The ambient air quality criteria (AAQC) for EtO of 0.005 mg/m^3 as set by the Ontario Ministry of the Environment was used to evaluate non-worker exposures. Under normal working conditions, exposures within the hospital from exhaust gases being drawn into the building would be below the AAQC, however poor stack design could create opportunities for the emissions to be drawn back into the building. Under worst case conditions, when an abator failed and two sterilizers were discharged manually, exposures could exceed the AAQC. All community exposures were below the AAQC.

289.

RISK ASSESSMENT, PRODUCT STEWARDSHIP, AND CORPORATE REPUTATION: LESSONS LEARNED FROM 20 YEARS OF CONSUMER PRODUCT SAFETY. C. Armstrong, Viridescent Inc., San Antonio, TX.

The enormous cost in human suffering and damage to brand reputation make product safety a crucial part of any company's continued success. Despite this perilous cause-and-effect relationship, the U.S. Consumer Products Safety Commission (CPSC) reported that 17 toy-related deaths and 191,000 injuries requiring trips to hospital emergency rooms occurred in 2000 alone. These statistics suggest that, despite our best intentions to effect fail-safe product stewardship policies in our manufacturing practices, health and safety approaches are falling short of societal needs.

The CPSC is an independent agency charged with regulatory responsibility over the safety of consumer products. The CPSC is responsible for promulgating consumer product safety standards when necessary to protect the public against unreasonable risks of injury and to pursue product recalls when appropriate. Over the past nearly 30 years, the CPSC has compiled detailed recall information on roughly 200 product types, 3400 product descriptions, and 3400 companies. Analysis of these data shows root causes of unsafe products resulting from misapplication of risk assessment, product stewardship, or supply chain management practices (or a combination). Product recall data from the past 20 years are reviewed in the context of a framework that incorporates risk assessment, product stewardship, and supply chain management.

290.

A METHOD TO IDENTIFY COUNTIES WITH POTENTIAL NON-OCCUPATIONAL ASBESTOSIS MORTALITY. K. Linch, P. Middendorf, R. Althouse, G. Syamlal, NIOSH, Morgantown, WV.

Description. Counties with possible high non-occupational asbestosis mortality rates were identified by comparing their actual asbestos mortality rate to predicted based on their estimated occupational exposure to asbestos. To estimate county exposures, industries with asbestos exposures were identified using national exposure data. National mean exposures in these industries were multiplied by the number employed (obtained from Bureau of Census County Business Patterns data for 1982) in these industries for each county. The results within each county were summed and then divided by the total county employment to provide an overall county occupational exposure index. This index was then regressed on the observed asbestosis mortality rate for each county for the years 1989 to 1998. Counties lying outside of the upper 67, 95, and 99 percent confidence limits were identified as potentially having excess asbestosis mortality unexplained by the model, possibly due to non-occupational asbestos exposure. **Results.** Counties were classified as having "probable" non-occupational asbestos exposure (those falling within the region defined by the 67 and 95 percent limits), "highly probable" non-occupational asbestos exposure (those falling within the region defined by the 95 and 99 percent limits), and "very highly probable" non-occupational asbestos exposure (those beyond the 99 percent limit). Counties identified as having high asbestosis mortality but low apparent occupational risks are candidates for follow-up investigation to determine cause.

291.

SHOULD BRAIN TANNING BE A LOST ART? POTENTIAL HAZARDS OF PROCESSING MAD DEER. G. Harvey, USAF, Wright-Patterson AFB, OH; T. Lentz, NIOSH, Cincinnati, OH.

The recent Bovine Spogiform Encephalopathy crisis in the United Kingdom has brought international attention to transmissible spongiform encephalopathies (TSEs), neurological disorders that produce holes in brain and spinal tissue leading to dementia and death. TSEs such as Creutzfeldt-Jakob Disease, scrapie in sheep and goats, and Chronic Wasting Disease (CWD) in North American deer and elk are believed to be caused by self-replicating infectious proteins called prions. Prions are highly stable and resistant to drying, freezing, boiling, and other conventional sterilization techniques. Although research suggests that intraspecial transmission of TSEs is markedly more common than interspecial transmission, studies have shown that 1 gram of infected brain or central nervous system tissue is theoretically enough to transfer a TSE across species. On this premise, an investigation was performed to determine the potential hazards involving use of deer brains for traditional leather tanning techniques employed by some North American Indians and primitive technology enthusiasts. While brain tanning is a cottage industry, a review of books, articles, on-line materials, and a video indicate that this craft is actively practiced. The review found that brain tanning processes employ minimal precautions, and the potential for dermal contact with infectious brain material exists. Brain-tanned products may also present a hazard for transmi
population. Details of the b
process are described with
routes of exposure, a charac
bers of persons involved in
peripheral industries, and re
hazard communication and
ures to address the potential
exposures to a TSE. Conclu
additional surveillance of th

292.

**HEALTH CONSEQUENC
OCCUPATIONAL EXPO**
I. Vanadzins, M. Eglite, M.
Occupational and Environm
Stradins University, Riga, L

Objective. There are incr
occupational poisonings wit
during the last 10 years. The
is to link data of lead concer
places with clinical data of l
order to improve early diagn
rate preventive measures. **M
methods.** 1020 measuremen
tration in workplaces of diff
industry (ceramic, glass, acc
tion, ship repairing, etc.) and
chronic lead poisoning cases
1991–2001 were performed.
lead biomonitoring (lead in b
phyrin (CP), and δ-aminolev
in urine) have been analysed
2001 (number of investigatec
3041). Clinical examinations
carried out. The concentratio
blood were analysed by atom
spectrophotometer. **Results a**
In 64% of cases investigated,
of lead in workers' breathing
than occupational exposure li
high as 0.72 mg/m^3 with OE
mg/m^3). 170 chronic poisoni
have been reported during ye
22% subclinical poisonings, 3
(light), 33%–2-stage (modera
stage (severe) poisonings. Tot
of Latvia during this period w
1 million including 2.1–3.4. t
workers working with lead. T
signs of chronic lead poisonin
for workers with lead level in
than 60 μ/dl. Biomonitoring d
number of workers with incre
and ALA levels are remarkabl
number of workers with regist
poisonings showing insufficie
early lead poisonings. **Conclu**
monitoring must be improved
with early diagnostics of lead
through implementing of legal
and advanced training for occ
specialists.

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