ACTS FACTS

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

January 1997 Vol. 11, No. 01

ACTS wishes you a healthy, happy 1997

RADIATION HAZARDS FOR CERAMIC AND GLASS WORKERS

Substances heated until they "glow" emit ultraviolet (UV), visible, and infrared (IR) radiation. Welding produces more UV than other types of rays. In glass and ceramic work, IR is the major hazard.

REGIONS OF THE OPTICAL RADIATION SPECTRUM

Region	Wavelength Range in nanometers (nm)
Ultraviolet (UV)	**100 to 380-400**
UV-C	100 to 280
UV-B	280 to 315-320
UV-A	315-320 to 380-400
Visible (light)	**380-400 to 760-780**
blue light	400-500
yellow (sodium flare)	588-590
Infrared (IR)	**760-780 to 10,000**
IR-A	760-780 to 1400
IR-B	1400 to 3000
IR-C	3000 to 10,000

IR can be thought of as waves of energy that heat substances that absorb them. If IR heats the skin, we feel pain and can protect ourselves. If the rays enter the eye, however, we sense no pain. Damage results from the heat or the "fever" sustained by various structures in the eye.

Heat damage to the retina from IR is well known. Damage to the lens resulting in cataract also has been reported but there is some disagreement about how likely this is to occur. IR can also cause burns of the cornea and eyelids and can dry the eyes and skin.

Visible radiation also can damage the retina. Ultraviolet radiation can "sunburn" the skin and eyelids and cause conjunctivitis and lesions on the cornea (photo keratitis).

To protect worker's eyes, the American Conference of Governmental Industrial Hygienists (ACGIH) set separate standards (Threshold Limit Values or TLVs) to limit irradiance in the ranges:

* 400-1400 nm, to limit thermal injury to the retina
* 400-700 nm, to limit photochemical injury to the retina
* 770-3000 nm, to limit possible effects on the lens and cornea

The National Institute of Occupational Safety and Health (NIOSH) did two studies* of radiation emitted by glass furnaces and torches. Both show that some workers are exposed to IR radiation over the TLV from furnaces and glory holes. NIOSH recommends the use of welding shades # 3 and #4 for protection. The study done at Glass Schell in Houston, Texas, says further that":

> It should be noted that there are other types of eye protectors...for glass workers to use. The owner of Glass Schell loaned the NIOSH investigators several of these different eye protectors to determine their spectral transmittance levels. ... While it was determined that most of the eyewear would be satisfactory for use with the type of emissions found at the facility on the days of measurements, there were several eyewear devices which gave better protection than others. In general, those eyewear devices that eliminated the UV, blue light, and the sodium flare wavelengths while minimizing the IR wavelengths would obviously warrant more consideration for occupational use.

This means if you want to follow NIOSH's advice precisely, you should use #3 or #4 welding shade lenses. If you want instead to try other eyewear, ask the seller for the transmission spectrum of the lenses from a reputable laboratory over a range of 0 to 3500 nm. Buy lenses with low transmittance in the UV (100-400 nm), blue (400-500 nm), yellow (588-590 nm) and IR (760-3500 nm) ranges.

* Single free copies of the two NIOSH studies can be obtained by calling 800/356-4674. Ask for:
1. Health Hazard Evaluation of Glass Schell Fused Glass Masks, Houston TX. NIOSH publication:HETA 95-0119-2554
2. Health Hazard Evaluation of Louis Glass Factory, Weston, WV, NIOSH publication: HETA 88-299-2028

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NTP RELEASES SEVERAL TECHNICAL REPORTS

61 FR 66054-7, Dec 16, 1999

The National Toxicology Program (NTP) announced the availability of Technical Reports (TR)* on the toxicology and carcinogenesis of several chemicals, some of which are used in the arts and crafts.

NICKEL COMPOUNDS: Nickel sulfate and subsulfide are used as patinas for brass and zinc, a mordant for dyes, and in electroplating. Nickel oxide is a glaze and glass colorant. These compounds were chosen for study because workers in some nickel refineries have increased incidences of lung and nasal sinus cancers.

a) **Nickel Subsulfide (TR-453)** showed clear evidence** of carcinogenic activity in male and female rats and no evidence** in male or female mice.
b) **Nickel Oxide (TR-451)** showed some evidence** in male and female rats, no evidence** in male mice, and equivocal evidence** in female mice.
c) **Nickel Sulfate Hexahydrate (TR-454)** showed no evidence** in either species.

FIRE RETARDANT, 2,2-Bis(Bromomethyl)-1,3-Propanediol (TR-452), used in unsaturated polyester resins, in molded products, and in rigid polyurethane foam, showed clear evidence** of carcinogenic activity in male and female rats and in male and female mice.

ROOM ODORIZER AND INCENSE ADDITIVE, Isobutyl Nitrite (TR-448), showed clear evidence** of carcinogenic activity in male and female rats and some evidence** in male and female mice.

AN ANTHRAQUINONE DYE, 1-Amino-2,4-Dibromoanthraquinone (TR-383), showed clear evidence** in male and female rats and clear evidence** in male and female mice. This data was reported in ACTS FACTS (August, 1994) before the final report was available).

* Free copies of the studies are available from Central Data Management, NIEHS, MD E1-02, P.O. Box 12233, Research Triangle Park, NC 27709; 919/541-3419. Ask for "Toxicology and Carcinogenesis Study of (chemical name plus the number cited after each item above)."

NTP PEER-REVIEW PANEL RESULTS RELEASED

BNA-OSHR, 26(29), Dec 18, 1996, pp. 970-973

The National Toxicology Program's (NTP) Peer Review Panel has released the results of their review of several chemicals, three of which are found in some art and craft materials.

Cobalt sulfate heptahydrate is used in electroplating, as a coloring agent for ceramics and as a drying agent in inks, paints, varnishes and linoleum. The NTP two-year inhalation study showed clear evidence** of carcinogenicity in female rats and in both sexes of mice. Some evidence** was seen in male rats.

Ethylbenzene is a major component of mixed xylenes used in household degreasers, paints, adhesives, rust preventatives and anti-knock agent in motor fuels. The long-term inhalation study showed clear evidence** of carcinogenic activity in male rats and some evidence** in female rats and both sexes of mice.

Tetrahydrofuran is used in resins and plastics and as a solvent for dyes and lacquers. A long-term inhalation study showed clear evidence** of carcinogenic activity in female mice, no evidence** in female rats or male mice and some evidence** in male rats.

** The NTP uses five categories of evidence of carcinogenic activity to summarize the evidence observed in each animal study: Two categories for positive results (clear evidence and some evidence); one category for uncertain findings (equivocal evidence); one category for no observable effects (no evidence); and one category for studies that cannot be evaluated because of major flaws (inadequate study).

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CLAIROL ASKS NTP NOT TO LIST CANCER-CAUSING DYE

BNA-OSHR, 26(26), Nov. 17, 1996, pp. 864-865

On November 18, Clairol, of Stamford, Conn., asked the NTP Biennial reports on Carcinogens Subcommittee not to include Disperse Blue 1 in its list of anticipated human carcinogens in the *Eighth Biennial Report on Carcinogens*. The panel declined.

C.I.Disperse Blue 1 (CAS 2475-45-8, C.I. 64500, 1,4,5,8-tetraamino-anthraquinone) was reviewed by the peer review panel and recommended for listing in the NTP's report. The dye is an amino-anthraquinone dye for fabrics, plastics, and hair color formulations. NTP said the dye no longer is made in the States, but cites 1996 data indicating there are three U.S. suppliers.

Disperse Blue 1 was also one of the dyes the German Government banned for use in products intended for "longer than temporary contact with the human body" such as textiles, bed linens, and eyeglass frames. (Ed: And in the US, we put it on our hair? Maybe being a little old blue-haired lady is riskier than I thought.)

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METALLIC LEAD SHEDS SIGNIFICANT AMOUNTS OF DUST

AIHA Journal, "Potential Health Hazards from Lead Shielding," 57:1124-1126, Dec. 1996

Uncoated metallic lead is widely used as radiation shielding in research and development, manufacturing, and in nuclear medicine and radiology. Tests of the dust around lead storage areas and of the air while workers move lead objects indicated that handling and storage of metallic lead may present an insidious health hazard.

Floor wipe samples from lead storage areas ranged over nearly two orders of magnitude, from about 10-450 micrograms/100 square centimeters (ug/100 cm^2). Similarly, samples of floor dust collected near seven different shielding storage areas all showed substantial lead concentrations, ranging from a low of 2800 milligrams/kilogram (mg/kg) to 34,000 mg/kg, with most samples within 15,000 to 30,000 mg/kg. These values and their variability reflect not only the flaking of lead from shielding, but also their susceptibility to contact and disturbance, and the frequency and extent of area housekeeping.

Twenty breathing zone air samples were collected during manual handling and stacking of lead brick to form shielding structures. One of the eight-hour time-weighted average exposures was above the OSHA action level of 30 micrograms/$meter^3$. The others were below the action level primarily because they were taken for only short work periods (4-5 hours). It was clear from these tests, that merely handling and moving lead objects can result in overexposure.

Surprisingly, the data indicate that lead is readily dispersed from visibly oxidized as well as freshly-cleaned shielding, although oxidized surfaces produced the highest concentrations of lead contamination. A single coating of polyurethane was shown to reduce lead removal by nearly three orders of magnitude.

This study is very relevant to crafts in which lead metal is used. Artists must take into account that even storing and handling came, solder, lead ingots, sheet lead, type lead and other lead items can create dust in amounts that may be hazardous.

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ACTS FACTS' SOURCES include the Federal Register (FR), a compilation of all the regulations and public notices issued by all federal agencies, the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications.

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February 1997 Vol. 11, No. 02

METHYLENE CHLORIDE STANDARD PUBLISHED

62 FR 1493-1618, Jan 10, 1997; BNA-OSHR, 26(29), 1996, pp. 964-865; Ibid, 26(32), p. 1044

OSHA's methylene chloride standard was issued January 10th. By April 10th, most workers will be protected by an 8-hour permissible exposure limit (PEL) of 25 parts per million (ppm). This limit replaces the old PEL of 500 ppm which dated from the 1970s and is lower than the current ACGIH TLV of 50 ppm. Based on animal testing, OSHA calculated the risk of dying from cancer per 1000 workers to be: 125.8 deaths at the old 500 ppm PEL; 7.47 deaths at the 50 ppm TLV; and 3.62 deaths at the new 25 ppm PEL.

In addition to cancer, OSHA expects the standard to reduce methylene chloride's adverse effects on the heart, central nervous system, and liver, and to reduce irritation of the skin and eyes.

The standard modifies its requirements for small businesses such as furniture refinishers, makers of polyurethane foam upholstery, or users of printing ink solvents. Outgoing OSHA Administrator Joseph A. Dear said, "We are giving small firms up to three times as long to meet the standard's requirements as larger firms, and we are planning a series of workshops for next spring to help firms understand what they need to do."

OSHA estimates the standard will cost employers about $ 426 per exposed worker. The cost may be higher for small firms that have not already installed ventilation. To reduce the impact on small businesses, the agency has made the following changes:

* Expanded compliance schedules to reduce costs in the first two years by 30 - 40 % and allow small businesses time to plan major expenditures;
* Allows licensed health care professionals in addition to physicians for medical surveillance;
* Requires laboratory tests at the discretion of the physician rather than automatically;
* Requires physical exams for employees under age 45 every three years rather than annually;
* Requires respirators only when the permissible exposure limit is likely to be exceeded; and
* Removes the requirement for written compliance plans.

Editor's Comment: Work on this standard began with a petition filled by the United Auto Workers in 1985. It languished in this anti-regulatory climate while workers died. Still pending are literally hundreds of other desperately needed PELs. The story on the next page may represent a strategy whereby other Agencies can more rapidly set their own standards to protect their workers.

DOE TO SET BERYLLIUM STANDARD

61 FR 68725-7, December 30, 1998

The Department of Energy, (DOE) held two public forums in January to gather data to be used in developing a new occupational health standard for beryllium to protect its workers and contractor employees. Inhalation of the dust or particles can cause chronic beryllium disease (CBD), a granulomatous (tiny tumors) lung disease resulting from a delayed hypersensitivity response to beryllium in the lung. CBD is often misdiagnosed as sarcoidosis. Beryllium also also cause other types lung disease, skin diseases and cancer.

The current DOE permissible exposure limits (PELs) for beryllium were adopted from the 1970 OSHA standards. They were an eight hour time-weighted average of 0.002 milligrams per cubic meter (mg/m^3) and a ceiling limit of 0.005 mg/m^3. DOE explains:

> *After the PELs were adopted, the industry experienced a significant reduction in the incidence rate of the disease. This led to the belief that CBD was occurring only among workers who had been exposed to high levels of beryllium decades earlier (i.e., in the 1940s). DOE is now discovering cases of CDB among workers who were first exposed in the 1970s and 1980s. DOE has found that some of these cases are occurring among workers who were exposed to levels well below the PEL for beryllium.* (61 FR 68726)

OTHER USES OF BERYLLIUM

DOE uses beryllium metal and beryllium ceramics in weapons and reactor fuel element cladding. Some artists also use beryllium. Artists who been diagnosed with sarcoidosis or other unusual lung diseases should consider their possible exposures to beryllium.

SCULPTORS AND JEWELERS. Some casting alloys contain beryllium. (At the 1984 International Sculpture Conference in Oakland, CA, this Editor saw a company passing out samples of a beryllium-copper alloy they were selling to sculptors.) Artists who weld or modify junk objects may be exposed to beryllium used in products such as corrosion resistant springs, bushings, electrical contacts and switches, diamond drill bits, watch balance wheels, computer parts, structural materials in space craft, and non-sparking tools.

CERAMICISTS. Beryllium oxide or Glaucinum oxide (BeO) is a high temperature flux for ceramics and porcelain glazes. It functions as an opacifier and modifier at lower temperatures. It is usually added to ceramic compositions in the form of beryl, a mineral silicate with the formula 3BeO.Al2O3.6SiO2.

LAPIDARISTS/ROCK COLLECTORS. Emerald and aquamarine are varieties of beryl. Other Be minerals are Bertrandite, Beryllonite, Chrysoberyl, Euclasite, Hambergite, Helvite, Herderite, and Phenakite.

GLASS WORKERS. Some types of glass, enamels, and florescent lights contain beryllium.

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RDIs CHANGE FOR SOME MINERALS

61 FR 65490-2, Dec 13, 1996

The US Food and Drug Administration (FDA) has adopted new Reference Daily Intakes (RDIs) for certain minerals. Those differing from the old RDIs include ones for selenium, molybdenum, and chloride. A list of both the new and the old RDIs (see chart) shows that some minerals are needed in only trace amounts, while others can be ingested safely in larger amounts. This is not evident from reading vitamin bottle labels because minerals are reported in both milligrams and micrograms. Converting them all to milligrams makes the differences in our need for various minerals more obvious.

MINERAL	RDI LABEL DOSAGE	MILLIGRAMS*
Chloride	3,400 milligrams (mg)	3,400
Calcium	1,000 milligrams (mg)	1,000
Phosphorus	1,000 milligrams (mg)	1,000
Magnesium	400 milligrams (mg)	400
Zinc	15 milligrams (mg)	15
Copper	2 milligrams (mg)	2
Manganese	2 milligrams (mg)	2
Iodine	150 micrograms (mcg)	0.15
Chromium	120 micrograms (mcg)	0.12
Molybdenum	75 micrograms (mcg)	0.075
Selenium	70 micrograms (mcg)	0.07

* mg/liter is the same as parts per million (ppm).

For good health or to protect a developing fetus, it's not enough to simply avoid metals for which there are no RDIs such as cadmium, lead and arsenic. It is also important to achieve a good balance of essential minerals. **This is impossible if you are supplementing your diet with metal-laden dusts or fumes from your art studio.**

Many metals required by the body in very small amounts are toxic in larger amounts. For example, children die each year from accidental overdoses of iron supplements. Selenium and chromium (VI) are animal carcinogens and manganese can damage the nervous system.

MANGANESE, for example, is known to cause symptoms similar to those of Parkinson's disease. Many art workers risk exposure to manganese from welding fume from mild steel and many types of welding rods and wire, from paint and ink pigments,** dyes that are "metalized" with manganese, and manganese colorants in ceramic glazes, dark colored clays, metal enamels, and glass.

And this month, a potter asked ACTS' advice about a lab report which showed that a ceramic cup leached 5 mg/liter* manganese on an acetic acid test. Someone using a set of this ware conceivably could exceed their RDI for manganese just from their crockery.

OTHER TOXIC METALS WITH RDIs have similar sources in art and craft materials. For example, chrome and molybdenum can also be found in welding fume, pigments, and glass, enamel and glaze colorants. Selenium is in some pigments, glass, enamel and glazes. And so on.

Exposures to metals must be assessed "holistically" by considering all sources: work, hobbies, food and supplements, medications and herbal remedies, water, utensils, environmental sources, and more.

** Color Index Pigment Black 11, 14 (manganese black), 26; Pigment Blue 33 (manganese blue); Pigment Brown 6, 7, 8 (manganese brown); many red organic pigments laked on manganese salts; & P. Violet 16 (manganese violet).

METHYLENE CHLORIDE IN FOOD: ONE HAND GIVETH...

62 FR 2011-2016, Jan 15, 1997

FDA amended the food additive regulations to provide for safe use of 2,2'-ethylidenebis(4,6-di-*tert*-butylphenyl)fluorophosphonite as an antioxidant in adhesives and in the preparation of plastics intended for contact with food. This additive is contaminated with methylene chloride which consumers will ingest (worst case estimate no greater than 0.9 micrograms/person/day). Since the methylene chloride is not added directly to food it does not trigger the Delaney Clause. FDA calculated the risk, found it acceptable, and is permitting the contaminated plastic additive in contact with food. ACTS thinks that consumers should know that this kind of approval is granted to hundreds of toxic chemicals at low levels.

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OVER HALF OF NC TEEN WORKERS REPORT INJURIES

BNA-OSHR, 26(26), Nov. 17, 1996, pp. 869

A survey shows that more than half the teenage workers in North Carolina have been injured at least once. The 562 surveyed workers, who were between 14 and 17 years of age, were employed in non-farm occupations--most often in someone's home, at retail stores, or in restaurants. The teens were exposed to many hazards, including forklifts, riding mowers, scaffolds, and ladders.

Cuts were the most common injury, reported by 29 % of the workers surveyed, followed by burns (24 %); falls, slips, and trips (12 %); and back strains/sprains from lifting (10 %). Of special interest were findings that a significant percentage of the workers reported working in the late evening or overnight, which--depending upon the worker's age and the hours worked--may violate child labor laws.

These statistics and those from other States bear out ACTS' concern for theaters, museums and schools that employ teens, young interns or work/study students. Such institutions must plan work which is consistent with child labor laws and consider teen accident statistics when planning worker's compensation and safety programs.

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ACTS FACTS' SOURCES include the Federal Register (FR), the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications. Staff: Monona Rossol, Editor; Toby Zausner, Nina Yahr, Diana Bryan Research.

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ACTS HAS A WEB PAGE!

We are proud to announce that in addition to our regular e-mail address, **75054.2542@compuserve.com**, we now have an additional e-mail address, **ACTS@CaseWeb.com**, and a new web page:

http://www.caseweb.com/acts/

LINSEED OIL RAGS NEED A WEEK TO DRY

Research presented at a January 25 ASTM meeting showed that linseed oil rags dried even for several days may still spontaneously ignite. Previously we thought that setting oils polymerized enough in about two days to be incapable of self-ignition. Label warnings for setting oil rag products must consider this fact.

Labeling required by the State of Connecticut tells users to put setting oil rags in a metal can full of water. Other experts suggest placing them in a sealed cans. However, if the rags are removed from the air-tight can or from the water they can still ignite. If they are thrown in the trash, the cans can open accidentally and the rags can ignite. ACTS recommends handling rags or paper contaminated with any setting oil (linseed, tung, poppyseed, etc.) in one of several ways:

** Hang the rags on a line, throw them over a limb, or find some other way to expose the rags to the air so they can polymerize without heating up. This method is recommended by the National Fire Protection Association. But we emphasize: Hang them out for a week before discarding.

** Place the rags in a water-filledmetal can. Have them picked up by a hazardous waste service or keep them under water until they can be hung to dry for a week.

** Place the rags in a self closing safety can and have them picked up for professional laundering or disposal daily.

** Place the rags in a tightly sealed metal can so no oxygen can reach them. Keep them there until they can be picked up by a hazardous waste service or hung out to dry for a week.

Note: As a college student, this editor was red-faced when the fire department found that the smoke filling her apartment came from an unsealed metal can under the sink filled with rags that were soiled with a mixture of linseed oil and burnt umber artist's oil paint.

LEGIONNAIRES DISEASE FROM WHIRLPOOL SPA DISPLAY

MMWR, 46(4), Jan 31, 1997, pp. 83-86

Last September and October, 23 cases of Legionnaires Disease were traced to a retail store display of whirlpool spas. Other spa- or whirlpool-associated outbreaks have been documented, but in this case, none of the patients entered the water. All were most likely exposed when walking by or spending time in the area near the spa.

Approximately 10,000 to 15,000 cases of Legionnaires disease occur each year in the U.S. Aerosol transmission of the disease has been documented to have come from contaminated cooling towers and evaporative condensers, showers, decorative fountains, humidifiers, respiratory therapy equipment, and whirlpool spas.

SPAS AND FOG MACHINES. Water-borne disease transmission is also the reason ACTS has not fully endorsed the use of theatrical water fog machines. First we need to know if an effective biocide will be used in the water and if the biocide itself is hazardous.

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STACHY STRIKES INFANTS

MMWR, 46(2), January 17, 1997, pp. 33-35

Private physicians and public health officials in Cleveland and Centers for Disease Control reported that eight cases of acute pulmonary hemorrhage/hemosiderosis had occurred from January 1993 to November 1994 among infants in one area of the city. Two additional cases were identified in December 1994. All 10 infants lived in Eastern metropolitan Cleveland. An investigation documented an association between the cases and mold growth in their homes.

The 10 case infants were matched with 30 age-matched control infants from the same area in Cleveland. Other factors were looked at including breast feeding (none of the case infants and only 11% of the case controls were breast feed) and smoking (9 of the case-infants and over half of the controls resided with smokers). However, all 10 case-infants and 7 of the controls resided in homes where major water damage as a result of chronic plumbing leaks of flooding had occurred during the previous 6 months. Visual inspections and air sampling showed that the quantity of fungi, including the toxigenic fungus *Stachybotres atra*, was higher in the homes of case-infants than in those of controls.

An additional 11 cases of acute pulmonary hemorrhage/hemosiderosis among infants in the Cleveland areas were identified during January 1995 and December 1996. Re-examination of all infant deaths in the county between January 1993 and December 1995 identified 66 other possible cases, some of which were previously diagnosed as SIDS (Sudden Infant Death Syndrome).

Historically, *S. atra* has been associated with gastrointestinal hemorrhaging in animals that had consumed moldy grain, but the fungus had not been associated with disease in infants. Health authorities in Cleveland recommend prompt clean-up and disposal of all moldy materials in water damaged homes.

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PESTICIDE MISUSE TRIGGERS LARGE-SCALE EVACUATION

Chemical Engineering News, Dec 16, 1996, p. 28; Ibid, Jan 13, 1997, p. 16, Ibid., Jan 27, 1997, pp. 22-23

Federal officials have begun to correct what they call "the worst case of pesticide misuse in U.S. history." To date, eight men have been arrested and a ninth--an ex-convict from Louisiana--has been charged but not arrested because he can't be extradited across state lines for a misdemeanor. The men are alleged to have participated in unlicensed commercial application of the insecticide methyl parathion for cockroach control in homes.

Methyl parathion is a powerful restricted-use agricultural pesticide. Outdoors, it volatilizes and breaks down quickly in ultraviolet light. Indoors, it persists for many months or years. So far, about 2,700 houses identified as having been sprayed with methyl parathion in Mississippi and neighboring states. About 330 families have been temporarily relocated. Decontamination of evacuated structures is projected to cost around $ 50 million.

Two similar misuses of parathion occurred in 1994 in Lorain County, Ohio and in 1995 in Detroit Michigan. EPA then asked the manufacturer, Cheminova Agro, to reformulate with a strong odorant so that no one would use it indoors. Cheminova refused. After this third incident, EPA again asked for a recall and reformulation with an odorant. This time the company agreed.

The Army Corps of Engineers plans to decontaminate the houses. This will involve more than cleaning. For example, rugs that have been sprayed must be taken to a hazardous waste site. Sprayed porous materials such as bare wood, have to be replaced. Some people could be out of their homes for as long as a year.

The Mississippi Health Department is reviewing hospital records to determine if illnesses reported before doctors became aware of the problem might have been caused by methyl parathion. They also are going to review the death certificates of children in Jackson County over a number of years, especially those where the cause of death is not clear.

Many residents had chronic headaches, respiratory symptoms, and recurrent asthma which was relieved after they were relocated. Some still have symptoms they attribute to methyl parathion, but no symptoms can be proven to be from the pesticide. This sad incident will enable us to learn more about methyl parathion's effects.

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METHYLENE CHLORIDE STANDARD CHALLENGED

BNA-OSHR, 26(34), Jan 29, 1997, pp. 1204-1205

ACTS FACTS reported that OSHA's methylene chloride standard was issued January 10th. By January 17th, both industry and labor had filed lawsuits challenging it. The United Auto Worker's petition asserts that OSHA failed to provide sufficient medical removal protection. The Halogenated Solvents Industry Alliance, Benco Sales Inc., Brock Woodcrafts, and Masters Magic Products petitioned to have the standard reviewed under the 1996 Small Business Regulatory Enforcement Fairness Act. **Be prepared to see the standard stayed.**

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Q FEVER OUTBREAK IN GERMANY

MMWR, 46(2), January 17, 1997, pp. 29-32

In May 1996, the health department in Hessen, Germany, was notified of a cluster of persons with high persistent fever who resided in a rural town, Rollshausen (population 300), and in five surrounding towns. The towns were in the vicinity of two flocks of sheep, one of 1000-2000 animals and other of only 20 sheep. Q fever was suspected as the cause of the fevers.

Q fever is caused by rickettsial organisms *Coxiella burnetii* which is carried by ruminants such as sheep, cattle, and goats. Antibody tests were offered to all residents 15 years or older. Of the 200 people tested, 49 (25%) were identified as case-patients. Of the these, 35 persons had clinical cases of Q fever. Four were hospitalized and all had radiologically confirmed pneumonia.

The data showed that even leisure walking near the large sheep farm increased risk of the disease nearly fourfold compared to those who did not walk near the area. *C. burnetii* is among the most infectious of all bacteria. Inhalation of a single organism can produce infection in a susceptible host. Airborne particles containing bacteria can initiate infections at distances of half a mile from the origin of the particles. Outbreaks usually occur during lambing because *C. burnetii* is reactivated in ewes during pregnancy. As many as one billion organisms per gram may be in the placenta, amniotic fluid and fetal membranes.

Many people who inhale the organisms are infected but are asymptomatic. When the disease is active, it manifests as acute infections including a self-limited influenza-like illness, hepatitis, pneumonia, myocarditis, pericarditis, or meningoencephalitis. Mortality associated with acute infections is low (< 1 %) but may be as high as 2.4%. When endocarditis and other chronic complications occur, it is often are fatal.

There have been a number of U.S. outbreaks of Q fever. ACTS FACTS covered one in May 1994. ACTS is concerned about weavers and textile artists who raise and shear their own sheep and goats. Wool and hair from infected animals could also spread the disease.

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ACTS FACTS' SOURCES include the Federal Register (FR), the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications. Staff: Monona Rossol, Editor; Toby Zausner, Nina Yahr, Diana Bryan Research.

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ACTS FACTS

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

April 1997 Vol. 11, No. 04

POTTER'S WHEEL COSTS SCHOOL DISTRICT $100,000

In February of 1990, 13 year-old Paula Smith and several other fifth and sixth grade students were playing around a potters wheel in the art classroom. Left unsupervised by the class teacher, the students began spinning the heavy concrete turntable with their feet to see how fast it could go. One of the students was spun off the turntable and into Paula causing her to fall. Damage to her right hip was so severe that the hip joint had to be fused.

Paula's parents sued the West Rutland School District in Vermont, Principle Charles Memo, Art Teacher James Simonds and School Nurse Lorraine Davis. On February 21, 1997, Paula's parents settled their claim for medical expenses for $ 100,000.

This case should remind us that wheels of this type do not belong in grade schools. The fly wheels often weigh 150 pounds or more and develop powerful forces when spun rapidly. And grade and high school students must NEVER be left unsupervised around machinery.

CONSENSUS STANDARD PROHIBITS BLASTING WITH SAND

BNA-OSHA, 26(41), Mar 19, 1997, p. 1349

A voluntary, consensus standard prohibiting silica sand as a blasting agent was approved February 28 by an American National Standards Institute (ANSI) committee. The new standard (ANSI Z9.4-1997) for Abrasive-Blasting Operations--Ventilation and Safety Practices for Fixed Location Enclosures states: "From a health standpoint, silica sand is currently the most hazardous abrasive commonly used and its use shall be prohibited. Substitute materials with a lower toxicity shall be used."

The Z9 Committee on Safety Standards for Exhaust Systems banned silica sand because the National Institute for Occupational Safety and Health (NIOSH) has continued to document serious health effects due to crystalline silica overexposures. The Committee also could not document any blasting applications that required the use of silica sand to achieve the desired result. The substitutes, they said, are more expensive but not excessively so.

According to OSHA, more than 1 million workers are still exposed to crystalline silica, with 100,000 at high risk of silicosis. While ANSI Z9.4 is not mandatory, it greatly increases the liability of those who ignore its advice. Artists and schools should never employ sand or any silica-containing mineral for blasting.

PURPLE PAPER-EATERS STILL THREATEN TEACHERS

"Methanol Exposure Among School Workers During Spirit Duplicator Use, Appl. Occup. Environ. Hyg., 11(11), Nov. 1996, pp. 1340-1345 & "Investigation and Control of Occupational Hazards Associated with the Use of Spirit Duplicators, Am. Ind. Hyg. Assoc. J., 45(1), 1984, pp. 51-55.

Way back in 1984, the National Institute for Occupational Safety and Health (NIOSH) studied the purple ink spirit duplicators that were in common use. They found that teachers using them were being over-exposed to methyl alcohol (methanol). The NIOSH study provided plans for a local exhaust system for duplicators. They also recommended that workers be warned about methanol's hazards, wait 24 hours before collating papers, and/or use non-methanol fluids.

Well, 12 years later, their baa'aack. The American Federation of Teachers describes the use of spirit duplicators as still commonplace in many schools including large, urban systems such as New York City, Chicago, Washington, D.C., and Baltimore.

Now the University of North Carolina's School of Public Health has done another study of duplicators. First they called 23 North Carolina schools and found that most used both photocopiers and spirit duplicators. Not one school used local exhaust systems.

Eleven schools were chosen for further study and 48 workers were monitored for methanol exposure. Since use of the duplicators is erratic, the standard used was the 15 minute short term exposure limit (STEL) of 250 parts per million (ppm). Breathing zone concentrations measured during use of unvented duplicators ranged between 365 and 3080 ppm. When various room ventilation systems were turned on, concentrations ranged from 80 to 1340 ppm. Concentrations during collating and stapling materials that had been duplicated 3 hours earlier were between 180 and 870 ppm.

The risk to teachers and school workers from these methanol exposures is heightened by concerns that the current STEL may not adequately protect against chronic effects such as adverse reproductive outcomes. Animal studies demonstrate methanol's rapid penetration of the placental and blood-brain barriers. Methanol also rapidly penetrates the skin, so exposure during collating may include additional exposure by skin absorption.

It is also significant that duplicators are commonly used in poorly ventilated rooms which are often used for multiple purposes. Workers and teachers can be exposed to methanol during activities other than duplicating, such as eating, making telephone calls, or attending staff meetings. (This Editor also wonders how often students use duplicators.)

The authors of the North Carolina study constructed simple local exhaust enclosures for the duplicators and connected them to existing ventilation systems. Tests showed that these systems reduced methanol exposure to between 9 and 130 ppm. The study's authors recommended that methanol hazards be included in teachers' hazard communication training, that warning signs be posted near duplicators, that materials be allowed to dry 24 hours before collating, and that non-methanol fluids be used. Sound familiar?

==========

SOME ART PRODUCTS MAY NEED CHILD-RESISTANT PACKAGING

62 FR 8659-8663, February 26, 1997

The Consumer Product Safety Commission (CPSC) requires child-resistant packaging on products containing petroleum distillates and certain other hydrocarbons of low viscosity (less and 100 SUS at 100° F). Aspiration of small amounts of these hydrocarbons directly into the lung, or into the lung during vomiting of an ingested chemical, can cause chemical pneumonia, pulmonary damage, and death.

Examples of petroleum distillates are naphtha, mineral spirits, benzine, and gasoline. However, a number of hydrocarbons that are not petroleum distillates can cause similar toxic effects. Included are products containing 10 % or more by weight of benzene, toluene, xylene and terpenes. Warning labels are already required on these products. Now CPSC thinks these products also should require child-resistant packaging. CPSC called for public comment on this proposal. (Contact Suzanne Barone, 301/504-0477, ext 1196 for further information.)

ACTS is pleased that "natural" solvents like the terpenes are included in the proposal. CPSC defines terpenes as hydrocarbons derived from wood or fruit such as turpentine, pine oil and limonene. This editor knows of an accidental limonene ingestion.

In 1982, I remember meeting with a lawyer representing a child who was hospitalized after the fruity odor of a d-limonene product called "Grumtine" tempted the boy to drink some (*Art Hazards News*, Vol. 6, No. 6. July 1982). The manufacturer then added "keep out of the reach of children" and other warnings to the label. But the incident could have been prevented by child-resistant packaging.

Limonene is also found in other "natural turpenoid" solvents, industrial hand cleaners, paint strippers, air fresheners, cleaning products, furniture polishes, spot removers, and disinfectants. (However, products marketed as disinfectants are regulated as pesticides by the EPA and do not come under CPSC's jurisdiction.) Pine oil has many similar uses. If CPSC has its way, many of these products will be sold in child-resistant packaging soon.

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AFTER THE FLOOD: REPLACING ELECTRONIC DEVICES

CPSC Press Release # 97-080. Mar 6, 1997

The U.S. Consumer Product Safety Commission (CPSC) is warning flood victims that all gas control valves, electric circuit breakers, ground fault circuit interrupters (GFCIs), and fuses that have been under water must be replaced to avoid explosions and fires. Even if these safety devices appear to function after being submerged in a flood, they are unfit for continued use and cannot be repaired. They may eventually fail, causing explosions or fires.

Other parts of gas and electric appliances that have been submerged such as fans, motors, electric circuits, and venting systems should be evaluated by a qualified technician for continued safe operation. Entire appliances may need to be replaced.

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MANY TYPES OF FLAMMABLE FABRICS RECALLED

CPSC, Press Releases # 97-084 97-085, 97-086, 97-087

This month, the Consumer Product Safety Commission recalled more garments that did not meet the flammability standards. Included were certain brands of terry cloth bathrobes, long haired chenille sweaters, and sweat shirts, and garments made of a fleece-like fabric called Sherpa. Previously recalled were scarves and skirts made of sheer rayon and rayon/cotton blends and many other kinds of fabrics. Clearly, textile artists and theatrical costumers cannot identify flammable fabrics by merely looking at them. Insist on documentation that the fabrics you use meet flammability standards.

==========

HAZARDOUS WATER FILTER RECALLED

CPSC Press Release # 97-076, Mar 4, 1997

The Consumer Product Safety Commission (CPSC) and Ecodyne Water Systems of St. Paul announce a recall of 14,000 Sears Water Filter Cartridges. The filter cartridges were sold under the name "Sears Chemical Contaminant/Taste and Odor Filter" and they fit most standard-sized under sink and counter top water filter housings. The approximately 10 by 3-inch cylinder-shaped cartridge has a white plastic casing and a green end cap.

An incorrect form of carbon containing nickel chloride was used to make some of the filter cartridges. Nickel chloride can cause abdominal cramps, nausea, vomiting, and diarrhea. However, CPSC's press release failed to mention that nickel also shows sufficient evidence of carcinogenicity in humans according to the International Agency for Research on Cancer.

Cartridges containing nickel chloride, when initially used, cause the filtered water to taste metallic and turn green. Consumers who have used the affected filter cartridges should advise a medical professional of possible ingestion of nickel. Consumers should immediately stop using the water filter and call Ecodyne Water Systems at (800) 945-0109 for instructions on returning the cartridge for a full refund or replacement.

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ACTS FACTS' SOURCES include the Federal Register (FR), a compilation of all the regulations and public notices issued by all federal agencies, the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications.

M. Rossol, Editor; Toby Zausner, Nina Yahr, Diana Bryan research.

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May 1997 Vol. 11, No. 05

INJURED PROP MAKER: SETTLEMENT UPDATE

interviews, e-mail, and expert testimony for the Plaintiff

In January, 1996, ***ACTS FACTS*** reported on a suit brought by the resident artist at Jeannie Costumes, Macungie, PA, against her employer. The artist alleged that she was chemically injured while repairing Ninja Turtle costumes and props for a Little Shop of Horrors. She literally worked inside the "Audrey" rebuilding the plant's infra-structure with urethane foam (Great Stuff™) and spray adhesive. She used these and other products without protective gear for about two weeks before succumbing to illness.

In 1996, the employer's insurance company paid the Claimant compensation of over $60,000 plus all back wages, medical bills with interest, and reimbursement for lawyers fees, expert witness, and doctors' testimony. This year, her disability status changed. On March 17, she was awarded another $80,000 for commutation of wages and medical expenses. The defendants also must continue to pay her medical bills--even for natural remedies that she purchases at a health food store on recommendation of her physician. Asked how other injured artists can get good settlements, she said:

> *...you need to find your own witnesses, experts and physicians...don't wait for someone else to do it! It took me over three years to find my physician...even if you don't have a specialist, make sure you are seeing a family doctor or any physician who is recording your health [problems]!*
>
> *Record ALL your efforts...they will come in handy when testifying in your case. DON'T let people tell you what is true--you tell them! It is your body!*

CRYOLITE TASK FORCE SEEKS NEW PESTICIDE RULE

62 FR 11437-11441, March 12, 1997

EPA received a petition from the Cryolite Task Force (CTF) proposing a tolerance of 2 parts per million for natural and synthetic cryolites used as pesticides on potatoes. CTF estimates that the dietary exposure resulting from the use of cryolite on potatoes would be about 0.00016 mg/kg/day. The CTF argues that adding this small amount of fluoride to the amounts people are already getting from other sources such as fluorinated drinking water and tooth paste does not constitute an excessive risk.

ACTS hopes potters who mix glazes will remember what exceedingly small amounts of fluoride are considered safe the next time they haul that dusty scoop of cryolite out of a bin or a 100 pound bag.

FIRE AT NBC: WHEN SHOULD WORKERS RE-ENTER?

BNA-OSHR, 26(44), April 9, 1997, p. 1433

The National Broadcasting Co., New York City, is contesting a serious citation and a $12,000 penalty for alleged failure to keep workers out of a building during repair activities until all exits, fire protection, and fire detection and alarm systems were fully operative, or equivalent and effective measures in lieu of these were in place (1910.36(c)(2)); and failure to provide all workers on initial employment, and at least annually, an educational program to familiarize them with the principles of fire extinguisher use and hazards of incipient stage fire fighting (1910.157(g)(2)).

This Editor assumes that the OSHA visit came after an electrical fire on October 10, 1996 had damaged several floors of Rockefeller Center. The citations should remind us not to go back to work after disasters such as fires or floods until exits are operable and fire protection systems are in place. We must be familiar with the building's fire and evacuation plans. If fire extinguishers are to be used by workers, the employer must train us to use them.

==========

OSHA REGS APPLY TO LEAD AZIDE MOVIE BOMB EFFECTS

BNA-OSHR, 26(12), August 21, 1996, p. 310, ACTS FACTS 10(10) & 62 FR 18350-2, April 15, 1997

EPA denied a citizens' petition to ban the use of lead azide in special effects bombs in movie making. Cris Ericson of Jerico, VT filed the petition alleging injury from a special effects blast for which she was unable to seek a remedy in federal court.

EPA agreed with the petitioner that "Lead azide is a skin and eye irritant, explosive, a carcinogen, and toxic to the lungs, kidneys, nervous system, blood and reproductive systems." However, EPA denied the petition primarily because worker exposure to lead azide is already addressed by OSHA. EPA writes:

> *Currently, occupational exposure to lead azide is regulated by OSHA under 29 CFR 1910.1025. Under appendix B(g), workers exposed to lead above the OSHA PEL, or workers exposed to lead compounds such as lead azide, which can cause skin and eye irritation, must be provided with protective work clothing and equipment appropriate for the hazard at no cost to the employee. The employer is required to provide information and training programs for all employees who may be exposed to lead above the action level or who may suffer skin or eye irritation from lead. In addition the employer must make readily available to all employees including those exposed below the action level, a copy of the standard and its appendices and must distribute to all employees any materials provided to the employer by OSHA.* 62 FR 18351 (underline Ed.)

ACTS thinks it is highly unlikely that film industry workers will be provided with free protective gear, information and training programs and copies of the law before such special effects are used. Performers and technicians can be seriously harmed by the smoke from some types of special effects. They and their unions must take actions to protect themselves (See Story on Page 3).

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UNIONS WILL TAKE OVER BOSSES JOB

BNA-OSHR, 26(45), April 16, 1997, pp. 1448-1449

CONSTRUCTION UNIONS. Many OSHA rules contain provisions that require employers to develop formal worker training programs. However, construction company bosses so often fail to train their workers that the National Labor Management Committee for the construction industry plans to take over this job.

According to Robert Georgine, President of the Building and Construction Trades Department (BCTD), they are developing a standardized construction safety program that will be incorporated into every journey-level training program. They plan to provide safety and health training for all of their members within three to four years. After training is complete, each worker will receive a card, certifying that they were trained according to Occupational Safety and Health Administration standards. "We intend to make it [the card] so recognizable and so much in demand that owners won't let us leave home without it," Georgine said.

OSHA has been cooperating with BCTD to help develop this concept and has reviewed the training material for the certification program. OSHA also supports the card concept. The cards will help expedite the inspection process by reducing the amount of time it takes to verify an employer's training and will give employers an easy way to determine what training each employee has had.

THEATRICAL/FILM UNIONS. ACTS thinks all workers whose jobs are short term such as those in theater and film should be union-trained. Theater and film schools also should train their students. People who build and paint sets, make props and costumes, install lighting, rigging, and electrical systems, and even designers and performers may need OSHA training in one or more of the following:

* Hazard Communication (1926.59, 1910.1200)
* Respiratory Protection (1926.103, 1910.134)
* Personal Protective Equipment (1926.28, 1910.132)
* Fall Protection (1926.500-503)
* Occupational Noise Exposure (1910.95 or 1926.52)
* Welding, Cutting and Brazing (1910.251-.255, 1926.350-.351)
* Emergency Plans and Fire Prevention (1910.38, 1926,150)
* Electrical Safety (1926.401-.405, 1910.331-333)
* Medical Services and first aid (1910.151, 1926.50)

In some cases, workers who renovate old buildings into theaters or shooting locations may need training in the Lead in Construction (1926.62) and Asbestos in Construction (1926.1011) standards.

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LIST OF RECALLED PRODUCTS AVAILABLE

ACTS FACTS has covered a lot of Consumer Product Safety Commission (CPSC) recalls of hazardous products over the year. The CPSC has compiled a list of the major product recalls. You can get a copy by sending a postcard to "Recall List," CPSC, Washington, DC 20207.

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EUROPE REGULATES NICKEL IN JEWELRY

Nickel dermatitis: how much nickel is safe?, Contact Dermatitis, 1996, 35, 267-271

In 1996, a new law called "The Nickel Directive" became effective in the European Union. This law states that the concentration of nickel in earring post assemblies (for pierced ears) may not exceed 0.05% and that products which come into direct and prolonged contact with the skin (e.g. earrings, watchstraps, or zippers) may not release more than 0.05 micrograms per square centimeter of nickel per week ($ug/cm^2/wk$). Release from nickel-coated products also must not exceed this level after 2 years of normal use.

The new law was discussed in an article in *Contact Dermatitis* by David J. Gawkrodger from the Department of Dermatology, Royal Hallamshire Hospital, Sheffield, UK. Dr. Gawkrodger surveyed the literature on nickel-sensitive patients and determined that the $0.05ug/cm^2/wk$ threshold will not protect many of these nickel-sensitive individuals. In addition he tested several types of jewelry. He found that the nickel threshold levels were exceeded by many items including those made from high-sulfur stainless steel. This means that many manufacturers are going to have to change the composition of their jewelry alloys to comply with the directive.

Although the U.S. does not have a similar law, craft jewelers here also should protect clients from skin contact with nickel from all metals, solders, and casting alloys such as monel metals. ACTS has opposed use of nickel jewelry alloys for years also because it is a carcinogen. Now jewelers cannot sell such items in Europe.

==========

BRICK COMPANY CITED FOR SILICA VIOLATIONS

BNA-OSHR, 26(45), Apr 16, 1997, p. 1447

Powell & Minnick Brick Works Inc., Coeymans, NY were cited by OSHA for alleged willful, serious and other-than-serious violations of OSHA respirator, air contaminant, and other standards, for failing to perform required fit tests and use an installed ventilation system to remove dust from the air. The inspection was initiated by a complaint about unhealthful conditions at the plant after a ventilation system was turned off when it became clogged with dust. OSHA launched a national special emphasis program on silica in 1996. The total proposed penalty is $ 106,050.

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LEAD RULES TIGHTEN ON MUGS AND GLASSES

http://www.ceramics.com/sgcd/ & correspondence

The US Food and Drug Administration (FDA), in concert with the Consumer Product Safety Commission (CPSC) and the Environmental Protection Agency (EPA), announced that the voluntary agreement for lead and cadmium in the lip and rim area of drinking glasses will be withdrawn. Instead, lead and cadmium from this area will be regulated as unauthorized food additives.

Previously, lead and cadmium leaching from the top 20 millimeters (0.79 inch) of the outside surfaces of glasses were unregulated except for the voluntary standards of the Society for Glass and Ceramic Decorators (SGCD). These standards allow 25 parts per million (ppm) by weight and internal volume of lead and 7.5 ppm cadmium. The voluntary standards were adopted by SGCD in 1978 and endorsed by FDA, EPA and CPSC when published in the Federal Register on December 15, 1978. In 1993, SGCD determined that tighter standards were attainable and recommended that FDA recognize reduced limits. FDA took no action at that time, but the Canadian government and the State of New Jersey have been considering tighter standards.

FDA is expected to announce the new regulations in the Federal Register in a few months. Until they are published, glasses meeting the old standards will be allowed into commerce. Industry comment on the rule will be solicited so that consideration can be given to special situations such as for shot glasses, barware, non-drinking glasses, seasonal glasses and so on. However, consideration of these comments will not delay withdrawal of the old voluntary agreement. Pete Cassebeer, SGCD's President, advises decorators:

> *....your best option is to not decorate in the top 20 mm. of a mug or tumbler. If you must decorate in that area; however, you should test your wares before shipping them to your buyer. This will help you to avoid the problems currently faced by at least four decorator members and two decal suppliers.*

Unchanged by the new rule are the regulations of the CPSC which limit lead which may be transferred from hand-to-mouth from the outside of the glass and for lead-containing paint (greater than 0.06%) on plastic drinking cups, especially those that might be used by children. For more information contact SGCD, 1627 K Street, NW, Suite 800, Washington DC 20006; Phone: 202/728-4132, E-mail: sgcd@sgcd.org, or http://www.ceramics.com/sgcd/.

LEAD PAINT EMBOSSED NECKLACES RECALLED

CPSC Press Release # 97-120

In cooperation with the CPSC, Charming Shoppes Inc., Bensalem, PA is voluntarily recalling about 4,800 metallic medallion necklaces that contain high levels of lead. The necklaces have a heart-shaped silver-colored medallion embossed with daisies on a dark blue string. They were included as an accessory with a blouse-and-pants set. Charming Shoppes has no reports of illness or injury, but consumers should take these necklaces away from young children immediately. They can return the necklaces to any Fashion Bug store for a replacement lead-free necklace or call 800/478-2918.

==========

THE DYES HAVE IT

62 FR 23469-23470, April 30, 1997

Fifteen new substances will be listed in the 8th Biennial Report on Carcinogens by the National Toxicology Program. Four are anti-cancer or anti-rejection drugs. Five are chemicals found in diesel and gasoline emissions. One (furan) is used in the manufacture of many organic chemicals, another (1,2,3-trichloropropane) is a polymer crosslinking agent, paint and varnish remover, solvent and degreasing agent. The remaining four "Reasonably Anticipated to be a Human Carcinogens" are all dye/pigment-related chemicals:

p-CHLORO-o-TOLUIDINE and its hydrochloride salt (95-69-2) are used to produce azo dyes for cotton, silk acetate and nylon and as an intermediate in production of Pigment Red 7 and Pigment Yellow 49.

DANTHRON--1,8-dihydroxyanthraquinone (117-10-2) is used as a laxative and as an intermediate in the manufacture of dyes.

DISPERSE BLUE 1--1,4,5,8-tetraaminoanthraquinone (2475-45-8) is used in an anthanthraquinone based dyestuff for hair color formulations and in coloring fabrics and plastics.

o-NITROANISOLE--1-methoxy-2-nitrobenzene (91-23-6) is used as a precursor in the synthesis of o-anisidine which is used in the manufacture of over 100 azo dyes and pigments.

These chemicals join the 28 dyes and dye-precursors already listed. The two anthraquinones, Danthron and Disperse Blue 1, bring to four the number of anthraquinones officially listed as carcinogens by NTP (i.e. 2-aminoanthraquinone & 1-amino-2-methylanthraquinone).

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SAFETY-KLEEN SAFE?

BNA-OSHR, 26(42), Mar 26, 1997, pp. 1383-1384

Safety-Kleen Corporation of Thornwood, NY is contesting a serious citation and a $20,500 penalty for five items, including alleged failure to guard an open-sided floor or platform more than four feet above the adjacent floor with a standard guardrail (1910.23 (c)(1)); failure to provide proper inside flammable or combustible liquid storage rooms (1910.106(d)(4)(iv)); and failure to select and require employees to use proper hand protection to prevent skin absorption, punctures, chemical and thermal burns (1910.132(a)).

==========

PIGMENT KILLS BARNACLES

Journal of Coatings Technology, 69(866), March 1997, pp. 39-45 & 69(867), April 1997, pp. 67-72

Chemicals must be mixed into boat paints and varnishes to keep barnacles and other marine organisms from attaching to the surface. Mercury, lead, and organic tin compounds were used for many years. These paints are highly toxic to workers who sand or blast surfaces prior to repainting. And the amount of organic tin in sea water near shores in many countries is killing marine life.

Copper oxide was used as a less toxic alternative, but its strong red color limited decoration and interfered with the painting of water lines of a different color on large vessels. Now another copper compound, cuprous thiocyanate, has been found to work well as both an off-white or yellow-white pigment and biocide.

Most thiocyanates are of low acute toxicity unless they are exposed to strong acids or heat which causes the release of cyanide. Cuprous thiocyanate appears to be quite toxic to barnacles, but far less so to humans. More work must be done to determine its effects on other marine life, but it looks like a promising alternative to more toxic antifouling chemicals. ACTS wonders if small amounts of this pigment also might work as a biocide/extender for some types of art materials if the color shift over time is not significant.

==========

R & F ENCAUSTICS STRENGTHENS LABEL WARNINGS

R & F Newsletter, Vol. 3, No. 1, Spring 1997, pp. 2-3.

R&F Encaustics is changing the warnings on their Pigment Sticks and Encaustics that contain cadmium and cobalt. The new warnings are stronger than those required by most of the toxicologists who certify art material labelling. Many toxicologists still believe that these pigments will pass through the digestive tract unchanged because are not very soluble in acid. ***ACTS FACTS*** has repeatedly pointed out the fallacies in this theory and applauds R & F's new labels. For example, labels on colors containing cadmium state:

> *CONTAINS CADMIUM WHICH CAN CAUSE CANCER BY INGESTION. (Risk of cancer depends on duration and level of exposure). Effects of ingestion are cumulative due to slow elimination of absorbed cadmium. May cause harm to kidneys, testes and developing fetus. Prolonged or repeated skin contact may cause irritation and dermatitis.*

There are no warnings on the label about inhalation of cadmium which can also cause cancer. However, if encaustics are used properly, cadmium should not be released in an inhalable form. The only exception would be if a pigment stick or encaustic work surface were severely over heated or torch melted to the point at which either cadmium or cadmium-containing wax would fume. Other art pigments such as the diarylide pigments also emit highly toxic chemicals at fairly low temperatures.

Heated wax itself emits highly toxic chemicals. Artists should provide ventilation for liquid wax containers or other hot process which is sufficient to remove both wax and pigment emissions.

==========

LEAD, ARSENIC & CHROME EMITTED BY GLASS FURNACES

62 FR 15227-15270, March 31, 1997

The new proposed rule for National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing contains some interesting facts for glassblowers. EPA notes that cullet (crushed recycled glass) is very likely to contain lead and arsenic in amounts that will create significant particulate emissions when melted. And, chromium particulates are emitted from eroding refractory linings of the furnace and furnace exhaust stack.

Glass artists should be aware that good ventilation of the furnaces is needed. Certain types of cullet and the high chrome refractory pavers often used to line glass furnaces can emit small amounts of highly toxic particulates while the furnace is hot.

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KWICK KLEEN & KODAK JOIN MC STANDARD CONTESTERS

BNA-OSHA, 26(34), Jan 29, 1997, pp. 1204-1205 & 26(41), Mar 19, 1997, pp. 1339 & 1342-3

OSHA's methylene chloride standard was issued January 10th. By January 17th, the Halogenated Solvents Industry Alliance, Benco Sales Inc., Brock Woodcrafts, and Masters Magic Products petitioned to have the standard delayed and reviewed under the 1996 Small Business Regulatory Enforcement Fairness Act.

Now there are two more contesters: 1) Eastman Kodak Company filed suit March 10 asking an appeals court to set the standard aside claiming a number of objections including that the rule is not supported by substantial evidence and that it violates the OSH Act; and 2) Kwick Kleen Industrial Solvents Inc, has filed comments with OSHA contending that small businesses will "bear a disproportionately high share of the [paperwork] costs."

The new standard would replace the old 500 parts per million (ppm) permissible exposure limit (PEL) which dated from the 1970's with a new OSHA PEL of 25 ppm. Based on animal testing, OSHA calculated the risk of dying from cancer per 1000 workers to be: 125.8 deaths at the old 500 ppm PEL; and 3.62 deaths at the new 25 ppm PEL. It is always interesting see which industries are willing to fight to prevent OSHA from protecting workers.

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ACTS FACTS' SOURCES include the Federal Register (FR), the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications. Staff: Monona Rossol, Editor; Toby Zausner, Nina Yahr, Diana Bryan Research.

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ACTS FACTS

THE MONTHLY NEWSLETTER FROM
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July 1997 Vol. 11, No. 07

PRESSURE FROM INDUSTRY CLOSES WORKER'S CLINIC

APHA Occup. H & S Section Newsletter, Spring, 1997, pp. 1-2 & interview with Kern

For over a decade, Dr. David Kern practiced internal and occupational medicine at teaching hospitals in Rhode Island and taught at Brown University's School of Medicine. Until late 1996 he headed an interdisciplinary program which treated patients, trained medical students and conducted occupational and environmental health research and investigations.

Two of Dr. Kern's patients worked at a synthetic fiber textile manufacturing plant in Rhode Island and both had interstitial lung disease (ILD). The plant employed about 150 workers, yet the expected annual incidence rate for ILD is one case per 40,000. Dr. Kern and Industrial Hygienist Kate Durand, acting as consultants to the company, investigated and found eight cases at the Rhode Island plant! They also learned that another plant run by the same company in Canada had an outbreak in 1990-1991[1] in which another eight cases were identified.

Dr. Kern submitted an abstract summarizing his findings to a scientific conference. Under pressure from the company, the president of Memorial Hospital ordered Dr. Kern to withdraw his abstract. Officials at the School of Medicine did not support Dr. Kern. At the same time the hospital decided to end its involvement in occupational health and prohibited Dr. Kern from providing medical care to his patients from this facility.

It appears that the textile company *was already aware of problems in the plant in Canada, but at the time of his first inquiry, withheld this information from Dr. Kern.... Even afterwards, the company chose to keep their employees, and the other physicians in Rhode Island caring for them, in the dark. Coverage in the newspapers indicates that the company combined threats with financial inducements to induce Memorial Hospital to punish Dr. Kern (and the honest employers and workers in Rhode Island) by closing the only occupational medicine clinic in the state.*[2]

The Brown faculty supports Dr. Kern, but hospital officials apparently are abetting the company's attempts to violate OSHA rules on medical information release and hazard communication. ACTS has referred artists to this clinic in the past and is appalled at its loss. Contact Dr.Kern at David_Kern@Brown.edu for more information.

1. Lougheed, et al., Desquamative interstitial pneumonitis and diffuse alveolar damage in textile workers. Chest, 1995;108:1196-1200.

2. Janie Gordon, APHA OH&S section Newsletter, with contributions from Howard Frumkin, MD & Jim Keogh, MD.

MERCURY POISONING KILLS TOXIC METALS EXPERT

Chemical & Engineering News, May 12, p. 7, Jun 16, pp. 6 & 12
Concord Monitor, 6/10/97, pp/ B-1 & 8, Union Leader, Manchester, NH, 6/10/97, obit.

Karen E. Wetterhahn, a brilliant and beloved professor of chemistry at Dartmouth College, died June 8 at age 48 from mercury poisoning. She was an internationally recognized expert on the toxicity of heavy metals such as lead, arsenic and chrome.

A chemical called dimethylmercury killed Professor Wetterhahn. She used it in her laboratory for only one day last August and spilled between one and a few drops on her latex gloves. Unknown to her it permeated the gloves and absorbed through her skin. She began experiencing increasing difficulty with balance, speech, vision, and hearing. She was diagnosed with mercury poisoning in January. Doctors managed to reduce her mercury levels, but her neurological functions could not be restored. She died June 8, 1997.

OSHA began an investigation of the incident about two months ago to determine if Dartmouth was in compliance with applicable OSHA standards. The report is expected to be finished by October.

COMMENT: Years ago, many people were exposed to organic mercury. Compounds such as phenyl mercuric acetate were used in paints, even artist's acrylics. Ordinary indoor consumer paints sold before September 1991 were still allowed to contained organic mercury preservatives (***ACTS FACTS*** Sept, 1991). Some old medicines including mercurochrome (now banned) contained organic mercury.

Organic mercury compounds are not used by in art anymore, but artists may be exposed to inorganic mercury from many sources. Included are: liquid mercury used in neon art, from broken thermometers, during restoration of old mirrors (some silverings degrade to produce beads of mercury), from some lustre glaze and gilding processes, in several historic photo processes (mercury vapor daguerreotype, toning of platinum or palladium prints, etc.), some imported cosmetics (***ACTS FACTS***, June & Sept, 1996), and from real vermillion (cinnabar) and cadmium vermillion pigments which are mercuric sulfide. ***ACTS FACTS*** also covered a story about a group of artists whose cooperative building was condemned after liquid mercury contamination was found to have affected the health of many (August 1996).

Inorganic mercury is not as toxic as organic mercury, but can cause serious neurological problems and death. Liquid mercury can absorb through skin and gloves and gives off a vapor which can be inhaled.

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ACTS FACTS ON TIME DISPITE FIRE

A fire was discovered Friday, June 27 at about 4:45 pm in ACTS' building. Many people ran out with valuables and pets. This Editor shut down the computer, took the Zip drive, and forgot her shoes. One tenant is in a burn-treatment facility and no apartment or business in this half of the building was spared damage. We were lucky. Nothing was lost that can't be replaced and ACTS' computer was one of only two that is still works! We're on schedule!

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ABSTRACTS

The following three abstracts were obtained from either *HAZCHEM ALERT* or its Editor, Judith Douville. *HAZCHEM ALERT* is a global communique on hazardous chemical news and information which ACTS recommends to all involved in chemical use or research. It is published by NdS Information Consultants, 23 Virginia Drive, Middletown, CT 06457-4826 at an annual subscription price of $190 ($230 outside the United States). Readers can learn more about this publication at http://www.connix.com/~hazchem.

ARSENIC from occupational exposure has been detected in **MUSEUM CONSERVATORS.** An elevated arsenic content was detected in urine samples of 13 conservators, at a higher value than normal for controls. Concentrations were below those at which a correlation to cancer and heart-blood vessel disease could be determined. Exposed personnel showed changes in carbohydrate metabolism and peroxide levels, and increased systolic blood pressures. The risk of use of arsenic compounds in the preservation of birds and animals can be diminished by using gloves and optionally, using sodium arsenate as the preservative. In Danish. (Dart Kemi 78(2), 11-15 (1997); Chemical Abstracts 126:196261fy, 1997)

FOG FLUIDS. Air and material samples were analyzed as a result of numerous complaints about irritative symptoms after contact with fog fluids put forward by employees of a theater. The irritations were suspected to be due to aldehydes occurring during pyrolysis of fog fluids in fog generators. Aldehyde concentrations in the room atmosphere were always related to aldehyde impurities in the fog fluid. The concentrations remained below the legal limit values applying to aldehyde exposure at the workplace. Chemical Abstract # 126:108062f Exposure to fog fluids used on theater stages. Neumann, Heinz Dieter; Hahn, Jens Uwe; Assenmacher--Maiworm, Heinz; Birtel, Heinrich; Kussin Heike (GUVV Wesstfalen - Lippe, D-48159 Muenster, Germany). *Gefaharstoffe - Reinhalt. Luft* 1996, 56(11), 431-436 (Ger), Springer.

> COMMENT: Some fog proponents say complaints about fog effects all come from New York. ACTS knows of complaints from all over U.S. and Canada, from Australia, England, and now Germany.

BATIK fumes from textile preparation may contain irritant and asphyxiant gases, and exposure in factory workers is of great concern. The prevalence of impaired lung function in traditional batik factory workers can be assessed by measuring batik fume concentrations in the workplace or by assessing workers' pulmonary function. Of 372 workers in 18 traditional batik factories in central Java, 77 (20.7%) had impaired lung function, consisting of 44 (11.8%) obstructive diseases, 29 (7.8%) restrictive diseases, and 4(1.1%) mixed symptoms. Batik fumes consist of sulfur dioxide, nitric oxide, hydrogen sulfide, oxygen, carbon monoxide, and hydrocarbons; there were also some particulates. (Proc ICMR Semin (Proceedings:Second Asia-Pacific Symposium on Environmental and Occupational Health, 1993), pp. 257-261 (1994); Chemical Abstracts 126:228922h, 1997)

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CYCLONE DUST COLLECTORS BELONG OUTSIDE

BNA-OSHR, 27(3), June 18, 1997, p. 86

Improperly installed cyclone dust collectors used in woodworking are potential fire and explosion hazards, according to the recent OSHA bulletin, *Improper Installation of Wood Dust Collectors in the Woodworking Industry*. The bulletin warns that cyclone dust collectors usually should not be installed inside woodworking shops. OSHA points out that the 1994 Uniform Building Code and the 1994 Uniform Mechanical Code (or official interpretations of these codes) call for dust collection systems to be located outside shops. Many local U.S. building codes reference these national codes.

The National Fire Protection Association standard on prevention of fires and explosions in wood processing and woodworking facilities also states, "dust collectors shall be located outside of building." The NFPA lists two exceptions in which collectors can be located inside buildings:

1. If they are adjacent to an exterior wall or are vented to the outside through straight ducts no longer than 10 feet in length, and they have explosion vents; and

2. If they are protected by an explosion suppression system that meets the NFPA standard on explosion prevention systems.

The OSHA bulletin was released May 2 by the Directorate of Technical Support. OSHA compliance officers and staff will be notifying woodshop owners that it is necessary to locate dust collection systems outside buildings. They further require that all electrical components of the dust collector be approved by a nationally recognized testing laboratory and that the manufacturers installation instructions are followed.

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ACTS FACTS' SOURCES include the Federal Register (FR), a compilation of all the regulations and public notices issued by all federal agencies, the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications.

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August 1997 Vol. 11, No. 08

DIOXINS CONTAMINATE CHICKENS, EGGS, & CLAY?

The Wall Street Journal, Bruce Ingersoll, Staff Rep., July 15, 1997

After elevated levels of dioxin were detected in chicken and eggs, the FDA banned all shipments from scores of poultry processors and egg producers starting July 14 unless they can certify that their products aren't tainted with dioxin. The FDA says there is no immediate health risk, but they wish to avoid additional accumulation of dioxin in the body. Dioxins also are potent carcinogens.

The problem began earlier this year when EPA found elevated dioxin levels in chicken from Tyson Foods plants in Arkansas and Texas. One sample contained 22 parts per trillion of dioxin and the other 26 parts per trillion. The norm for edible meat is 0.6 parts per trillion. The FDA has detected dioxin levels ranging from 0.87 to 2.19 parts per trillion in two egg samples from Texas and Arkansas. Similar levels have also been found in farm-raised catfish. Because people eat far less catfish than chicken and eggs, the FDA decided to give the catfish industry a reprieve from the food-safety ban until a backlog in laboratory testing can be caught up.

THE CLAY CULPRIT. The dioxin contamination was traced to two Arkansas animal-feed manufacturers that use small amounts of clay as an anti-caking agent in soybean meal used by chicken farms nationwide and by several major catfish farms in Mississippi. The tainted clay came from an open-pit mine near Sledge, Mississippi.

A spokesman for the Kentucky-Tennessee Clay Company in Nashville said the company doesn't know how their mine became contaminated. The mine went into production in 1991 and produces ball clay. The term "ball clay" comes from the practice of digging the clay out of open pits in convenient blocks of about 25 pounds called balls.

Ball clays are major ingredients in whiteware, porcelains, stoneware, terra cotta, glass refractories, and floor and wall tile. They also are used in ceramic clays, casting slips, and glazes. Craftspeople should ask suppliers where their ball clays are mined and be doubly careful to avoid exposure to dust and kiln emissions.

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About six months ago, the 800 number at which people could order our books changed. Unfortunately, people calling the old number are told only that the books are no longer available. Please note the new number and ignore rumors that our books are out of print.

NIOSH ALERT ON RUBBER LATEX

BNA-OSHR, 27(4), June 25, pp. 115-116; Ibid., 27(6), July 9, pp. 183-4 & 62 FR 33089, June 18, 1997

The National Institute for Occupational Safety and Health (NIOSH) published an alert on allergic reactions to natural rubber. NIOSH notes that 8-12 percent of health care workers regularly exposed to latex are sensitized compared with 1-6 percent of the general population. Symptoms include: skin rash and inflammation, respiratory irritation, asthma, and systemic anaphylactic shock. Between 1988 and 1992, the FDA received reports of 1000 systemic reactions to latex, 15 of which were fatal. NIOSH suggests that employers:

* Use non-latex gloves for tasks such as food preparation, routine housekeeping, and maintenance that do not tend to involve contacts with infectious materials such as blood;
* If latex gloves must be used, they should be reduced-protein and powder-free (powder used as a lubricant can increase exposure though skin contact and inhalation);
* Screen workers with low allergy reaction tolerance to detect symptoms early;
* Implement work practices such as washing hands with a mild soap after removing latex gloves;
* Identify and clean areas contaminated with latex-containing dust using ventilation filters and vacuum bags; and
* Provide latex allergy training for workers. For instance, workers should know that allergies to certain foods like avocados, potatoes, bananas, tomatoes, chestnuts, kiwi fruit, and papaya are also associated with latex allergy.

For copies of the NIOSH Alert: Preventing Allergic Reactions to Latex in the Workplace, pub.# DHHS(NIOSH) 97-125 call 800/356-4647.

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WHEN IS LATEX NOT NATURAL RUBBER?

LATEX is any polymeric substance in an essentially aqueous medium or water dispersion. The polymer in latex could be natural rubber, a polyacrylic plastic, butadiene rubber, urethane or any other synthetic or natural polymer. The term **RUBBER** is applied to any of these natural or synthetic polymer having unique properties of deformation and elastic recovery. The synthetic "rubbers" are chemically unrelated to natural rubber.

NATURAL RUBBER is derived from latex sap drawn from Hevea trees. It contains a chemical is called isoprene, a monomer that can react with itself to form a polymer called polyisoprene. The latex also contains impurities including highly sensitizing proteins. These proteins cannot be completely removed from natural rubber. Gloves labelled "reduced proteins" are less sensitizing, but all natural rubber products should be considered allergy provoking.

NATURAL RUBBER PRODUCTS INCLUDE: condoms, surgical gloves (natural rubber is still the best HIV barrier), balloons, rubber cement, many latex molding products, surgical adhesives, and most special effects latex makeup products. Almost all rubber tires contain some natural rubber although the main ingredient is more likely to be butadiene rubber. **PRODUCTS WHICH MAY NOT CONTAIN NATURAL RUBBER** include shoes, toys, and many other hard "rubber" items. Consumer and artists latex paints almost never contain natural rubber.

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PUBLIC TV PROGRAM FEATURES ART HAZARDS

Health Week, a program produced by Maryland Public Television and aired nationally between July 18 and July 29, featured a section on art hazards. Artist Merle Spandorfer, industrial hygienist Michael McCann, toxicologist/MD Jack Synder, teacher Mark Hatfield, and others commented on aspects of the problem. Monona Rossol wrapped up the segment in discussion with interviewer Sharyl Attkisson.

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ABSTRACTS

TOLUENE

HAZCHEM ALERT 12(6) p. 58, June 1997

Toluene (CAS RN 108-88-3) as a teratogen is reviewed and discussed. Extrapolating from animal data, at the level at which well-controlled occupational exposure to toluene vapor is encountered, in utero exposure does not pose a significant fetal risk. However, following chronic and excessive industrial accidents or intentional abuse, toluene exposure several orders of magnitude greater exists, and at these levels in utero exposures in both animals and humans have been shown to produce significant delays in fetal growth. Teratogenicity similar to that of fetal alcohol syndrome is found in all human studies where there is excessive in utero exposure to toluene. Chronic toluene abuse produces a renal tubular acidosis with maternal hypokalemia and profoundly lowered serum pH. (*Teratology* 55(2), 145-151 (1997); Chemical Abstracts 1997:295594)

GLAZE TESTING

MEDLINE search

Extraction of lead, cadmium and zinc from overglaze decorations on ceramic dinnerware by acidic and basic food substances. Dinnerware decorated with overglaze designs can release toxic metals into food substances in amounts high enough to constitute health hazards. When dishes made in the US before 1970 were filled with 4 % acetic acid for 24 hours, lead concentrations of up to 610 micrograms/ml and cadmium concentrations of up to 15 micrograms/ml were measured. Acetic acid leachates for more than half the dishes tested for lead (78 of 149) contained levels exceeding the US Food and Drug Administration (FDA) allowable concentration of 3.0 micrograms/ml. One-fourth of dishes tested for cadmium (26 of 98) exceeded the FDA limit of 0.5 micrograms/ml. High concentrations of lead, cadmium and zinc were also released into 1% solutions of citric and lactic acids. Significant amounts of these metals were extracted by basic solutions of sodium citrate and sodium tripolyphosphate, as well as by commercial food substances including sauerkraut juice, pickle juice, orange juice, and low-lactose milk. Relative concentrations of lead, zinc and cadmium released depend on the leaching agent used. Citric acid leachates contain higher lead:cadmium and zinc:cadmium (but lower lead:zinc) ratios than do acetic acid leachates from nominally identical dishes. Repeated extractions with acetic acid show that even after 20 consecutive 24 hour leachings many dishes still release lead in concentrations exceeding FDA limits. Dept. of Chem., Southwest Missouri State Univ., Springfield MO 65804, *Sci.Total Environ.* 1997 Apr 30;197(1-3):167-175

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FURNITURE PLANT FINED FOR MACHINE GUARDING VIOLATIONS

BNA-OSHR, 27(5), July 2, 1997, pp. 148-149

Allen-Rogers Ltd., of Laconia, a New Hampshire furniture and wood product manufacturer, was hit with a $244,500 OSHA penalty for machine guarding and other violations. The Company had been alerted to these workplace hazards in 1995 as part of an OSHA cooperative compliance program. Under this program, called the New Hampshire "Focused Fifty," OSHA notifies employers of their injuries and illnesses and offers employers a chance to fix violations before undergoing an OSHA inspection.

Under the Focused Fifty program, OSHA conducts follow up inspections to ensure that employers have reduced the hazards noted the initial notification letter. Apparently, Allen-Rogers did not abate the violations. The largest number of citations were for lack of adequate machine guarding for woodworking machinery, including lathes and sanders. Other citations involved electrical hazards, blocked exits, fire extinguishers, flammable liquids, personal protective equipment, fall protection and asbestos. ACTS objects to cooperative OSHA programs that leave workers at risk for years.

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OHIO BRICK & TILE MAKER FINED AGAIN

BNA-OSHR, 27(7), July 16, 1997, p. 211

An Ohio brick and tile manufacturer faces proposed fines from OSHA of more than $320,000 for allegedly failing to abate dozens of hazards cited two years ago. The company, General Clay Products Corp, was hit with fines of more than $281,000 in 1995 for willful, serious, and repeat violations. Those penalties were later reduced under a settlement in which the company pledged to fully abate the hazards. A follow-up inspection in January concluded that the company failed to live up to the commitments. OSHA issued three failure-to-abate notices--each carrying a $84,000 penalty--alleging the company failed to develop and implement a hearing conservation program, failed to develop and implement a lockout/tagout program, and failed to train employees in lockout/tagout procedures.

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September 1997 Vol. 11, No. 09

ASTHMATIC WORKER LOSES DISCRIMINATION SUIT

Seattle Times, July 11, 1997, p. 1 & July 19, 1997, p. A12, correspondence & depositions.

Sherry Kelley, an Assistant Manager at a Black Angus Restaurant in Seattle, had a series of asthma attacks between October 1994 and June 1995 while the restaurant's Disc Jockey was using theatrical fog. Two of the attacks were so severe she went to the emergency room. She did not associate her breathing difficulties with the fog until she read the asthma warning on the container. She complained to the restaurant's management and they ordered the disc jockey to stop using fog. Later, the management permitted the disc jockey to use the fog again. Then Kelley filed suit claiming that she was discriminated against as a person with a disability.

At trial, the only issue the jury was allowed to decide was the claim of discrimination. The jury found that Kelley was not treated improperly. After holding conversations with several of the jurors, Kelley's attorney, Jaclyn Sinclair, concluded that "the jury found that, as a manager, she should have taken primary responsibility for accommodating her disability herself."

This leaves the question about whether the fog exacerbated Kelley's asthma unanswered. Jaclyn Sinclair thinks this is unfortunate because Kelley "...has moved from a mild asthmatic state to one that is chronic now." The defendants claimed that Kelley's smoking caused the problem. But according to Sinclair:

> ...all three medical doctors who testified, including the defense physician, agreed on a more probable than not basis, that smoking did not cause the aggravation of her condition. The two medical doctors called by the plaintiff testified that the fog caused the aggravation of her asthma. Even the defense asthma expert testified that it was entirely possible that the fog was the cause. The one lone voice opining that the fog created with High End Systems' Atmospheres fog fluid could not hurt people, including asthmatics, was Dr. James Kehrer, who is not a medical doctor.

It is only a matter of time before another case is filed and the medical issue is finally aired in court. The other two similar cases of which this editor is aware were settled out of court.

COPIES OF HEALTH WEEK TAPE AVAILABLE

Last month we mentioned a PBS program in which art hazards were covered. Several people asked how to get a copy. Contact Health Week Transcripts, P.O. Box 55742, Indianapolis IN 46205 or call 800-338-8440. Ask for Program # 112. The cost is $ 20.90.

ABSTRACTS

DYES AND LEATHER WORK ASSOCIATED WITH BIRTH DEFECTS

HAZCHEM ALERT 12(7) p. 66, July 1997

Occupational exposure and congenital malformations in female workers were studied. Chromosomal anomalies and cases with multiple anomalies were studied; babies with no congenital malformations recognized at birth born between 1982 and 1989 were selected as controls. Malformation included isolated events and multiple congenital anomalies. Of four categories of maternal occupation studied, a notable, significant association between oral clefts and mothers involved in leather and shoe manufacturing; multiple anomalies and mothers in textile dyeing; and pelt or leather working mothers and orofacial clefts in offspring. (*Occup Environ Med* 54(4), 223-228 (1997); Chemical Abstracts 126;320402m, 1997)

COSMETIC/HAIRDRESSING HAZARDS

HAZCHEM ALERT 12(7) p. 66, July 1997

Cocamidopropyl betaine was studied as a "new" important cosmetic allergen. This material is an amphoteric surfactant, which enjoys increasing popularity among cosmetic chemists because of its low potential for irritation of the skin. Depending on its commercial source, the substance can still contain varying amounts of reactants and intermediates involved in its synthesis; a major impurity (and the possible allergen) is dimethylaminopropylamine. Since its first description as an allergen in 1983, many cases of cosmetic allergy from cocamidopropyl betaine have been reported. The causative products are usually shampoos, although other cosmetics and contact lens fluids have also been the sensitizers. The allergen appears to be an occupational hazard to hairdressers, of whom between 3.7 and 5% may be sensitized. In English. (*Dermatosen Beruf Umwelt* 45(2), 60-63 (1997); Chemical Abstracts 1997:409928)

HAZCHEM ALERT 12(7) p. 67, July 1997

Hairdressers exposed to various hair chemicals develop asthma and chronic bronchitis. Potential chemical agents for these diseases include acrylic monomers, rosin, and phthalates in hair spray; monoethanolamine in hair colorants; and permanent waves and perfumes. Persulfates in bleaches can cause allergic skin and respiratory symptoms, and polyvinylpyrrolidone and polyacrylates with alcohols and hydrocarbons in hair sprays and other hair aids can cause airway irritation and affect the mucociliary transport in the nose and trachea. Additionally, ammonia and sulfur compounds in hair dyes and permanent wave solutions are airway irritants. (*Journal of Occup and Envir Med*, Vol. 39, No. 6, pp. 534-539, 1997)

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REFERENCE ON PROFESSIONAL VOICE AVAILABLE

Professional Voice: The Science and Art of Clinical Care, 2nd Ed., Robert Thayer Sataloff, MD, Editor, is now available from Singular Publishing Group, 800/521-8545. Among the 1094 pages, 585 illustrations (156 in color), and items on subjects ranging from nodes to nerves and surgery to snoring, are chapters on "Artificial Fogs and Smokes" by Harry Herman and Monona Rossol, and on "Pyrotechnics" by Rossol. The $ 325 price tag is daunting for all but professionals.

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NTP PROPOSES LISTING ALL BENZIDINE DYES

62 FR 37272-3, July 11, 1997; 62 FR 23469-70, April 30, 1997; &
61 FR 50499-50500, September 26, 1996

As predicted in ACTS FACTS, December 1996, the National Toxicology Program's (NTP) new definition of a carcinogen is being applied to a dye class.. The latest list of substances proposed for the coming 9th Edition of the Report on Carcinogens includes "Benzidine-based dyes as a class." This class would include more than 250 benzidine-based dyes, most of which have never been studied for cancer effects. However the benzidine dyes could meet NTP's new definition of "Reasonably Anticipated To Be Human Carcinogens" when:

> ***There is less than sufficient evidence of carcinogenicity in humans or laboratory animals, however; the agent, substance or mixture belongs to a well defined, structurally-related class of substances whose members are listed in a previous Annual or Biennial Report on Carcinogens as either a known to be human carcinogen, or reasonably anticipated to be human carcinogen or there is convincing relevant information that the agent acts through mechanisms indicating it would likely cause cancer in humans.*** (61 FR 50499-50500, *ACT FACTS* Dec. 1996)

Most experts and government agencies assume that the benzidine dyes as a class cause cancer. Recently, the German government acted on this assumption and included many benzidine dyes in their ban on dyes for products used next to the skin (***ACTS FACTS***, May 1996). Our US Consumer Product Safety Commission (CPSC), however, has not followed suit. The CPSC denied a petition to ban benzidine dyes in 1980 because they believed use of these dyes in consumer products and commercial textiles had decreased voluntarily.

ACTS feels that voluntary reduction in the use of benzidine dyes is insufficient and applauds NTP's actions. We also hope that the anthraquinone dyes also will be listed one day as carcinogens.

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DIFFERENCES BETWEEN DYES AND PIGMENTS FADE

Chem & Eng News, July 14, 1997, P. 36.

By definition, dyes and pigments function differently. Dyes penetrate fibers in a soluble form after which it may or may not become insoluble. Pigments, on the other hand, color fibers as a finely divided insoluble solid that remains unchanged in the process. However, dyes that are soluble in water and insoluble in oils can be both fabric dyes in water and pigments in oil paints.

Distinctions between dyes and pigments are further blurred by a new method of using organic pigments developed by researchers at Ciba Specialty Chemicals in Basel Switzerland. Their method involves converting certain functional groups in the pigment molecule into lipophilic (oil/solvent-soluble) groups.* The product is then a "latent" pigment, which like a dye, easily dissolves in an oil or solvent medium. Subsequent warming of the latent pigment after it has been applied converts it to the original insoluble pigment.

* The latent pigment is formed by replacing the hydrogens in the amino groups with tert-butoxycarbonyl groups [R=(CH3)3C-O-C=O]. It dissolves easily in xylene and cyclopentanone at room temperature. Heating the latent pigments for two minutes at 180 o C regenerated the pigments with release of carbon dioxide and isobutene.

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DARTMOUTH FINED IN PROFESSORS DEATH

New York Times, August 9, 1997 & Chem. & Eng News, Aug 25, 1997, pp. 9-10.

In July, ***ACTS FACTS*** covered the death of Professor Karen Wetterhahn after she absorbed a few drops of dimethyl mercury through her gloves in her laboratory at Dartmouth College. An OSHA investigation revealed that Dartmouth's safety violations lead to the death. A $13,500 fine was proposed. David May, OSHA area director in New Hampshire, Region 1, says that employees weren't properly trained about personal protective equipment. The citation says that "laboratory workers were using disposable latex or vinyl medical examination type gloves when handling organic chemicals and solvents."

A spokeswoman for the school said safety efforts would increase now that they know more "about how this material behaves and also about the absolute safety limits of disposable gloves." ACTS asks readers to ponder how, throughout years of study, science professors in a renowned university could escape learning about skin absorption and glove permeability when OSHA requires every schools' chemical hygiene program to address this well-known information.

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LEAD-DECORATED UMBRELLAS RECALLED

Press Release # 97-169, CPSC (Ken Giles), Aug 5, 1997

Gymboree Corporation of Burlingame, CA in cooperation with the U.S. Consumer Product Safety Commission (CPSC) is voluntarily recalling about 6,500 children's umbrellas that have surface coating decorations with high levels of lead in violation of the U.S. Consumer Product Safety Act. Another 7090 similarly decorated beach and golf umbrellas also are being recalled.

CPSC and Gymboree are not aware of any reports of illness involving these umbrellas. The recall is being conducted to prevent possible illnesses. Gymboree stores sold the umbrellas nationwide from September 1996 through May 1997 for about $12 to $30, depending on the model. Consumers should take these umbrellas away from children immediately and return them to any Gymboree store for a full refund. For more information about this recall, contact Gymboree at 800/588-9885 between 9 am and 5 pm PDT Monday through Friday.

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ACTS FACTS' SOURCES include the Federal Register (FR), a compilation of all the regulations and public notices issued by all federal agencies, the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications.

M. Rossol, Editor; Toby Zausner, Nina Yahr, Diana Bryan research.

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

October 1997 Vol. 11, No. 10

ETHYLENE OXIDE USERS: HEADS UP!

BNA-OSHR, 27(10), August 6, 1997, PP. 391 & 27(13), August 27, 1997, pp. 469-470

Explosions at a number of facilities that use or produce ethylene oxide (EtO) have prompted the EPA to delay enforcement of an air toxics rule for the substance. The action stems from concerns that controls required by the EPA regulation may have been responsible for the eruptions, which occurred at facilities in Indiana, Massachusetts, Virginia, and Wisconsin. The Indiana incident resulted in a fatality and 69 injuries.

John Seitz, director of the agency's Office of Air Quality Planning and Standards, said the agency will delay a December 1997 deadline for complying with the air toxics standard while the explosions are investigated. The control devices, called a catalytic oxidizers, use combustion to remove hazardous air pollutants from the emissions. Facilities using these kinds of pollution controls should disconnect them immediately.

While EtO is used primarily by major industries, certain large libraries and museums use it to fumigate books and artifacts for control of pests and molds. ETO's explosive nature and status as a carcinogen have caused EPA and OSHA to develop strict regulations on its use and disposal.

SCREEN PRINTERS NEED BETTER SQUEEGEES

BNA-OSHR, 27(14), Sept., 3, 1997, p. 497

Redesigning squeegees can significantly reduce hand pain and fatigue for workers in the screen-printing industry, according to a recent National Institute for Occupational Safety and Health (NIOSH) Hazard Controls bulletin. Manual screen print workers use wooden-handled squeegees to force ink through a screen. This may result in carpal tunnel syndrome and other musculoskeletal disorders of the hand, wrist, and arm. The handle places pressure on the mid-palm and can cause compression of the median nerve, NIOSH said.

NIOSH recommends that handles be designed to conform to the shape of the hand when it is in a "somewhat relaxed and open position." In addition, padding the handle can reduce hand pain and fatigue when used over time and may result in lower carpal tunnel pressure. The institute also recommended that standard squeegee handles be modified by adding compressible grips. For more information about controlling this hazard call NIOSH at 800/356-4674 or refer to http://www.cdc.gov/niosh/homepage.html.

BLOOD LEAD LEVELS HIGHER IN CONSTRUCTION WORKER'S KIDS

Am. Journal of Public Health, 87(8), August 1997, pp. 1352-1355

A study of the children of construction workers in New Jersey indicated that their children were six times more likely to have a blood lead level of 10 micrograms per deciliter(µg/dL) or greater than the children of their neighbors employed in non-lead industries. Ten µg/dL is the level at which the Centers for Disease Controls recommends follow up and repeat screening.

The source of the children's exposure is contamination of their homes from lead dust brought in on clothing and shoes. It appears that the workers' employers are not instituting the measures required by OSHA to reduce so-called "take home" lead. Since 1993, the OSHA lead in construction standard mandates showers and changing facilities at work sites where lead paint is a factor.

The study also showed that the construction workers' families were somewhat more likely than the control families to have members who participated in lead-related hobbies at home. Pediatricians need to ask about both hobbies and the parent's occupations when deciding which children to screen for lead.

==========

LEAD'S EFFECT STILL SEEN AFTER 20 YEARS

Haz. Substances & Public Health, ATSDR, 7(3) Fall 1997, pp. 1-3

In 1974, a public health survey showed widespread lead poisoning among Silver Valley Washington children. They had an average blood lead level of 55 micrograms of lead per deciliter of blood (µg/dL). Recently, the Agency for Toxic Substances and Disease Registry (ATSDR) followed up 917 of these lead-exposed children and compared them with a control group of 754 Spokane Washington residents. Compared with the control group, the lead-exposed group

* performed significantly poorer on neurobehavioral tests that determine the functional capacity of the central and peripheral nervous systems;

* had significantly higher prevalence of neuropsychiatric symptoms--the largest differences in the symptoms of difficulty reading, concentration, and remembering;

* had significantly higher prevalence of difficulty conceiving children, which increased with duration of residence in the Silver Valley;

* reported a significantly higher number of medical conditions including anemia, anxiety, history of high blood pressure, urinary tract conditions, ulcers, arthritis, poor circulation, and history of dialysis among family members; and

* had a significantly higher average tibial bone lead concentration.

The study clearly shows that individuals exposed to lead between 9 months and 9 years of age still have observable neurologic and reproductive effects 20 years or more later. More information: contact Lynette D. Stokes, PhD, MPH at ATSDR, Division of Health Studies, 1600 Clifton Road, N.E., MS E31; telephone 404/639-6203; e-mail lxs4@cdc.gov.

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LEAD-FREE ELECTRIC MATCH

Martinez Specialities MSDS & promotional materials

Depending on their chemical composition, pyrotechnic effects generate smoke containing varying amounts toxic components. The smoke even may contain small amounts of lead fume from their igniters.

Often called "electric matches," igniters consist of relatively high resistance bridgewires surrounded by small quantities of heat-sensitive pyrotechnic composition. When sufficient electric current goes through the wire, it ignites the pyrotechnic composition, producing a burst of flame that sets off the firework. The pyrotechnic material in most igniters contains lead often in the form of lead styphnate or lead peroxide. Lead fume will be created during the reaction. Some lead fume also may emanate during the reaction from the lead solder used to secure the resistance wire.

Now a company called Martinez Specialities, Inc., is marketing an electric match whose pyrotechnic composition contain no lead or any other highly toxic metal. The material safety data sheet lists only boron, carbon and nitrogen under decomposition products. ACTS suggests pyrotechnicians look into Martinez Specialities' TiTAN e-match. 205 Bossard Road, Groton NY 13073 607/898-3053

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YELLOW PERIL IN OLD PAPER

C&EN, August 11, 1997, pp. 36-40

Chemical and Engineering News carried an article on the British Library's restoration of the Diamond Sutra, an ancient Chinese paper scroll, whose yellow color was attributed to Berberine and two other closely related alkaloids, Palmatine and Jatrorrhizine. But the article failed to mention that these three dyes are toxic and that conservators need to be cautious when working with them.

The dyes are plant extracts. Berberine is extracted from Berberis vulgaris and Hydrastis canadensis. It was used historically as a poison and a medicine in the treatment of malaria fevers. It lowers body temperature, increases peristalsis, and can cause death by central nervous system paralysis. The two other dyes in the scroll also have been used as poisons and medicines. Mutation data is reported for Berberine. None of the dyes have been studied for cancer effects. All three dyes are expected to skin-absorb.

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NON-CHEMICAL B&W PHOTOGRAPHY

Chem. & Eng. News, June 30, 1997, p.7

Imation Corporation of Oakdale, Minnesota received an award for an outstanding discovery in pollution reduction from the National Academy of Sciences for its DryView film medical imaging technology. Traditional photographic processing involves silver halides, baths containing developers, acetic acid and other chemicals. In the new process, exposed film is developed by heat. In the medical imaging industry, the DryVeiw method has the potential to eliminate use of more than 3 million gallons/year of developer, 5 million gallons/year of fixer and 900 million gallons/year of wash water. Other uses for DryView are planned and one day artists may use it.

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ABSTRACTS

HAZCHEM ALERT 12(5) p. 42, May 1997

ERIONITE, an asbestos-like fibrous mineral in the soil, may be the cause of the many cancer cases in an area of Turkey. The name of the town, Karain, means "abdomen," and may refer to pains in the abdomen, possibly linked with illnesses so prevalent in the town. The erionite-containing soil is used by the villagers for white-wash, insulation, plaster, and a substitute for baby powder. Cancer accounts for perhaps 40-80% of the deaths in that town. (NY Times, p. 4, May 4, 1997) Ed. note: the cancers include mesothelioma, the asbestos marker cancer. Some US soils and rocks contain erionite.

HAZCHEM ALERT 12(7) p. 66, July 1997

ERIONITE fiber control limit for occupational exposure is proposed. Erionite is a potent mesothelioma risk agent; recommended is an 8 hour exposure limit of 0.0007 fibers/cc air. (Applied Occupational and Environmental Hygiene, Vol. 21, No. 6. pp. 429-434, 1997)

INTERESTING NEW PIGMENT

62 FR 44008-9, August 18, 1997

EPA has granted USR Optonix, Inc., approval to test market a new pigment without special worker and environmental restrictions for six months beginning on the first day of commercial manufacture. The new wax and plastic colorant is described as a "Silicic Acid Magnesium Strontium Salt, Dysprosium, Europium Doped." This means it is a magnesium and strontium hydrated silica (like silica gel) in a crystalline form that has had traces of two rare earth metals (Dysrosium and Europium) added. This sounds quite different from the traditional inorganic pigments used by artists.

In its risk assessment, EPA said that it had identified human health concerns for lung toxicity based on data from an analogous chemical substance. However, during manufacturing and use, exposure to workers is not predicted to be significant. In addition, it is not expected to be toxic to aquatic organisms in the concentrations projected. The test market activities are not expected to present any unreasonable risk of injury to human health or the environment.

ACTS FACTS' SOURCES include the Federal Register (FR), the Bureau of National Affairs Occupational Safety & Health Reporter (BNA-OSHR), the Mortality and Morbidity Weekly Report (MMWR), and many health, art, and theater publications. Staff: Monona Rossol, Editor; Toby Zausner, Nina Yahr, Diana Bryan Research.

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November 1997 Vol. 11, No. 11

LAXATIVE INGREDIENTS FINALLY BEING WITHDRAWN

62 FR 46223-7, Sept 2, 1997 & FDA Consumer, October 1996, p. 6-7.

The FDA is planning to ban phenolphthalein as a laxative ingredient and to withdraw approval of a number of other laxative ingredients. ***ACTS FACTS*** warned a year ago (November, 1996) that a number of laxative ingredients will be demoted from GRAS status (generally recognized as safe) to Category II (not generally recognized as safe and effective or misbranded). These ingredients are:

phenolphthalein	aloe	sagrada preparations
bisacodyl	cascara	senna preparations
danthron		

The FDA says that the new data on phenolphthalein indicates:

> *...that chronic use could lead to damage to the human genome (including p53, which is known to be a tumor suppressor gene) and could increase the risk of malignancy. ... Such genetic damage and increased risk could occur at phenolphthalein doses that are likely to be used by humans.* 62 FR 46224

All the reclassified laxative ingredients are anthraquinones or are chemically related to them. Anthraquinones are chemicals which easily convert or metabolize to form quinoid structures which in turn can generate free oxygen radicals. Phenolphthalein can convert to a quinoid. Bisacodyl is chemically related to phenolphthalein and may cause cancer in rodents. Cascara contains hydroxymethylanthraquinone, and aloe contains an anthraquinone glycoside that dyes the urine red when used as a laxative. Senna (related to aloe and cascara) may cause gene or chromosome irregularities.

Danthron is a new addition to this list. It is an anthraquinone and exhibits a positive mutagenic effect in tests. Studies on rats and mice published in Britain and Japan show that chronic high doses of danthron resulted in development of tumors.

ACTS faults laxative companies for waiting until FDA announced the phenolphthalein ban before reformulating their products. FDA informed them in a letter dated May 21, 1996 about reclassification of the five ingredients. Worse, some laxative manufacturers are replacing banned phenolphthalein with the other reclassified chemicals on this list. And health food stores still sell teas and other products containing the natural reclassified ingredients.

ACTS FACTS covers this story because similar free-radical generating anthraquinone natural and synthetic dyes and pigments are used pervasively in the arts. They are usually labeled "non-toxic."

YOUNG DANCERS STUDIED

The Experience of Very Young Dancers (4-7 Years Old) Performing in a Large Theatrical Production. (A Master of Arts Nursing thesis). The College of St. Catherine, St. Paul, MN. Patti Roeger Breen Draheim, May 1996

Pediatric Nurse Practitioner Patti Breen's 1996 Masters thesis contains a fascinating picture of the qualitative experiences of young (4 to 7-year-old) dancers in productions of the Nutcracker. Ms. Breen recruited a sample of eight children from three large ballet companies. The children were interviewed in the presence of their parents, once during the theatrical production and again about one month after the end of the run. Confidentiality was maintained by coding the subjects and their responses.

Transcribed texts of audio-taped interviews of the children and their parents were analyzed for commonalities and differences in themes. While some children initially summed up the production as "fun," the interviews revealed a far more complex picture. There were positive effects such as an increase in confidence, self-esteem, love of dance, and meeting new friends. However, negative effects abounded. The children's complaints included:

long hours (some days they spent 10 to 12-hours at the theater);

> ***I was really tired and couldn't rest.***

lack of food and bathroom facilities;

> ***My tummy ached from being hungry and having to go to the bathroom.***

irritation from cosmetics;

> ***The make-up started stinging me and I didn't want to do it anymore...***

and physical stress.

> ***My knees hurt.***

And while Ms. Breen was not looking for theatrical fog problems, the following statements were found in the transcribed interviews:

> ***Sometimes people were mean.***
> ***We were standing in front of the fog.... We could barely breathe.... We were suffocating and they'd just tell us to cover our mouths. ... Then A. had an asthma attack and we just couldn't breathe--they just kept doing it and making us go in the fog.*** p. 22

And again from other interviews on page 23:

and
> ***The fog made it so we couldn't breathe--it was scary.***
> ***The smoke comes and freezes me.***

Ms. Breen concludes that pediatric nurse practitioners should ask parents about the physical activity of young patients. If dance is one of the activities, they should share this study with them to help them assess the positive and negative aspects of the experience. Practitioners in the community at large also should work with teachers and directors to help devise rehearsal schedules more appropriate for four- to seven-year-olds.

Ms. Breen gave ACTS permission to provide the 63 page thesis on request for a $10.00 copy/postage fee. Correspondence with the author should be directed to Patti Breen, M.S., C.P.N.P., 8323 Deer Pond Trail, Lake Elmo, MN 55042.

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WARRANTS ISSUED IN STUNTMAN'S DEATH

Canadian Occup. Health & Safety News. Southam Products Ltd.,Ont. p. 8.

The *Canadian Occupational Health and Safety News* reports that warrants have been issued for two film producers from the United States who failed to appear in a British Columbia court to answer charges stemming from the death of a Canadian stuntman. Keith Perepelkin plunged to his death on the Vancouver set of the movie, "Firestorm."

Firestorm Productions, Glen Wilder, Louise Rosner, and the stunt coordinator, all were charged with offenses under the provincial *Workers' Compensation Act*. The accused allegedly failed to ensure that Perepelkin was properly instructed to minimize risk and they proceeded with the jump despite having cause to believe the worker could be harmed. A spokesman with the Workers' Compensation Board says that Perepelkin's death was preventable because the stunt was poorly conceived, planned and executed.

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OVERUSE, BAD AIR, AND CHEMICALS CAN DAMAGE THE VOICE

BNA-OSHR, 27(19), Oct 8, 1997 p. 618

"Voice loss," a new type of occupational disease identified in the London finance sector, may become a massive problem in the future, the Banking Insurance and Finance Union (BIFU) reports from the UK.

The BIFU surveyed members working in call centers. They found that workers suffered from a host of vocal conditions ranging from being unable to speak, to whispering and squawking, to an irritative cough. The report said that these symptoms experienced over time can lead to nodules and polyps of the vocal cords, excessive blood on the edges of the vocal cords, and ulcers on the larynx.

For example, one union worker developed hyperkinetic dysphonia--a permanent injury to the voice. She worked in an office in which she had to shout to make herself heard over the background noise and street sounds. The problem was intensified because she was separated from customers by a thick plastic security screen that had no amplification devices.

The BIFU report identified two categories of workers at risk: 1) those who are exposed to certain airborne chemicals and conditions such as hot, dry air, and 2) overuse in those workers whose voices are the "very tool of their trade." These later include telephone call center workers in large, factory-like "boiler rooms" with banks of display screens and telephone headsets.

None of this is surprising to singers and actors. They already know that vocal injuries can occur from airborne chemicals, poor air quality, and overuse. ACTS hopes that information about the workers in the U.K. financial industry will convince the theatrical and entertainment industries to address performers' needs for better performance and rehearsal schedules, better air quality, and relief from theatrical fog and airborne pyrotechnic irritants.

==========

SIXTH-GRADE SCIENCE PROJECT SPARKS FDA INVESTIGATION

FDA Consumer, Sept-Oct, 1997, pp. 34-35

In the fourth grade, Cason Schmit of Oakland, CA, became interested in a news story about FDA's impending ban (effective in 1995) on lead soldered cans. For his science project, he decided to see if he could find lead-soldered cans in Oakland stores. He scouted four stores, bought some cans with thick wide seams or solder smears, tested them with a home lead test kit, and found them positive.

Schmit's sixth-grade science project updated the earlier one. In January, 1997, he re-revisited the two stores where he had previously found lead-soldered cans. He did not find any of the cans at one of the stores, but found 10 lead-soldered cans--six more than he had found two years earlier--in the other store.

With his Mother's help, Schmit arranged for a private laboratory to test samples of food from the cans. The samples tested positive for lead. Schmit contacted county and state health authorities and the FDA. Impressed with the quality of Schmit's research, FDA sent four teams of investigators to check out 24 small stores specializing in imported foods in Oakland, Berkeley, South San Francisco, and San Francisco. Most of the stores sold Chinese, Vietnamese, Philippine, or Korean foods. A few stocked Central and Eastern European food.

Thousands of suspect products were collected by FDA and 64 tested positive for lead in the side seam. For example, the Oakland team visited five stores, examined 818 cans, and 47 (6 %) of them tested positive for lead. They also found old, swollen, leaky cans, rodent droppings, urine stains and other signs of filth around the cans.

As a seventh grader, Schmit helped with FDA's educational efforts to upgrade food safety in the small stores by appearing on a one-hour Chinese-language San Francisco TV program. His school project also was the focus of several local print and broadcast news stories and he was interviewed by National Public Radio and Scholastic News. ACTS applauds Cason Schmit for proving once again that a lone citizen, even a very young one, can make a difference.

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December 1997 Vol. 11, No. 12

WOODEN vs PLASTIC CUTTING BOARDS

FDA Consumer, Nov/Dec, 1997, p. 17

For years people have debated over which food cutting boards are safer. Wood proponents claim that the toxic substances found in wood (which also cause occupational diseases in workers) can kill off foodborne microorganisms. Plastics backers claim their boards are so dense the bugs can't get a foot-hold. Neither is right.

FDA now advises the following practices to prevent food contamination from both wood and plastic cutting boards:

* Use smooth cutting boards made of hard maple or plastic and free of cracks and crevices. These kinds of boards can be cleaned easily. Avoid boards made of soft, porous materials.

* Wash cutting boards with hot water, soap, and a scrub brush to remove food particles. Then sanitize the boards by putting them through the automatic dishwasher or rinsing them in a solution of 1 teaspoon (5 milliliters) of chlorine bleach in 1 quart (about 1 liter) of water. You may want to keep a ready-supply of the solution in a spray bottle near the sink.

* Always wash and sanitize cutting boards after using them for raw foods, such as sea food, and before using them for ready-to-eat foods. Consider using one cutting board only for foods that will be cooked, such as raw fish, and another only for ready-to-eat foods, such as bread, fresh fruit, and cooked fish.

GLASS-ETCH IS AMONG PRODUCTS TO BE REGULATED

62 FR 61928-61933, November 20, 1997

The Consumer Product Safety Commission (CPSC) proposes to require child-resistant packaging for products containing more than the equivalent of 50 milligrams or 0.5% elemental fluoride. Examples of such products are rust removers, metal cleaners and glass etch.

Glass etching creams are often touted as "non-toxic" because they don't contain hydrofluoric acid. However, they generate this acid when in contact with glass and they are highly toxic by skin contact and ingestion. CPSC reports that a 56 year old man died after ingesting a spoonful of glass etching cream (20% ammonium bifluoride and 13% sodium bifluoride). If a spoonful can kill an adult male, clearly child-proof packaging is indicated.

The CPSC says they are "especially interested in obtaining information and receiving comments on the uses and marketing patterns of glass etching creams." People who have this data can contact Jacqueline Ferrante at 301/504-0477 ext. 1199.

LATEX LABELING: LATE AND TOO LITTLE

62 FR 51021-51030, Sep 30, 1997

The Food and Drug Administration (FDA) issued a final rule, effective September 30, 1998, requiring warning labels on medical devices and packaging containing natural rubber. The rule was developed in response to numerous reports of severe allergic reactions and deaths related to a wide range of natural rubber-containing medical devices. Two types of rubber are covered by the labeling rule.

1. Natural rubber latex is made by a process that involves the use of natural latex in a concentrated colloidal suspension. Products are formed by dipping, extruding, or coating. Examples include medical gloves, catheters, and condoms. Labels on medical devices containing natural rubber latex that contacts humans must state: "Caution: This Product Contains Natural Rubber Latex Which May Cause Allergic Reactions." Even medical devices containing natural rubber latex in their packaging must state: "Caution: The Packaging of This Product Contains Natural Rubber Latex Which May Cause Allergic Reactions."

2. Dry Natural rubber, which is less allergy-provoking, is produced by a process that involves the use of coagulated natural latex in the form of dried or milled sheets. Sometimes called "crepe" rubber products, they are formed by compression molding, extrusion, or by converting the sheets into a solution for dipping. Examples of dry rubber products include syringe plungers and vial stoppers.

Labels on medical devices containing dry natural rubber that contacts humans only are required to warn users that rubber is present by stating: "This Product Contains Dry Natural Rubber." Medical devices containing dry natural rubber in their packaging that contacts humans must state: "The Packaging of This Product Contains Dry Natural Rubber."

"Hypoallergenic" claims also must be removed from the labeling of all medical devices that contain natural rubber. There are gloves which contain less of the sensitizing rubber proteins, but no process yet known can render rubber free of them. All natural rubber products can cause allergies. (The National Institute for Occupational Safety and Health recommends using latex gloves only when necessary and purchasing the reduced-protein, powder-free types of latex gloves.)

FDA rule not enough. FDA's rule applies only to medical devices. Since FDA also regulates cosmetics, ACTS feels they should mandate warnings on rubber-containing products such as eye lash adhesive and latex rubber mold liquids for special effect makeup.

The Consumer Product Safety Commission (CPSC) also should label rubber products sold to consumers such as gloves, rubber cement, clothing elastics, balloons, and other rubber products. **Currently, the same glove that requires warnings when sold as a medical device will not require warnings if marketed to general consumers.**

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DRY ICE FOG FELLS OPERA SINGER

Personal correspondence.

At the end of October, a well-known opera company was rehearsing a production of Electra. The Klytemnestra was staged to die face down over a fog-emitting pool which was filled with dry ice. The singer was to remain in this position for the last 10 minutes of the show. In rehearsal the singer noticed some discomfort from the dry ice mist. However, no one thought much about it.

The night of the performance, however, the singer had a seizure on stage while she was lying at the pool. The episode was seen by two of the handmaidens, who rushed off stage to tell management. Then they returned, knelt down by her, tried to comfort her, and masked her from the audience. The stage managers rotated the turntable on which the scene was set. Electra keep singing while they got the Klytemnestra off-stage and to the emergency room.

Personnel at the hospital made it clear that the singer was lucky to be alive. Her problem developed in stages as follows:

1) The dry ice was releasing a lot of carbon dioxide gas which was cold and remained near the floor where the singer lay.
2) The increasing amount of carbon dioxide gas in the air was also reducing the amount of oxygen the singer was breathing.
3) When the air reached between 7 and 10 % carbon dioxide, she was rendered unconscious and at risk of dying.

This accident never should have happened. First, the effects of carbon dioxide have been known for over 50 years, yet the special effects designers clearly did not consider them. Designers and technicians, who control the very air that performers breath, need formal health and safety training or they will continue to learn from their mistakes one performer at time.

Second, the two singers and the stage managers who assisted the victim showed the kind of fast thinking and the "show must go on" mentality instilled in all theatrical professionals. However, the delay in getting the singer off stage could have left her dead or permanently brain damaged. ACTS believes we need to change our priorities. When someone collapses or has a seizure on stage all actions should be directed toward saving the victim.

Life is simply too valuable to risk it for the audience's pleasure, the box office receipts, or even for a misplaced loyalty to historic traditions that date from a time when life was cheap.

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ABSTRACTS

HAZCHEM ALERT 12(7) p. 67, July 1997

POLYCYCLIC AROMATIC HYDROCARBONS (PAH) formed during combustion in fires may be a source of occupational carcinogens for firefighters. Urine tests in firefighting personnel revealed the presence of metabolites of carcinogenic PAH, showing that these chemicals are found in fires. (Journal of Occupational and Environmental Medicine, Vol. 39, No. 6, pp. 515-519, 1997)

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