

ACTS FACTS

THE MONTHLY NEWSLETTER FROM

ARTS, CRAFTS AND THEATER SAFETY (ACTS)

181 THOMPSON ST., # 23,

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ACTS wishes you a healthy, happy 2007

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21 YEAR ANNIVERSARY OF ACT FACTS

Editorial

At 21, *ACTS FACTS* has come of age. And it looks like we will be around for many years more. In fact, we are obligated to be here, because some of our subscribers renew for 5 years at a time or more! In any case, 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.

\$925,000 SETTLEMENT FOR WORKER IN WOOD STAIN FACTORY

New Jersey Law Journal, December 15, 2006: www.law.com/jsp/nj/suits.jsp

Thirty years ago, Frank Gravina of Hamilton, NJ, worked part time during high school at Harris Pine Mills in Tranquility, NJ. Since then the factory where he worked went bankrupt and no longer exists. So at age 42, when he was diagnosed with bladder cancer which required the removal of his bladder, his lawyer decided to sue the insurer of the bankrupt furniture factory. There is a known link between a number of wood stain pigments and bladder cancer.

The first lawsuit was dismissed for lack of evidence by a Superior Court Judge because there were no records to identify the stain or the manufacturer of the stain Gravina actually used. Then last July, an appeals court reinstated the case, saying that the link between bladder cancer and stains commonly used for furniture was sufficiently well-described in medical literature to allow a jury to decide. The claim also wasn't time-barred because laws require liberal treatment of minors' claims of workplace injuries.

Gravina's lawyer, Steven Wodka of Little Silver, NJ, explained by telephone with this reporter that his strategy was to show that the plaintiff had no risk factors for developing bladder cancer except for his work with furniture stains. The suit, *Gravina v. PPG Industries, Inc.*, was settled after 5 days of trial. The National Union Fire Insurance Company of Pittsburgh, the defunct company's workers' compensation carrier settled the claim for \$925,000.

TWO DIE AT DIP 'N STRIP FRANCHISE SHOPS: LESSONS LEARNED

BNA-Right-To-Know Planning Guide, John Gannon: 20(25) Dec 7, 2006 page 100

Furniture stripping involves exposure to chemicals, including one called methylene chloride. According to the federal Occupational Safety and Health Administration (OSHA), about 7,800 furniture strippers work with methylene chloride, a suspected human carcinogen whose vapors can attack the central nervous system and interfere with the heart's ability to obtain oxygen.

The manufacturer of one furniture stripping product called Dip 'N Strip® has franchised small shops around the country. Their stripper is primarily composed of methanol, methylene chloride, and toluene. The following incidents occurred at two of these franchised shops.

AUGUST 29, 1999 INCIDENT. Jonathan Welch was 18 and less than a week from beginning college when he collapsed while working over a tank of furniture stripping chemicals at the Dip 'N Strip® shop in Red Bank, TN. Doctors restarted his heart, but he had suffered severe brain damage and was pronounced dead the next day. According to his family and records compiled by the Tennessee Occupational Safety and Health Administration (TOSHA), Welch had no known health conditions predisposing him passing out and he did not drink, smoke, or use illegal drugs.

TOSHA investigators determined the work area was poorly ventilated, Welch had not been given proper gloves, a respirator, or safety goggles, and the shop had no eyewash station or shower. Yet shop owner Larry Coxey paid TOSHA only \$1500 in fines. Coxey also told TOSHA that if he stayed in business, he would do all of the furniture stripping from this time forward.

To correct the ventilation problems, a National Institute for Occupational Safety and Health (NIOSH) employee came to Red Bank, drew plans for a ventilation system for the Dip 'N Strip shop, and provided them to Coxey at taxpayers' expense. Coxey never installed it.

DECEMBER 14, 2000 INCIDENT. Sixteen months after Welch's death, Anthony Kaniewski, 31, was found face down in a furniture stripping tank at the Antique Restoration Company, another Dip 'N Strip® franchise in Newtown, Pennsylvania. The Cause of Welch's death was "inhalation of toxic fumes," according to the Bucks County Coroner's Office.

The federal OSHA investigated this accident and found the 8-hour time-weighted average airborne level of methylene chloride was 200 parts per million (ppm), eight times the permissible exposure limit (PEL) of 25 ppm. They measured a short-term exposure of 1,292 ppm, more than 10 times that allowable level. As in the Tennessee shop, OSHA found the Pennsylvania shop's ventilation was inadequate, there was no eyewash station, employees were not using respirators or other protective equipment, and they had not been trained about the hazards of the stripping chemicals.

Owner Dan Tilstone paid \$9,500 in fines and he told the Bureau of National Affairs (BNA) that he spent also \$10,000 to bring his shop into compliance.

BACK TO TENNESSEE IN 2006. TOSHA did not reinspect the Dip 'N Strip® in Red Bank until February, 2006, when they responded to requests from Welch's mother and a national workplace safety activist critical of TOSHA's 1999 investigation. Rita Welch told the Bureau of National Affairs (BNA) reporter that she called the agency after seeing a male who looked about her son's age emerge from Coxey's shop in a work apron one day as she drove by.

TOSHA returned to find nearly the same conditions it had documented after Welch's death seven years prior. The furniture strippers still wore no goggles or respirators and were unfamiliar with the hazards of methylene chloride. The shop still did not have proper eyewash equipment. This time they conducted air sampling and found an 8 hour time-weighted average methylene chloride level of 247.8 ppm, nearly 10 times the permissible exposure limit of 25 ppm.

TOSHA also found a total of 17 workplace safety violations and proposed \$11,300 in fines. Coxey said he had to spend \$13,000 to abate the safety violations and now could not afford to pay the penalties, too. He requested a reduction in the fines. The TOSHA Review Commission rejected his request on November 29. Coxey also told the BNA that since TOSHA did not conduct air sampling in his shop in 1999, there was no "conclusive proof" that chemical fumes killed Welch.

LESSONS LEARNED. ACTS sees the comparison of these two stories as evidence that state agencies like TOSHA actually encourage law breaking when they assign ridiculously small penalties for multiple violations and when they fail to reinspect facilities even after a death has occurred there. Poor inspections that do not include air sampling to prove overexposure also allow employers like Coxey to continue to avoid taking responsibility for life-threatening conditions.

The Pennsylvania shop, on the other hand, paid larger fines and corrected their violations after the first inspection's air sampling documented overexposure. When OSHA gets serious about workplace conditions and penalties, employers are more likely to react responsibly.

LEAD PAINT STILL FOUND ON FURNITURE: 2006 RECALL

December 5, 2006 CPSC RECALL OF FURNITURE, Press Release #07-043

Furniture stripping also can involve exposure to lead paint—even on fairly modern furniture due primarily to furniture imported from countries where lead paint is still used for such purposes. The following recall illustrates the point, but there are many other such recalls every year.

WASHINGTON DC - The US Consumer Product Safety Commission, in cooperation with the manufacturer named below, today announced a voluntary recall of the following consumer products. Consumers should stop using recalled products immediately....

Name of Product: Antique White Furniture from the Cottage Collection.

Units: about 2000 pieces

Importer: The Land of Nod® of Northbrook, Illinois.

Manufactured in: Mexico

Hazard: Some of the recalled furniture contains paint with high levels of lead. The lead level exceeds that allowed by the federal ban on lead-containing paint which is designed to protect children who might ingest paint chips or peelings. Lead paint is toxic if ingested by young children and can cause adverse health effects.

The recall included items sold by catalog and website nationwide and in stores in Illinois and Washington from September 2003 to August 2006. Included are shelf kits for use in the Low Rider Bookcase and a Double Door Armoire. If you think you have one of these items, call the store with the item number on a label located on the back of the products. Sold in stores in Ill and Washington from Sept 2003 to August, 2006 \$50-\$1,100. Call 866-990-5263

ART CLASS USED TOXIC PAINT, PARENT SAYS

Salem Oregon Statesman Journal, Dec 6, 2006 Thelma Guerrero, staff

Federal investigators are looking into a complaint that Hispanic Children involved in a Woodburn art program were given toxin-laden spray paint, while non-Hispanic children were given safer paint. Charles Keen, Sr., whose 12-year-old son participated in the program, filed a complaint with the federal National Park Service, an arm of the Department of the Interior. Keen said he went to other centers and observed that only youngsters in the art program at Settlemier Park, the center at which his child participated, were given the toxic spray paints.

Scott Russell, the Woodburn chief of police and acting city administrator, rejected the charge. "The same program was held at all of the parks and recreation centers with the same materials provided to all of them," Russell said. The city of Woodburn provides "recreation to all members of our community equally and as best as the city can within their budget."

Months before Keen filed another complaint with the federal government. He contacted OSHA in Portland over concerns for two employees who worked with the youngsters at the Settlemier Park. On March 30, OSHA sent a letter to the city of Woodburn advising them to take immediate corrective action. "The city of Woodburn sent a letter back saying that because of the concerns raised, they had voluntarily suspended the use of the [spray] paint cans on those projects," said Kevin Weeks, and OSHA spokesman.

In his recent complaint to the National Park Service, Keen also alleges that the students were allowed to use the toxic paint "without the provision of protective clothing or masks." "The paint fumes were so heavy that the children were pulling their T-shirts over their faces to protect themselves" Keen said.

"The youth art program was conducted outdoors in the open air," Russell said. "The kids did have some protective equipment, such as particulate masks," he said.

COMMENT: It is disturbing that the Woodburn chief of police thinks that kids would be protected by "particulate masks." These mask do not provide protection from spray paints. And children should not wear masks or use products that require them either in- or out-of-doors. Adults should use spray paints only when provided with proper protective gear.

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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PRYO- MAGIC TRICK AMPUTATES FINGERS FOUR TIMES

Editorial

A single type of magic pyrotechnic effect has caused amputation of fingers in four cases of which I am aware. I do not believe these are reported anywhere in the literature, so I will report them here. I am covering this story now because the last of these cases just settled.

THE FIRST CASE. In May 2002, I was contacted by Varna, the distraught mother of a 40 year old man who had a mental disability. Police had arrested her son, Robert, after witnesses had reported an explosion near a bus stop in Santa Rosa, CA. Smoke was seen around Robert and he was missing several fingers which were blown off from something he had been holding. Due in part to his poor communication skills and attitude, the police concluded Robert was a terrorist working with explosives. He had been in jail for 6 months by the time his mother contacted me.

Robert told his mother that he had been experimenting with a magic trick he bought at a local magic store. I directed Varna to buy the same effect from the same store and then ask the manufacturer for a material safety data sheet (MSDS). However, the store manager was aware of Robert's accident and now claimed they never carried this product. They also claimed they serve only professional magicians and pyrotechnicians and would not have sold anything to Robert.

Varna went to another magic store and bought a different product made with essentially identical chemicals. Then one of ACTS researchers, toxicologist Brian C. Lee, got enough additional information on yet another similar product to provide all the information we needed.

When I had all this data and police reports collected, I wrote an expert opinion on the product Robert had been experimenting with at the Santa Rose bus stop. It was faxed on August 14, 2002, to the California Public Defender in charge of Robert's case. The Defender presented my written opinion to the judge. The felony charges were dropped and reduced to the misdemeanor of possessing pyrotechnics without a license.

THE SECOND CASE. When I was helping Robert, I reached out to the magic community. My father was a Vaudeville magician and escape artist and I still have contacts in that world. In e-mail conversations with magicians, I learned there was another victim of this effect. It was a woman who was the wife and assistant to a rather well-known professional magician. However, she could not help because she had concerns about bad publicity affecting her husband's career. I can only tell you that she, like Robert, lost several fingers on one hand.

THE THIRD CASE. When Varna was calling various magic shops, a sympathetic owner told her of a friend of his who lost a finger to this effect as well. This victim was a professor who was using the device to demonstrate the chemical reaction to his class.

THE FOURTH CASE. About a month after I was contacted by Varna, a lawyer for a professional clown called. While this man was performing a magic show for adults and children, he attempted to demonstrate one of these products. While holding the vial containing the red powder in his left hand, he opened the white powder vial and was about to pour a small quantity onto his finger to perform the trick when the explosion occurred. The man lost four fingers on one hand and part of the thumb on the other hand.

A lawsuit was filed on behalf of the clown and it settled recently. I cannot tell you more because I was retained in the case and there is a confidentiality agreement attached to the settlement. In fact, I cannot tell you the name of the clown, the companies that manufacture and sell this particular effect, or the amount of the settlement. Confidentiality agreements like this keep the public in the dark about many hazardous products. These suits may provide much needed assistance to the victim, but they do not help to prevent others from falling victim.

WHAT ARE THESE PRODUCTS MADE FROM? The products that caused these accidents are all made with red phosphorus and potassium chlorate. Sometimes small amounts of other chemicals were added as well such as manganese dioxide, sulfur, magnesium oxide, and calcium carbonate. In pyrotechnics, red phosphorus, potassium chlorate with small amounts of sulfur and calcium carbonate added is called "Armstrong's Mixture." This kind of mixture is used in toy pistol caps. The minuscule amount in the cap, when hit with the cap gun's hammer, will create the gun-shot sound. And only a gram of Armstrong's mixture can blow a hole in a metal pipe.

Products of this type used for magic effects are sometimes mistakenly called "flash powder." (True flash powder is a single material called nitrocellulose.) The three products on which we have collected data were called "Snap Flash," "Finger Flash" and "Flashing Fingertips." They consist of two small (~ 2 inch) vials, one of red phosphorus and the other of potassium chlorate. The vials of the products I saw had no labels or warnings of any kind. Warnings were in the directions and product literature. Those on the "Snap Flash" product read:

The two powders explode powerfully when mixed. Use in very small amounts. This kit gives 50 to 100 very loud explosions! Never mix powders in advance. Any friction, heat, impact, or shock EXPLODES the mixture, which can cause Injury, Damage, and Burns. Most magicians put a tiny dot of red phosphorus on a fingertip and twice as much S.F. White on the thumb, then snap their fingers to mix it and explode it. Danger: You'll get burned while practicing, quickly drown flames in water. See doctor for burns as these can be severe

In addition to the hazards when the two powders are mixed together, both chemicals can degrade with age, heat, humidity, and contamination to become even more unstable and unpredictable.

RECOMMENDATIONS. ACTS agrees with the Santa Rosa judge that Robert was guilty of "possessing pyrotechnics without a license." These products should be held and used by licensed pyrotechnicians. Shipment of this effect through the mails should be controlled as it is for other pyrotechnic devices. Stage performers using these effects should get a pyrotechnic license in one of the states whose requirements are respected throughout the business such as California or Connecticut. Magic stores should require customers to have a license. And like other two-component unstable pyrotechnic chemicals, there should be an expiration date on the vials.

MOLD: TOXIC OR NOT?

Daily Report (dailyreportonline.com/Editorial on 1/9/2007) by William M. Bulkeley, Wall Street Journal

Mold was a big toxic hazard in the 1990s and then it dropped off the front pages. Suddenly it was not considered to be much of a threat anymore. People filing cases for health effects from mold were losing more often than winning. How did this happen?

THE ANSWER. William M. Bulkeley, a reporter for the Wall Street Journal seems to have found the answer. He looked at the case of Colin and Pamela Fraser who suffered headaches, rashes, respiratory infections and fatigue after moving to a New York City apartment. They attributed their health problems to mold and tried to sue the cooperative that owns their building. However, the court wouldn't let their medical expert testify that mold caused their health problems. The state trial judge said that this position is "unsupported by the scientific literature."

The judge in this case relied in part on a position paper from the American College of Occupational and Environmental Medicine (ACOEM). The paper says that "scientific evidence does not support the proposition that human health has been adversely affected by inhaled mycotoxins in the home, school, or office environment." Bulkeley says:

The paper has become a key defense tool wielded by builders, landlords and insurers in litigation. It has also been used to assuage fears of parents following discovery of mold in schools. One point that rarely emerges in these cases: The paper was written by people who regularly are paid experts for the defense side in mold litigation. The ACOEM doesn't disclose this, nor did its paper.

CONFLICT OF INTEREST. Bulkeley then goes on to document the affiliations of each of the writers and the history of the development and publication of this paper. He also said there were two other medical societies that have published statement on mold also written by legal-defense experts. These societies didn't disclose this fact either, although one later published a correction saying two authors served as expert witnesses in mold litigation.

A HERO. In the Fraser case, a recently retired toxicologist for Washington state's health department, came to the rescue. After the judge barred testimony that mold caused health problems, Dr. Ammann, on her own and without pay, provided an affidavit filed with the appellate court saying the judge misinterpreted the research. Now the Frasers are appealing the refusal of the trial judge, state Supreme Court Justice Shirley Werner Kornreich, to let their expert testify that indoor mold caused their health complaints. ACTS wishes them well.

WEBSITE FOR EPA BOOKLET

In the November, 2006 *ACTS FACTS*, we told readers that the EPA booklet called "A guide for K-12 Schools, Colleges and Artisans" and a companion booklet called "Guidance Manual for K-12 Schools" would be on EPA's website by December 7. We've gotten many calls and e-mails informing us it was not there. We referred them directly to EPA.

At last the booklets are available for download at: <http://www.epa.gov/region02/p2/schools/> or you can order hard copies from EPA from the same location.

INDEX TO 2006 (VOL. 20, No.s 1-12)

January

20 YEAR ANNIVERSARY OF *ACT FACTS*
LATEST THEATRICAL FOG STUDY
LADDER RECALL
TOXIC TOYS FOR ADULTS
BEWARE OF "GLITTERLUNG"
HISTORIC LANCASTER GLASS CO. CITED BY OSHA
LEGIONNAIRES DISEASE FACTS AND FIGURES

February

CONSUMERS BETRAYED AGAIN BY PETROLEUM INDUSTRY
SOLVENT EXPOSURE DURING PREGNANCY: ANOTHER STUDY
NIOSH INVENTS BOOTH TO CLEAN DUSTY CLOTHES
\$1 MILLION AWARDED WELDER FOR MANGANESE EXPOSURE
NFPA PROVIDES MISLEADING CARBON MONOXIDE DATA
EPA air quality index for CO, Household CO detector limits

March

JEWELRY: MAJOR RETAILERS AGREE TO GET THE LEAD OUT
HILTON SETTLES MOLD SUIT
A 13-YEAR OLD CLEANS UP KATRINA MOLD
MAKER OF PYRO PRODUCTS FOR FILM/TV CITED
"AIDA" PERFORMANCE CANCELED: STAGE TECH. INJURED

April

ANTHRAX FROM GOAT HIDES FELS DRUMMER
Vado's Workshop, Types & History of Anthrax, The 1976 Case,
Anthrax Today, Recommendations
UNIVERSITY PAYS \$300,000 PENALTY FOR ASSAULT ON CAMPUS
NY JURY ORDERS COLLEGE TO PAY \$16 M INJURED STUDENT
UPDATE: LEAD JEWELRY KILLS CHILD
ZUBBLES: A NEW COLORED BUBBLE NOVELTY PRODUCT
CRAFTING IS BIG BUSINESS
COMMON ELECTRICAL PROBLEM KILLS UNIVERSITY PROF

May

ARENA CITED: \$75,000 FOR FALL PROTECTION VIOLATIONS
HIGH COURT UPHOLDS VERDICT: LINKS WELDING &
PARKINSON'S
ROSE ART PRODUCT RECALL: A DEATH & 4 SERIOUS INJURIES
WIDOW SUES SAFETY-KLEEN FOR DEATH OF HER HUSBAND
THIRD AGREEMENT ON IMPORTED CHINESE CERAMICS

June

NONTOXIC WOOD TREATMENT
Inventor, How it works, Availability, Comment
RENEWED CONCERN OVER ASBESTOS
Government Response, Exposure, Comment
PAINT THINNER-CIGARETTE ERROR CAUSES FIRE
AUSSIE SCHOOL FINED FOR ACCIDENT
AUSSIE SCHOOL FINED FOR ACCIDENT
MYSTERIOUS ART STUDENT FIRE FATALITY
RIGGER INJURED IN SYRACUSE UNIVERSITY THEATER PIT

July

RHODE ISLAND NIGHTCLUB FIRE: AN UPDATE
Agents & Managers, The Nightclub Owners, Performers, Pyrotechnic
Suppliers, Fire Marshals, State & Local Regulators, NFPA & I, Summary
TRAPEZE INVOLVED IN SCHOOL ELECTRICAL ACCIDENT
NEW MEXICO SCULPTOR KILLED WHILE WORKING IN HIS
STUDIO
HAZARDS OF DAMAGED HALIDE LIGHTS: UPDATE

August

THEATER WORKER DIES OF ASBESTOS CANCER: CASE SETTLED
This Case, Mesothelioma, Asbestos Exposure, Testimony, The Trial
MANGANESE EXPOSURE FROM A CERAMIC GLAZE
Ceramic Leaching Standards, Drinking Water Standards, Cancer &
Development, Neurological Damage, Dietary Exposures, HAL, New
Data, The Glaze Test Results, Conclusion
OZONE CAUSES RESPIRATORY SYMPTOMS IN INFANTS

September

ANTHRAX FELS ANOTHER ARTIST: THIS ONE DIES
2005 FATAL OCCUPATIONAL INJURIES DATA RELEASED
GRAND FIREWORKS FINED BY OSHA
ADULT BLOOD LEAD SURVEILLANCE FIGURES OUT FOR 03-04
STUNT MAN IS SHOT: WHO DUNNIT?
LAVENDER & TEA TREE OIL ACT LIKE HORMONES
EVEN WORMS KNOW LIMONENE IS TOXIC

October

ESTA STANDARDS FOR GLYCERIN THEATRICAL FOG EFFECTS
The Story, History of Air Quality Limits, Who is Protected, EPA
Standards, ASHRAE Standards, Summary
SO-CALLED "SAFE" BLOOD LEAD LEVELS LINKED TO EARLIER
DEATHS
OWNERS SENTENCED FOR RHODE ISLAND NIGHTCLUB FIRE

November

EPA ENVIRONMENTAL HEALTH & SAFETY BOOKLET
The Introduction, Sections 2.0-6.0, MSDS Deficiencies, The appendix, A
Companion Booklet, Where to Get One
IMPORTANT STUDY OF EFFECTS OF VENTILATION IN SCHOOLS

December

VANDERBILT TALC CAUSED CANCER: JURY SAYS
Exposure, Messages, Two Diverse Opinions, Meso Cases, Lung
Cancer, Recommendations
TALC LINKED TO SCHOOL ASBESTOS ABATEMENT FAILURE
POLLUTANTS FOUND IN NEW ORLEANS SOIL

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SCULPTURE STUDENT V. CUNY: \$5 M AWARD UPHELD

NYS Law Reporting Bureau, *Man-Kit Lei v City University of NY*, 2006 NY Slip Op 07578, Decided 10/19/06, as corrected 12/13/2006, Eliot Spitzer AG NY and Melito & Adolfsen PC NY for the respondent.

When sculptor Man-Kit Lei was still a student at one of the Universities of New York City (CUNY), he sustained serious burns from an accident with an oxyacetylene torch in the college's metal lab. Lei filed suit against CUNY and on June 14, 2004, he was granted a judgement in a nonjury trial. The court declared CUNY 80% at fault and awarded Lei \$2.5 million for past pain and suffering, and \$2.5 million for future pain and suffering, and \$850,920 for future lost wages. CUNY appealed the judgement to the Supreme Court, First Appellate Division. This article reports on the final decision of the Supreme Court on that appeal.

RESPONSIBILITY FOR THE ACCIDENT. The City University felt the judgement should be set aside because CUNY had satisfied whatever duty it owed Lei by equipping its metal lab with fire extinguishers, leather aprons, and having the lab regularly inspected by the Fire Department.

However, the plaintiff claimed the University deviated from good and accepted safety practices by allowing Lei, when he was still an undergraduate student, to weld alone, without the presence of a fire watcher, and without proper protective outerwear. While leather aprons were available to the sculpting students, their use while welding was not mandated. The University also issued no written guidelines and safety procedures for students to follow when working with dangerous machinery. Instead, CUNY left the matter of safety procedures entirely to the class instructor. For these reasons, the Appeals Court upheld the 80% liability finding against CUNY.

PAIN & SUFFERING DAMAGES. The Appeals Court noted that Lei had endured seven operations and numerous painful treatments, required extensive physical therapy, and sustained permanent significant scarring to his upper torso, neck, lower jaw and left hand. His left hand is gnarled which leaves him with diminished grip strength. Lei's damaged skin itches persistently. Heat, cold and humidity make him uncomfortable. And he has developed serious psychological problems, many of them permanent, including elements of post-traumatic stress disorder and severe depression. The Appellate Court upheld the \$2.5 million award for past pain and suffering and the \$2.5 million award for future pain and suffering.

LOST WAGES. The Appeals Court decided the claim for future lost wages was not established to a reasonable degree of certainty and the \$850,920 was rescinded. The expert who testified for Lei did not establish to the satisfaction of the court that the young sculptor would have significantly lower earning potential in the future. In addition, Lei had resumed welding and was comfortable using a welding torch one year after the accident. Notwithstanding a diminished grip in his left hand, Lei believed his welding skills and ability had not diminished as a result of the accident. And since his accident, Lei's sculptures have been displayed several times in galleries.

LESSONS. Every school that teaches welding—or any other potentially dangerous craft—should read the section on RESPONSIBILITY above. The court makes it clear that CUNY should not let students work alone under potentially dangerous conditions. Simply providing aprons and safety equipment is not enough. Rules about clothing, safety equipment, and other precautions must be written and enforced. Safety cannot be left to the discretion instructors and students.

IONIC BREEZE CONSUMERS WILL GET \$60 MILLION

Associated Press, Michael Liedtke, 1/20/07, and later reports

Things have been going wrong for Sharper Image, the company that sells the various types of Ionic Breeze® air purifiers. In 2003, *Consumer Reports Magazine* warned readers that Ionic Breeze and other ionic cleaners do a poor job of cleaning the air and emit ozone, a dangerous gas. Sharper Image filed suit in California against *Consumer Reports* for saying their Ionic Breeze was “ineffective” and produced “almost no measurable reduction in airborne particles.” The court looked at the science and dismissed the lawsuit.

If this were not enough, consumer Michael Figueroa filled a class action lawsuit on behalf of himself and 3.2 million other consumers. This suit was settled this past January (for court approval March 1). The court papers indicate that Sharper Image denied the allegations that their device was ineffective. However, they “concluded that it is in the best interest of Sharper Image, its shareholders, and the customers to settle this class action.”

Sharper Image will offer about \$60 million in the form of \$19 merchandise credits to each of the roughly 3.2 million consumers who bought one of its “Ionic Breeze” purifiers since May 6, 1999. This same group of consumers also will be able to buy a grill attachment for the Ionic Breeze for \$7 that Sharper Image says will reduce the toxic ozone emissions from the device.

OZONE is such a strong respiratory irritant that various agencies (OSHA, EPA, ACGIH) have set ozone air quality limits (0.1 ppm) similar to levels for phosgene—a chemical warfare gas.

Sharper Image and the makers of other ozone-producing air cleaners often claim their devices don’t produce a large amounts of this gas. Even when this is true, adding ozone to the air in our homes and workplaces is a bad idea because our air often contains too much ozone to start. This is because ozone is a common air pollutant created as a byproduct of various electrical and chemical processes including from automobile exhaust. Outdoor ozone in many locations in the country are reportedly at levels that present a potential health hazard. Additional common indoor sources include electric generators and motors, copy machines and laser printers, and welding.

Nature makes ozone when lightening goes through air. We recognize the “fresh air” odor of ozone after a storm. This fresh air odor makes it easy for charlatans to convince people that ozone is good for them. There are many testimonials on the internet from happy users of Ionic Breeze which mention the smell of fresh air as proof that the air purifier works!

COMMENT. David Gordon, CIH, P.E., an expert I have known and worked with many years says his tests of various Ionic Breezes have shown they will generate unacceptable levels of ozone if the plates aren’t cleaned. He also observed that they capture about as much dust out of the air as does your television screen. Lets just get more TVs!

OZONE GENERATORS

Another type of air cleaner is called an Ozone Generator. Some of these produce large amounts of ozone and their manufacturers and distributors have on occasion been jailed or fined for their false advertizing. If you are interested in more information about this type of air cleaner, send an SASE and request "Ozone: Killer or Cure" – 4 pages. We'll send it free.

TURPENTINE TLV

ACGIH-Documentation for TLV for Turpentine & Selected Monoterpenes, 2003

For many years, ACTS has recommended turpentine be replaced with safer solvents in as many applications as possible. A good review of the reasons for this recommendation can be found in the American Conference of Governmental Industrial Hygienists (ACGIH) *Documentation of Threshold Limit Values (TLVs)*.^{*} These TLVs are the amounts of chemicals in the air that almost all healthy adult workers are predicted to be able to tolerate without adverse effects. In general, the lower the TLV, the less should be in the air and the more toxic the substance is by inhalation.

In 2003, ACGIH reviewed its TLV for turpentine and lowered it from 100 parts per million (ppm) to 20 ppm. In their summary of turpentine's toxicity, they noted that turpentine is a skin and mucous membrane irritant, and at high concentrations, is a central nervous system depressant. The various components in turpentine are readily absorbed from the gut through the skin, and from the respiratory tract. Recent studies report acute upper respiratory tract irritation and possible long-term pulmonary compromise. The occupational studies illustrate short and long term alveolar (deep lung) damage. This occurred in workers in concentrations above 10 ppm.

Although it absorbs through the skin, ACGIH does not list turpentine with a "skin" notation because there is no evidence of organ damage from absorption. However, turpentine is well-known to causes skin allergies so it is given the "SEN" notation indicating it is a "sensitizer." Turpentine is unclassifiable as a carcinogen (A4) due to inadequate animal and human data.

| <u>SOLVENT VAPORS</u> | <u>TLV-TWA* (ppm)</u> | A comparison of turpentine's TLV with those of other solvents helps to put its toxicity in perspective. And since ventilation rates are calculated to dilute air to below the TLV, it is obvious that switching to less toxic solvents like Gamsol® will enable engineers to design more economical systems for studios and classrooms. |
|-------------------------------------|-----------------------|---|
| ethyl alcohol (grain alcohol) | 1000 | |
| acetone | 500 | |
| odorless paint thinner or Gamsol®** | 300 | |
| mineral spirits | 100 | |
| toluene | 50 | |
| turpentine | 20 | |
| <u>carbon tetrachloride</u> | <u>5</u> | |

There are many less toxic solvents to use. And for oil painting, there are now the water washable oils which require no solvent use at all—the safest option.

^{*} For a more complete explanation of TLVs and TLV-TWAs, see the ACGIH definitions in their publications such as the 2006 TLVs and BEIs, www.acgih.org. Readers can also send an SASE for a two page data sheet used to explain the concept to workers for hazard communication training.

^{**} A 300 ppm TLV painting solvent sold by Gamblin Paints, Inc.

ARTS ACADEMY CITED, FINED IN MAN'S DEATH

Inland News - For Southern California, www.pe.com/localnews/inland/stories - 1/24/07

Idyllwild Arts Foundation, Idyllwild, CA, is appealing a state safety investigation that cited the school in connection with an August, 2006 accident in which an employee died after being thrown from a cherry picker. Dean Fryer, spokesman for the California Occupational Safety & Health Administration (CalOSHA) said the school filed an appeal for the citation and fines that total about \$36,000. Fryers said it may be 18-20 months before an administrative judge hears the appeal.

The citations involve allegations that maintenance supervisor Keith James Kent, 43, of Idyllwild, was not secured to an aerial device by a safety belt or harness and that the cherry picker's weight limits were exceeded, endangering employees. According to the investigation, the accident happened when Kent and his crew were trying to replace a defective pump. They used a cherry picker with a boom and bucket mounted on a 1969 Ford truck. In order to pull the pump, they had to pull up the well pipe which weighted 1,085 pounds from the PVC casing. The load limit specified by the manufacturer for the one-man bucket was 350 pounds, the report said.

The pipe became stuck after they pulled it about 12 feet. A weld on a hook that was part of the pipe lid broke off and the boom and cherry picker swung up, catapulting Kent, the report stated. He fell about 30 feet and died at a regional medical center about two hours later.

The CalOHSA citations also included violations for failure to maintain records for scheduled and periodic inspections and training for employees.

LESSONS. Art organizations and schools, like any other business, must have training programs for their maintenance and grounds workers. Kent had been with the school for 9 years and supervised about 10 people. These workers had access to powered lifts, so their employers must provide training and yearly certification. In addition, maintenance workers and the teachers in arts organizations must have training in proper waste disposal, hazard communication, fire safety, scaffold use, and much more. Most art organizations and businesses, even relatively small ones, need at an employee with professional safety and environmental training to make sure that all employees, including teachers, have the proper OSHA and EPA training and safety equipment.

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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FOUNDING BOARD MEMBER REMEMBERED

Elizabeth Northrop

Acts is deeply saddened to share the news of the death of Nina Ellen Yahr on January 28, 2007. Nina has been a member of the ACTS Board of Directors at its founding and a stalwart contributor to ACTS' research with her review and clipping of safety issues. She was the beloved wife of Eric B. Gertner (also a founding Board Member and Secretary of ACTS).

Readers have not had the opportunity to meet the fun-loving, kind, courageous, and principled woman who spent many years overcoming the challenges of neurological problems. Although her conditions robbed her of physical strength and left her severely aphasic for a number of years, she persevered in her mission to help people in a personal way through daily outings to deliver meals to AIDS patients in New York City with God's Love We Deliver.

Nina was a graduate of the University of Pennsylvania and of Columbia University School of Social Work. Nina will continue to be sorely missed.

UNTRAINED OHLONE COLLEGE MAINTENANCE WORKER TRANSPORTED TOXIC CHEMICALS

Tri-Valley Herald, www.insidebayarea.com, Angela Woodall, 2/27/07

Last August at Ohlone College in Fremont, CA, pool maintenance worker Willie Gallegos got an order to pick up a bottle of acid from a campus building. It was a bottle of picric acid left behind by a retired engineering professor several years ago. It was only listed as "combustible" on the disposal order Gallegos received. However, the stabilizing solution in which the acid was kept, had evaporated. The 25 grams of acid in the bottle was partially crystalized.

Gallegos transported the acid in a pickup truck across campus. Although the August heat and the jostling of the truck could have made it explode, the transfer was completed safely. Then on February 5th, an employee of Decon Environmental, the company hired to dispose of Ohlone's hazardous materials, arrived. The Decon employee "got the hell out of the building," Gallegos recalled.

Gallegos then alerted the Ohlone College building and grounds manager, but was ignored. It was another day before the Fremont Fire Department was called in to remove it. Instead, they called in the Alameda County Bomb Squad, which detonated it near the tennis courts. The blast shook the campus and set off car alarms.

Gallegos had protested numerous times in the past about handling hazardous materials, but facility managers saw transport as the janitors' duty because it was in their job description. Ohlone had provided Gallegos with no training for this work whatever.

Changes will be made. The storage shed to which the acid had been relocated is likely to be removed completely if it is not in compliance with state safety standards. Staff members also have been notified that only lab technicians are responsible for handling hazardous materials. ACTS only wonders how well the lab technicians will be trained for this job considering their actions thus far..

PROFESSOR GUILTY OF ENVIRONMENTAL FELONY

Seattle Times, <http://seattletime.nwsource.com>, Nick Perry, 3/8/2007

On March 7, 2007, Daniel Storm, 62, a respected University of Washington pharmacology professor became a felon when he pled guilty to flushing about four liters of the ethyl ether solvent down the sink in violation of the Resource Conservation and Recovery Act. He faces a maximum five years in prison and a \$250,000 fine when sentenced June 18, although prosecutors have recommended probation under the terms of a plea agreement.

Storm, who continues to work at the university has been there nearly 30 years. A faculty disciplinary process is also reportedly underway.

Storm's plea agreement states that in June 2006, UW health and safety inspectors found three metal and two glass containers of very old ethyl ether in Storm's lab which required disposal. But Storm balked at the estimated \$15,000 cost, which would have come out of a lab operations fund. So later that month he took an ax to some of the containers and flushed the contents down the sink.

Prosecutors say Storm then tried to cover himself by preparing a false voucher from a fictitious company indicating he'd properly disposed of the substance. UW inspectors discovered the voucher was fake and alerted authorities.

Striking containers of old ethyl ether with an ax also could have ignited them. Storm said he used the ax "just because it was handy" and because the lids on some containers were stuck tight. "I knew what I'd done was probably wrong, but I didn't realize the penalties," Storm said.

COMMENTS. People trained in one chemistry speciality such as pharmacology or biochemistry, often do not know about other aspects of chemistry such as safety and reactivity. OSHA and EPA clearly expect the "employer," that is the university, to provide training for all potentially exposed employees, in this case the professors. Instead, university administrators often simply assume that their chemists are informed about safety and regulatory issues. Even worse, these badly trained chemists do not pass safety and environmental information on to their students, thus creating another generation of poorly informed chemists. Clearly, mandatory safety and environmental training should be provided to professors as required. This training also should be formally installed in the curriculum for all students.

ACTS also knows that art professors are even more likely to be untrained to recognize safety and environmental hazards. I suspect felonies similar to Professor Storm's have been committed in many art departments. In the past I have found hazardous materials during inspections that mysteriously disappear. Included were old benzene solvents and benzene-containing asphaltums, old organic peroxide resin curing agents (become shock sensitive explosives with age), many pounds of old potassium chlorate from print making departments, uranium oxide (a glaze colorant) and much more.

ART SCHOOL'S SCENE STORAGE BUILDING CONTAMINATED

Winston-Salem Journal, www.journalnow.com, Laura Giovannelli, 2/24/07

The North Carolina School of the Arts (NCSA) has agreed to pay up to \$300,000 for the clean up of a contaminated scene storage building. It was previously used as a soldering plant. In 2005, the site came to the attention of the EPA, which began testing it for pollutants. The EPA found elevated levels of lead and other metals in soil outside the building and dust that had collected inside.

NCSA is only partly responsible for the cost. It signed a settlement with a holding corporation which previously leased the building to the company that manufactured solder. The building was donated to the N.C. School of the Arts Foundation which in turn leases it to the school. The holdings company and NCSA will split the first \$600,000 of the cost of the cleanup, with the school contributing up to \$300,000. The holdings company will pay for any cost after the \$600,000 for clean up of the building's exterior.

The building sits on one acre in an industrial neighborhood a few blocks from NCSA's campus. It has been used to store sets, documents and films. It is an aging warehouse with limited climate control. NCSA needs storage space because it generates a large volume of set pieces. But the building may not be worth saving if clean up of the interior is too costly.

COMMENT. The leasing or purchase of old industrial properties is common in many universities and professional theaters. These properties always should be first assessed for potential hazards by searching the building's history. Uses which should trigger prospective owners or lessors to require environmental testing include manufacturing that involves of solder, paints, dyes, solvents, chemical reclaiming or recycling, or if it has been used by the military.

DISNEY LEARNS LESSONS ABOUT COSTUME SAFETY

Orlando Sentinel, www.orlandsentinel.com, Beth Kassab, 3/6/07

Thousands of performers at Disney parks around the world must deal with physically demanding conditions and injuries from their heavy and sweltering hot costumes, overzealous children and other hazards. These performers at Disney's four Orlando theme parks reported enough injuries in 2005 to affect more than a third of the 1,900-person work force.

The reason is the costumes portraying 270 different characters can weight as much as 47 pounds. Weight was blamed for 282 out of 773 injuries, mostly to the neck, shoulder or back, according to reports kept by Disney during 2005, the most recent year available for the Occupational Safety and Health Administration (OSHA). While some of the injuries were minor, the reports show that actors at Disney World were injured badly enough in cases in which the costume was cited as a factor to miss a combined 105 days of work in 2005. Actors were transferred to lighter-duty jobs for a month or longer at least 13 times that year because of costume-related conditions.

A burdensome costume head, typically a weighty part of the gear, was specifically cited in 49 cases, often resulting in neck or back strain. Mickey Mouse, Goofy and Donald Duck heads, among others, were specifically mentioned in the reports.

Children or adults were listed as a cause in 107 injured, in which they pushed, pulled or otherwise hurt performers in costume. Some reports cited "excited" guests, characters who were "hit by guest," "jumping" children, "heavy" children and "child pulling on costume." Injuries from those incidents include bruises, sprains and other ailments.

All told, the reported incidents ranged from a death in 2004 to minor ailments such as skin rashes. The death occurred when 38-year-old performer Javier Cruz died after he was hit and run over by a parade float backstage while dressed as Pluto. OSHA fined Disney \$6300 because they had allowed employees to be in areas where they should not have been. But that incident also raised questions about performers' poor vision while in costume.

Another issue is the heat that can build up in the costume especially in the hot Florida summers. Various gadgets such as fans, cooling tubes and ice vests were reportedly tried, but for the most part, they added more weight to the costume than they were worth. The gadgets tend to break, performers say, leaving them carrying additional pounds without any benefit. And in the dead of summer, performers reported that the ice in the vests melts before you get started.

Disney claims that in recent years it has recruited a former NASA engineer to address some of the issues on how the human body endures heat and weight. Disney also exchanges information with military researchers who examine the effects of heat and heavy loads on soldiers and has adopted some materials and techniques originally developed for the auto industry, Carol Campbell, vice president of Disney's character programs and development claims.

Disney also says it now provides classes for actors on how to bend down and pick up heavy items (such as the bag that contains their costume) and other ergonomically correct movements. And instructor-led warm-up class designed by sport-medicine experts at Florida Hospital is included at the beginning of each actor's shift.

COMMENT. ACTS would like to see Disney's findings made available to teachers of costume design in schools and universities. All of these issues of restricted vision, heat, and ergonomic factors should be incorporated into costume designing at the entry level in this profession.

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, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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TITANIUM DIOXIDE LISTED AS A CARCINOGEN

IARC: Titanium dioxide (IARC Group 2B) Summary of reported data, Feb 2006, up dated, March 10, 2006 & MSDSs of many art and industrial materials.

It's been over a year since the International Agency for Research on Cancer (IARC) updated their standards to include titanium dioxide as a 2B carcinogen, that is, possibly carcinogenic to humans. This IARC determination supports the opinion of the National Institute for Occupational Safety and Health. NIOSH listed TiO_2 as a carcinogen in 1988. As yet, no other major agency or governmental organization has listed it.

The change in IARC's listing came about after the agency reevaluated all of the previous studies, concentrating this time on particle size. Essentially, the differences in the size of the TiO_2 particles used in the experiments explained why some studies showed no lung tumors in animals and others did. There was now enough animal data to support it's being a carcinogen when inhaled. And by the same causal mechanisms, IARC says it is a possible human carcinogen.

SKIN CONTACT. The good news is that IARC found no evidence that nanoparticle size TiO_2 will absorb through the skin. Instead, studies of sun screens containing ultra fine TiO_2 on healthy skin of human volunteers revealed that the particles only penetrate into the outermost layers of the skin (*stratum corneum*). This suggests that healthy skin is an effective barrier to titanium dioxide. There are no studies on penetration of TiO_2 on damaged or diseased skin.

MSDSs. All material safety data sheets (MSDSs) for paints, clays, cosmetics, sun screens, and other products containing TiO_2 should be updated by this time to include this new status and information. The Occupational Safety and Health Administration (OSHA) requires manufacturers to up date their MSDSs within 3 months after they become aware of any significant new data (29 CFR 1910.1200(g)(5)).

COMMENT. TiO_2 is a white pigment found in consumer and art paints, inks, cosmetics, and more. The TiO_2 in these products is not hazardous if it does not get airborne. However, artists should be concerned because the titanium white gessoes are likely to be sanded to create a dust. And clays and glazes containing them always create dust in the studio. Airbrushing or spraying of titanium-containing materials would also be another cause for concern.

The new status also should be the final nail in the coffin for air brushing makeups. The majority of the ingredients in cosmetics are approved by the Food and Drug Administration only for skin contact. Many are not approved for the skin around the eyes or the lips. And none are approved for inhalation. Now one of these common ingredients is also a possible human carcinogen by inhalation. It's time for the airbrush makeup industry to call it a day.

ACTIVISTS ASK CPSC TO BAN TALC WATER PUTTY

Copy of hand delivered letter to Nancy Nord, Acting Chair, CPSC, January 29, 2007

Activists Barry I. Castlemen, Jarrold L. Abram, M.D., and James Millette had a letter hand-delivered to the US Consumer Product Safety Commission (CPSC) on January 29, 2007 asking them to ban Donald Durham Company's water putty. The activists maintain the putty contains tremolite asbestos fibers that can be traced to the talc in the water putty from R.T. Vanderbilt Company, the current owner and operator of several talc mines. (See *ACTS FACTS* articles on RTV talcs in issues: 12/07, 6/00, 7/92, 5/91, 4/90, 8/89, 5/89.)

With their letter, the activists submitted data showing that air samples taken during the mixing of the dry putty generated airborne asbestos counts as high as 1.1 fibers per cubic centimeter (fiber/cc) and averaging 0.8 fiber/cc over the 12 minutes of the mixing activity. The data shows that the sanding process generated airborne asbestos counts of 0.23 fiber/cc and 0.2 fiber/cc during 15 minutes of sanding knot holes in a board. And the areas where this was done would be asbestos-contaminated from the dust. This means exposure during prolonged use of this product will result in exposures over the threshold limit value (TLV) for asbestos of 0.1 fiber/cc.

The letter points out that 16 CFR § 1304.1(a) if the Consumer Product Safety Act specifically outlaws all *consumer patching compounds containing intentionally-added respirable freeform asbestos in such a manner that the asbestos fibers can become airborne under reasonably foreseeable conditions of use.....* Here the crucial words are *intentionally-added*, because the manufacturer may maintain that the asbestos was not intentionally added. However, the letter states that § 1304.3(f) *defines intentionally-added asbestos as:*

...asbestos which is... (2) contained in the final product as the result of knowingly using a raw material containing asbestos. Whenever a manufacturer finds out that the finished product contains asbestos, the manufacturer will be considered as knowingly using a raw material containing asbestos, unless the manufacturer takes steps to reduce the asbestos to the maximum extent feasible.

This means asbestos is "intentionally" added when it is known that the product contains asbestos.

The activists have also appended reports on 5 cases of mesothelioma in Vanderbilt talc miners in addition to the 8 cases already identified in previous studies. These 5 new cases were the same ones presented in a recent trial brought by the estate of an art potter who used RT Vanderbilt talc in his glazes and who died of mesothelioma (*ACTS FACTS*, 12/06).

COMMENT. The most damning fact presented by the letter was that Durham's website has directions for the product's use as an art material and shows projects for children. The web site also says the product conforms to ASTM D4236, which means a Board Certified Toxicologist somewhere has certified this product as safe for children. What can this person be thinking?

In the 1980's there were many asbestos-containing products with the AP-nontoxic seal of approval for children. The most well-known was an instant paper machè powder sold by Milton Bradley which contained 80% chrysotile asbestos. Outlawing this kind of product was one reason a group of activists, myself included, worked to get the Labeling of Hazardous Art Materials Act passed in 1988. Clearly, this law doesn't work when toxicologists can certify products like this one.

CHRONICLE LOOKS AT DECLINE IN SAFETY INSPECTIONS

The Chronicle of Higher Education, Jeffrey Brainard, Mar. 16, 2007, Vol. LIII, #28, pp. A1, A24-25

The *Chronicle of Higher Education* rarely has articles of interest to ACTS. They seem to ignore many of the safety issues and campus accidents on which ACTS reports. However, in March, Senior Editor Jeffrey Brainard, wrote a feature article on the rising numbers of campus accidents.

According to the *Chronicle's* analysis of federal safety inspection records, serious injuries have risen 41% since the mid 1980s. Maintenance workers were the most commonly affected. Nearly 200 significant campus incidents were cited by government officials between 1996 and early 2006, up from the 140 serious injuries in the decade before. The increase well out-paced the growth in the number of nonprofessional employees at colleges.

The *Chronicle* attributes the increase to the period when the government conducted fewer inspections of workplaces, particularly academic employers. The *Chronicle* analysis found that in the last 10 years, enforcement of occupational safety rules at colleges fell sharply, with few inspections and citations for serious violations.

Since 1996, twenty-nine people have died in work-related accidents on campuses, the *Chronicle* found. Workers falling or being struck by objects were the most common cause. Examples included a worker who was not wearing a safety harness fell off an extension lift while changing light bulbs in 2005 at Tennessee State University. And in 2001, a custodian at the State University of New York College at Oswego fell off the back of a truck while moving a half-ton printing press, which toppled over and crushed him.

Another accident report described how master electrician, Kurt G. Tassche, died of smoke inhalation when a fire ripped through a maintenance room in the physics building at the University of Maryland at College Park in 2002. Four other university workers managed to escape, but Mr. Tassche, 41, was trapped by Christmas decorations and chairs stored in the cramped space. The illegally stored items were among six serious violations cited by state safety officials during their investigation of the fire. According to Editor Brainard (in a phone conversation), the college wasn't even fined because the Maryland OSHA cannot fine a state institution. Brainard's primary findings in the *Chronicle* were:

- * *Fewer government occupational-safety inspectors are visiting college campuses. There were 2,776 inspections from 1996 to early 2006, about 40 percent below the level in the previous 10-year period. Inspections of all types of workplaces dropped just 15 percent between these two periods.*
- * *Although the number of serious injuries has risen, the number of "serious violations" –conditions likely to cause death or "serious physical harm" –cited by inspectors dropped by more than half to 2,772.*
- * *Most fines against colleges were relatively small, a median of \$1,100, and even serious violations did not always result in fines.*
- * *Enforcement varied widely with geography. Of the top 100 colleges receiving the highest cumulative dollar amounts in fines from 1996 to 2006, nearly half were in California or New York.*

On this last point, it seems obvious to me that CalOSHA is the reason so many California schools are cited. It is one of the best state OSHAs in the country. I'm surprised at the high number of citations in New York because I see poor compliance here. But unlike the agencies in some states, CalOSHA and New York's PESH can levy fines against their state schools. The fines, however, are usually so small that they are not a deterrent.

This patchwork of state and federal regulations limited the *Chronicle* survey to the 25 states which report this data. In the other 26 states, state schools at all levels, from grade schools to universities, are exempt from health-and-safety inspections. Federal law allows states to set up their own OSHA-approved agencies to enforce OSHA rules. These OSHA-approved state agencies are required to inspect both public and private employers. But in states in which there is no OSHA-approved agency, the federal OSHA does not cover nonfederal public-sector employees. The 26 states in which public schools and state colleges are exempt from monitoring and reporting are:

| | | | | | |
|---------------|-----------|--------------|--------------|---------------|---------------|
| Alabama | Arkansas | Colorado | Delaware | Florida | Georgia |
| Idaho | Illinois | Kansas | Louisiana | Maine | Massachusetts |
| Mississippi | Missouri | Montana | Nebraska | New Hampshire | North Dakota |
| Ohio | Oklahoma | Pennsylvania | Rhode Island | South Dakota | Texas |
| West Virginia | Wisconsin | | | | |

To be fair, many of these states have set up unapproved state plans to provide safety monitoring and services. But in years of work in this field, I have observed that these state agencies usually do not have much power or will to enforce, some are only advisory, and some can't levy fines.

The 25 states and 2 territories that have approved State Plans which monitor and report safety violations in their public schools and universities are:

| | | | | | |
|----------------|------------|------------|----------------|----------------|-------------|
| Alaska | Arizona | California | Connecticut | Hawaii | Indiana |
| Iowa | Kentucky | Maryland | Michigan | Minnesota | Nevada |
| New Jersey | New Mexico | New York | North Carolina | Oregon | Puerto Rico |
| South Carolina | Tennessee | Utah | Vermont | Virgin Islands | Virginia |
| Washington | Wyoming | | | | |

NOTE: The Connecticut, New Jersey, New York and Virgin Islands, the state plans cover public sector (State & local government) employment only. The Federal OSHA enforces in the private schools in these states.

COMMENT. I suggest that parents choosing a school for their children or job seekers looking for employment at schools, consider that they are likely to be safer in schools where there is enforcement of safety regulations and reporting of violations and incidents. **Parents should be aware that they, like the *Chronicle*, will be unable to access the safety records of state schools in the 26 exempted states.**

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, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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ART TEACHER GETS ARM STUCK IN CLAY MIXING MACHINE

The Journal News, Will David, www.thejournalnews.com, May 19, 2007

A Yonkers, New York, art teacher was flown by helicopter from Roosevelt High School to Westchester Medical Center on May 18 after she caught her arm in a clay mixing machine. Police, firefighters and ambulance workers raced to the school about 12:30 pm. A STAT flight helicopter was dispatched and landed on the school's football field while rescue workers spent about an hour dismantling the machine which is called a pug mill. The school went into lockdown mode to allow emergency services free access throughout the building during the emergency.

Police Lt., Diane Hessler said the 41-year-old woman's right arm became lodged in the shaft and that emergency service officers had to cut the shaft from the pug mill and transport the woman to the hospital with the shaft still around her arm.

No students were in the classroom with the teacher as she was preparing for an art class by mixing clay, according to school spokeswoman Jerilynne Fierstein. The school was not releasing any additional information about the teacher because Fierstein did not think it was "appropriate" at this time. Lt. Hessler said the cause of the accident remains under investigation and that the federal Occupational Safety and Health Administration (OSHA) would be notified.

COMMENT. The police may notify OSHA, but this federal agency does not have jurisdiction. In New York state, public employees come under a state agency called "PESH." While OSHA would clearly blame the school's administrators for having an unguarded machine on their premises, PESH is not likely to penalize the school. (For information about OSHA actions in such cases, see *ACTS FACTS* 8/99 and 12/99 which report on an arm amputation by a pug mill in a worker at Continental Clay Company in Minnesota.)

Pug mill should have guards that make it impossible to put your hand into the machine when it is engaged. I see many unguarded pug mills every year. There are three reasons why they are unguarded: 1) they so old they were purchased before manufacturers put guards on them, 2) the guard has broken, or 3) the guard was deliberately disabled by teachers or students.

FIRE IN CHANNEL 7 NEWS STUDIO

Reports from Channel 7 News, May 28, 2007

An electrical panel or light in the WABC-TV News Room started a fire at about 11 pm on May 27. Reports said a "pop" was heard and within about 30 seconds, the whole floor-to-ceiling curtain behind the set was engulfed. Everyone evacuated safely, but the station was off the air for two hours and the studio is badly damaged. ACTS thinks Channel 7's own reporters should investigate why this curtain burned so rapidly when the fire code requires it to be flame resistant.

ACROBAT LACKED SAFETY GEAR TO HALT FATAL FALL

Los Angeles Times, May 2, 2007 & Whittier Daily News, May 3, 2007

Roberto Vallenзуuela, 35 of Brownsville, Texas and a popular Mexican circus performer, was performing a series of maneuvers while dangling from two 26-foot-long red cloths when equipment connecting cables to the material broke, sending the performer 15 feet headfirst to the ground. He was immediately attended by county firefighters who were already on site to monitor the next act because it involved fire. They found that Vallenзуuela had died instantly from massive head injuries.

The accident occurred in the first of two scheduled performances on Monday April 30 at the Circo Hermano Vazquez (Vazquez Brothers Circus) in South El Monte, east of downtown Los Angeles. Circus officials ushered patrons out of the big top after the accident. County officials offered grief counseling to the hundreds of spectators, especially children, who witnessed Valenzuela's death.

The California Occupational Safety & Health Administration (Cal-OSHA) began to investigate this as a workplace accident. California law requires circuses to have reliable safety systems in place during performances. However, the preliminary investigation appears to show that Vallenзуuela was not an employee. Instead, he was an independent contract performer. If the performer worked on a contract basis, Cal-OSHA has no jurisdiction in the case. The contract also indicates that the performer himself was responsible for ensuring the safety of all the equipment used in his act.

The Sheriff's Department is also conducting a "non-criminal" death investigation. The county Coroner's Office ruled the death an accident. The official cause of death was blunt head trauma.

COMMENT. Performers should be aware that independent contractors are liable for their own well-being. The company they contract with usually has little or no responsibility for their safety and pays no workers' compensation or death benefits. In addition, no union is negotiating their contracts and protecting their interests. Unless you make millions and can take care of your own benefits, it is better to be represented by a union and be on the payroll of shows or production companies.

EXPLOSION PROMPTS UNIVERSITY TO TRAIN WORKERS

Charlotte Observer, 4/21/07: www.charlotte.com

After an explosion and fire last year, University of North Carolina (UNC) Charlotte officials said they are making a number of changes to the school's facilities management department including providing more training for workers. These changes were discussed at an April 20th meeting of the school's board of trustees. A report by a four-person panel chosen to study the blast found that some workers believed there was a lack of commitment to safety in the facilities department.

Other changes in the department include hiring a supervisor to oversee high-voltage electrical operations and writing up detailed training requirements for employees. One of the Trustees also said safety must be part of the department's culture and included in its mission statement.

Five workers were injured during the blast on April 13, 2006, including electrician Ed Seamon, who died in August. In September, the N.C. Department of Labor find the university \$12,250 for nine violations of the state's Occupational Safety and Health Act. And independent report commissioned by the university said a switch that failed and led to the blast had not been regularly inspected. The university has replaced all 10 of these switches.

URETHANE PAINTS HAZARDOUS LONG AFTER DRYING

Journal of Occupational & Environmental Hygiene, June 2006, 4:406-411

Two-component urethane paints (i.e., composed of a Part A and a Part B) are widely used. They are commonly used for school gymnasium floors, stage and scenery decks (floor surfaces), or for resurfacing bathtubs and other porcelain fixtures. They are also a common autobody spray paint.

The primary hazard of these paints are the curing agents—the highly toxic isocyanates. A recent study in the *Journal of Occupational and Environmental Hygiene* reported that isocyanate curing agents remain on the surfaces of autobody paints for prolonged periods (days to weeks) after they are fully cured. To study this phenomena, workers spray painted 23 scrap sections of auto bodies using methods they regularly use to paint cars. The paints were cured either by putting them in a spray booth under a heat lamp, or by air drying in the shop. Geometric mean curing time of 23 painted surfaces was 56.4 hr (range 0.8 hours to 32 days).

After they were cured, the 23 sprayed surfaces were tested at regular time intervals using a semiquantitative SWYPE technique.* Quantitative isocyanate analysis was also performed on two sprayed parts.** It was found that unbound isocyanates like those found in the original bulk material remained on the majority of sampled painted surfaces for up to 120 hours for typical paint formulations and for 1 month for others, showing that the complete curing of polyurethane paints in autobody refinishing can be a very slow process. Such surfaces are probably an under-recognized potential source of skin exposure to autobody workers.

COMMENT. I assumed that once two-component urethanes were completely dry and cured, they were safe to handle and use. I was obviously wrong. And if autobody paints can be a source of exposure to isocyanates for weeks after curing, I now must assume that other two-component urethane products may pose similar risks. Included would be all types of two-component urethane foams, mold making materials, roof coatings, weather proofing, and more.

Another well-documented hazard occurs when the A and B parts are not properly mixed. In this case, the material can outgas significant amounts of isocyanates forever, rendering them an inhalation hazard. Isocyanates can cause life-threatening asthma, anaphylactic shock, and allergic dermatitis. Highly sensitive individuals can react to tiny amounts of these chemicals. Air-purifying respirators cannot be used for protection unless air monitoring is done to determine the cartridge change out schedule. Send an SASE for ACTS' Urethane data sheet for additional information.

* SWYPE surface pads from CLI in Des Plaines, IL, are impregnated with a proprietary reagent that changes color on contact with aliphatic isocyanates. Product directions call for spraying mineral oil on test surfaces because it will dissolve unbound isocyanates and increase their recovery on porous surfaces. However, these were very nonporous surfaces and mineral oils was not used.

** National Institute for Occupational Safety & Health method 5525.

SPRAY PAINT STUDY: MAJOR EXPOSURE BY SKIN ABSORPTION

BNA-OSHR, 37 (17), 4/26/07, p. 369, and www.joem.org/pt/re/joem/abstract.00043764-200704000-000121.htm

A study in the *Journal of Occupational and Environmental Medicine* of shipyard spray painters found that dermal exposure was a greater source of total exposure to solvent than inhalation exposure. While vapor inhalation is recognized as a primary occupational exposure and prevented by wearing respirators, the route of skin contact is usually ignored, the study said.

In tropical and subtropical countries particularly, the study said, it is too hot for spray painters to wear protective suits. For this reason, the study monitored 15 male Taiwanese spray painters during

a three-day work period in August 2005. The workers wore long-sleeved shirts and trousers and used air-purifying, half-face respirators while spraying with airless guns to paint block units for assembling ships. The workers wore no chemically protective clothing or gloves.

For the study, researchers collected personal exposure data outside and inside the workers' respirator masks. Each worker had two samplers clipped to his collar. The participants wore the samplers a minimum of six hours a day. Dermal exposure samplers were taped directly onto workers' skin. Nine samplers—each three centimeters square—were placed on the back, upper arms, forearms, and upper legs. The dermal sampling was limited to two hours. Researchers also collected the workers' urine before and after each work shift.

Air samplers showed that the primary occupational exposure was to ethylbenzene and xylene solvents in the paints. Seven of the 40 air samplers outside the respirators had ethylbenzene concentrations above 100 parts per million which is the threshold limit value (TLV) set by the American Conference of Governmental Industrial Hygienists. Eleven of the 40 samples implied some level of overexposure to ethylbenzene and xylene, the study said.

The highest dermal exposure concentrations were found on the workers' upper legs. All of the dermal doses of ethylbenzene across the different body regions were higher when workers were spraying inside the assemblies than when they were spraying outside the assemblies. "Significant correlations were found between ambient concentrations of xylene and dermal exposure mass of xylene for all investigated body regions" the study said. Similar results were found for ethylbenzene.

Analyses of the worker's urine revealed a significant relationship between dermal exposure and levels of chemical exposure markers in the workers' urine. The study estimated that the dermal absorption contribution to total exposure dose of xylene and ethylbenzene was approximately 62 percent and 84 percent, respectively. "Our results showed that the contribution of dermal exposure to the total dose was important," the study said.

COMMENT. Respiratory protection alone is not enough protection if air monitoring shows solvent concentrations from spray painting to be above the TLV for the solvents. When mists or high vapor concentrations are present, chemically protective clothing also should be recommended. This study shows that ordinary shirts and pants are not protective during spray painting.

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, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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CT BOARD OF ED ADVISES SCHOOLS TO REMOVE TALC-CLAYS

Letter to Sup. of Schools, 6/20/07 - send SASE for a copy

A joint letter from the Connecticut Department of Public Health (DPH) and CT Department of Education (DOE) was released June 20, 2007. Mark K. McQuillan, Commissioner of Education and J. Robert Galvin, MD, MPH, MBA, Commissioner of Public Health sent the letter to alert all Connecticut Superintendents of School to the "Potential Asbestos Hazard in Art Clay."

The letter cites the "recent court case in New Jersey [that] found talc mined by the R.T. Vanderbilt Company of New York was responsible for an asbestos-related cancer (mesothelioma) in a pottery shop owner." This potter had used Vanderbilt's NYTAL 100 talc (see *ACTS FACTS*, 12./06).

The letter also says there is limited data on how much exposure students and teachers would have to airborne asbestos from this source, but that clay produces airborne dust when it dries or is sanded.

The DPH and DOE stated that they have asked the U.S. Consumer Product Safety Commission (CPSC) to look into this further. But, until the CPSC provides an opinion, the DPH and DOE advise school officials to inventory all art clays for the presence of talc and ask their art material suppliers to provide non-talc substitutes. Further DPH recommends schools conduct a thorough wet wipe cleaning or HEPA vacuuming of art rooms where talc clays were used.

UNDISCLOSED EXPOSURE DATA. Actually, the DOE has some data on asbestos exposure from talc clays used in one of their schools. In 2000 and in 2002, a school failed asbestos air tests. The problem was traced to talc-containing clay in the art room (see *ACTS FACTS*, 2/06).

OTHER FACTS. As noted in *ACTS FACTS* 2/06, the trial cited in the letter also provided the following information:

- There are now 13 known cases of mesothelioma in a workforce of about 800 Vanderbilt workers. This cancer is a marker disease for asbestos and usually occurs only in one in a million people.
- The National Institute for Occupational Safety and Health (NIOSH) has steadfastly maintained since the early 1970s that Vanderbilt talc is significantly contaminated with asbestos.
- NIOSH is not alone, other researchers agree. The most recent ones are researchers from the NY State Department of Health who studied sediments at the bottoms of lakes downwind from the Vanderbilt mines. They found the amounts of asbestos fibers they found in the sediments for the last 100 years could be correlated with Vanderbilt mining production volumes.*

* Reconstruction of a Century of Airborne Asbestos Concentrations, *Environ. Sci, Technol.* 2004, 38, 707-714

- Four studies asserting that the talc was asbestos-free which were presented by the defense in the Vanderbilt trial were determined to have been financed by Vanderbilt. In two of these studies, this fact had not been disclosed by the researchers in violation of ethical principles. These studies are in stark contrast to the unbiased studies paid for by NIOSH and NYS Department of Health.

- Those studies claiming the talc is asbestos-free do not deny that there are structures that look like “fibers” present in the talc. These fibers are clearly seen in microscopic analyses of the talc. Instead, they claim that these fibers are transitional fibers, cleavage fragments, or other structures. Even if they are right, it matters little what the fibers are called if they can cause cancer.

RECALL BY A CT MANUFACTURER. John C. Cowen, President of Sheffield Pottery sent a letter to their Connecticut customers on June 18, 2007. This was before the Superintendent’s letter was sent. Cowen says they were in contact with the DPH over the previous few months and decided to take a proactive approach. Effective immediately, Sheffield Pottery will be shipping their SC5 talc-free white earthenware clay as a substitute for their Mass White clay. Cowen also will exchange any remaining Mass White clay inventory in the schools with the SC5 clay and will provide free 25 pound samples of the SC5 to any teacher who wants to try it.

TALC PRODUCTS CERTIFIED AS “SAFE.” The average consumer will have a hard time finding out if talc is in their clay or other modeling products. Toxicologists have been certifying these talc-containing products as safe for years. The major US certifier, the Arts & Creative Materials Institute (ACMI), sent the following statement to ACTS in an email on June 29. As a condition of it’s use, they require ACTS to provide their entire statement unedited. Here it is:

As a result of conflicting information and possible consumer confusion from reports of asbestos in ceramic clays in Connecticut schools, not from safety concerns, ACMI has required member manufacturers using Nyal talc, if any, to reformulate their products within six months to replace such talc with suitable alternatives. ACMI believes this is a situation similar to that which occurred in 2000 with talc in crayons, when ACMI member companies agreed to reformulate crayons to replace the talc at the request of then Commissioner Ann Brown. Even though tests by the Consumer Product Safety Commission found traces of “Asbestos-like fibers,” but in levels so small that the Commissioner Ann Brown described them as “scientifically insignificant” and stressed that “there is no cause for concern,” the companies reformulated to maintain consumer trust in their brands.

Our toxicologist, Dr. Woodhall Stopford of Duke University, has required testing of clays and related products for dust production during foreseeable use and cleanup activities. Based on the amount of asbestiform fibers that might be in clays using Nyal talc and based on EPA’s risk assessment for asbestos, he found no excessive risks to users of such ceramic products. This evaluation is posted on Dr. Stopford’s web site and has been reviewed by CPSC’s Health Directorate. It was resubmitted to CPSC after Connecticut raised their concern. This risk assessment covers all art of craft materials that may contain Nyal talc. Based on the lab reports of CPSC and other labs and the risk assessment of ACMI’s toxicological team at Duke University, ACMI does not believe certified art materials containing Nyal talc, if any, then or now need to be recalled from the market place.*

* Note from Editor: Actually the information is at: <http://duketox.mc.duke.edu>

ACTS has the following comments on ACMI’s statement:

- We agree that crayons in which the talc was suspended in wax probably will not expose users to asbestos in significant amounts. We still object to its being there at all.

- We disagree with ACMI's statement that only "asbestos-like fibers" were found in crayons. The National Toxicology Program's 2002 10th *Report on Carcinogens* reported that:

CPSC tested crayons from three manufacturers. ... CPSC found trace amounts of anthophyllite asbestos and larger amounts of transitional fibers in crayons from two of three manufacturers. ... Although the risk was considered extremely low, manufacturers agreed to reformulate to eliminate talc (CPSC (2002).*

* A "trace" is defined in the Chemical dictionary as 1% or less—which can be significant.

- Regarding Dr. Stopford's risk assessment tests for ceramic products: we would ask readers to consider that Dr. Stopford's definition of asbestos is clearly different from that of NIOSH and many other researches. ACTS thinks we should not accept such risk assessments as valid unless they are done by someone who will count the fibers as NIOSH would.
- ACMI's phrase "manufacturers using Nyltal talc, if any" is ominous. ACMI must know which of their manufacturers are using Nyltal since Dr. Stopford obtains a list of each product's ingredients. It sounds as if ACMI is implying that perhaps none of their members use Nyltal and, if they do, ACMI couldn't identify them so that consumers could avoid talc-products if they wished.

SUMMARY. Clearly, Dr. Stopford does not think Nyltal contains significant amounts of asbestos. We suggest he talk to a fellow faculty member at Duke University, the Program Director of the Epidemiology Department, Dr. John M. Dement. Dr. Dement is the researcher who did the first NIOSH study of Vanderbilt talc back in the 1970s. As long as NIOSH and other scientists who are not paid to certify products or to defend talc producers in lawsuits say the talc is hazardous, consumers and children should not be exposed to it. ACTS commends the Connecticut Department of Health and the Connecticut Department of Education for their proactive stand on this matter.

MOLD ARTICLE WRONGLY ATTRIBUTED

Editor

On June 26, I discussed mold problems with Leonard Lopate on his interview program on Public Broadcasting. During preparation for this broadcast I suggested to the show's Producer, Barbara Cahn, that we include a discussion of the *Wall Street Journal* article covered in the February 2007 *ACTS FACTS*.

This WSJ article was written by a reporter who investigated a paper that appeared in the journal of the *American College of Occupational and Environmental Medicine* (ACOEM). This paper concluded that there was "no scientific evidence" that mold has ever caused adverse effects in the home, school or office environment. The paper was used by some judges as a reason to throw out the cases of some plaintiffs claiming injury from mold exposure for lack of evidence. But the reporter found that the ACOEM paper had been written by doctors who did not disclose that a significant portion of their living was from serving as defense expert witnesses in mold cases.

As Barbara Cahn checked this article prior to broadcast, she noticed that it had been made available on several news web sites including the dailyreportonline.com where I saw the article. However, Barbara found that some of the web sites attributed the article to William M. Bulkeley while others attributed it to David Armstrong. Cahn made a call to her contact at WSJ and determined that the reporter actually was David Armstrong. We also will correct this in *ACTS FACTS'* electronic files.

EPA CITES UNIVERSITY IN THE US VIRGIN ISLANDS

<http://yosemite.epa.gov/opa/admpress.nsf/0/CCE7ADF55DDFEC65852572AB0058C160>, EPA Settlement with the UVI to Benefit All Schools – Release date: 03/27/2007

An agreement between the U.S. Environmental Protection Agency (EPA) and the University of the Virgin Islands (UVI) will promote a safer environment for students, faculty and workers not only at the university's campuses but at all the schools in the Territory. EPA cited the university for multiple violations of rules under the Resource Conservation and Recovery Act that govern how to handle hazardous waste. The settlement announced on March 27th goes beyond requiring the university to correct these violations, by requiring them to spend at least \$99,000 to help all U.S. Virgin Islands' schools to comply with environmental rules. The university must also pay a penalty of \$20,000.

"The UVI will help ensure good environmental stewardship throughout the entire VI educational community," said Alan J. Steinberg, EPA Regional Administrator. "This settlement is a true win-win for the Territory." Under the terms of the agreement, UVI has committed to train its staff and faculty from both campuses and conduct a series of assessments, reports, mentoring and seminars to help other school facilities better handle their own environmental obligations.

The settlement requires the university to correct all of the alleged violations that EPA observed during its inspections to the extent that it has not already done so. The violations included failing to store incompatible waste chemicals separately, failing to determine which of the wastes that it generates are hazardous, and failing to minimize the risk of fires, explosions, and the release of hazardous wastes and hazardous waste constituents. EPA also found that the university had not properly labeled containers of hazardous waste, had not regularly inspected the chemical waste storage areas, and had not provided proper training to employees.

Over the past four years, EPA's Region 2 has inspected 58 colleges and universities under their "Colleges and Universities Initiative" program* and have issued administrative complaints with penalties totaling more than \$2.6 million against 20 colleges and universities in New Jersey, New York and Puerto Rico. This is the first such action in the Virgin Islands.

* The "Colleges and Universities Initiative" is an ongoing program with additional investigations anticipated. Educational institutions also can self report violations and get relief from a portion of the penalties in exchange. See <http://www.epa.gov/region02/capp/cip/> for more about EPA's Colleges and Universities Initiative and visit <http://www.epa.gov/region02/p2/college> for a booklet on compliance with hazardous waste regulations.

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, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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NEA ACCEPTS NO RESPONSIBILITY FOR GRANT RECIPIENT'S LOCAL LAW VIOLATIONS

Editorial - Unlike our usual reports, the names and places in this story are withheld.

THE STORY. In the middle of July, a professional conservator contacted me. She was sent an old theater curtain to restore. However, the curtain was asbestos, and she knew this was not proper without special training and certification. I found out that the curtain was sent by a group that had been receiving National Endowment for the Arts (NEA) to restore curtains for over 10 years.

The group's website showed an impressive array of restored curtains originally painted between 1880 and 1940. The curtains on the website did not appear to be asbestos (painted designs on curtains of this period often proudly state that they are asbestos). Instead, the web site's curtains were painted grand drapes, back drops, scenic curtains including tormentors and overhead teasers and local advertising grange curtains. The text stated that 110 such curtains had been restored, 80 of which were rehung in town hall stages, grange halls, community theaters, and opera houses.

STATE LAWS BROKEN. The major problem is that none of these curtains were fire retarded. The state in which this project was done (like most states) adopted National Fire Protection Association codes, specifically NFPA Life Safety 101. This code (at rule 10.3.1) requires that "draperies, curtains, and other similar loosely hanging furnishings and decorations shall be flame resistant as demonstrated by testing in accordance with NFPA 701 Standard Methods of Fire Tests for Flame-resistant Textiles and Films." This rule applies to both old and new public buildings including theaters (although there is a theater chapter with some additional theater-specific rules).

For over 10 years, this project was funded by NEA through the "Save America's Treasures" program and provided additional support from the National Park Service and the Department of the Interior. Not once did anyone notice this problem. Yet the problem should have been immediately apparent because there was no budget line for purchasing and applying fire retarding chemicals, lab testing and providing fire certificates with the restored curtains. Worse, the grant application from this group was sent by NEA to other applicants as a model of a good proposal!

I contacted the NEA Museum Grant office. The person I talked to said he would discuss the issue with colleagues and get back to me in a few days. When he called back, his position was that the fire codes are local laws and grant applicants sign a statement saying they will meet all state and local regulations, so NEA is not responsible. Amazing. Eighty potential fire hazards exist in this state due to a grant they repeatedly renewed, and NEA seems concerned only about their liability.

WERE FEDERAL LAWS BROKEN? Theatrical and other paints used in the 1880 to 1940 period commonly contained lead chromate greens and yellows, cadmium yellows and reds, mercury-containing vermilion, arsenic colors such as violet and Paris green, and more. The web site also

says they used powdered pigments to mix their own paints for in-painting. All the old lead, cadmium, and chromium pigments are still readily available. As a result, toxic metal dusts may be everywhere throughout the restorer's facility, especially if the vacuum being used by a conservator in a web site picture was not HEPA filtered.

The federal Occupational Safety & Health Administration's regulations regarding lead, cadmium, arsenic, chromium, and other highly toxic metals require identifying sources of these metals, monitoring worker exposure to them, and setting up special precautions. However, the particular state in which the project is being done has a state OSHA plan. This State's toxic metals rules are identical to the federal laws, but NEA is technically off the hook again.

However, if any asbestos curtains were vacuumed and treated, the dust throughout would be even more toxic and some of the asbestos regulations are federal.

WHO IS AT RISK? The web site says three conservators and three technical assistants work on the curtains. The project also has local volunteers work along side the professional team. So a considerable number of people have been working here and are potentially exposed. And then there are all the people now working or visiting the 80 venues in which the untreated, potentially combustible curtains are hanging.

FIRST THINGS FIRST. The most important action is to alert current custodians of the restored curtains that these curtains must come down immediately. I e-mailed the Chief Fire Marshal in the state in which this project is located about the problem. Reportedly, the conservation group has met with a Marshal. If I am informed about the results of this meeting, I will report to readers.

And from this point forward, NEA should require grant review panels to include professionals and experts in the proposed activity (i.e., not just teachers, professors, artists, etc.). In this particular case, a fire safety expert, an owner/operator of a theatrical curtain manufacturing facility, or even a union scenic artist in any professional theatrical shop could have caught this problem.

THE NEXT STEP. ACTS believes that NEA helped get them into this mess and, ethically, they owe them help to get out. NEA should provide emergency funds to this project for the following:

1. Obtain laboratory identification of the curtain fabrics and paints to find out which might classify as "inherently fire retardant" by the nature of their fiber content and the types of paints used on them. These curtains could be rehung as soon as certificates attesting to this status are generated.
2. Consult with professionals in theatrical curtain manufacture/ maintenance and chemists to identify fire retardant products that can be applied to the remaining curtains with the least damage or color change to the historic painting. Actual testing may need to be done by conservators.
3. Pay for certified labs to test these curtains using the least amount of fabric possible. Most of the tests (e.g., NFPA 701) require three strips about 4" by 12" to be tested by burning. The tests may have to be repeated every few years depending on the length of time for which the retardant product is guaranteed. This could require replacement of significant amounts of historic fabric over time. There also may be some theaters with special fire suppression systems that can get variances.
4. Hire safety consultants to determine how to properly protect workers from toxic pigments and fire-retarding chemicals in compliance with the state OSHA regulations (which are identical to the federal OSHA regulations in this particular state) and to meet both OSHA and EPA asbestos rules.

MERCURY FOUND IN SOME ANTIQUES

MMWR, CDC, 56(23), pp. 576-579, 6/15/07, BNA-OSHR, 37(25), pp. 557-8, 6/21/07

Common sources of mercury in homes include thermostats and thermometers, but elemental mercury may also be in antiques. Vintage items such as clocks, barometers, mirrors, and lamps may contain it. The Centers for Disease Control recently wrote up six incidents that were reported to the Hazardous Substances Emergency Events Surveillance system in New York state from 2000 to 2006.

The items that were involved included two pendulum wall clocks from which 150 milliliters (ml) and 500 ml of mercury were spilled, a clock which had a 15 inch mercury filled column from which 30 to 330 ml were spilled, a barometer from which 35 ml spilled, a mirror from which approximately 30 ml of mercury leaked from the back, and a lamp from which about 35 ml of mercury spilled.

In most cases, the people in the stores or homes where the spills occurred tried to clean up the mercury themselves, but soon called their health departments for professional help. Those that tried to clean with ordinary vacuums only made the problem worse. It also should be noted that rugs and fabrics into which the mercury spilled were bagged for disposal as toxic waste. The measures suggested by the CDC to prevent unintentional releases of mercury from antiques include:

- * *Know the various types of antiques and items that might contain elemental mercury:*
 - *thermometers, barometers, pendulum clocks, electrical switches, blood-pressure gauges, thermostats, silvered mirrors, silvered vases.*
- * *Do not purchase an antique known to contain mercury. If the seller is uncertain, have the seller verify the item is mercury-free.*
- * *For mercury containing antiques in the household, exercise care:*
 - *Inspect each item thoroughly for cracks or leaks in susceptible areas (e.g., seals, columns, and castings).*
 - *Replace or remove mercury-containing components, whenever possible. Do not attempt to drain or replace the mercury.*
 - *Because mercury is hazardous waste, contact the state or local health or environmental department for advice on cleaning up or disposing of mercury.*
- * *When handling mercury-containing items, exercise care:*
 - *Move slowly.*
 - *Keep the item in a leak-proof container.*
 - *Support the item with padding.*
 - *Do not turn the item horizontal.*
 - *Keep barometers at a 45-degree angle when moving.*
 - *Because mercury is regulated by the U.S. Department of Transportation, know the applicable laws before shipping an item.*
- * *Ensure that the antiques containing mercury are not within the reach of children and that children are educated about the dangers of mercury.*

COMMENT. ACTS also knows of mercury coated mirrors that do not spill visible amounts of elemental mercury, but which instead constantly release mercury vapor from their backs. They can be identified by examining their backs where tiny shiny beads of mercury can be seen with a magnifying glass. There are also glass vases that look like they have been silvered on the inside which also contain mercury. Collections of rocks may also contain ores which release mercury. Some old medicines contained mercury compounds or metallic mercury. Always study the types of antiques you buy in depth to identify potential sources of mercury and other toxic substances.

SWISS STUDY LINKS CANCER WITH MAGNETIC EXPOSURES

BNA-OSHR, 37(23), pp. 514-515, 6/7/07 & Occup Environ Med online, May 2007

A study of 20,141 Swiss railway employees found that two types of cancer may be linked with exposure to extremely low frequency magnetic fields (LFMF). Accepted for publication in *Occupational and Environmental Medicine* on May 24, 2007 and published online in advance, the study quantified the workers exposures to LFMF.

Swiss railway employees were chosen for this study because they are generally employed long term, exposures at a given workplace are well characterized, and confounding exposures to chemical pollutants or electric shocks are rare. Train drivers have a very high exposure while other employees have exposures comparable to the general population. The median cumulative lifetime exposure for train drivers was about 120 microteslas*-years, compared with 42 microteslas-years for shunting yard engineers and 13 microteslas-years for train attendants. Station masters, the study said were minimally exposure at 6 microteslas-years.

The study found that leukemia mortality rates were over 40% higher for train drivers than for station masters. Additionally, the study said, train drivers were more than four times as likely to die of myeloid leukemia and over three times more likely to die of Hodgkin's lymphoma.

Mortality from lymphoid leukemia and non-Hodgkin's disease, and brain tumor were not associated with magnetic field exposure, the study found. The leukemia mortality rates of the railway workers became more similar over the course of the follow-up period, the study noted and predicted that "Additional analyses in a few years may clarify this finding."

COMMENT. Exposure to magnetic fields is hard to study. This appears to be one of the better studies and may provide important data for risk assessments for such workers in combination with other subsequent studies. There is a great deal we do not know about LFMF and the many other forms of energy that are beamed through us regularly.

* A tesla is a unit of magnetic induction. A microtesla is a millionth (10^{-6}) of a tesla. A more common measure is a gauss and 1 gauss equals 100 microteslas.

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, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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September 2007

Vol. 21, No. 09

AN ART MATERIAL AMONG THE RECALLED CHINESE IMPORTS

Sources: CPSC Press Release #07-299, August 30, 2007; www.toysrus.com; www.msnbc.msn.com/id/20511812; www.wtopnews.com/?nid=104&sid=1235383; www.nydailynews.com/news/wn_report/2007/08/30/2007-08-30-toys_r_us_issues_recall_on_lead_paint_fe.html?ref=rss; www.danxiang.net/en; & Brian C. Lee.

ACTS FACTS has reported on Chinese product safety issues since June of 1988 when we covered a US/China agreement regarding lead in ceramic products. Later, we wrote articles on many US Consumer Product Safety Commission (CPSC) recalls such as the lead-laced vinyl miniblinds. Today, all of the news services are writing about the numerous recalls of Chinese-made toys, jewelry, baby bibs, lunch boxes, and more. And among all these there was one art product of note.

Available for \$20 from Toys “R” Us®, this product was their Imaginarium® Wooden Coloring Case. It contains crayons, pastels, colored pencils, fiber pens, paintbrush, pencil, water colors, palette, white paint and a ruler. CPSC says the printed ink on the outer packaging of the wood case contains too much lead. But the next line in the CPSC press release is relevant to art consumers:

Also, some of the black watercolor paint contains excessive levels of lead, which violates the federal lead paint standard.

The fact that the lead paint standard was violated, is not as important as the fact that this product comes under the Labeling of Hazardous Art Materials Act (LHAMA), another law which the CPSC enforces. This law requires that art materials be evaluated by a toxicologist who certifies that the product conforms to a chronic toxicity labeling standard called ASTM D 4236.* In fact, it is illegal to sell any art product in the US whose label does not state that it “conforms to ASTM D-4236.”

Try as we might, there was no picture of this product’s label that was clear enough to determine if this statement was present. If the statement was not there, this was a violation. If the statement was there, then ACTS wants to know: who was the toxicologist that approved this hazardous product?

Toys “R” Us® says it bought the sets from Funtastic, a Hong Kong distribution company called FPL Group. The set was manufactured by a company in Ningbo, China, called Danxian International Trading. *The Daily News* reported that Toys “R” Us® said they cut off their relationship with Funtastic over this, but will they still buy from Danxian International Trading?

MSNBC reported that “The wooden art set passed a safety test as recently as April 2007, but failed a recent retest, according to the company [Toys “R” Us®].” Does this mean that Toys “R” Us® does their own testing rather than relying on the manufacturer’s certifier? If so, how often and how many items in each batch do they test? And how did this product get passed their tests?

COMMENT: LHAMA is designed to make it almost impossible for lead-containing art materials to get on the market. Obviously, this labeling/certification system has failed. Toys “R” Us® and the CPSC should provide information on how the system failed and who is responsible.

* footnote: American Society of Testing & Materials (ASTM) chronic toxicity labeling standard D 4236.

CPSC & NFPA ADVICE ON COLLEGE DORM FIRES

CPSC Press Release #07-279, August 21, 2007

A joint press conference held by the Consumer Product Safety Commission (CPSC), the US Fire Administration, the National Fire Protection Association (NFPA), and the University of Maryland's Fire Marshal urged students, parents, administrators and resident assistants to be aware of fire dangers. The NFPA reported that fires in college housing have dramatically risen in recent years from a low of 1,800 fires in 1998 to 3,300 fires in 2005. From 2000 through 2005 there were 39 deaths and nearly 400 injuries. The CPSC and the NFPA recommend following these College Dorm Fire Safety Tips:

- * *Cooking equipment causes 72% of dorm fires. Students should cook in designated areas only, and never leave cooking equipment unattended when in use.*
- * *As far as deaths and injuries are concerned, most occur in sleeping areas, and are associated with smoking materials like tobacco products, candles, and incense. Always extinguish flames before leaving the room or going to sleep.*
- * *Electrical products, portable heaters, and lighting such as halogen lamps are the source of many dorm fires. Keep combustibles away from heat sources and don't over load electrical outlets, extension cords, and power strips.*
- * *Take special care with holiday and seasonal decorations. Don't use combustible materials and never block access to safety devices, doors, etc.*
- * *Know your building's evacuation plan in case something does go wrong.*
- * *Don't disable smoke alarms.*
- * *Sign-up to receive automatic electronic e-mail notification announcement of recalls at www.cpsc.gov*

COMMENT. Young people have heard all these precautions before. They just don't follow them. I've inspected hundreds of university art and theater departments and it is my experience that many teachers don't follow these rules either. The CPSC/NFPA precautions won't work without supervision and inspection of dorms by personnel trained to recognize the hazards.

And there are certain college dormitories that are at special risk. These are found at schools in which administrators and architects have conspired to attract art students by providing live/work dorms. In these dorms, students can do their class art work. I have inspected such housing and seen students using flammable solvents, toxic paints, and spray cans where they eat and sleep.

At one well-known university, the live/work spaces were designed to accommodate two or three students who share the bath, kitchen, and a studio/living room. Administrators claimed the studios had special ventilation which actually was an ineffective 300 cubic foot/minute, bathroom-type, exhaust fan installed in the ceiling of each studio/living room. There was no separation between the studio/living room and the kitchen--and the kitchen sink was where paint brushes and other art utensils would be washed. Students in these dorms will be exposed to the flammable and toxic materials they use. And they are learning bad work habits which can last a lifetime.

Overall, the CPSC/NFPA list of fire precautions is pretty useless without formal education and training of teachers and administrators, and supervision and inspection of dormitories.

OREGON HALIDE LIGHT BULB LAW SIGNED

BNA-OSHR, 37(25), p. 559, 6/21/07

On June 11, 2007, Gov. Ted Kulongoski of Oregon signed a bill banning use of certain kinds of metal halide lights in schools. Teachers lobbied for this bill after several were injured by exposure to ultraviolet radiation from a broken halide light cover in a gymnasium at Bryant Elementary school in Lake Oswego, OR. The bill bans the use of bulbs that don't self extinguish within 15 minute if there is a crack or break in the outer protective lens.

ACTS FACTS (April, 2005 & July 2006) covered the incident in which the teachers were injured and the subsequent Oregon state alerts on the halide lights. The teachers were attending a meeting in the gym and were seated for more than an hour under beneath a bare arc-bulb. A volley ball had broken the cover off previously. Five teachers are still suffering the effect of their exposure. One has radiation burns to the cornea of her eye and has recently been able to obtain specially made lenses to provide temporary relief from the pain in her eyes.

26 STATES SAY FIREFIGHTERS GET CANCER ON THE JOB

BNA-OSHR, 37(23), pp. 513-514, 6/7/07

With the addition of three states this legislative session, there are now 26 states that presume firefighters diagnosed with certain types of cancer have contracted the disease from on-the-job exposure, and official with the International Association of Fire Fighters said.

Cancer presumption legislation for firefighters was very active this year. Colorado, Vermont and Washington were added this year. Legislation is still pending in Oregon. Florida Legislature has authorized an actuary study on five cancers for firefighters.

Early states a decade ago were Virginia, Connecticut and California. And now there is a federal bill that would amend the US Code to presume that certain diseases are work-related causes of disability and death for federal employees in fire protection activities. The Federal Firefighters Fairness Act of 2007 (HR 1142) would place heart disease, lung disease, brain cancer, leukemia, lymphoma, multiple myeloma and other cancers, and infectious diseases including tuberculosis, hepatitis and diphtheria are on the list of presumptions.

COMMENT. It is not possible to burn any complex organic material without producing highly toxic chemicals. Toxic and cancer-causing substances are found in the smoke and tar of cigarettes, coal, wood, or the smoke and tar of any other plant substance you might inhale. Some plastics produce even more toxic smoke. Fire fighters, exposed to smoke and tar from a host of these and other substances found in homes and buildings clearly put them at risk. Compensation for cancer and other diseases which may result is in order.

2009 SUBSCRIPTION PRICES WILL RISE

We've looked at the bottom line, and it seems that we will have to raise the price of our subscriptions from \$20 to \$25 for US subscribers, from \$23 to \$28 for Canadian and Mexican subscribers and from \$26 to \$30 for other countries. But this will not happen until 2009. But for those who wish to renew for multiple years, this is the time to lock in years at the old price.

WASHINGTON PROFESSOR GETS FINE & COMMUNITY SERVICE

Seattle Post-Intelligencer, Christine Frey, seattlepi.nwsourc.com & ACTS FACTS, April, 2007

The April 2007 ACTS FACTS covered a story about a University of Washington professor who dumped containers of ethyl ether down a sink in his laboratory last summer to avoid paying \$15,000 to properly dispose of it. Technically, this is a felony and under the EPA's rules, 62-year-old Professor Daniel R. Storm could have faced 5 years in prison and a \$250,000 fine.

However, on August 28, 2007, a District Court in Seattle ordered him to pay only \$5000 and perform 80 hours of community service. Storm will also be on probation for three years. Half of Storm's fine will go toward an environmental cause and his community service is likely to be performed with a group that deals with hazardous waste disposal, such as the city of Seattle's ReUse Store.

FORMER RISD FIRE-SAFETY OFFICIAL ARRESTED FOR FRAUD

Chronicle of Higher Educ., New Blog, Mar 28, & Aug 7, 2007 & WJAR-NBC 10, Aug 7, 2007

A former fire-safety official at the Rhode Island School Design pled guilty today to federal charges in connection with a nearly \$1-Million swindle of the arts college. Patrick Clyne, 65, is free on bond pending sentencing, set for November 2, for mail fraud and filing a false tax return.

From 1997 to 2005, Clyne billed the school for fire-safety work purportedly done by a shell company he created, prosecutors said. Clyne approved nearly \$982,000 in fraudulent invoices for the company, then forwarded the bills for payment to the school's purchasing department. Clyne and his wife, Ibtisama Bradley, were indicted this year on conspiracy and 10 counts of mail fraud. The couple, who had been living in Ireland, surrendered to federal authorities in May and were arrested at Logan International Airport in Boston. Federal prosecutors agreed to dismiss all charges against Bradley and permitted Clyne to plead guilty to just two counts. He also has agreed to forfeit ownership of a property in Ireland that prosecutors say he and his wife brought with proceeds from the scheme.

COMMENT: RISD official have said Clyne's scheme led the school to implement stricter safety controls and caused no significant safety problems. I find it hard to believe that nearly \$1million in fire-safety work that was billed but not done did not impact on RISD's fire safety.

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, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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UPDATE ON THEATER CURTAIN RESTORATION PROJECT

Editorial

We've had a lot of feedback about the August *ACTS FACTS* article on the NEA-funded theater curtain restoration project in Vermont. To refresh your memory, this project resulted in about 80 restored painted curtains being hung in theaters and public venues without being fire retarded and tested as required by fire codes. Now *ACTS FACTS* readers and other interested parties have reported similar projects in New York, New Jersey, Connecticut, Georgia, Massachusetts, and Canada.* We suspect similar projects have been done throughout the US and Canada.

We wanted to alert fire authorities, but found this is difficult due to the patchwork of fire laws in each state and province. For example, New York fire laws are enforced by three agencies. New York City marshals enforce within Manhattan and the Burroughs. NYS Fire Marshals only cover state colleges and universities. And building code enforcers enforce in the rest of the state.

RECOMMENDATIONS. Readers should check their own workplaces and all fire code enforcers, inspectors, and marshals should pay particular attention to the curtains, drapes, and hanging textiles in the buildings in their jurisdiction. Fabric materials should have an active fire certificate, internal field test data that is deemed acceptable, or a written variance from the authority having jurisdiction.

An example of a variance for an historic curtain was described in an e-mail by an art conservator in Canada. In this case, an historic backdrop is allowed on view only before a performance. Fire retarded house curtains are hung about a foot in front of the historic backdrop. The historic curtain is displayed as the audience is filing in. When the show is just about to begin, the fire retarded house curtains come in from the sides and the historic backdrop is raised into the rafters where it remains.

We welcome further information about restoration of textile materials in theaters and other public buildings. And we would welcome any suggestions for getting the word out to fire code enforcers to increase their vigilance with respect to theater curtains and other decorative textile hangings.

* On September 24 and 25 I spoke in Edmonton and Calgary at the launch of a new safety publication called *Safe Stages: Health & Safety Best Practices for the Alberta Theatre Community*. The publication covered textile fire laws which are essentially the same as those in the US. This excellent publication is available online at www.worksafely.org or www.theatreAlberta.com.

PURDUE PAYS \$600,000 TO PARENTS OF ELECTROCUTED STUDENT

Chronicle of Higher Educ., New Blog, August 21, 2007

Purdue will pay \$500,000 to the parents of a student who was killed by electrocution last winter in a dormitory. Purdue also will create a \$100,000 scholarship fund to settle the parents' claims. Wade S. Steffey, a freshman, was missing for two months before his body was discovered in a basement utility room. He had apparently entered the room through an unlocked or improperly locked door that bore no warning sign or other indication that high-voltage equipment was in the room.

SUIT FOR SCHOOL LAB ACCIDENT SPURS TRAINING PROGRAM

www.democrateandchronicle.com/pbcs.dll/article?AID=/20070831/NEWS01/708310377 (accessed 9/5/07)

Rochester NY Democrat & Chronicle, James Hawver, August 31, 2007, contact

jhawver@DemocrateandChronicle.com

School science and technology teachers in Webster, New York, will receive more rigorous safety training after the parents of a Schroeder High School student who was severely burned in a chemistry experiment in June files a lawsuit against the district. James and Elizabeth Laird filed the suit with the state Supreme Court on August 17 seeking compensatory damages for medical expenses and income lost while they cared for their daughter, Kristen, who suffered third-degree burns on her arms, face and back. According to the suit, Kristen “sustained serious and permanent physical and emotional injuries” as the result of an after-school experiment gone wrong in Jaret Schug’s Advanced Placement chemistry class on June 7.

Schug was demonstrating a “flame test” experiment, which consists of putting chemicals into dishes, pouring methanol on them and lighting the contents with a butane lighter. Webster Fire Marshal Robert Boutillier’s report concluded that the explosion and fire from the experiment ignited combustible materials on the counter and Kristen, who was not wearing protective goggles or clothing.

Schug then put her in a safety shower, attempted to turn it on but couldn’t immediately, because a valve had been turned off. He then lead Kristen to the nurse’s office with some delay, because Shrug said he did not realize the extent of the injuries, thinking that her skin resembled a strong sunburn, according to the fire marshal’s report. Instead, the lawsuit alleges Kristen’s “injuries are expected to result in permanent scarring and disfigurement and permanent neurological damage.”

Superintendent Adele Bovard said the district won’t decide on possible disciplinary actions for Schug until it finishes conducting its own investigation of the incident. The district also has hired environmental health and safety specialists from the Monroe Board of Cooperative Educational Services (BOCES 1) to train middle school science and technology, and high school teachers. Previously, the mandatory annual training was conducted internally.

COMMENT Administrators often mistakenly think they can create an acceptable safety program by assigning training and safety auditing to teachers or facilities managers. But these people do not have the time to keep up on safety practice and regulations. Training and auditing must be done by **professionals** in all school departments in which there are safety hazards including art and theater.

THIRD ANTHRAX DRUM-MAKING INCIDENT!!

New York Times, Thomas Kaplan, Sept 6, 2007 & www.newstimeslive.com/news/story.php?id=1186571937

accessed Sept 28, 2007

On September 6, 2007, Connecticut state officials were reported in the New York Times as saying that two people have contracted anthrax. A Danbury resident and one of his family members allegedly contracted anthrax after coming in contact with untreated animal hides brought from Africa to make drums, the authorities said on Wednesday. Tests of the resident’s three-story home, a barn in the backyard, and the trunk of a car tested positive for anthrax. Terrorism is not suspected.

Testing and decontamination work began immediately. The EPA and its partners in the cleanup – the city and state Department of Public Health and Department of Environmental Protection are still working. The investigation and first phase of the cleanup required the closing of a section of the road for 6 days and cost several hundreds of thousands of dollars. Several nearby residences were voluntarily evacuated primarily due to the noise of crews operating all night.

Three weeks later, the road is opened but work goes on. Waste including soiled decontamination suits and chlorine-based cleaners used to wash spores of walls and objects is stored on site in 55-gallon toxic waste barrels. Further plans include building a big tent around the three story house and pumping fumigation gas into it.

Officials have never released the names of the anthrax patients, who are in the same family. However, the owner of the home where the anthrax was found, Donald Lombardo, identified the tenant as Ase-AmenRa Kariam, the Associated Press reported. Mr. Kariam is the director of a West African drumming program at the Danbury Music Center.

ABOUT ANTHRAX Anthrax spores are formed by naturally occurring bacteria and can be found in soil, according to the Centers for Disease Control. Animals who ingest contaminated soil can then pass the disease to people who handle their hides or eat undercooked meat.

Naturally occurring anthrax is rare in the US. Only one or two cases occur annually. Anthrax is much more prevalent in other parts of the world, including many developing countries and much of sub-Saharan Africa.

Cutaneous anthrax, the most common type, is a non-communicable infection of the skin and can be treated with common antibiotics, according to the Centers for Disease Control and Prevention. Symptoms of cutaneous anthrax, which accounts for 95 percent of all anthrax cases, include swelling of the skin, itchiness, and black scabbed sores, the experts said. It is not usually fatal when treated.

On the other hand, inhalation anthrax is often fatal. Inhalation anthrax was responsible for 5 deaths in the US, including one in Connecticut, when specially engineered anthrax spores were sent through the mail in the months after the attacks of September 11, 2001.

HISTORY This Danbury incident is the third time in two years that African drummers have contracted anthrax. In all cases, untanned hides for drums were believed to be the source.

In February 2006, a 44-year-old Greenwich Village drummer contracted the more serious inhalation anthrax while using unprocessed animal skins to make drums. Authorities believe he inhaled anthrax spores while covering a drum with goat skin he bought in the Ivory Coast, where he was born and raised. The drummer, Vado Diomande, spent more than a month in the hospital and lost 45 pounds as he fought the disease. He survived and vowed to return to dancing and drum-making.

In July of 2006, a self-employed Scottish artist who made sculptures, decorative items, and bongo drums contracted anthrax. Fifty-year-old Christopher Pascal Norris died on July 8 in Edinburgh Royal Infirmary becoming the first person in Britain to die of anthrax in 30 years.

COMMENT Note that two of the three drum makers contracted the inhalation form of the disease. Leather workers, in general, tend to clean and treat skins in ways that get dusts and particles airborne. Ventilation or respiratory protection should be used when working with leather. Untreated skins can release biological hazards. Tanned leather may release toxic chromium compounds and other treatment chemicals. Be cautious with all animal products. There is even a case in the literature of a death from inhalation anthrax in a worker who shaped elephant tusk ivory into piano keys.*

* *International Labor Organization Encyclopaedia of Occupational Health & Safety*, 3rd Ed, 1983, 3rd Impression, 1989, pp. 1164-5

FIRE DESTROYS LOST COLONY BUILDINGS AND COSTUMES

Outer Banks Sentinel, Sept 11, 2007, Sandy Semans, www.freerepublic.com/focus/f-news/1895082/posts accessed 9/15/07

On September 11, a resident saw a fire across the sound on Roanoke Island and called 911. Part of The Lost Colony's Waterside Theatre was burning. All area fire departments arrived. Despite their efforts, the maintenance shed and the Irene Rains Costume Shop were lost. The theater was saved.

Every summer since 1937, The Lost Colony's Waterside Theatre has been staging an historic Pulitzer prize-winning play about the founding and disappearance of the Jamestown Colony. The loss of the buildings is estimated at about \$1 million according to Charles Sellars, chief of facilities maintenance for the National Park Service Outer Banks Group.

Vintage costumes made by famous costumers have been lost: Irene Rains' costumes from the 1940s and 1950s, and costumes by Fred Voelpel made from the 1960s through 1980s. All of the colonist and Indian costumes, the historic fabrics, the shoes and hats were lost. Only the court costumes which happened to be at the dry cleaners and a few costumes that had been delivered to the NC Museum of History for a Lost Colony exhibition have been spared.

PREVIOUS FIRE. Sixty years ago, in June 1947, a late afternoon fire destroyed two-thirds of the Waterside Theatre and most of the sets and props. The costumes in the 1947 disaster escaped the flames, however, because of costumer Irene Rains' quick action in removing them from the dressing rooms and casting the items on the shore. There was no possibility of saving anything from the current disaster. From the point of arrival of the firemen, it was impossible to enter the building. Fund raising to replace the costumes has begun, and the show will be held again in the summer.

REACHING ACTS BY E-MAIL

It is easiest for us to address inquiries and requests for publications by e-mail. However, be sure you fill out the subject line of your e-mail (no "unknown" subjects) and that the subject line not include "key" words that trigger spam blockers and manual deletion responses. We want to hear from you.

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, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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CPSC SAYS HOME LEAD TEST KITS UNRELIABLE

CPSC Staff Report: Evaluation of Lead Test Kits, October 2007, CPSC Press Release #08-038, 10/22/07, www.stoptoxicimport.org/press_release 10/23/07 and other press articles.

The Consumer Product Safety Commission (CPSC) is warning parents about lead jewelry, painted wood and vinyl plastic toys, baby bibs, and a host of other products and recalling them by the millions. We know CPSC only tests a portion of the millions of imports and now they say the lead test kits parents use to check products not on CPSC's list are unreliable. What's a mother to do?

CPSC says the home test kits were developed to detect lead in lead-based paint at concentrations equal to or exceeding 0.5% by weight. But the CPSC's standard for lead in toys and other consumer products is 0.06% by weight. They say the kits are not sensitive enough and give false negatives.

Further, CPSC says that the two types of chemical color-change reactions employed by the kits to detect lead can give false positive results in the presence of some substances. The two types of kits are:

- 1) the rhodizonate ion test kits which show a pink or red color in the presence of lead; and
- 2) the sulfide ion tests which produce a grey, brown or black color in the presence of lead.

However, chromate ions and paints with red pigments can also turn the rhodizonate kit indicators red. And iron, copper, bismuth, and antimony can also cause a dark color with the sulfide ion kits.

Toxicologist Brian C. Lee, an ACTS associate, wonders why CPSC's criticisms are not backed up with more complete information such as the descriptions of the various types of products tested (e.g., painted wood, vinyl plastic, metal, coated metals, fabric bibs, etc.), which types of lead-containing materials tested negative, and the performance and relative ranking of the various brands of kits examined.

The United Steel Workers, which supplies kits and instructions online to assist parents, is incensed. "This agency [CPSC], which sat on its hands for years while literally millions of lead-tainted products flooded this country from China and other unregulated economies, is now preoccupying itself with discrediting the lead testing kits – one of the only real tools parents have for protecting their children in the face of the national's failed trade policies," said USW President Leo W. Gerard. And the USW notes that in October, *Consumer Reports* said its independent tests of home lead screening kits, including those distributed by USW, concluded that they were generally reliable.

COMMENT. Having used these kits myself many times, I think some modifications and common sense can make them useful. For example, lead in some kinds of items would be more likely to test properly in those kits which direct users to soak items in vinegar over night and then test the vinegar. With others, layers of the coating should be exposed by cutting or sanding, so that lead below the top of the coating can be detected. But to simply say there is nothing that consumers can do but wait for the warnings from the CPSC which only tests a fraction of the millions of imports is depressing.

CHECKING VENTILATION SYSTEMS: DO IT YOURSELF

product recommendation*

Local ventilation systems draw specific amounts of air away from tasks that create air pollutants. Examples of local systems include chemistry fume hoods, flexible duct exhausts (a.k.a. snorkels or elephant trunks), slot hoods, and spray booths. Design standards for local exhaust systems are found in the American Conference of Governmental Industrial Hygienist's (ACGIH) publication called *Industrial Ventilation: A Manual of Recommended Practice*. This manual sets requirements for the velocity at which the air must be drawn through the "face" of each type of hood.

The "face" is the plane at the outer edge of the ventilation hood at which point the air is drawn inside the hood. So the face of a walk-in sized spray booth is the whole rectangular plane bordered by the height and width of the booth at the point at which you would step into the booth. The face of a slot hood is the area of the slot just before the air is drawn inside the hood. The face of a chemistry fume hood is the rectangular plane area represented by the opening just under the sash. And so on.

"Face velocity" is the speed at which air flows through the hood's face. For many years, I have recommended that artists and art workers in schools, studios or businesses in which there are local exhaust system have a method of checking face velocities themselves. Maintenance workers are not always available when things go wrong. For example, fan belts on the motors powering ventilation systems can break. This is not immediately apparent, because the motor sounds the same even though the blades are no longer turning. In other cases, air flow may slowly decrease as spray booth filters get dirty. The people using these systems should have a way to monitor air flow.

Anemometers. There are many devices called "anemometers" on the market which can measure face velocities. One type, in my opinion, is so durable and easy to use that for years I have recommended them for use by nonprofessionals in my reports to colleges and theaters. These are the Alnor Velometer Jr.® 8100 series anemometers. They are simple mechanical devices without batteries. The source I use is:

KDE Instrumentation (contact person: Don Eberhardt)
20 Coltsfoot circle, PO Box 757
Glasonbury CT 06033 ph:860-657-2744 Fax:860-657-4871 or 800-533-4678
or don@kdeinstrumentation.com

The model most useful for the types of ventilation systems in most schools and theaters is the Alnor Velometer Jr.® 8100-16. This model can measure air velocity on two scales: from 0 - 400 feet/minute (f/m) and from 0 - 1600 f/m. To use the Velometer, you select the scale and place it in the air stream at the face of the hood and read the dial. For example, a small spray booth (2 feet x 2 feet square) should have a face velocity of 200 f/m. A larger booth may only need a draw of 100 f/m. A flexible duct exhaust hood should read 1500 f/m or more at the hood's face.

Cost. The Velometer costs \$405 plus shipping and should last for years. I had one that was still accurate after 20 years of use. To be sure it's accurate, you can check it against anemometers used by others such as those your maintenance workers use. If the Velometer needs recalibration, you can send it back to KDE Instrumentation. Recalibration costs \$99 without data or \$145 with data (e.g. recalibration data is needed if you are taking measurements that may meet a legal challenge).

* ACTS and I do not benefit from this recommendation in any way, e.g., from payments, donations, or free merchandise.

MANGANESE ACCUMULATES IN EAR TISSUE

BNA-OSHR, 37(41), 10/18/07, p. 904

Manganese exposure can lead to an accumulation of the metallic element in the ears, but whether that causes hearing loss is unclear, according to researcher Mary Beth Genter. She presented her findings on October 12 at the 8th Annual Pilot research Project Symposium at the University of Cincinnati. Genter explained that several studies in the past have reported hearing loss in humans exposed to manganese, which led her and fellow investigator Scott Schneider to hypothesize that the metal accumulates in the ear.

After exposing two species of mice to airborne manganese, they found increased levels of the element within the ear tissues and detected “metal transporters,” proteins that attract the element, localized in the blood vessels of the inner ear. However, the study did not detect any change in the hearing among the mice, Genter said, perhaps because the acoustic startle test used in the study was not sensitive enough. The startle test employs sounds loud enough to startle or frighten the animals. Genter said she and her research partner plan another study in which they will test the mice with various sound frequencies and examine the hair cells of their inner ears.

Existing research already shows that inhalation of manganese mist can cause a 6.5-fold increase of the element in other brain regions. Now work needs to be done in the realm of noise-toxicant interactions, Genter said. It should especially encourage use of hearing protection in workplaces where exposure to both noise and manganese, called “co-exposure,” occurs.

WELDERS RISK LOSS OF SMELL

BNA-OSHR, 37(41), 10/18/07, p. 904

Professional welders who work in enclosed spaces with poor ventilation may be at risk of losing their sense of smell, according to a study by researchers at the University of Pennsylvania published in the October 12th issue of *Neurology*. The study evaluated the olfactory function of 43 welders who worked in confined spaces on the San Francisco Bay Bridge, and who ranged in age from 23 to 66 years old. Such welders are exposed to hazardous fumes and toxins, the majority of which come from vaporized metals during the welding process, the study said. Typical constituents of welding fumes are a mixture of mainly iron, chromium, manganese, aluminum, nickel, and cadmium.

Researchers used a smell identification test incorporating 40 “scratch and sniff” odors with multiple choice options to identify the odor. They found that the mean scores of the welders were, on average, seven points lower than those of their matched controls, the study said. The study found that 38 (88%) performed more poorly than their controls, although only three (7%) had a total loss of their sense of smell. According to the researchers, of the 42 welders who provided information on their sense of smell before being tested, more than half were unaware of the problem. A “number of the welders complained of taste loss before being tested,” the study added.

“Although under appreciated, loss of smell function significantly alters quality of life,” said Richard Doty, a professor with Cincinnati University’s Department of Otorhinolaryngology. “This important sense not only determines the flavors of foods and beverages, but serves as an early warning system for the detection of fire, dangerous fumes, leaking gas, spoiled foods, and polluted environments.”

Doty also said, “The results of the study suggest that exposure to the fumes of welding can alter the ability to smell, and that changes in this important sensory system are not correlated with alterations in cognitive function, which also can be induced by toxins in welding fumes.

In addition to the smell test, the welders were administered tests for blood levels of chemicals found in welding fumes, which showed that 40.5 percent of the welders had abnormally elevated levels of manganese.

COMMENT: The two University of Cincinnati studies covered above indicate that manganese may damage hearing and the sense of smell. It is already known manganese can cause a type of Parkinson' disease and other nervous system damage. Manganese is found in welding fumes, many ceramic glazes, as a colorant in enamels and glass, a constituent in some art pigments, and a metalizing element in some dyes. Artists have many potential exposures to manganese.

ULTRAFINE PARTICLES MAY CHANGE NIOSH RESPIRATOR CERTIFICATION RULES

BNA-OSHR, 37(41), 10/18/07, p. 910

Standard respirator certification does not measure the penetration of ultrafine particles, which represents "a health and safety knowledge gap" according to research presented on October 11 at a symposium supported by NIOSH. The symposium was the 8th Annual Pilot Research Project Symposium, held at the University of Cincinnati's Education and Research Center.

Robert Eninger, who is conducting research on respirators within the university's environmental health department, told the meeting that NIOSH certification is based on a standard "most penetrating particle size" of 0.3 micrometers(μ). Eninger's research, however, shows particles measuring less than 100 nanometers ($<0.1\mu$) are actually the most penetrating, which may indicate that NIOSH's certification guidelines need to be revised. This paper supports earlier research presented in 2005 at the 2nd International Symposium on Nanotechnology and Occupational Health.

COMMENT. Artists should be aware that paint pigments today are often in the range of 0.1μ to 0.05μ in diameter, far below the levels that can be fully captured by HEPA filters. Welding fume particles also are often smaller than 0.3μ in diameter which may be a factor in the neurological problems seen in welders.

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: Eric Gertner, Tobi Zausner, Diana Bryan, Sharon Campbell, Robert Pearl, Brian Lee, Pamela Dale; Staff: John Fairlie, OES.

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YALE SCHOOL OF DRAMA STUDENT KILLED DURING LOAD-IN

Yale Daily news, 11/18/07 Thomas Kaplan, (www.yaledailynews.com) & e-mail from Linda Young, Head Electrician, Yale School of Drama, 11/19/07.

Sunday Morning, November 18, Graduate student Pierre Salim was killed during a load-in of Yale School of Drama's planned production of Tartuffe. Pierre was 26 years old and in his 2nd year of study in the Technical Design and Production program. He came from Indonesia with a background in Singapore and Asian theater. Pierre was the Assistant Technical Director for Tartuffe. According to Linda Young, Head Electrician on the production:

[Pierre] and two other students were in the truck, wearing hard hats, unloading the scenery. Around 8:45am they reached the part of the truck that contained the floor of the show. In testing the load, they determined it was too heavy and decided to get help. At that moment, the load shifted and struck Pierre in the head. One student was trapped in the rear of the truck, the other student held Pierre until the ambulance came. Pierre was still conscious when he left in the ambulance, and it was a big shock to hear about his death so soon afterward.

Reportedly, work on the show has stopped and the New Haven and Yale police are investigating the accident. OSHA cannot investigate because Pierre was not an employee. The truck and its contents have been taken as evidence for further study. ACTS hopes they will determine if the type of hard hat Pierre was wearing was designed to protect against blows from both the top and the sides (many are not). The investigation may help Yale determine how to prevent this type of accident.

UPDATE ON ASBESTOS-CONTAMINATED TALCS IN CLAY

Letter: St. of NY Dept of Health, October, 2007

The July, 2007 ACTS FACTS covered a letter sent out to all Superintendents of Schools in Connecticut jointly by the Department of Health and the Department of Education advising them of the "potential asbestos hazard in art clay." The letter advised schools to inventory all art clays for the presence of talc and ask suppliers to provide non-talc substitutes.

In October, the New York State Department of Health and the State Education Department sent a similar letter to superintendents after reviewing the Connecticut data. It says, "Although limited, the information suggests that talc in art clay may have been a potential source of indoor air asbestos in the art room. However, the link between talc and asbestos in Connecticut schools is not conclusive." Nevertheless, the letter advised precautions to reduce "this potential source of asbestos:"

- * Use talc-free clays
- * Use pre-mixed wet clays (to avoid dust during mixing)
- * Use cleaning methods that reduce airborne dust (wet mops, sponges and/or HEPA vacuums).

EMPLOYERS MUST PAY FOR PERSONAL PROTECTIVE EQUIPMENT

BNA-OSHR, 37(45), 11/15/07, p. 1007 & 72 FR 64341-64430, 11/15/07

Eight years after it was first proposed, a standard that requires employers to pay for employee personal protective equipment (PPE) has been published in the Federal Register. The standard does not require employers to provide PPE where none has been required before. Instead it stipulates that the employer must pay for the PPE required by current regulations, except for the following:

- * Non-specialty safety-toe protective footwear, including steel-toe shoes or boots, and non-specialty prescription safety eyewear if the employer permits such items to be worn off the job site.
- * If the employer provides metatarsal guards but allows employee to use shoes or boots with built-in metatarsal protection, the employer is not required to reimburse employees for the shoes or boots.
- * Logging boots.
- * Everyday or ordinary clothing, such as long sleeve shirts, long pants, street shoes, and normal work boots, or skin creams and other items used solely for protection from the weather such as winter coats, jackets, gloves, parkas, rubber boots, and hats.
- * Lost or intentionally damaged PPE does not have to be replaced at the employer's expense.

According to OSHA, with the exception of footwear, employers for "nearly all industries" already pay for more than 90 percent of their employees' PPE. But now, it is the law. The law becomes effective February 13, 2008. After that, employers have until May 15, 2008 to be in compliance.

APPEALS COURT UPHOLDS \$1.6M AWARD FOR MOLD INJURY

BNA-OSHR, 37(45), 11/15/05 P. 1017

Competent expert testimony supports a North Carolina jury's award of \$1.6 million in damages to a worker who developed an illness linked to mold exposure on the job, the NC Court of Appeals ruled November 6th (*Cameron v. Merisel Properties Inc.*, N.S. Ct. App., No. 07-54, 11/6/07). The Court found that expert medical testimony provided was sufficient to establish causation.

THE STORY. Tommy Cameron worked for Merisel Americas, Inc., a computer hardware and software company, at its remote customer call center in Cary, N.C. Shortly after Cameron began working there in December 1998, he experienced dizziness, and later suffered nausea, blackouts, and falling spells. Cameron eventually was diagnosed with complete loss of balance function of both inner ears and significant damage to the vestibular organs of both ears. He continued to work at the call center through April 2000, when he was diagnosed as completely disabled and told by his doctors not to return to the office.

THE LAWSUIT. The lawsuit, filed November 2001 in the NC Superior Court for Wake County, alleged that Merisel knew that Cameron's workplace was contaminated and dangerous and knew that several of his co-workers also suffered illnesses from exposure. The suit, which also named the head of maintenance at the call center, claimed the company knowingly and intentionally exposed Cameron to conditions "substantially certain to cause severe bodily injury or death."

LAWSUIT DISMISSED/REINSTATED. The trial court initially dismissed the lawsuit, finding it was barred by the applicable statute of limitations. That ruling was overturned by the appeals court in March 2004. The case then went to trial.

In March, 2006, a jury returned a verdict finding Merisel Properties was liable for damages of \$1.6 M for Cameron's claim and \$200,000 for his loss of consortium claim. The head of maintenance was found not liable. On review, the appeals court found in November 2007 that the trial court ruled properly. Regarding causation, the appellate court ruled that the testimony of three experts rose above mere speculation and therefore was sufficient to withstand a challenge to the verdict.

EXPERTS. The appeals court noted that Dr. Joseph Farmer performed various tests on Cameron to determine the cause of his vestibular dysfunction before deciding that it was likely to be due to mold exposure. "Clearly, [Farmer's] opinion was based on far more than speculation," the court said.

Dr. Eckhardt Johanning, testified as an expert in the area of occupational and environmental medicine and the effects of mold on health. He said that Cameron's exposure to mold "more likely than not" was the "competent cause" of his illness, according to the appeals court. That testimony, along with other evidence present in the case was sufficient to show causation, the court said.

COMMENT. Let's hope this trial marks the end of the practice of throwing out claims for mold injury as "junk science" on the basis of three highly biased position papers, one even published by the American College of Occupational and Environmental Medicine. These papers were actually written by paid experts for the defense side in mold litigation cases (see *ACTS FACTS*, February, 2007). None of the medical journals disclosed this fact, and only one later published a correction revealing that the authors served as expert witnesses in mold litigation. Meanwhile, many people have been harmed by mold exposure and were unable to obtain damages for their injuries.

And since Cameron's lawsuit was filed in November 2001 and the appeals court upheld it in 2007, one has to wonder how people whose only recourse is the courts survive these legal ordeals.

SADDEST CUBICLE IN AMERICA FOUND BY WIRED.COM

The Seattle Times, 11/10/07, <http://seattletime.nwsources.com>

So you think your workplace cubicle is the worst? You'll have to go some to beat the cubicle of David Gunnells. Gunnells won a RoboMan webcam as a prize for the "Saddest Cubicle in America" from Wired.com (see www.wired.com/culture/lifestyle/).

The cubicle is at the University of Alabama in Birmingham. Gunnells sits at a desk behind large filing cabinets in a windowless conference/break room. A wall is on the right side of his desk and the filing cabinets are flush up against the back and left side of his small desk. The cabinets that separate him from the room are 5 drawers high with another large cabinet piled on top. They tower threateningly high above him.

A desk lamp left by Gunnells' predecessor looks comforting, but it is there to replace faltering overhead lights.

An old refrigerator and microwave in the room can create overpowering odors such as those on the day a co-worker heated up a catfish. Oh, and the cubicle adjoins a bathroom which is poorly vented. A nightmare of smells completes the ambiance. Gunnells says that when the catfish and the bathroom smells combine, he leaves the office for a breather.

And where is the cubicle at the University and who is David Gunnells? Why are we not surprised to learn that the cubicle is in the Community Health Services building and that Gunnells works for the university's Department of Occupational Health and Safety?

INDEX TO 2007 (VOL. 21, No.s 1-12)

January

21 YEAR ANNIVERSARY OF ACT FACTS
\$925,000 SETTLEMENT FOR WORKER IN WOOD STAIN FACTORY
TWO DIE AT DIP 'N STRIP FRANCHISE SHOPS: LESSONS LEARNED
August 29, 1999 Incident, December 14, 2000 Incident, Back to Tennessee
in 2006, Lessons Learned
LEAD PAINT STILL FOUND ON FURNITURE: 2006 RECALL
ART CLASS USED TOXIC PAINT, PARENT SAYS

February

PRYO-MAGIC TRICK AMPUTATES FINGERS FOUR TIMES
First, Second, Third, Fourth Case, What are they made from?
MOLD: TOXIC OR NOT?
WEBSITE FOR EPA BOOKLET
INDEX TO 2006 ACTS FACTS (Vol. 20, No.s 1-12)

March

SCULPTURE STUDENT V. CUNY: \$5M AWARD UPHELD
Responsibility, Pain & Suffering, Lost Wages, Lessons
IONIC BREEZE CONSUMERS WILL GET \$60 MILLION
OZONE GENERATORS
TURPENTINE TLV
ARTS ACADEMY CITED, FINED IN MAN'S DEATH

April

FOUNDING BOARD MEMBER REMEMBERED
UNTRAINED OHLONE COLLEGE MAINTENANCE WORKER
TRANSPORTED TOXIC CHEMICALS
UNIVERSITY PAYS \$300,000 PENALTY FOR ASSAULT ON CAMPUS
ART SCHOOL'S SCENE STORAGE BUILDING CONTAMINATED
DISNEY LEARNS LESSONS ABOUT COSTUME SAFETY

May

TITANIUM DIOXIDE LISTED AS A CARCINOGEN
Skin contact, MSDSs, Comment
ACTIVISTS ASK CPSC TO BAN TALC WATER PUTTY
CHRONICLE LOOKS AT DECLINE IN SAFETY INSPECTIONS
States in which there are state or federal OSHAs

June

ART TEACHER GETS ARM STUCK IN CLAY MIXING MACHINE
FIRE IN CHANNEL 7 NEWS STUDIO
ACROBAT LACKED SAFETY GEAR TO HALT FATAL FALL
EXPLOSION PROMPTS UNIVERSITY TO TRAIN WORKERS
URETHANE PAINTS HAZARDOUS LONG AFTER DRYING
SPRAY PAINT STUDY: MAJOR EXPOSURE BY SKIN ABSORPTION

July

CT BOARD OF ED ADVISES SCHOOLS TO REMOVE TALC-CLAYS
Undiscolored exposure data, Recall by a CT manufacturer, "Safe" defined.
MOLD ARTICLE WRONGLY ATTRIBUTED
EPA CITES UNIVERSITY IN THE US VIRGIN ISLANDS

August

NEA ACCEPTS NO RESPONSIBILITY FOR GRANT RECIPIENT'S
LOCAL LAW VIOLATIONS
The story, State laws broken, Who is at risk? The Next Step
MERCURY FOUND IN SOME ANTIQUES
SWISS STUDY LINKS CANCER WITH MAGNETIC EXPOSURES

September

AN ART MATERIAL AMONG THE RECALLED CHINESE IMPORTS
Toys "R" Us watercolor set
CPSC/NFPA ADVICE ON COLLEGE DORM FIRES
OREGON HALIDE LIGHT BULB LAW SIGNED
26 STATES SAY FIREFIGHTERS GET CANCER ON THE JOB
2009 SUBSCRIPTION PRICES WILL RISE
WASHINGTON PROFESSOR GETS FINE & COMMUNITY SERVICE
FORMER RISD FIRE-SAFETY OFFICIAL ARRESTED

October

UPDATE ON THEATER CURTAIN RESTORATION PROJECT
PURDUE PAYS \$600,000 TO PARENTS OF ELECTROCUTED
STUDENT
SUIT FOR SCHOOL LAB ACCIDENT SPURS TRAINING PROGRAM
THIRD ANTHRAX DRUM-MAKING INCIDENT!
FIRE DESTROYS LOST COLONY BUILDINGS & COSTUMES

November

CPSC SAYS HOME LEAD TEST KITS UNRELIABLE
CHECKING VENTILATION SYSTEMS: DO IT YOURSELF
MANGANESE ACCUMULATES IN EAR TISSUE
WELDERS RISK LOSS OF SMELL
ULTRAFINE PARTICLES MAY CHANGE NIOSH RESPIRATOR
CERTIFICATION RULES

December

YALE SCHOOL OF DRAMA STUDENT KILLED DURING LOAD-IN
UPDATE ON ASBESTOS-CONTAMINATED TALCS IN CLAY
EMPLOYERS MUST PAY FOR PERSONAL PROTECTIVE
EQUIPMENT
APPEALS COURT UPHOLDS \$1.6M AWARD FOR MOLD INJURY
SADDEST CUBICLE IN AMERICA FOUND BY WIRED.COM
INDEX TO VOLUME 21 (issues in 2007)

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