

hazardous substances



Public Health

A publication of the Agency for Toxic Substances and Disease Registry

Volume 4, Number 3

November 1994

Environmental Toxicants and Breast Cancer

Fifty years ago, 1 of 20 women in the United States contracted breast cancer. Today, according to statistics, the disease will develop in 1 of 8 American women, or 200,000 annually. Although advances in medical technology account for part of the increase in diagnoses of breast cancer, experts say that the incidence of breast cancer, the most common cancer in women, has increased. Environmental toxicants may be partially responsible for the rise in cases, says a senior Department of Health and Human Services (DHHS) official.

"Established risk factors for breast cancer, including genetics, account for about 30% of breast cancer cases, yet all risks have one thing in common: total life-time exposure to estrogen," said Devra Lee Davis, PhD, an epidemiologist and cancer researcher who has been examining the increase in cancer that is not caused by regular risk factors. She recently has published "Patterns of Cancer in Industrial Countries: Time Trends in Cancer" in the *Journal of the American Medical Association*. She is also an active member of Secretary of Health Donna Shalala's National Action Plan on Breast Cancer. Dr. Davis spoke at the Atlanta Conference on Human Health and the Environment, held at the Carter Center and Emory University in June 1994.



Dr. Devra Lee Davis is an epidemiologist and cancer researcher.

Seventy percent of breast cancer cases cannot be explained by genetics or other known risk factors. The rise in testicular cancer among men also suggests the presence of an environmental factor, according to Dr. Davis. Scientists have found clues that seem to link the incidence of cancer with the presence of environmental chemicals that act like hormones.

"Some environmental chemicals mimic estrogens," said Dr. Davis. These include plastics, fuels, pharmaceuticals, and chlorine-based chemicals such as DDT, polychlorinated biphenyls (PCBs), and chlorofluorocarbons.

These environmental chemicals include by-products of disinfecting wastewater and producing pesticides. They can accumulate in body fat and for years mimic the activity of estrogen in the body, including its carcinogenic effects.

Some studies indicate that women who work in the chemical industry or who live near hazardous waste sites reportedly have higher rates of breast cancer.

Continued

IN THIS ISSUE

Remediation Dispute	2
Use of Technical Advisory Committees	4
Research Program Aims To Fill Data Gaps	4
Training Improves Risk Communication Skills	6
New Group for Local Health Officials	7
Announcements	7
Calendar	12



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry

Continued from page 1

But environmental estrogens are pervasive and affect many women who are unaware of their presence. In Long Island, New York, for instance, where the rate of breast cancer is higher than normal, one analysis revealed that more than 400,000 gallons of the pesticide DDT were sprayed over the area in the 1960s. DDT was banned for use in 1972, but it remains in the environment. When house carpet was recently tested, 5 of 9 carpets had measurable DDT residues. The study also revealed that the duration of residence in the area was a factor: the longer a woman lived in Long Island, the greater her risk of developing breast cancer.

Environmental chemicals that mimic hormones can affect the internal production and metabolism of estrogen, and can function as a xenoestrogen, a foreign or unnatural type of hormone. Many xenoestrogenic compounds are carcinogenic.

Dr. Davis cited several studies that suggest that susceptibility to these environmental toxicants is greatest at three critical stages of life: before birth, during puberty, and at menopause.

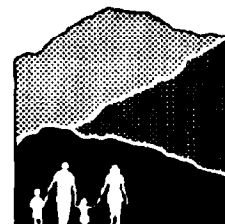
Diet and exercise can help reduce the risk of breast cancer. "There is some evidence that breast cancer increases with increasing dietary fat, and body fat may enhance the production of estrogens," she said.

"More research is still needed, but progress has been made in determining possible causes of breast cancer," said Dr. Davis. "You can control what you are exposed to in the environment, but it's not a personal issue: it's a social issue. We need to take preventive and precautionary measures to limit exposure to these environmental toxicants. My advice to help reduce the risks of contracting breast cancer is to exercise regularly, drink alcohol moderately, avoid unnecessary drugs and radiation, and eat your broccoli."

For more information, please contact Devra Lee Davis, PhD, Office of the Assistant Secretary for Health, DHHS, 200 Independence Avenue, SW, Washington, DC 20201.

From the States. . .

Colorado: Technical Advisory Committee Helps Settle Remediation Dispute



**COLORADO
DEPARTMENT
OF HEALTH**

When the US Environmental Protection Agency (EPA) wanted to excavate soil throughout the area of Smuggler Mountain, residents called a halt. Community opposition eventually led EPA not only to revise its proposed remediation plan, but also to increase public participation in decisionmaking at other sites. The use of a technical advisory committee was pivotal in overcoming the impasse, community members say.

Smuggler Mountain is a site near Aspen, Colorado, where for 40 years precious metals were mined. Seventy-five years later, in 1982, soil testing revealed high levels of cadmium and lead. EPA soon added Smuggler Mountain to the National Priorities List (NPL), a listing of the nation's most hazardous sites. Public health officials feared that children, who commonly ingest more soil than adults through outdoor play and hand-to-mouth activity, might have too much lead exposure, which could cause developmental delays and other health effects.

The Agency for Toxic Substances and Disease Registry (ATSDR) helped the state perform a blood lead survey to assess the health risk from soil lead contamination. But when children were tested, their blood lead levels were quite low, with a mean of 2.6 micrograms per deciliter ($\mu\text{g}/\text{dL}$), well below the Centers for Disease Control and Prevention's recommended intervention level of 10 $\mu\text{g}/\text{dL}$. The community became anxious and suspended activities with EPA.

Patti Clapper, a resident who is also a nurse, led the community to take action to prevent EPA from excavating her neighborhood. "Our children don't have elevated blood lead levels—there has to be a better way to solve this problem than destroying our community," she said.

Colorado senators became involved to help solve the dispute. Both parties agreed to use a technical advisory committee (TAC), an independent expert panel.

The six TAC members were selected by the community and EPA to analyze the data and to determine the best solution for the town. The city council and EPA agreed to accept the TAC recommendations.

The members were Paul Hammond, DVM, PhD, University of Cincinnati; Rufus Chaney, PhD, US Department of Agriculture; Iain Thornton, PhD, Imperial College of London; Alice Stark, MPH, New York State Health Department; Mary Ellen Mortensen, MD, Ohio State University; and Willard R. Chappell, PhD, University of Colorado.

The TAC addressed three questions and reached remarkable consensus: (1) Was there a realistic health threat? (*no*); (2) Was there a future health threat? (*possible, but not likely*); and (3) Were public health actions warranted? (*extensive soil removal was unwarranted*).

The TAC is an excellent model for dispute resolution and public health input.

"After analyzing the data and hearing testimony from both sides, we learned that the lead found at the site had a broad range of level contamination, with only a few hot spots that could present a significant health impact," said Willard R. Chappell, PhD, TAC member. "The residents had nutritious diets, high in iron, which could interrupt an exposure pathway, and the ground was normally covered with grass or snow that would reduce potential exposure. No corresponding increases in blood lead levels in children occurred with increases in soil lead concentrations. We felt that EPA's extensive remediation plan was not necessary."

The community accepted the TAC's recommendations. The estimated remediation costs were \$400,000, compared to EPA's estimate of \$12 million in clean-up costs.

The involvement of local, state, and federal public health agencies was essential to defining realistic health risks at the site, according to Mary Ellen Mortensen,

MD, a TAC member. The agencies assisted in the blood lead level study and collaborated on analysis of samples taken after EPA's record of decision. "Lead is not lead is not lead: trying to devise a single clean-up value for soil lead is not practical to use at all sites; each site must be analyzed individually," she said.

Several lessons were learned from this controversial site. Early public health agency involvement in site investigation can assist EPA and the community with a realistic risk assessment. The TAC is an excellent model for dispute resolution and public health input, provided that involved parties agree, to the extent feasible, to abide by its recommendations. It is crucial to obtain collaboration between environmental and public health agencies at all levels of government. This is especially important because EPA's procedures often require that the record of decision be signed before, and independent of, public health involvement. In this instance, the clean-up level for lead appeared to be neither valid nor cost-effective because the public health threat depended on soil lead bioavailability,

presence of exposure pathways, and other non-environmental factors.

A consent decree (awaiting EPA approval at press time) pledges that the agency will help Colorado monitor the site and conduct some soil remediation. Blood lead sampling will be offered for 2 years to children living near the site.

For more information about the blood lead study, contact Gina Teracciano, DO, ATSDR, 1600 Clifton Road, NE, Mailstop E32, Atlanta, Georgia 30333; telephone (404) 639-6201; fax (404) 639-6209. To receive a copy of the TAC report, write to Mary Ellen Mortensen, MD, 455 E Mound Street, Columbus, Ohio 43205.

Article contributed by Lynn Bradley, environmental health project director, Association of State and Territorial Health Officials (ASTHO), Washington, DC.

Use of Technical Advisory Committees Is on the Rise

Technical advisory committees (TAC) have increased in prevalence and usage during the past 3 years. A TAC is a panel of experts often composed of community members or experts hired by a community or potentially responsible party (PRP) to analyze all available environmental data at a site to make recommendations for site remediation.

In the past, the US Environmental Protection Agency (EPA) has decided on a method of remediation before seeking input from the community that is affected by the site.

“Communities want to be involved in the decision making process. They want to be involved in developing the remediation plan,” said Robert Bornschein, PhD, University of Cincinnati.

Dr. Bornschein, director of the Center for Research on Lead and Related Metals, conducts lead-related research projects and is an expert on childhood lead exposure. He has advanced degrees in psychology,

psychopharmacology, and toxicology, and often serves as an expert on TACs.

“These people are directly affected by the hazardous waste site located in their community. By using a TAC, a community or PRP can get another opinion from experts not associated with EPA. Sometimes the TAC recommendations are similar to those of EPA, but often they can complement EPA’s recommendations to improve the remediation plan. It’s hard for a community to accept a remediation plan that affects them without asking for their opinion,” says Dr. Bornschein.

“It’s important for the community to work through the problem, and to feel that they have been active in deciding the best method of cleanup for the site.”

EPA realizes the importance of community involvement at hazardous waste sites and supports the use of TACs. Over the next few years the term *technical advisory committee* will be more commonly used.

For more information about technical advisory committees, contact Robert Bornschein, University of Cincinnati, PO Box 670056, Cincinnati, Ohio 45267-0056.

Research Program Aims To Fill Data Gaps

Protecting people’s health from hazardous substances in the environment is a job of the Agency for Toxic Substances and Disease Registry (ATSDR). The Superfund statute mandates that ATSDR find ways to fill the gaps in knowledge about potentially dangerous chemicals.

When adequate information is not available, ATSDR works in cooperation with the US Department of Health and Human Services’ National Toxicology Program (NTP) to make sure research is initiated to determine health effects.

The NTP is made up of four charter agencies of the Department of Health and Human Services:

- the National Cancer Institute of the National Institutes of Health
- the National Institute of Environmental Health Sciences (NIEHS) of the National Institutes of Health
- the National Center for Toxicological Research of the Food and Drug Administration
- the National Institute for Occupational Safety and Health of the Centers for Disease Control and Prevention

With ATSDR support, the National Toxicology Program tests substances found at National Priorities List (NPL) sites for toxic effects. (The National Priorities List is the Environmental Protection Agency's listing of sites thought to be the most hazardous.) ATSDR provides funds to NTP through an interagency agreement with the National Institute of Environmental Health Sciences (NIEHS).

The agreement was recently modified to include development of alternative methods to conventional testing. Only a limited number of the chemicals for which toxicological data are needed can be studied by conventional approaches. New approaches are needed to help scientists determine which chemicals and chemical mixtures might cause harmful health effects.

"About 50 chemicals or chemical classes have either been tested or selected for testing since this program began," said William Cibulas, PhD, chief, Research Implementation Branch, Division of Toxicology, ATSDR. "The chemicals include volatile organic chemicals, phthalate esters, phenols, inorganic compounds, chlorobenzenes, and several chemical mixtures."

The studies are used to determine levels of exposure that present a significant risk of human health effects. Often these studies include an assessment of the substance's ability to cause cancer, reproductive toxicity, and birth defects.

"Results of these studies are used by regulatory agencies such as the Food and Drug Administration and the Environmental Protection Agency and various environmental and industrial groups," Dr. Cibulas said. "NTP study results also address data needs identified in ATSDR's toxicological profiles¹ and help ATSDR improve the public health assessments² conducted at NPL sites. The agreement has provided an important

mechanism for filling priority data needs for ATSDR's substance-specific applied research program," he added.

The modified interagency agreement supports two activities:

- Functional toxicology studies for screening ATSDR priority hazardous substances for noncancer effects. Just as cancer can be triggered by the effect of a chemical on a specific part of a cell in the human body, so can other health effects. The areas of the cell that bind with hazardous substances are called receptors. By monitoring receptor-mediated actions, researchers can determine how the chemical affects the body.
- Toxicity studies of substances through application of structure-activity relationship techniques and physiologically based pharmacokinetic modeling. These studies use specialized computer programs to develop models of human or animal bodies upon which various substances can be tested. Researchers are able to learn more about how the body reacts to the presence of the substance by studying the model.

Dr. Cibulas expects that findings from these activities will complement existing and planned conventional testing. "The state of the science has rapidly progressed for these techniques. Once such methods are tested and validated, their application can result in a substantial savings of time, cost, and animals for research," he said.

ATSDR is currently developing a toxicology modeling laboratory that would use the high-powered computers required to develop and run the sophisticated modelling programs. "The goal is to develop a cadre of ATSDR experts to keep pace with the rapid changes in the application of these techniques," Dr. Cibulas said.

For more information about ATSDR's substance-specific applied research program activities with NTP, call Dr. Cibulas at (404) 639-6306.

¹Toxicological profiles are documents about specific substances which interpret all known information on the substance and specify the levels at which people may be harmed if exposed. The profile also identifies significant gaps in knowledge on the substance.

²Public health assessments are written evaluations of available data and information on the release of hazardous substances into the environment in a specific geographic area. The evaluation is used to assess any pertinent current or future impact on public health.

National Association of County Health Officials

Training Improves Risk Communication Skills, Public Health Officials Say

Courses in risk communication can improve the risk communication skills of participants, according to a recent evaluation. Participants in courses offered by the National Association of County Health Officials (NACHO) through a cooperative agreement with ATSDR, noted changes in both individual behaviors and in departmental policies and procedures after taking the courses.

The purpose of the evaluation was threefold:

- To determine impact of the course in increasing awareness and knowledge.
- To identify changes in behavior (individual and agency) as a result of a new understanding gained at the course.
- To identify areas or topics that require additional training.

The actions described by the participants represent key principles addressed in the courses: planning ahead for communication, alerting the public, involving affected citizens early, and establishing two-way dialogue. Respondents were asked about specific efforts taken to improve risk communication as a result of attending the course. More than 50% reported efforts to establish relationships with key community leaders, 57% reported efforts to establish media relations, and 62% reported considering factors other than science that would affect community reaction to environmental health issues.

In addition, nearly half the respondents (42%) reported applying the information they received from the short course to a particular situation. Some participants reported developing new systems for agency response, such as developing communication protocols, identifying key contacts, and forming community advisory panels.

When asked about additional topics for future training, the participants most commonly mentioned assessing public concern (64%); alerting the public to potential hazards (52%); working with advocacy groups (52%); responding to public inquiries (51%); and explaining risk data (51%). The data confirm the continuing need for risk communication training of local public health professionals.

Although the data were self-reported and the survey had a 33% response rate, the data suggest that the courses succeeded in affecting the behavior of the participants. The information in this report will be used by NACHO in its continuing Environmental Health Project (EHP) activities.

Short courses developed by the EHP have been presented throughout the nation to more than 800 health professionals. Health risk communication is the topic most often presented; other topics have included environmental toxicology and epidemiology, hazardous chemical emergencies, and the prevention of childhood lead poisoning. The EHP has become increasingly focused on the training needs of local health officials dealing with multiple National Priorities List (NPL) sites, particularly in the area of health risk communication.

To ensure that the short courses contain appropriate and useful information for local health officials and that the courses have an impact on public health practice, the EHP uses an advisory panel, convenes a local planning group, conducts focus groups, evaluates each short course, and has recently conducted a long-term evaluation of the impact of the first six short courses on the knowledge, skills, and behaviors of participating local health officials.

For more information on the document, "A Long-Term Evaluation of the NACHO Introductory Risk Communication Short Courses," and on other EHP activities, contact Christine Rosheim, DDS, MPH, NACHO Project Officer, ATSDR, (404) 639-6205; or Heidi Klein, MS, Director of Environmental Health Programs and Policy, NACHO, (202) 783-5550.

How NACHO Evaluated Risk Communication Courses

To gather data for the long-term evaluation of its risk communication courses, NACHO sent a 4-page evaluation to approximately 300 course participants. The evaluation sought information on five general areas:

- whether participants had shared material and information from the course,
- how participants had applied knowledge from the course,
- whether participants had changed individual behavior or agency response due to attending the course,
- whether participants had implemented effective risk communication procedures, and
- whether participants had sought additional training.

Some key findings of the survey follow:

- 85% of the responding participants reported sharing the information and materials received at the course.
- 83% reported reassessing the way their agency approaches risk communication as a result of attending the short course.
- 77% said they were more likely to communicate with the public about environmental health hazards before a controversy as a result of attending the course.
- 66% said they were more likely to involve members of the affected community in making decisions.

For more information, contact Heidi Klein, NACHO, 440 First Street, NW, Suite 500, Washington, DC 20001-2030; telephone (202) 783-5550; fax (202) 783-1583.

Merger Creates New Group for Local Health Officials

A merger of two national organizations that represent local health officials will strengthen public health, according to a spokesperson. On July 29, 1994, the National Association of County Health Officials (NACHO) and the US Conference of Local Health Officials (USCLHO) combined to form one organization, the National Association of County and City Health Officials (NACCHO). NACCHO will represent all of the nation's 2,891 local health departments.

Maurice Mullet, MD, NACHO's immediate past president, who presided over the signing ceremony held in Tucson, Arizona, at NACHO's annual conference, said that combining the organizations would "allow for a stronger, more effective voice for local public health." Mary McGlothlin, MPH, MPA, director of the Washington County Department of Health, Environment, and Land Management in Minnesota, will serve as the first president of NACCHO.

ANNOUNCEMENTS

Enhancing the Collection of Environmental Data Needed for Public Health Assessments

Evaluating all available data on the release of hazardous substances into the environment in a specific geographic area is the work of public health assessors. The evaluation is used to assess any pertinent current or future public health threat. But the data needed to perform this evaluation are often lacking, health assessors say. Access to this information early in the remediation process could contribute to the timely identification of needed public health actions.

Continued

Continued from page 7

During the preparation of a public health assessment, ATSDR must evaluate specific data that address pathways of exposure, especially at potential exposure points. Most of this information is available in reports of remedial investigations and other environmental studies conducted by the US Environmental Protection Agency, federal facilities, state agencies, and potentially responsible parties. Other environmental information critical to analysis of exposure pathways, such as contaminant concentrations at off-site human exposure points, is not as likely to be available at the beginning of the remedial investigation process.

A new publication by the Agency for Toxic Substances and Disease Registry (ATSDR) describes specific environmental data that are needed for a thorough evaluation of potential human exposure to hazardous substances and the related health effects. *Environmental Data Needed for Public Health Assessments—A Guidance Manual* also describes the general purpose and focus of a public health assessment. The document is intended for use by EPA remedial project managers, federal facility installation restoration program managers, ATSDR regional representatives, potentially responsible parties, and other parties involved in the public health assessment process.

ATSDR's public health activities have documented human exposure to releases at about 40% of the hazardous waste sites agency scientists have examined; the potential for exposure was documented at another 40%. In 1992, sufficient environmental data were available to indicate the need for health investigations at about 35% of the sites evaluated by public health assessments.

For more information about the public health assessment process and how ATSDR evaluates public health effects, see the *ATSDR Public Health Assessment Guidance Manual* (March 1992).

To obtain copies of these documents, contact the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161; telephone (703) 487-4650. The NTIS number for the *ATSDR Public Health Assessment Guidance Manual* (March 1992) is PB92-147164 (\$44.50). The NTIS number for *Environmental Data Needed for Public Health Assessments* (June 1994) is PB94-179827 (\$17.50).

Call For Abstracts

The International Congress on Hazardous Waste: Impact on Human and Ecological Health is soliciting abstracts for a conference to be held June 5-8, 1995, in Atlanta, Georgia.

The purpose of the conference is to promote the exchange of findings, ideas, and recommendations related to the human and ecological health effects of hazardous

waste. The intended international audience includes environmental epidemiologists, toxicologists, ecologists, health scientists, and environmental engineers from both government and occupational health; health educators, public health administrators, and policymakers; health, safety, and management representatives from industry; professional environmentalists; and the interested general public.



Abstracts for breakout sessions and poster presentations are being solicited in the following subject areas:

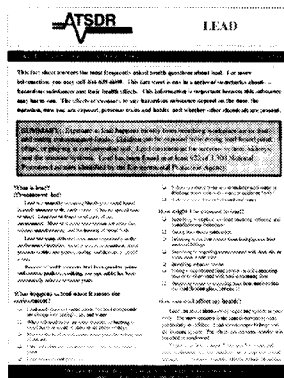
- Exposure
- Source Reduction
- Health Effects
- Site Remediation
- Community Involvement
- Meta-analysis
- Modeling
- Ecological Effects
- Risk Assessment
- Epidemiologic Studies
- Research Needs
- Registries
- Policy
- Biomarkers

The deadline for submitting abstracts is February 1, 1995.

To receive instructions for submitting an abstract, contact John Andrews, Jr, MD, MPH, Agency for Toxic Substances and Disease Registry, 1600 Clifton Road, NE, Mailstop E28, Atlanta, Georgia 30333; telephone (404) 639-0708; fax (404) 639-0759; Internet JSA1@ATSOAA1.EM.CDC.GOV.

ATSDR Chemical Fact Sheets

Do you need more information about the toxic effects of hazardous substances? The Agency for Toxic Substances and Disease Registry (ATSDR) can help.



ATSDR has prepared a set of easy-to-read, 1-page fact sheets on hazardous substances. The first set of fact sheets contains information about 20 chemicals most commonly found at hazardous waste sites. Lead, mercury, methylene chloride, and arsenic are included. During the next 2 years about 150 fact sheets will be developed.

The fact sheets describe the relevant toxicologic properties of each substance and answer the most frequently asked health questions:

- what the substance is
- how someone might be exposed
- how to prevent exposure
- how to get more information

For more information, contact ATSDR, Division of Toxicology, 1600 Clifton Road, NE, Mailstop E29, Atlanta, Georgia 30333; telephone (404) 639-6000.

Ten Superfund NPL Sites Proposed

The US Environmental Protection Agency (EPA) has proposed adding 10 sites to the Superfund National Priorities List (NPL), a listing of EPA's most hazardous sites.

Four sites are federal facilities: Parris Island Marine Corps Recruit Depot south of Beaufort, South Carolina; Cherry Point Marine Corps Air Station in Havelock, North Carolina; the Naval Air and Air Reserve Station in Willow Grove, Pennsylvania (considered one site); and the Air Force Arnold Engineering Development Center near Manchester, Tennessee.

Two sites are considered environmental justice sites because of low-income minority housing nearby: an abandoned Escambia Wood-Pensacola plant, Pensacola, Florida, and the Agriculture Street landfill in New Orleans, Louisiana.

Other sites include Texas Eastern Kosciusko station in Attala County, Mississippi; the Burlington Northern Livingston Shop Complex in Livingston, Montana; Reynolds Aluminum near Troutdale, Oregon; and Groce Laboratories of AquaTech Environmental Inc. in Greer, South Carolina.

The NPL was established 11 years ago in 1983. Currently, about 1,300 sites are listed; about 100 sites are

Continued

ATSDR currently has 20 chemical fact sheets available in a complete set. Single fact sheets are not available.

1. Aldrin/Dieldrin (CAS No. 309-00-2/60-57-1)
2. Arsenic (CAS No. 4770-38-2)
3. Benzene (CAS No. 71-43-2)
4. Beryllium (CAS No. 7440-41-7)
5. Cadmium (CAS No. 4770-43-9)
6. Chloroform (CAS No. 67-66-3)
7. Chromium (CAS No. 7440-47-3)
8. Cyanide (CAS No. 57-12-5)
9. 1,4-Dichlorobenzene (CAS No. 107-46-7)
10. Di (2-ethylhexyl)phthalate (CAS No. 117-81-7)
11. Fluorides (CAS Nos. 7782-42-4; 7664-39-3; 7681-49-4)
12. Heptachlor/Heptachlor epoxide (CAS No. 76-44-813; 1024-57-3)
13. Lead (CAS No. 7439-92-1)
14. Methylene Chloride (CAS No. 75-09-2)
15. Nickel (CAS No. 7440-02-0)
16. N-Nitrosodiphenylamine (CAS No. 86-30-6)
17. Polychlorinated biphenyls (CAS Nos. 1336-36-3; 11096-82-5; 11097-69-1; 12672-29-6; 53469-21-9; 11141-28-2; 12674-11-2)
18. Tetrachloroethylene (CAS No. 127-18-4)
19. Trichloroethylene (CAS No. 79-01-6)
20. Vinyl Chloride (CAS No. 75-0104)

Continued from page 9

added each year. Once a site is proposed, the public has 90 days to comment on EPA's recommendation. If the comments justify not adding the site to the NPL, EPA may decide not to add it.

The notice of the proposed sites was published in the *Federal Register*, August 23, 1994. For more information, contact the Superfund Hotline at 1 (800) 424-9346.

New Superfund Publications Available

Three new documents about the Superfund program are now available from the US Environmental Protection Agency (EPA). Single copies are free of charge while supplies last.

- *National Priorities List: Background Information Final Rule (Superfund)*, EPA 9320.7-041
- *National Priorities List: Supplementary Materials Final Rule (Superfund)*, EPA 9320.7-051.
- *This Is Superfund: A Citizen's Guide to EPA's Superfund Program*, EPA 540-K-93-008.

To order these Superfund publications, contact the Public Information Center, Mailcode 3404, US EPA, Washington, DC 20460; telephone (202) 260-2080.

EPA Sets Universal Treatment Standards for Hazardous Waste

On July 29, 1994, the US Environmental Protection Agency set final universal treatment standards for most hazardous wastes regulated under the land disposal restrictions of the Resource Conservation and Recovery Act (RCRA). The restrictions require hazardous wastes to be treated before land disposal. The

new rule, proposed in September 1993, streamlines existing treatment standards by setting universal treatment standards for more than 200 constituents, regardless of the waste in which they are found. Before the universal standards, each form of waste had to be treated according to its established standard, using the best demonstrated technology available (different waste, different standard). For example, if mercury were in a solvent, the best treatment technology might be incineration; if mercury were in a solid, on the other hand, a different technology might be required. The new universal treatment standards set a clean-up level for hazardous waste regardless of its form, simplifying the process. Fifty-nine percent of the previous standards remained the same; 33% changed. The rule establishes treatment standards for 42 new wastes, including coke by-products and chlorotoluene wastes. The final rule will be published in the *Federal Register*. For additional information, call EPA's waste hotline at 1 (800) 424-9346.

Environmental Justice Grants Offered

The US Environmental Protection Agency (EPA) awards 61 grants to assist community-based and grassroots organizations, nonprofit organizations, and tribal governments to address environmental justice issues and concerns.

This grant is offered annually. In fiscal year 1994, EPA received 250 applications from parties interested in obtaining a portion of the \$500,000 available for the program. Grant recipients were awarded up to \$10,000 each and were required to provide a minimum of 5% in matching funds.

In Roxbury, Massachusetts, the Roxbury Neighborhood Council received \$6,000 to compile abstracts of all environmental research concerning air quality within their communities, which are known to be heavily polluted. The report *Community Environmental Resource Guide* will be distributed to local libraries, community health centers, community

service centers, city and state agencies, and neighborhood organizations to serve as a reference for efforts to remediate the air quality concerns.

In fiscal year 1995, EPA has budgeted \$3 million to be distributed among the 20 regional offices for the program. A maximum of \$20,000 can be awarded for each grant. The request for application (RFA) was published in the October 7 *Federal Register*. Pre-applications can be obtained by contacting the EPA regional offices. The applications should be mailed to EPA regional offices and must be postmarked by Saturday, February 4, 1995.

For additional information, please contact Danny Gogal at (202) 260-0392.

Courses

Environmental and Occupational Health Sciences Institute

The Environmental and Occupational Health Sciences Institute, sponsored by the University of Medicine and Dentistry of New Jersey Robert Wood Johnson Medical School and Rutgers is offering the following training opportunities:

Inspecting Buildings for Asbestos-Containing Materials (AHERA Inspector), December 5-7, 1994. This 3-day course combines lectures, discussions, and hands-on experience to accredit inspectors. Cost: \$525.

Managing Asbestos in Buildings (AHERA Management Planner), December 8-9, 1994. This 2-day course provides accreditation to students as management planners. Those who pass the exam receive photo identification documenting their status as AHERA-accredited management planners. Cost \$350.

For more information about these and other available courses, contact Kristine Ramirez, 45 Knightsbridge Road, Brookwood Plaza II, Piscataway, New Jersey 08854-3929; telephone (908) 235-5062; fax (908) 235-5133.

University of Alabama

The Deep South Center for Occupational Health and Safety at the University of Alabama at Birmingham is offering the following training opportunities:

Pulmonary Function Testing, November 11-12, 1994. The objective of this course is to teach the basics of respiratory anatomy and physiology, lung volumes, and determinants of respiratory flow, and to explain how the environment affects the respiratory system. Proper techniques for obtaining valid spirometric values as defined by the National Institute for Occupational Safety and Health (NIOSH) will be taught. Various types of spirometers and calibration syringes will be demonstrated and used. Certificate awarded upon satisfactory completion of the examination. Cost: \$375 full day; \$150 1-day refresher.

Introduction to Industrial Hygiene Air Sampling Techniques, December 5-6, 1994. Participants will be given extensive lecture and hands-on time with direct reading air sampling devices. Course is designed for safety professionals, occupational health nurses, chemists, laboratory supervisors, and other staff who may monitor worker exposure. Costs: \$350.

Respiratory Protection Programs, December 12-14, 1994. This course is an intensive 3-day program covering the basic information necessary for attendees to implement and manage a respiratory protection program suitable for their needs and acceptable under OSHA and ANSI requirements.

For more information about these and other available courses, contact Cherie Hunt, The University of Alabama at Birmingham, 117 Mortimer Jordan Hall, 1825 University Boulevard, Birmingham, Alabama 35294-2010; telephone (205) 934-7178; fax (205) 975-7179.

University of California

The Division of Occupational and Environmental Medicine, Department of Medicine, University of California, San Francisco School of Medicine, is

Continued

Continued from page 11

offering short-course training in occupational and environmental medicine. Courses are being offered in five 1-week sessions over a 2-year period to accommodate practicing physicians. The courses are designed to enhance knowledge about the following topics:

- Occupational Health and Safety in Small Industry
- Psychiatric Assessment Panel
- Biostatistics and Epidemiology
- Information Management
- Ergonomics and the Prevention of Occupational Injuries
- Occupational Exposures and Industrial Hygiene

The next session is scheduled for the week of January 30 through February 3, 1995, at the Miyako Hotel in San Francisco, California. Approximately 40 hours of continuing education credit are available. Cost: \$725.

For more information, contact Joseph LaDou, MD, UCSF Box 0924, San Francisco, California 94143-0924; telephone (415) 476-4951 or the UCSF Postgraduate Programs for a course brochure at (415) 476-5208.

University of Utah

The Rocky Mountain Center for Occupational and Environmental Health at the University of Utah is offering the following training opportunities:

Computer Methods of Manual Material Handling Task Analysis and Design, December 1, 1994. This 1-day program will allow participants to analyze manual material handling tasks using computerized biochemical and metabolic models.

Lead Abatement Training - Inspector, January 4-6, 1994. This 3-day course is for individuals interested in inspecting abatement projects related to lead-containing materials.

4½-day course is for people who desire structured training in fundamentals of industrial hygiene or who support industrial hygienists and desire an understanding of the field.

Air Sampling for Toxic Substances, January 17-20, 1995. This course has two parts; each is 2 days long. The two parts are offered consecutively to allow participants to attend both sessions. Part I provides a general introduction to industrial hygiene air sampling and part II provides training in asbestos air sampling.

For more information about these and other available courses, contact the Rocky Mountain Center for Occupational and Environmental Health, Building 512, University of Utah, Salt Lake City, Utah 84112; telephone (801) 581-5710; fax (801) 585-5275.

University of Washington

The Northwest Center for Occupational Health and Safety at the University of Washington is offering the following training opportunities:

Hazardous Waste Annual Refresher Course, February 15, 16, 17, 1995. This 8-hour course will provide the latest information on protective clothing and respirators, air monitoring techniques, safe use of specialized equipment, and legal and regulatory issues related to worker protection at hazardous waste sites. Cost: \$145.

Emergency Response in the Workplace: An Occupational Health Nursing Update, March 2, 1995. This course provides strategies for implementing and updating individual and organizational emergency response procedures. An overview of strategic plans implemented by various organizations will be examined. Areas to be addressed include earthquake preparedness, response to fire and catastrophic accidents, and individual emergency evacuation procedures. Cost: \$145.

Advances in Occupational and Environmental Medicine, April 13, 1995. This course is for occupational health and primary care physicians, internists,

occupational health nurses, and industrial hygienists. Current issues in occupational and environmental medicine will be explored by experts in the field. Cost: \$145.

For more information about these and other available courses, contact Janice Schwert, Northwest Center for Occupational Health and Safety, Department of Environmental Health, SC-34, University of Washington, Seattle, Washington 98195; telephone (206) 543-1069.

CALENDAR

November

November 29-December 1, 1994: HMCRI/Superfund '94 Conference and Exhibition, Washington, DC. *Contact:* Hazardous Materials Control Resources Institute, One Church Street, Suite 200, Rockville, Maryland 20850; telephone (301) 251-1900; fax (301) 738-2330.

December

December 3-7, 1994: Fifth International Symposium on Neurobehavioral Methods and Effects in Occupational and Environmental Health, Cairo, Egypt. *Contact:* Barry L. Johnson, PhD, Office of the Assistant Administrator, Agency for Toxic Substances and Disease Registry, 1600 Clifton Road, NE, Mailstop E28, Atlanta, Georgia 30333 USA; telephone (404) 639-0700; fax (404) 639-0744.

PREVENTION 95

March 30-April 2, 1995
Hyatt Regency New Orleans
New Orleans, Louisiana

OUTCOMES AND ACCOUNTABILITY

Policymakers, payers, providers and patients are focusing sharply on health outcomes and accountability as they seek to maximize quality and access while minimizing costs in the health system. Fiscal constraints are intensifying this thrust in both the public and private sectors. The abilities to devise and measure health outcomes and to interpret and communicate their meaning are increasingly important to health professionals.

PREVENTION 95: Outcomes and Accountability will provide information and skills needed by health professionals concerned with prevention to develop and use appropriate outcome measures and to recognize their strengths and limitations. Issues and problems in assuring and communicating accountability will also be addressed.

AMA Category 1 credit will be awarded. For registration or other information, call PREVENTION 95 at (202) 789-0006 or write to P.O. Box 65686, Washington, D.C. 20035-5686.

hazardous substances



Public Health

Hazardous Substances and Public Health is published by the Agency for Toxic Substances and Disease Registry. The contents are in the public domain and may be reproduced and distributed without permission. The staff welcomes contributions and comments from readers. All correspondence should be addressed to Managing Editor, Hazardous Substances and Public Health, Agency for Toxic Substances and Disease Registry, 1600 Clifton Road, NE, Mailstop E33, Atlanta, Georgia 30333; phone (404) 639-6206; fax (404) 639-6208.

David Satcher, MD, PhD
Administrator

Agency for Toxic Substances and Disease Registry

Barry L. Johnson, PhD
Assistant Administrator

Max R. Lum, EdD, MPA
Director, Division of Health Education

Managing Editor Teresa L. Ramsey
Assistant Editor Susan Coatsworth
Staff Writers Susan Coatsworth
Chris Rosheim
Nancy Haynie-Mooney
Layout and Graphics Sara Cote

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry
Atlanta, Georgia 30333

Official Business

Penalty for Private Use \$300

FIRST-CLASS MAIL
POSTAGE & FEES PAID
PHS/CDC
PERMIT No. G-284