hazardous substances & Public Health

A publication of the Agency for Toxic Substances and Disease Registry

Volume 3, Number 1 **Special Topic: Native American/Alaska Native Health Concerns** February/March 1993

Tribes Address Environmental Contamination at Federal Facilities

Over the last decade it has become increasingly clear that environmental contamination at federally owned and operated facilities needs to be addressed as a national priority. Tribes throughout the country, along with local communities, are concerned about activities affecting the environment and human health issues at these facilities. With the passage of statutory provisions under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and greater attention to identifying environmental contamination at federal facilities, the magnitude of the environmental problem has been revealed.

Tribes throughout the country, along with local communities, are concerned about activities affecting the environment and human health issues at federal facilities.

The environmental contamination confronts federal agencies with challenges that are often fundamentally different from their primary missions. Environmental problems exist at facilities owned by most federal agencies. The number and severity of these problems are the greatest at sites managed by the Department of Defense (DOD) and the Department of Energy (DOE). The facilities were built to serve the nation's defense needs. Many of the environmental contamination problems at these facilities were created in an era when there were few laws or regulations to address the disposal of hazardous and radioactive wastes.

The cost to taxpayers of cleaning up the environmental contamination at the federal facilities will be enormous by any measure. More significantly, these costs must be borne by taxpayers in an era of increasing concerns over the growing federal budget deficit. Individuals and organizations involved in the restoration of the federal facilities, as well as those who are regulated or affected by these programs, worry about the ability of the nation to maintain the necessary level of funding to meet current restoration projections.

As the magnitude of environmental contamination at federal facilities has become evident, so have the technical complexities of these problems. In many instances, environmental contamination problems at federal facilities pose threats to human health and the environment that are similar to those identified at private sector sites throughout the country. However, in numerous other major defense production facilities owned and operated by DOE, the technical dimensions of the environmental contamination problems are extremely complex.

The extent of environmental contamination at these facilities has boosted the level of public demand to clean up the sites. Because of the number of federal facilities adjacent to Indian lands, many Indian tribes are taking responsibility to address the health and environmental

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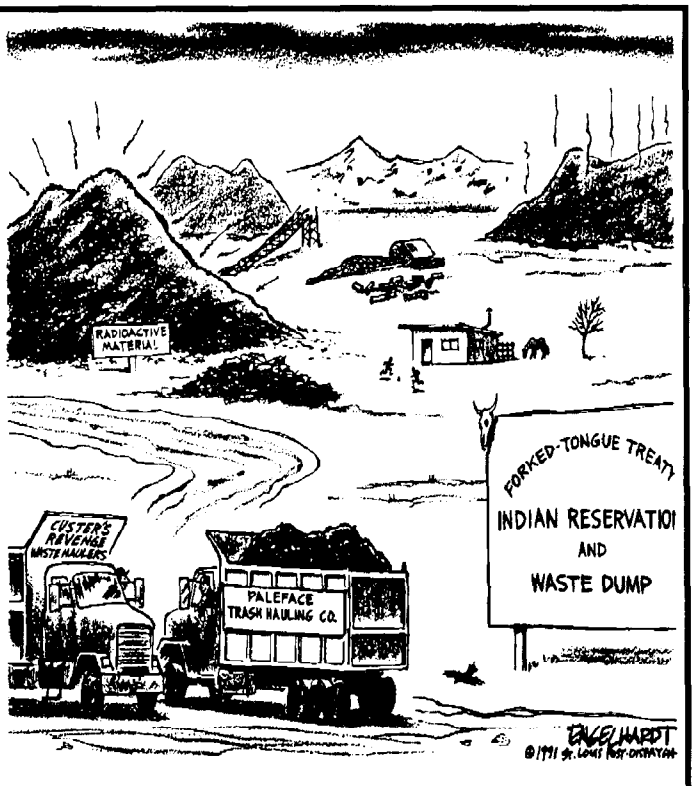
integrity of their citizens and reservations. Despite the progress that has been made toward bringing the federal facilities into compliance with state and federal environmental laws, significant problems that are systemic in nature jeopardize efforts to set priorities for restoration projects and form strategies for reaching long-term environmental objectives.

Many of the environmental contamination problems at federal facilities were created in an era when there were few laws or regulations to address the disposal of hazardous and radioactive wastes.

In March 1992, the U.S. Environmental Protection Agency established the Federal Facility Environmental Restoration (FFER) Dialogue Committee as an advisory committee under the Federal Advisory Committee Act. Over the last year, the National Tribal Environmental Council has participated in the activities of the FFER Dialogue Committee. The purpose of the FFER Committee is to provide a forum to identify and refine issues related to environmental restoration activities at federal facilities.



"We Call It 'The Happy Dumping Grounds'"

The goal of the FFER Committee is to develop consensus policy recommendations aimed at improving the process by which environmental restoration decisions are made for federal facilities, such that these decisions reflect the priorities and concerns of all stakeholders. Because of public concern, publicly supported priorities had to be established as the study and restoration activities proceed on the federal facilities.

Copies of the FFER Dialogue Committee's report, *Recommendations for Improving the Federal Facility Environmental Restoration Decision Making Process and Setting Priorities in the Event of Funding Shortfalls*, can be obtained by writing the National Tribal Environmental Council at 1225 Rio Grande NW, Albuquerque, New Mexico 87104; telephone (505) 242-2175, fax (505) 242-2654.

An Environmental Health Program for American Indians and Alaska Natives

From Johnson B, Williams R, Harris C, eds. Proceedings of the national minority health conference: focus on environmental contamination. Princeton, New Jersey: Princeton Scientific Publishing, 1992.

Indian Health Service/tribal environmental health programs have effected many improvements in environmental conditions within Indian communities during the past 30 years. For example, gastrointestinal disease death rates for the Indians are now below the U.S. all races rate. In many Indian communities, the infant mortality rate is also less than the U.S. all races rate. The life expectancy of Indians increased in 1980 to 71.1 years compared with the U.S. white life expectancy of 74.4 years. The 9-year gap of 1950 has been reduced to 3 years.

However, there remains much work to eliminate environmental health problems for the Indian people. More than 56,000 Indian families still live in substandard housing, and approximately one quarter of the 1.2 million Indian people still are not served by adequate water supply, sewage disposal, or solid waste disposal systems that comply with federal environmental regulations.

More than 650 known sites on Indian sites remain where solid wastes have been disposed of. Few waste disposal sites on Indian land comply with the Resource Conservation and Recovery Act (RCRA). Many Indians live in remote areas on Indian reservations or in isolated Native villages in Alaska, and poverty continues to inhibit their efforts to improve environmental conditions. The costly compliance with new, stringent federal pollution control and environmental protection legislation has cre-

ated major, unresolved financial problems for the Indian communities and tribal governments. Tribes are threatened with expensive fines for violation of the federal regulations.

Many unattended and unguarded waste sites on the Indian lands are still being used for that purpose in violation of RCRA. The tribes have few financial resources to correct the problems or to employ staff required to operate, maintain, or monitor the sites. The sites are extremely vulnerable to continued dumping of environmentally hazardous wastes. Furthermore, many Indian people live in sparsely populated rural areas adjacent to non-Indian lands that are being similarly violated and that present threatening potential for air, land, and water contamination.

A few unscrupulous profiteers see the Indian lands as potential sites for illegal dumping of hazardous wastes. There are also tempting financial rewards for remote, rural communities that are willing to have legal waste disposal from industries and cities on their lands. The threat of environmental contamination is still a danger to the Indian people who respect and revere their lands and their environment.

The IHS works closely with tribal governments, other Public Health Service agencies, and other federal, state, and local agencies to identify potential environmental hazards and implement programs to protect the environmental health of the Indian people.

Bill F. Pearson, PE
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Associate Director, Indian Health Service
Public Health Service
U.S. Department of Health and Human Services

hazardous substances & Public Health

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ATSDR Responds to Native American Environmental Health Concerns

Health statistics and research reveal that the health status of minority populations, as compared with that of whites, is compromised by apparent disparities in rates of morbidity and mortality. However, the extent to which these disparities exist because of environmental risk factors is largely unknown. As an agency of the Public Health Service, ATSDR is committed to reducing any disproportionate burden of adverse health effects on minority populations by reducing illness and injury caused by exposure to hazardous substances in the environment.

In 1988, the ATSDR Minority Health Initiative was created to proactively address special issues affecting low income and minority populations, including gathering demographic data about those people who live near hazardous waste sites. The Initiative is also addressing the specific health concerns of minority communities and their special requirements for health communication and trained professionals. One of the minority populations that ATSDR's Initiative focuses on is Native Americans.

Working with the Indian Health Service, the U.S. Environmental Protection Agency (EPA), and state agencies, ATSDR has undertaken several major health consultations and health studies in response to environmental concerns of Native American Nations. Although it is unwarranted to generalize ATSDR's findings to date, the following environmental concerns are illustrative of potential environmental health problems of Native Americans. Currently, we do not know to what extent the environmental hazards faced by Native Americans are unique to them. As additional studies are completed on the health effects of environmental hazards, specific public health interventions targeted to Native Americans may result.

Hazardous wastes

ATSDR investigated the problem of uranium ore discarded during mining operations in the 1950s on Navajo lands in New Mexico. Investigators found that radiation levels in private residences were at levels of health concern and that areas around the residences were contaminated with certain heavy metals. EPA and the Navajo Superfund Office have removed discarded ore from the site. ATSDR is working to implement a program of community health education and is reviewing the need for site-specific health surveillance of the populations at greatest risk of any radiation-associated health problems.

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Tribal Governments Face Diverse and Complex Environmental Problems

Samuel Winder, executive director of the National Tribal Environmental Council, identifies the following problems as some of the environmental issues facing tribal governments.

Solid and hazardous waste. Environmental problems resulting from waste disposed of or generated on Indian lands will be enormous. For example, an Indian Health Service survey indicates that solid waste is disposed of on more than 650 sites on Indian lands. Most of these sites are open dumps, and many contain medical waste, pesticides, and other hazardous materials. In addition, hazardous waste may be present at a number of Indian reservations near federal facilities.

Underground storage tanks. Leaking underground storage tanks probably exist at every reservation. The potential hazards of leaking underground storage tanks are releases of volatile compounds, and the costs of addressing these problems are significant.

Hazardous waste. The Department of Transportation estimates that more than 500,000 movements of hazardous materials occur each day in the United States, with over 4 billion tons being moved each year. The movements undoubtedly occur through numerous reservations each day. Should an accident occur, most tribal governments lack the necessary expertise to control the situation. This is a major issue that tribal governments will need to address in the next several years.

Water quality. In general terms, the issue of water quality is significant and will continue to be a factor with regard to clean rivers and lakes and also safe drinking water.

The quantification of Indian water rights has been a major focus of attention in the past 30 years. The issue of water quality will gain significance in the next several years, particularly for those tribal governments that market their water.

Environmental equity. Environmental equity refers to the distribution of environmental risks across populations groups and to government policy responses to these distributions. There are Indian lands where environmental risks have been unevenly distributed. The Environmental Protection Agency (EPA) and other federal agencies have not adequately taken these risks into account.

According to Mr. Winder, "For the past 20 years, EPA has provided vast amounts of resources to state governments to develop programs to address environmental problems. Tribal governments were left out of the process. In the past several years, EPA has provided some funds to tribal governments, but the amount of money is insufficient to allow tribal governments to develop necessary programs."

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Consumption of contaminated fish and game

The consumption of fish and game contaminated with hazardous substances from polluted lakes, rivers, or other sources is a potential health hazard, depending on the amount of contaminated food consumed, the toxicity of substances in the food, and individual susceptibility factors. ATSDR has advised various Native American Nations on the health relevance of eating contaminated fish and game. The Agency recommended reduced consumption of specific fish by the Coeur d'Alene Tribe in Idaho when elevated urine cadmium levels associated with fish consumption were measured in some tribal members.

Similarly, ATSDR, through an interagency agreement with the Indian Health Service, is conducting a study of the Fond du Lac Band of Chippewa Indians in Minnesota to investigate exposure to methylmercury through consumption of fish from the St. Louis River. Mercury measurements in blood and hair were conducted. The sources of the methylmercury are being investigated by EPA. Initial observations indicate that elevated blood lead levels are attributed to bass consumption and the number of fish meals consumed each week.

ATSDR is also providing funds and technical assistance to the Florida Department of Health and Rehabilitative Services (HRS) to conduct an exposure assessment and health effects study of Seminole and Miccosukee Native Americans potentially exposed to methylmercury in fish caught from the Everglades National Park. This study by HRS is designed to initiate a cross-sectional study of subclinical effects of human mercury exposure. Persons having hair levels of methylmercury greater than 10 parts per million will undergo further biomedical testing. The sources of pollution are unknown and are being investigated by Florida agencies.

Environmental degradation

ATSDR is working with the St. Regis Mohawk Tribe and the New York State Health Department to characterize exposure to hazardous substances in the general environment as a consequence of industrial emissions. A health consultation is currently under development to address exposure to polychlorinated biphenyls (PCBs), volatile organic compounds, and fluoride emissions. Current recommended activities include air monitoring, soil and vegetation sampling, expansion of the fishing advisory now in place, and health education for citizens and health professionals. Additionally, ATSDR is funding a study by the New York State Health Department to assess the association between PCB exposure of mothers who ingest local fish

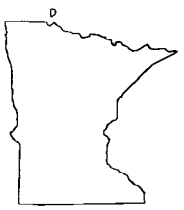
and game, and the levels of PCBs in the mothers' breast milk and the urine of mothers and their infants.

At the request of the Shoshone-Bannock Tribe in Fort Hall, Idaho, ATSDR is cooperating with the Indian Health Service to investigate the problem of air pollution from industrial facilities. Using questionnaires, researchers will compare the prevalence of selected diseases, primarily respiratory, in a cohort of exposed Native Americans on the Fort Hall reservation to that found in an unexposed group of Native Americans living on another reservation. Biomarkers of exposure and effect will also be compared in subsets of subjects selected from each population.

For more information on ATSDR's Minority Health Initiative, contact Sandra Coulberson, MPH, Office of the Assistant Administrator, ATSDR, 1600 Clifton Road., NE, Mailstop E28, Atlanta, Georgia 30333; telephone (404) 639-0700; fax (404) 639-0744.

From the States...

Minnesota: Methylmercury Exposure Study



The St. Louis River in Minnesota has traditionally been used for subsistence fishing by the Fond du Lac Band of Chippewa Indians.

Over the past few years, the fish have been found to be contaminated with methylmercury. The contamination is thought to be related to the paper, steel, and iron industries that operated in the area as well as the use of municipal garbage as fuel for incinerating sewage waste and sludge.

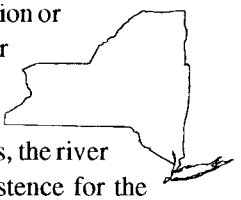
ATSDR initiated an interagency agreement with the Indian Health Service, Bemidji Service Area, to investigate exposure to methylmercury. ATSDR's Division of Health Studies conducted a study for the Fond du Lac Band during the summer of 1991, surveying members of the Band to determine the frequency with which locally caught fish were being consumed.

A sample of survey participants was invited to participate in a more detailed study. Data were gathered from participants through personal interviews about fish-eating habits, including frequency, quantity, and source. Participants were also asked about other potential sources of mercury exposure.

Concentrations of total and inorganic mercury were measured in hair samples and whole blood samples from study participants. Data collection was completed in September 1991. The results of these laboratory tests will help researchers determine the association between the ingestion of fish and methylmercury levels in hair and blood and to estimate changes in mercury exposure over time. Results of the study will be published early in 1993.

For more information, contact Michael McGeehin, PhD, MSPH, Division of Health Studies, ATSDR, 1600 Clifton Road, NE, Mailstop E31, Atlanta, Georgia 30333; telephone (404) 639-6201; fax (404) 639-6220.

New York: Polychlorinated Biphenyl (PCB) Exposure Study of Native American Women and Infants



The St. Regis Mohawk Reservation or Akwesasne (the Mohawk word for "Land Where the Partridge Drums") is in northern New York State along the St. Lawrence River. For centuries, the river has been the major source of subsistence for the Mohawk; fish, waterfowl, and wildlife are abundant. The river is the source of public drinking water supplies serving both the Canadian and American sides of Akwesasne.

However, the twentieth century St. Lawrence River turned into an exposure pathway of hazardous waste, rendering Akwesasne's fish and wildlife unfit to be eaten.

From 1959 to 1973, a General Motors (GM) manufacturing plant in Massena, St. Lawrence County, New York, used polychlorinated biphenyl (PCB)-based hydraulic fluids in its die-casting process. The plant periodically disposed of sludges containing PCBs and other hazardous substances in on-site disposal pits. In September 1983, the U.S. Environmental Protection Agency (EPA) placed the General Motors Foundry site on the National Priorities List (NPL) as a result of GM's past waste disposal practices involving PCBs.

The St. Regis Mohawk Environment Division has led the effort to have Mohawk concerns addressed during the cleanup of this hazardous waste site. The staff has been successful in combining traditional Mohawk values with science to document the contamination of the Tribe's natural resources. In January 1989, the Tribe held a public hearing on a Tribal resolution adopting ambient standards for PCBs in Akwesasne. With the passage of the resolution 3 months later, the Mohawks became the first Indian Tribe in the United States to adopt PCB standards. When EPA announced its Proposed Plan for the General Motors site in March 1990, it required that contaminated areas in Akwesasne be restored to the Tribal standards.

In 1988, ATSDR funded a grant to the New York State Department of Health to study contaminants in the breast milk of women of childbearing age from Akwesasne. The

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specific aims of the study are to determine if the concentrations of PCB congeners in breast milk and urine are greater among the Mohawk women compared with concentrations in a semi-rural control population of nursing women; to correlate maternal exposure to PCBs through diet to maternal concentrations of PCB congeners in breast milk and urine; to determine if the concentration of PCBs is greater in the urine of breast-fed Mohawk infants than concentrations in a comparison group of infants; and to compare congener patterns in human biological specimens to those identified in fish, wildlife, soil, sediment, and water.

Data collection continued in FY 1991. The results are being analyzed for a final report scheduled for release in FY 1993.

Related activities include a public health assessment, currently being developed; education of health professionals; and a health consultation that will address polychlorinated biphenyls, volatile organic compounds, and fluoride emissions. Current recommended activities include air monitoring, soil and vegetation sampling, expansion of the fishing advisory now in place, and health education for citizens and health professionals.

For more information, contact Zachary Taylor, MD, MS, Division of Health Studies, ATSDR, 1600 Clifton Road, NE, Mailstop E31, Atlanta, Georgia 30333; telephone (404) 639-6201; fax (404) 639-6219.

Administration for Native Americans (ANA): A Small Agency with a Big Mission

Under Commissioner Wapato's leadership, ANA is responding in several new ways to the need for reservation environmental protection.

The environmental problems confronting tribes today affect every aspect of life in Indian country. Tribal governments have difficulty identifying, correcting, and preventing environmental problems because of limited financial resources, a small tax base, and physical and social isolation from other communities. The Administration for Native Americans (ANA), part of the Office of Human Development Services in the Department of Health and Human Services (DHHS), offers support to tribes. Since 1985, ANA has awarded nearly $1 million to approximately 20 grantees for the establishment of environmental codes. For example, the Coeur d'Alene Tribe of Idaho designed a project to help establish environmental protection codes to provide a legal basis for control of land development and to maintain and control water quality. In Colorado, the Southern Ute Tribe received a grant for a natural resource database and management project. This project developed environmental policies on energy and land development and assisted the Tribe to assume regulatory responsibilities for water use policies.

> *"The time will come when the sons and daughters of our oppressors will return to us and say, 'Teach us so that we might survive, for we have almost ruined the earth.'"*
>
> *—Black Elk, Lakota Sioux holy man*
> *Circa 1900*

ANA's mission is to promote the economic and social self-sufficiency of American Indians, Alaska Natives, Native Hawaiians, and Native American Pacific Islanders by providing grants, training, and technical assistance, and promoting policies that encourage and support locally determined Native American social and economic development. The Commissioner is Timothy Wapato, who is also chairman of the Intradepartmental Council on Indian Affairs, a body that serves as the focal point within DHHS for all matters regarding Native Americans.

ANA's program goals are based on the premise that local Native American communities are responsible for their own programs, and for building sound economic bases from their own natural, environmental, and human resources.

ANA's program goals are based on the premise that local Native American communities are responsible for their own programs and for building sound economic bases from their own natural, environmental, and human resources. The Administration seeks to develop and strengthen tribal governments, local decision-making, and Native American leadership; to encourage the development of stable, diversified local economies and economic activities that promote social and economic well-being and reduce dependency on welfare; and to support local control, access to, and coordination of programs and services that safeguard the health and well-being of Native Americans.

The organization has become increasingly concerned about addressing the problem of environmental degradation currently being faced by tribal communities. Under Commissioner Wapato's leadership, ANA is responding in several new ways to the need for reservation environmental protection.

First, under the Coordinated Discretionary Funds Program, ANA is soliciting applications for the purpose of developing action-oriented approaches that address the broad range of environmental issues facing Native American communities.

Second, the Commissioner is actively soliciting ideas from the tribal leadership on the direction of preserving and improving the environment.

Other future activities will involve ANA planning for possible appropriations under the Indian Environmental Regulatory Act, P.L. 101-408, passed October 4 1990. This legislation amends the Native American Programs Act of 1974 and authorizes grants to improve the capability of Indian tribal governments to regulate environmental quality.

For more information about the Administration for Native Americans, contact Sharon McCully, Executive Director, Room 339D, Hubert H. Humphrey Building, 200 Independence Avenue SW, Washington, DC 20201; telephone (202) 245-6546.

THE INDIAN ENVIRONMENTAL REGULATORY ACT AUTHORIZES GRANTS TO TRIBES FOR SPECIFIC PURPOSES DESCRIBED AS FOLLOWS:

Should appropriations become available, grants will be awarded for training and education of tribal employees responsible for enforcing or monitoring compliance with environmental quality laws; the development of tribal laws on environmental quality; and the enforcement and monitoring of environmental quality laws.

Environmental Equity: Native American Issues

Reprinted from Reducing Risk For All Communities, Volume 2: Supporting Document; U.S. Environmental Protection Agency; Policy, Planning, and Evaluation (PM-221) EPA230-R-92-008A, June 1992, p. 27.

... [EPA] Administrator [William] Reilly charged the [Environmental Equity] Workgroup with evaluating the evidence that racial minority and low-income people bear a disproportionate risk burden. As the Workgroup began to frame its analysis, it recognized that the trust relationship between the federal government and sovereign Native American tribal governments results in distinctive environmental issues. The trust relationship, based on treaties and legislation, differs greatly from that between federal and state governments. To address the environmental equity issues facing Native Americans, the Workgroup formed a Native American Tribal Issues Subgroup.

Currently, Indian reservations are not often considered in risk policy. Only recently have risk initiatives begun in Indian country. Environmental Equity Workgroup staff met with Regional Indian Coordinators in May 1991. The Regional Indian Coordinators raised several concerns:

- Indian tribes may be at higher risk than the average population due to high wild food consumption, contaminated drinking water sources, high levels of radioactivity found on reservations and high fish consumption rates. In addition, there is a lack of an environmental protection infrastructure or organization to carry out the responsibilities associated with environmental protection on many reservations.

- Although individual risks may be high on reservations, Indian tribes could be overlooked in EPA's risk-based approach, especially if population risk is the primary method of risk analysis. Due to the "large land mass-small population" situations of reservations, population risk will often be small relative to other, especially urban, population groups.

- EPA's existing risk analysis methodology may not include factors that accurately assess risk in Indian country.

- There is perceived inequity by Native Americans in how the Agency (EPA) funds tribal and state governments for the same programs under the same statutory authority.

- Indian tribes are substantially behind states in developing environmental protection infrastructure. This may contribute to higher environmental risks on Indian reservations.

Definitions of Terms Pertinent to Federal Activities Involving American Indians/Alaskan Natives

Tribe

Any Indian tribe, band, nation, rancheria, pueblo, colony, or community, including any Alaska Native village or regional or village corporation as defined in or established pursuant to the Alaska Native Claims Settlement Act, P.L. 92-203 (85 Stat. 688) that is recognized as eligible by the United States Government for the special programs and services provided by the United States to Indians because of their status as Indians.

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Tribal Organization

The recognized governing body of any Indian tribe or any legally established organization of Indians that is controlled, sanctioned, or chartered by such governing body or bodies or democratically elected by the adult members of the Indian community to be served by such organizations and that includes the maximum participation of Indians in all phases of its activities.

Tribal Sovereignty

The recognition of an Indian tribe (nation) as an independent political authority with the power to establish laws, statutes, taxes, judicial systems, and maintenance of a legislative branch within the tribal government. Indian tribes hold the same status and rights as foreign countries.

Trust Responsibility

The responsibility assumed by the federal government, by virtue of treaties, statutes, and other means, legally associated with the role of trustee, to recognize, protect, and preserve tribal sovereignty and to protect, manage, develop, and approve authorized transfers of interests in trust resources held by Indian tribes and Indian individuals.

Reservation

A geographic area set aside by treaty or other law for a federally recognized Indian tribe including reservations, pueblos, rancherias, colonies, former reservations in Oklahoma, Alaska Native regions established pursuant to the Alaska Native Claims Settlement Act, and Indian allotments.

Reservation State

A state in which there is at least one federally recognized tribe and in which the Indian Health Service (IHS) provides or finances health care for eligible Indians.

638 Contract

A contract between an Indian tribe or tribal organization and federal agencies, such as IHS and the Bureau of Indian Affairs (BIA), under which tribes assume planning, operation, and administrative responsibilities for programs and services for Indians from the federal government. (Also see **Tribal Management Grants.**)

Urban Indian Programs

Programs administered by urban Indian organizations, supported with federal funds, that operate health centers and other services, including helping urban Indians gain access to other programs for which they might qualify, such as Medicaid and other public assistance sources.

IHS Area Office

An area office is a bureau-level organization under an area director who reports to the director of IHS. The area office carries out the mission of IHS in providing a system of health care unique to the area's Indian population. The area office director supervises one or more clinical facility directors, who administer direct-care programs to an Indian population. Although specific programs of an area office vary, every area office includes functions of (1) administration and management, (2) program planning analysis and evaluation programs, (3) tribal activity programs, (4) health programs, (5) environmental health/sanitation facilities construction programs, and (6) information resources management.

IHS Service Units

The basic geographic unit defined by IHS for the organization and delivery of health services—somewhat comparable to city or county health departments. Service units are usually centered around a single federal Indian reservation or center of population.

Tribal Management Grants

These are grants authorized by section 103(b)(2) of the Indian Self-Determination and Education Assistance Act, P.L. 93-638 for Indian tribes and tribal organizations to develop and improve their own health programs. (See **638 Contract**.)

Native American Environmental Health Resources

Newsletters

National Tribal Environmental Council, 1225 Rio Grande NW, Albuquerque, New Mexico 87104; telephone (505) 242-2175, fax (505) 242-2654. Executive director, Samuel Winder. (See related story, p. 1.)

Native American Network: A RCRA Information Exchange, Office of Solid Waste, U.S. Environmental Protection Agency, (OS-340), 401 M Street, SW, Washington, DC 20460; telephone (202) 260-5096. *Native American Network* provides a diverse array of information for those interested in environmental issues in Indian country and offers a forum for information exchange among tribal governments, EPA, other federal agencies, and state and local governments. Editor: Judi Kane.

Tribal Activities Bulletin, Office of Tribal Activities, Indian Health Service, 5600 Fishers Lane, Room 6A-05, Rockville, MD 20857; telephone (301) 443-6958. Published quarterly by the Indian Health Service, the *Tribal Activities Bulletin* provides current information to leaders of Indian tribes and tribal organizations. The *Bulletin* features articles, announcements, and commentaries on Indian health needs, services, and related subjects.

Organizations

American Indian Health Care Association, 245 East Sixth St., Suite 499, St. Paul, MN 55101; telephone (612) 293-0233.

American Indian Science and Engineering Society (AISES), 1630 30th Street, Suite 301, Boulder, CO 80301-1014; telephone (303) 492-8658; fax (303) 492-3400. An affiliate of the American Association of Engineering Societies, AISES seeks to motivate and encourage students to pursue graduate studies in science, engineering, and technology. The organization grants awards, maintains a library, and operates a placement service.

Americans for Indian Opportunity, 3508 Garfield Street, NW, Washington, DC 20007; telephone (202) 338-8809. Executive director, LaDonna Harris.

Association of American Indian Physicians (AAIP), Building D, 10015 South Pennsylvania, Oklahoma City, Oklahoma 73159; telephone (405) 692-1202, fax (405) 692-1577. Executive director, Terry Hunter. This organization encourages American Indians to enter the health professions and provides a forum for the interchange of information and ideas among physicians of Indian descent. AAIP also supports and encourages all other agencies and organizations, Indian and non-Indian, working to improve health conditions of American Indians and Alaskan Natives. Identifying scholarship funds for Indian professional students and giving seminars on health professions at schools where American Indian children are taught are other activities of AAIP.

Council of Energy Resource Tribes (CERT), 1999 Broadway, Suite 2600, Denver, CO 80202-5726; telephone (303) 297-2378. CERT's purpose is to promote the general welfare of members through the protection, conservation, control, and prudent management of their oil, coal, natural gas, and other resources. CERT provides on-site technical assistance to tribes in all aspects of energy resource management.

CERT's Tribal Environmental Institute offers a variety of educational workshops. Topics include tribal ownership and operation of public water systems, solid and hazardous waste disposal and management, water quality, and hazardous and radioactive waste transportation. CERT also sponsors two EPA intern programs to foster environmental education for tribes. CERT's environmental specialists visit reservations to provide technical assistance, conduct needs analyses, and develop water quality guides.

CERT also has a nonprofit subsidiary called CERT Technical Services Corporation (CERT TSC), which was formed to make the expertise gained from more than 2,500 technical projects available to both member and nonmember tribes, Indian organizations, government agencies, and private entities or individuals. Services are offered on a direct contact basis. CERT TSC publishes a newsletter to disseminate environmentally related information and to enable those working in the field of tribal environmental protection to share ideas, solutions to problems, and approaches. CERT also publishes handbooks that provide detailed guidance and examples for preparing applications for primary enforcement responsibility.

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National Congress of American Indians (NCAI), 900 Pennsylvania Ave. SE, Washington, DC 20003; telephone (202) 546-9404. The National Congress of American Indians seeks to protect, conserve, and develop Indian natural and human resources; serve legislative interests of Indian tribes; and improve health, education, and economic conditions.

Native American Rights Fund, 1506 Broadway, Boulder, CO 80302; telephone (303) 447-8760. The Native American Rights Fund provides legal counsel in the protection of Indian lands and resources and maintains a National Indian Law Library.

Journal articles

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Books

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Announcements

Meetings

1993 Hazardous Waste Congress To Be Held in Atlanta

The first International Congress on the Health Effects of Hazardous Waste will be held in Atlanta on May 3-6, 1993, at the Marriott Marquis Hotel. Sponsored by ATSDR and the Emory University School of Public Health, the Congress will provide an exchange of ideas, recommendations, and findings related to the human health effects of hazardous waste. The intended audience includes environmental epidemiologists, toxicologists, and health scientists from both government and academic settings; clinical and public health physicians working in environmental and occupational health; health educators; public health administrators and policymakers; health, safety, and management representatives from industry; professional environmentalists; and the general public.

The Congress is cosponsored by the Centers for Disease Control and Prevention, the National Institute of Environmental Health Sciences, the U.S. Environmental Protection Agency, the Association of Occupational and Environmental Clinics, the Carter Center of Emory University, the International Life Sciences Institute, the International Programme on Chemical Safety, the International Society for Exposure Analysis, the Pan American Health Organization, The Sierra Club, the Chemical Manufacturers Association, the Association of Schools of Public Health, and the International Society for Environmental Epidemiology.

For information about conference registration, please contact Steve Von Allmen, Science Policy Analyst, Office of the Assistant Administrator, ATSDR, 1600 Clifton Road, NE, Mailstop E28, Atlanta, Georgia 30333; telephone (404) 639-0708.

PREVENTION 93 Focuses on Health Care Reform

PREVENTION 93, the tenth annual national disease prevention and health promotion meeting, will be held in St. Louis, Missouri, April 17-20, 1993. The meeting theme, "Leadership for Prevention in Health Care Reform," will be the focus of four days of workshops, poster sessions, and paper presentations. The roles and responsibilities of public health, organized medicine, the private sector, and individuals will be examined and considered in terms of access

and delivery, the relationship between prevention and primary care, the inclusion of public health and clinical preventive services into the proposed paradigms, and the costs—human and economic—of including or excluding prevention strategies.

For more information, please contact Emily Parker Slough, Meetings Manager, PREVENTION 93, 1015 15th St., NW, Suite 403, Washington, DC 20005-2605; telephone (202) 789-0006; fax (202) 289-8274.

Publications

Exploring Multiple Chemical Sensitivity

A diversity of medical symptoms falls under the category of multiple chemical sensitivity (MCS). These symptoms have been challenging to occupational and environmental medicine specialists and other medical providers because of the lack of specific diseases to explain them and their presence at levels of substance exposure previously thought to be without health effects.

To further the scientific understanding of MCS, the Association of Occupational and Environmental Clinics (AOEC) and ATSDR sponsored "Exploring Multiple Chemical Sensitivity," an invited workshop held in Georgetown, Washington, DC, September 20-21, 1991. The 2-day workshop included experts with differing perspectives on MCS and AOEC practitioners involved in caring for MCS patients.

The workshop provided participants with a forum 1) to share clinical experiences as a basis for understanding the spectrum of MCS; 2) to examine current research findings; 3) to explore possible mechanisms and models of MCS; and 4) to consider a variety of approaches for treatment and follow-up. The overall goal of the conference was to develop recommendations for a research agenda that could be pursued by governmental agencies, research institutes, and the academic community.

The volume of proceedings for the MCS workshop is available as a special issue of *Toxicology and Industrial Health*, Volume 8, Number 4, July/August 1992. The cost of the proceedings is $65, plus $3 shipping and handling; ISBN 0-911131-35-3. For more information, contact Princeton Scientific Publishing Co., Inc., P.O. Box 2155, Princeton, NJ 08543; telephone (609) 683-4750; fax (609) 683-0838.

Actions for Health

Actions for Health is a comprehensive elementary health program, offering teachers a flexible alternative to regular textbooks. The program includes illustrated workbooks, activity posters, storybooks, a teacher's guide, and take-home family materials in such subject areas as personal health and hygiene, disease control and prevention, injury prevention and safety, consumer health, and community and environmental health. Each lesson includes suggestions for incorporating health content into math, science, language arts, and other areas of the elementary curriculum. *Actions for Health* was developed by ETR Associates, a nonprofit organization offering publications, training, and research in comprehensive K-12 health education.

Materials are available for grades 1-3. Topics in community and environmental health include the following:

- actions that are good for the environment
- health workers in the community
- air, water, and land pollution
- the three R's — reduce, reuse, recycle
- environmental impact of actions

Materials for grades K, 4, 5, and 6 will be published in September 1993. For more information, contact ETR Associates, P.O. Box 1830, Santa Cruz, California 95061-1830; telephone (800) 321-4407; fax (408) 438-4284.

Immediately following the *International Congress on the Health Effects of Hazardous Wastes*, in Atlanta, Georgia:

A Joint Meeting of the International Societies of Environmental Epidemiology and Exposure Assessment

May 7, 1993
Atlanta, Georgia
Marriott Marquis Hotel

Submitted Posters on Any Environmental Epidemiology and Exposure Assessment Topic
and
A Symposium on Meta-Analysis for Environmental Epidemiology and Exposure Analysis

Registration before March 15, 1993—$95; after that date—$115

Write: Dr. Raymond Neutra
California Department of Health Services
5900 Hollis Street, Suite E
Emeryville, CA 94608
Fax (510) 540-3657

For hotel reservations, call (404) 586-6121.

Calendar

April

Apr. 4-8: **13th World Congress on Occupational Safety and Health,** New Delhi, India. *Contact:* National Safety Council, P.O. Box 26754, Sion, Bombay 400 022 INDIA; telephone (91 22) 407 3285,3694; fax (91 22) 525 657.

May

May 3-6: **International Congress on the Health Effects of Hazardous Waste,** Atlanta, Georgia. *Contact:* Dr. Howard Frumkin, Emory University School of Public Health, Division of Environmental and Occupational Health, 1599 Clifton Road, NE, Atlanta, Georgia 30329; telephone (404) 727-3697; fax (404) 727-8744.

June

Jun. 20-23: **20th Annual International Health Conference: Health, Population, and the Environment,** Washington, DC. *Contact:* National Council for International Health, 1701 K St., NW, Suite 600, Washington, DC 20006; telephone (202) 833-5900; fax (202) 833-0075.

Please submit calendar information to *Hazardous Substances and Public Health*, Division of Health Education, ATSDR, 1600 Clifton Road, NE, Mailstop E33, Atlanta, Georgia 30333; telephone (404) 639-6206; fax (404) 639-6207.

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