage of training provided by EPA and OSHA (see their websites).

SECTIONS 2.0 - 3.0 in the booklet are entitled "Hazardous Waste Management Basics" and "Hazardous Waste Generator Requirements/ Ensuring Technical Compliance" respectively. They are well written summaries of the law and requirements for teachers, artists and schools.

Section 4.0, "Expanding the Health and Safety Program," ties the EPA regulations, the OSHA hazard communication standard (Right to Know) and basic safety together into a unified program. This is extremely well-done. The development of a single unified program into which the OSHA and EPA programs fit is clearly the way safety should be approached in all workplaces.

SECTION 5.0, Sources of "Potentially Hazardous Waste in Art Studios" covers: Painting and Solvent Use; Ceramics; Jewelry Making and Small Metals; Photography; Printing and Printmaking; Metalworking and Foundry; Design, Architecture and Model Making; Drawing Materials and Pastels; Sculpture; and Woodworking. Most of these sections are organized into subsections on: the Major Dangers, Less obvious Dangers, Safety Suggestions, and Disposal in that order. Some also suggest Alterative Products. This section should be very useful teachers of specific media.

SECTION 6.0, called "Pollution Prevention and Waste Minimization," covers methods of reducing waste. To do this, it is necessary to understand the laws that apply particularly to art materials. Of most interest to ACTS is a paragraph about the art materials labeling law that references the American Society of Testing and Materials chronic hazard labeling standard, ASTM D 4236. It says:

> *One of the serious deficiencies of this law is that substances requiring labeling must be known to cause chronic effects, such as cancer, birth defects or other long term harm. However, many art material ingredients, especially the organic pigments, have never been tested for chronic hazards. Some of these pigments are members of classes of chemicals that are suspected of causing cancer or other long term harm, yet products containing these untested chemicals can be labeled "nontoxic."*

This is precisely the point that ACTS has been making for years and it is nice to see it clearly stated in a publication that will get wide distribution in the art world.

MSDS DEFICIENCIES. Section 6.0 and a number of the other sections point out that toxic metals are reported on material safety data sheets (MSDSs) at levels that are too high to determine if the waste from these products is regulated under EPA rules or not. MSDSs require toxic substances to be reported at 1% or greater. Cancer causing substances must be reported on MSDSs at 0.1% or greater. But the amounts of toxic substances which qualify waste as regulated under the Resource Conservation and Recovery Act (RCRA) are measured in milligrams/liter (mg/L), which is equivalent to parts per million(ppm). The relationship needed to understand this problem is:

1% = 10,000 mg/L = 10,000 ppm

For example, let us assume that some glaze ingredient or inorganic paint pigment such as titanium dioxide contains lead as a contaminant–a common occurrence. If the amount of lead is less than a "trace" (which is defined as ~1000 ppm or less), this is below 0.1% and it would not have to be reported on the product's MSDS. Assuming half of the lead is soluble on the Toxic Characteristic Lead Procedure (TCLP), this would register as ~500 ppm--well over the 5 ppm TCLP limit for lead.

Similar numbers could be generated for the other metals. With its repetition of this point, the Pratt EPA booklet makes it obvious that manufacturers must provide users with far more detailed analyses and ingredient information than required by OSHA if we are to deal with art waste properly. To see this problem clearly, I have created a table below showing the RCRA metals, the TCLP test limits for determining whether waste must be disposed of as toxic waste in both ppm and percentages so they can be quickly compared to the inadequate MSDS reporting levels.

Toxic Characteristic Leach Procedure (TCLP) Test & Regulatory Levels

METAL	TCLP LIMIT	= PERCENT	MSDS REPORTING LEVEL
Arsenic	5.0 mg/L(ppm)	= 0.0005%	0.1%
Barium	100.0 mg/L(ppm)	= 0.001%	1.0%
Cadmium	1.0 mg/L(ppm)	= 0.0001%	0.1%
Chromium	5.0 mg/L(ppm)	= 0.0005%	0.1% to 1.0% for different forms
Lead	5.0 mg/L(ppm)	= 0.0005%	0.1%
Mercury	0.2 mg/L(ppm)	= 0.00002%	1.0%
Selenium	1.0 mg/L(ppm)	= 0.0001%	0.1% to 1.0% for different forms
Silver	5.0 mg/L(ppm)	= 0.0005%	1.0%

(other metals may also be regulated by local agencies at similar levels)

THE APPENDIX is full of useful lists of regulated substances, compliance checklists, and resources. ACTS takes exception, however, to a reference in the list of "Art and Paint Supply Manufacturers" on page E-6. While toxicity is not mentioned in the comments for most of the suppliers, the comments on Golden Artists Colors specifically says that "not all the supplies are non-toxic." Golden is one of the few suppliers that has chosen not to put the "nontoxic" label on untested chemicals. They should be complimented for this ethical decision, rather than be put at an economic disadvantage by this comparison with companies who label untested products "nontoxic." I have been assured this error will be corrected in the electronic version of this booklet (see below).

A COMPANION BOOKLET called *Environmental Compliance and Best Management Practices Guidance Manual for K-12 Schools*, also published this October, was prepared for EPA by Long Island University and Columbia University. It provides a wealth of well-ordered technical information on each of the applicable laws and how to comply with them.

WHERE TO GET ONE. Copies of these booklets will be available after December 5 through the US EPA Region 2 - Environmental Compliance homepage at http://www.epa.gov/region02/capp/. The manuals will be available as both downloadable PDF and as a hard copy by mail. Orders for hard copies will be placed by completing an online form. Information collected through this order form will be used only for the mailing of this document and not be used for any other purpose.

IMPORTANT STUDY OF EFFECTS OF VENTILATION IN SCHOOLS

ASHRAE Journal, October, 2006, pp. 23-28 & page 1, *Commentary*, by Fred Turner

A preview of an important school air quality study was covered in the October *ASHRAE Journal*. The study, "Research Report on Effects of HVAC On Student Performance," looked at the results of five independent field experiments that were carried out in six identical classrooms in a Danish elementary school. In three experiments done in late summer and winter, the outdoor air supply rate per person was increased from about 6.4 to 20.1 cubic feet per minute (cfm), while in late summer the temperature was reduced from about 77 ° F to 68 ° F. The outdoor air supply rate was increased using the existing mechanical ventilation system while temperature was reduced by either operating or idling cooling units that had been installed in the classrooms for the purpose of the experiments.

Each experiment was carried out in two parallel classrooms at a time, and each condition lasted for a week. In alternate weeks, the improved condition was imposed in one classroom, the other one acting as the reference condition (unchanged ventilation and temperature) during that week. Then the conditions were switched between the two classrooms for the following week to produce a crossover design for the experiment. The study used the 10 to 12 year-old students:

... as their own controls, so the observed differences in performance between conditions cannot have been due to differences between groups of children. Both of the conditions to be compared were established at the same time, so external effects such as weather cannot have contributed to the average differences between conditions that was observed. Unlike anecdotal before-after studies of classroom upgrades, this study provides strong evidence that improving indoor air quality in classrooms by increasing the outdoor air supply rate and reducing moderately elevated classroom temperatures, can substantially improve the performance of a wide range of tasks characteristic of schoolwork, from rule-based logical and mathematical tasks requiring concentration and logical thinking to language-based tasks requiring concentration and comprehension.

The magnitude of the effects on the performance of school-work is larger than was found for performance of office work by adults. This suggests that children are more susceptible to environmental conditions.....

SUMMARY CONCLUSIONS. It was seen that increasing the fresh air rates from 6.4 to 20.1 cfm/person increased student performance by 8 - 14%, and modestly lowering the temperature could improve performance by 2 - 4%.

COMMENT. This is a critical study because the ASHRAE 62.1-2004 standard reduced the ventilation rate for classrooms to 10cfm/person from the 15 cfm/person rate required by the old 2001 standard. Part of the 2004 standard's rationale for this reduction includes new requirements to deliver the 10 cfm to the breathing zones of the occupants to ensure fresh air is not going from ceiling diffusers to return grills without getting where it is needed. This provides some improvement, but whether this is enough to compensate for the lower amount of fresh air is debatable.

The evidence from this Danish elementary school study is strong enough for ACTS to recommend that building planners use the old fresh air recommendations from the ASHRAE-62-2001 standard, including the higher 15 cfm/person rate for classrooms, and to design the systems to provide delivery of this air to the breathing zone as the ASHRAE 62.1-2004 standard dictates.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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ACTS FACTS

THE MONTHLY NEWSLETTER FROM

ARTS, CRAFTS AND THEATER SAFETY (ACTS)

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December 2006 Vol. 20, No. 12

VANDERBILT TALC CAUSED CANCER: JURY SAYS

SOURCES: Websites of Levy, Phillips & Konigsberg & R.T. Vanderbilt; *Bridgewater Courier News*-11/17/06; other newspapers; my sworn testimony in the pretrial and punitive damages phases of the trial.

The estate of a Montgomery, New Jersey pottery shop operator who died of asbestos-related cancer in 2004 was awarded $3.35 million in compensatory damages on November 16 by a Superior Court jury in New Brunswick. The jury awarded $1.4 million for pain and suffering, $1.45 million for loss of earnings and $500,000 for his widow's loss of companionship. On December 7, the punitive damage phase of the trial ended in a settlement of a confidential sum.

Bonnie Parker, the widow of Peter Hirsch, filed the suit through attorney Moshe Maimon of Levy, Phillips & Konigsberg, LLP, in New York City after her husband died at age 53, just 19 months after he was diagnosed with mesothelioma. Maimon said Hirsch, who operated a pottery shop in New Jersey, used talc in the production of his pottery. The talc was mined in New York by Connecticut-based R.T. Vanderbilt Company and sold by Hammill and Gillespie, a dealer who was also a defendant in the trail. The talc, Maimon argued, was contaminated with asbestos. Following a four-week trial in Middlesex County Superior Court and three days of deliberations, the jury ruled in the first-ever U.S. verdict connecting industrial talc with asbestos-related cancer.

EXPOSURE. Hirsch's exposure to asbestos-contaminated industrial talc occurred during the seven years he operated pottery studios, personally mixing glazes containing Vanderbilt's NYTAL®100 industrial talc. Hirsch purchased NYTAL®100 talc in 50-to-100 pound bags during this period. Each time he opened a bag of Vanderbilt talc, scooped or poured out contents, it generated very fine dust that was suspended in the air until it landed on the floor or Hirsch's clothes, Maimon said. Hirsch was also exposed briefly to asbestos-containing joint compound when he renovated his pottery studio.

MESSAGES. Maimon says, "New Jersey jurors have sent out a powerful, clear message to Vanderbilt and other companies that mine, mill or market industrial talc. Not only must their own workers be protected from lung disease, end users and others who come into contact with the product must be warned properly of the carcinogenic fibers lurking in this dusty powder used in so many manufacturing applications." Further Maimon claims, "This first-ever U.S. verdict finally – and decisively – proves that industrial talc from Vanderbilt's New York state mines contains lethal asbestos fibers."

But the message on Vanderbilt's website is somewhat different. It says the jury did indeed find their "industrial talc was defective and that Mr. Hirsch's exposure to Vanderbilt's talc and Georgia-Pacific's joint compound was a substantial cause of his death. The jury assessed 50 percent of the liability to each company." But then the website says, "Contrary to some news reports, the jury did not find that Vanderbilt's talc contains asbestos."

TWO DIVERSE OPINIONS. Actually, the jury was not charged with finding whether or not the talc contains asbestos, but whether or not the talc could cause the asbestos-related cancer that killed Hirsch. That they did. But clearly, Vanderbilt will continue to argue, as it has for over 30 years, that the talc doesn't actually contain asbestos.

This is a confusing point because, in addition to 20-40% talc, Vanderbilt talcs contain two other minerals: tremolite and anthophyllite. These minerals are called "amphibole asbestos" because they can be found in nature in two forms: one is fibrous (called "asbestiform") and the other is non-fibrous (called "nonasbestiform"). The asbestiform minerals are asbestos in every sense of the word. But there is not enough information about the toxicity of the nonoasbestiform minerals for the Occupational Safety & Health Administration to regulate these forms as asbestos. Is important to note that OSHA does not say that the nonasbestiform minerals are not toxic, only that there is not enough information to set precise limits for exposure to them.

Vanderbilt maintains that the amphibole minerals in their talc are all nonasbestiform and that the fibers seen in electron microscopic photos of their talc actually are talc fibers, cleavage fragments, transitional fibers and other structures that only look like asbestos. Here are the problems with this view in Maimon's and in my opinion:

1. Many experts, including those of the National Institutes for Occupational Safety & Health (NIOSH) have tested the talc's fibers and found them to be mineralogically true asbestos. There are other experts that say they are not asbestos, but it was my testimony at trial that the studies by these experts were financed and/or influenced by Vanderbilt.

2. Many experts hold that any inert mineral fiber of the right dimensions – asbestos or not – can cause the asbestos-related cancers. Structures these experts believe can cause cancer include the talc fibers, cleavage fragments, and transitional fibers in the product.

3. Asbestos-related cancers, namely mesothelioma and lung cancer, occur among talc workers.

MESO CASES. Mesothelioma is a disease rarely seen except in people exposed to asbestos. There are now known to be 12 deaths from meso among Vanderbilt workers. Five of these cases were newly identified by stipulation in this trial. Now a user of the talc, Peter Hirsch, has also died. And I personally know of another meso death in a user. In 1981, a doctor's wife who had a small ceramic doll business in Port Ewan New York died of mesothelioma at age 54. Since this case is known only from a letter this woman wrote to the editor of a ceramic magazine and from my interview with her and subsequent article, there was not enough medical evidence for this case to be used in the trial. I suspect there are other such unrecorded cases.

LUNG CANCER. The NIOSH study of Vanderbilt workers in 1967 found lung cancer at 4 times above the expected rate. The second study by NIOSH in 1980 also found a much higher risk of lung cancer among the talc workers. But other studies paid for and/or influenced by Vanderbilt found little or no increased risk of lung cancer in the workers. NIOSH, however, has never changed from their original opinion that the talc contains asbestos. They reiterate this point in their 1990 update on Vanderbilt talc. The jury apparently agrees with NIOSH.

RECOMMENDATIONS. NYTAL®100 is often in premixed clays used in many schools from grade schools to colleges (see next article). And potteries that mix their own clays and glazes commonly have 100 pounds and more of this material on hand. There is ample evidence that this talc should not be in schools or used by adults who are not fully appraised of these risks.

TALC LINKED TO SCHOOL ASBESTOS ABATEMENT FAILURE

By Kathy Rossland-Hulce, Parent Activist

Brookfield, Connecticut Public Schools were found to have various levels of asbestos contamination in all four of its schools in 2000 and again in 2002. This problem was brought to light largely as a result of parent and teacher activism. Over four million dollars were spent on professional clean up of the schools in 2002, including the ventilation systems, in which elevated asbestos levels were also detected.

After the extensive clean up, the Brookfield Public School System adopted an air and dust testing program to monitor the environment for any continued accumulation of asbestos fibers from unknown and/or uncontained sources. As a result of this monitoring program, elevated levels of anthophyllite asbestos in air were discovered in the art room at Whisconier Middle School.

For several months, the source of this ongoing contamination remained an enigma. After extensive bulk sample testing of art materials by the school district's asbestos consultant, Dr. Mark Granville of Brooks Laboratories, an art product was finally identified as the potential source. Art clay containing talc from Sheffield Pottery was identified with Transmission Electron Microscopy (TEM) analysis to contain traces (under one percent) of anthophyllite asbestos. This anthophyllite had been undetectable in the clay using Polarized Light Microscopy (PLM) analysis, the type of analysis specified in most asbestos regulations. The Material Safety Data Sheets for the talc used in the clay indicated that there was non-asbestiform anthophyllite in the talc.* A small percentage of asbestos-form anthophyllite in the "non-asbestiform" anthophyllite was sufficient to cause significant airborne asbestos fibers.

Even with such small quantities of anthophyllite asbestos fibers in the talc-containing clay, levels of anthophyllite fibers as high as 0.0184 structures/cubic centimeter (s/cc) were recorded in the air at Whisconier Middle School. This level is almost double the 0.01 s/cc standard recommended by most public health regulations as suitable for public occupancy, including the federal AHERA (Asbestos Hazard Emergency Response Act of 1986) standard for schools.

Once this clay was replaced with a clay that did not contain talc, no anthophyllite asbestos was detected in air and dust tests. However, several months later, the anthophyllite contamination reappeared in the art room. Upon investigation, Dr. Granville discovered that a different brand of art clay from Amherst Pottery Supply that contained talc** had again been inadvertently purchased and was being used at Whisconier Middle School. TEM analyses of three samples of this clay showed they contained anthophyllite asbestos from 2.8 to 2.1 percent.

Again, once the use of this clay with talc was discontinued, no anthophyllite asbestos in air or dust was detected at Whisconier Middle School.

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* The Sheffield pottery did not send an MSDS on their clay. Instead, they sent the MSDSs on each of the ingredients of their clay. The ingredients included silica, Redart clay, ball clay, bentonite, limestone, and RT Vanderbilt talc (NYTAL100HR). No information was provided on the amounts of the various ingredients in the formula.

**The MSDS on the Amherst clay only listed silica, hydrous aluminum silicate (clay), and talc without identifying the sources of any of the ingredients.

EDITOR'S COMMENT. The writer of this article, Kathy Rossland-Hulce, is modest about her role in this investigation. She was the vital force and her work significantly changed the way these schools monitor asbestos and order art supplies. ACTS designates her as our choice for hero!

It is also clear that school safety personnel and clay manufacturers need to use TEM analysis to identify the thin asbestos fibers in the talc products because they are missed by PLM. (The same problem was noted in the Vanderbilt trial covered in the previous article.) And anthophyllite should not be the only type of asbestos monitored. Chrisotile, a different asbestos mineral, was found in another clay used in the school and also in classroom air samples. We have started to investigate this product as well, so there may be a follow up to this article.

POLLUTANTS FOUND IN NEW ORLEANS SOIL

http://pubs.acs.org/cgi-bin/article.cgi/esthag/2006/40/i02/pdf/es052219p.pdf &
BNA-OSHR, 36(32), 8/10/06, p. 722 &

The storm surge associated with Hurricane Katrina has resulted in concentrations of aldrin (an agricultural pesticide), arsenic, lead, and seven semi-volatile organic compounds in sediments and soil around New Orleans that violate one or more of the Environmental Protection Agency's human health standards, according to a team of Texas Tech University researchers.

In a paper published in *Environmental Science and Technology*, the researchers reported finding 40 of 43 soil and sediment samples exceeded EPA's standards, and some lead samples were four times higher than EPA's standard. The samples were collected in September 2005 and they indicate that people are at risk if they disturb the earth and during clean up of mud and debris.

COMMENT. The study reinforces the need to be sure construction workers, waste handlers, and residents are protected. Readers may remember a story run in the March, 2006 issue of *ACTS FACTS*, based on an article written about a 13 year old boy an a group of 15 volunteers who cleaned a flood-damaged home in Louisiana without protective gear. To this editor, it looks like we are setting up long-term injuries in people who live and work in the Katrina damaged areas by proceeding with the same kind of lack of common sense that caused the illnesses and deaths we are now seeing in New York from 9/11 dust.

ACTS FACTS sources: the *Federal Register* (*FR*), the *Bureau of National Affairs Occupational Safety & Health Reporter* (*BNA-OSHR*), the *Mortality and Morbidity Weekly Report* (*MMWR*), and many technical, health, art, and theater publications. Call for information about sources. Editor: Monona Rossol; Research: Tobi Zausner, Nina Yahr, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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