

DEPARTMENT OF HEALTH AND HUMAN SERVICES  
STATEMENT  
OF  
ROBERT G. McSWAIN  
ACTING DIRECTOR  
INDIAN HEALTH SERVICE  
BEFORE THE  
HOUSE OVERSIGHT AND GOVERNMENT REFORM COMMITTEE  
THE HEALTH AND ENVIRONMENTAL IMPACT  
OF  
URANIUM MINING ON THE NAVAJO NATION

OCTOBER 23, 2007

STATEMENT OF THE INDIAN HEALTH SERVICE  
HEARING ON THE HEALTH AND ENVIRONMENTAL IMPACT OF URANIUM MINING  
ON THE NAVAJO NATION

Mr. Chairman and Members of the Committee:

Good Morning, I am Robert G. McSwain, the Acting Director of the Indian Health Service (IHS). I am accompanied by two other individuals: RADM Douglas G. Peter, M.D., Deputy Director and Chief Medical Officer of the Navajo Area and RADM (Ret) Gary Hartz, Director, IHS Office of Environmental Health and Engineering. Today, I am pleased to have this opportunity to testify on what is known about the health and environmental impact of uranium mining on the Navajo Nation.

The IHS has the responsibility for delivery of health services to an estimated 1.9 million Federally-recognized American Indians and Alaska Natives through a system of IHS, tribal, and urban (I/T/U) operated facilities and programs based on the government-to-government relationship and Acts of Congress. The mission of the agency is to raise the physical, mental, social, and spiritual health of American Indians and Alaska Natives to the highest level, in partnership with the population we serve. The agency's goal is to assure that comprehensive, culturally acceptable personal and public health services are available and accessible to the service population. Our duty is to uphold the Federal government's responsibility to promote healthy American Indian and Alaska Native people, communities and cultures, and to honor and protect the inherent sovereign rights of Tribes.

Three major pieces of legislation are at the core of the Federal government's responsibility for meeting the health needs of American Indians/Alaska Natives: the Snyder Act of 1921, P.L. 67-85, the Indian Health Care Improvement Act (IHCIA), P.L. 94-437, as amended, and the Indian Self Determination and Education Assistance Act (ISDEAA), P.L. 93-638, as amended. The Snyder Act authorized regular appropriations for "the relief of distress and conservation of health" of American Indians/Alaska Natives. The IHCIA was enacted "to implement the Federal responsibility for the care and education of the Indian people by improving the services and facilities of Federal Indian health programs and encouraging maximum participation of Indians in such programs." Like the Snyder Act, the IHCIA provided the authority for Federal government programs that deliver health services to Indian. The ISDEAA promotes Tribal administration of Federal Indian programs, including health care.

The IHS and Tribal programs provide a comprehensive scope of individual and public health services, including preventive, clinical, and environmental health services. In addition, the IHS and Tribal health programs purchase medical care and urgent health services through the Contract Health Services program, when health care is otherwise not available at their facilities

The IHS has 12 Area Offices located throughout the continental United States and in Alaska. One of these Area Offices is located in Window Rock, Arizona, where the capital of the Navajo Nation is located. The Navajo Area Indian Health Service (NAIHS) is responsible for the delivery of health services to American Indians in the states of Arizona (AZ), New Mexico

(NM), and Utah (UT), a region known as the Four Corners area of the United States (U.S.). The Navajo reservation, geographically, is approximately the size of the state of West Virginia with a population density which is one tenth of the U.S. average of 85 people per square mile.

Comprehensive health care is provided by NAIHS and the Navajo Nation through inpatient, outpatient, contract and community health, and environmental health programs through six hospitals, ten health centers, thirteen health stations and community based activities. In FY 2007, over 1.2 million outpatient visits and 56,000 inpatient service days were provided by 4,500 Indian Health Service and Tribal staff. The IHS sanitation construction program funded first time water and sewer service to 1,098 Navajo homes in FY 2007. The Navajo Nation and local health corporations administer approximately \$89 million of the annual NAIHS funding to deliver and support the delivery of health care services to Navajo people.

The Navajo population has a median age of 24 years which is twelve years below that of the entire U.S. population, and the annual per capita income of \$7,100 is one-third of the average in the U.S. The five leading reasons of death for the Navajo people (1999-2001) include unintentional injuries, cancer, heart disease, diabetes, and influenza/pneumonia. Cancer mortality rates for the Navajo Area death rates (1999-2001) are lower than that of all other races in the U.S. except for cervical cancer which is about twice as high as the U.S. rate for all races.

The leading reasons for outpatient visits to NAIHS in FY 2004 were diabetes, hypertension, upper respiratory infections, routine child care, ear infections, pregnancy and childbirth related, accidents, musculo-skeletal conditions and supplemental procedures (prevention tests).

### **The Health and Environmental Impact on the Navajo Nation**

I will be discussing the role of the Indian Health Service with respect to Navajo patients with health problems associated with exposure to uranium. Uranium is ubiquitous in the earth's crust but is especially concentrated in larger amounts in the southwest United States and the Navajo Nation. Naturally present uranium decays into radium and radon - a colorless, odorless and radioactive gas at normal temperatures. Radon decays further into additional radioactive elements (radon daughters or progeny) that are solids which collect on dust particles. These decay products emit alpha and beta particles and gamma radiation.

During mining operations in the southwest United States, radon and its progeny were inhaled into the lungs, and it is believed that exposure to high concentrations of alpha decay particles has caused lung cancer in some miners. In addition to cancer, chronic pulmonary disease also developed in some miners due to the inhalation of the silica dust particles.

An estimated 3,000-5,000 Navajos worked in uranium mines. The Navajo Nation reports the presence of over 1,300 abandoned mines on reservation land alone. Some miners also worked in Colorado (where the largest number of mines were located), Utah and in New Mexico (which produced the largest amount of uranium ore).

Prior to enactment of the Radiation Exposure Compensation Act (RECA) in 1990, individuals with lung cancer or chronic pulmonary disease were identified and treated by IHS staff. RECA

authorized compensation for the former uranium miners. IHS in the Navajo Area assisted with dedicated screening staff and funding to conduct medical exams. IHS staff also collected health history information from multiple facilities and assisted the Navajo Nation in establishing a registry containing the data to assist former miners and their survivors with the documentation of health histories and current medical condition. All information gathered is maintained by the Navajo Nation, not by the IHS.

In 2002, the Navajo Area Radiation Exposure Screening and Education Program (RESEP) began operations as one of seven HHS RESEP grants in the United States. NAIHS works closely with the Navajo Nation Division of Health, Office of Navajo Uranium Workers, to implement the grant which is funded through August 31, 2008. Special clinics at multiple NAIHS clinical sites are by RESEP staff from the Shiprock, New Mexico, IHS hospital. Screening is provided to (a) miners who worked at least one year above ground and/or underground from 1942 through 1971; (b) uranium millers or ore transporters, and (c) downwinders (those living in defined counties from 1951-1958 or in 1962).

Various pulmonary and kidney function related tests are performed during RESEP exams every three years. In between these regular screenings, NAIHS staff at all Navajo Area IHS facilities follow these individuals as part of their regular workload. It is of note that, since 2002, the RESEP program has not found a new case of lung cancer case in a uranium worker; but, many still live with chronic pulmonary scarring and are at a higher risk for the development of lung cancer than the average individual. IHS continues to treat affected miners appropriate to their health condition.

### **1990-1991 Radon Survey of Navajo Homes**

In 1990-1991, the Indian Health Service OEHE working with the Navajo Nation Environmental Protection Agency (NNEPA) and the U.S. Environmental Protection Agency (U.S. EPA) undertook a radon survey of private homes. EPA had established 4 pCi/L as a “guideline” for indoor radon levels. The survey used a statistical sampling technique to identify Navajo homes on or near the reservation normally occupied year-round. For the short term survey, charcoal test canisters were placed in just over one thousand homes during the winter months. In 10 percent of the homes, alpha test devices were put in place for one year to determine an annual average indoor radon concentration. In 1992 the results of the testing revealed 772 statistically valid measurements showing an average radon level of 1.7 pCi/L (U.S. average was estimated at 1.3 pCi/L). Ninety two percent of homes had levels below the U.S. EPA recommended guideline of 4 pCi/L. The year-long term radon test device results were positively correlated with the short-term survey results. Individual home owners were notified of the results. The conclusion drawn from this survey was that, in spite of surface soils rich in natural uranium, most Navajo occupied homes do not have a problem with higher than recommended levels of radon compared to the U.S. average.

### **Uranium Milling/Mine Waste Piles**

Health concerns for milling personnel are similar to those described above for uranium miners. The risks appear to have been less for millers than miners because mines contained far more

concentrated radon gas. But abandoned mine and milling tailing piles contained increased radium which seeped into local surface and ground water and spread to nearby lands via wind dispersal. Moreover, unfortunately tailing pile material has been discovered in the past to have been used by locals in home building materials, necessitating the abandonment/destruction of identified homes under the authority of Navajo Nation programs.

In 1990 the Agency for Toxic Substance and Disease Registry, the HHS component that addresses the public health effects of contaminants, advised authorities of an immediate and significant danger to people's health for one set of mines. The EPA conducted an emergency removal of the waste. EPA contracted with a Native American company to do that work.

### **Uranium and Water Quality Issues**

The increased exposure to radionuclides in drinking water results in increased risks of bone cancer and changes in kidney function by direct toxicity to kidney cells. In December 2000, the U.S. EPA issued new rules regulating uranium in community water systems to reduce toxic kidney effects and the risk of cancer. By December 31, 2007, all regulated water systems must complete initial monitoring.

Since the passage of P. L. 86-121 in 1959, IHS has been constructing community water systems in Indian country which meet all EPA standards for safe drinking water and, in the case of the Navajo Area, turning these systems over to the Navajo Tribal Utility Authority (NTUA) to operate and maintain. Compliance with the Safe Drinking Water Act on Navajo reservation land has been the responsibility of the Navajo Nation since 2001. Only 3 percent of Navajo Nation community water systems in 2005 had reportable health-based violations (any violations exceeding maximum contaminant levels, not just radio-nuclides) in comparison to numbers for the states of Arizona (11%), New Mexico (13%), Utah (6%) and Colorado (9%).

Currently, a Navajo Nation Institutional Review Board approved study is underway with funds awarded by HHS to the University of New Mexico, Health Sciences Center. The Navajo Uranium Assessment and Kidney Health Project is supported by a \$2.3 million five-year grant. Indian Health Service staff are collaborating with this effort, as medical record reviews, health exams and laboratory analysis will be essential to the success of this project.

The study is designed to (1) assess water quality and use in 100 water sources in Northwestern New Mexico communities with Navajo residents; (2) reduce uranium exposure from unregulated water sources used as drinking water; and (3) calculate relative risks for chronic kidney disease from ingestion of uranium and other kidney toxicants from unregulated water sources, evaluating urinary biomarkers over time in relationship to disease progression.

Historical data indicate that up to 25 percent of unregulated water sources in the western Navajo exceeded drinking water standard for kidney toxicants (including uranium). Preliminary analysis of eastern Navajo Nation data shows that this same percentage is being found for New Mexico unregulated water sources on or near Navajo lands. In the New Mexico study area, many families still haul water from multiple sites, including unregulated water sources, in spite of warnings by health providers and environmental health staff.

## **Concluding Remarks**

The Indian Health Service strives every day to be true to our mission to elevate the health status of eligible Indian people. We work in partnership with Tribes and many other organizations and governments to provide preventative and curative, community- and health care facility-based services to our large beneficiary population. Most of our resources are dedicated to addressing the most prevalent health problems in Indian Country. Every patient/family we serve is equally important in the eyes of our staff with regard to the unique health problems presented by each.

When IHS staff recognize unique trends in health statistics or a unique presentation of illness (such as with Hantavirus on the Navajo Nation over a decade ago) they work diligently to identify the cause or causes. This includes working with specialists or special programs (like CDC) to assist in uncovering the source of the problem the patient is experiencing. For example, Navajo Neuropathy was clinically pursued by our staff in conjunction with outside experts. Genetic researchers now conclude that a single gene mutation is the cause of this disorder.

The IHS is committed to addressing the health care needs of the citizens of the Navajo Nation, including those who may be impacted by the effects of uranium mining.

Thank you for the opportunity to present this testimony before the Committee. I will be pleased to answer any questions you may have for the IHS on this important subject.