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THE HEALTH AND ENVIRONMENTAL IMPACTS OF URANIUM CONTAMINATION IN THE NAVAJO NATION

HEARING

BEFORE THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

OCTOBER 23, 2007

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THE HEALTH AND ENVIRONMENTAL IMPACTS OF URANIUM CONTAMINATION IN THE NAVAJO NATION

TUESDAY, OCTOBER 23, 2007

HOUSE OF REPRESENTATIVES,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, DC.

The committee met, pursuant to notice, at 10 a.m. in room 2154, Rayburn House Office Building, Hon. Henry Waxman (chairman of the committee) presiding.

Present: Representatives Waxman, Cummings, Kucinich, Watson, Yarmuth, Braley, Norton, McCollum, Welch, Davis of Virginia, Shays, Platts, Issa, Bilbray, and Jordan.

Also present: Representatives Udall and Matheson.

Staff present: Phil Schiliro, chief of staff; Phil Barnett, staff director and chief counsel; Kristin Amerling, general counsel; Greg Dotson, chief environmental counsel; Andy Schneider, chief health counsel; Jeff Baran, counsel; Teresa Coufal, deputy clerk; Caren Auchman and Ella Hoffman, press assistants; Zhongrui "JR" Deng, chief information officer; Leneal Scott, information systems manager; Rob Cobbs, staff assistant; David Marin, minority staff director; Larry Halloran, minority deputy staff director; Alex Cooper, minority professional staff member; Larry Brady, minority senior investigator and policy advisor; Brian McNicoll, minority communications director; and Benjamin Chance, minority clerk.

Chairman WAXMAN. The meeting of the committee will please come to order.

Throughout this year, our committee has held a series of hearings on making Government work again. We focused on programs or agencies that once were effective but are now broken or dysfunctional. Today's hearing is a variation on that theme.

This morning we are looking at an instance where the Government has never worked effectively. It has been a bipartisan failure for over 40 years. It's also a modern American tragedy. For decades the Navajo Nation has had to contend with the deadly consequences of radioactive pollution from uranium mining and milling. Last year, a superb series of articles in the Los Angeles Times by Judy Pasternak described the impacts of the pervasive contamination. It has been devastating for the Navajo people and their lands.

The primary responsibility for this tragedy rests with the Federal Government, which holds the Navajo lands in trust for the tribes. Our Government leased the land for uranium mining, purchased

the uranium yellowcake produced from the mines to supply our nuclear weapons stockpile, and then allowed the operators of the mines and mills to walk away without cleaning it up and without doing anything about the resulting contamination.

The Federal Government's responsibility dates back to the late 1940's when mining began under the Truman administration. The contamination continued and remained largely unaddressed through the next 10 administrations, Republican and Democrat alike. As we will hear today, the Federal Government has over the past 30 years taken some important steps to help the Navajo reclaim some of their land, but as we will also hear today, much contamination remains both on the surface and in the groundwater. It is the Federal Government's responsibility to see that this contamination is fully remediated.

As you can see from this map, and we have the map on the wall there, the Navajo Nation covers an area larger than the State of West Virginia. It lies within the States of Arizona, New Mexico and Utah. Today over 250,000 Navajos are members of the Navajo Nation, which has its own government. Between the 1940's and the 1980's, millions of tons of uranium ore were mined from the Navajo Nation. Private companies mined the ore in order to supply the Federal Government with the uranium yellowcake it needed to build a nuclear weapons stockpile for the cold war.

For many years, the U.S. Government was the sole customer for this uranium. After the mining ended in the late 1980's, literally hundreds of radioactive mines in the Navajo Nation were abandoned. The companies that had leased the lands simply walked away without cleaning them up. Many of these sites were abandoned in the 1950's, 1960's and 1970's. In most cases, the mines were left wide open with no warnings about the dangers they posed. Five mill sites where uranium ore was processed were also left behind, along with their giant mounds of radioactive uranium filings.

Over the years, open pit mines filled with rain and Navajos used the resulting pools for drinking water and to water their herds. Mill tailings and chunks of uranium ore were used to build foundations, floors and walls for some Navajo homes. Families lived in these radioactive structures for decades. Radioactive dust from abandoned mines and waste piles blew in the air and were inhaled by those who lived nearby. Navajo children played in the mines and the piles of radioactive debris. They drank contaminated water that came straight from the mines.

This isn't something that only happened during a bygone era when schoolchildren kneeled under their desks during nuclear bomb drills and Americans built underground bomb shelters in their backyards. Navajo kids were swimming in open pit uranium mines in the 1990's. When the U.S. EPA took readings at one mine site, the radium levels were over 270 times the EPA standard. That was last year. And American citizens are still drinking contaminated water, breathing in radioactive dust, and likely living in radioactive homes today. That's happening today, right now.

Because of this contamination, the Navajo people, especially those living near the abandoned mines and the former mill sites, are at higher risk for cancer and for kidney failure. Unfortunately,

we do not have a full understanding of the extent of this risk because there has never been a comprehensive health survey of the effects of the surface and groundwater contamination. But we are fortunate to have with us today individuals who live in the Navajo Nation and can share their personal experiences. Although they come from different areas of the Navajo Nation, and in some cases live hundreds of miles apart, we will hear about the very similar threats and devastating impacts.

In recent years, Federal agencies have taken some initial steps toward grappling with this problem. We will hear about the work these agencies have done, and are doing, but will also hear that much more needs to be done. If a fraction of the deadly contamination the Navajos live with every day had been in Beverly Hills or any wealthy community, it would have been cleaned up immediately. As a matter of fact, there was an area in an upper income community in Colorado where they were exposed to the remnants of uranium mining, and that was cleaned up right away. But a different standard applied to Navajo lands, half measures and outright neglect has been the official response. It is hard to review this record and not feel ashamed. What has happened just isn't right.

That is why we are holding today's hearing. We want to know what has to be done, who needs to do it and what resources will be required to fix this. No member of this committee represents Navajo lands. But we all want to know how we will finish cleaning up the mess that was created by the Federal Government's past need for uranium and the ensuing failure to ensure that the mines and mills that produced this uranium did not contaminate the land and the groundwater.

Even as we hold this hearing, there is new interest in resuming mining on or near the Navajo Nation. I don't have any special expertise to evaluate the wisdom of that prospect. As a general rule, however, I think we ought to correct the wrongs of the past before inflicting new damage. And we ought to make sure that the mistakes of the past aren't repeated. I look forward to hearing from our witnesses and to working with all of them to correct this unacceptable situation as quickly as possible.

Mr. Davis.

[The prepared statement of Chairman Henry A. Waxman follows:]

Statement of Rep. Henry A. Waxman
Chairman, Committee on Oversight and Government Reform
Hearing on the Health and Environmental Impacts of
Uranium Contamination in the Navajo Nation
October 23, 2007

Throughout this year, our Committee has held a series of hearings on making government work again. We've focused on programs or agencies that once were effective but are now broken or dysfunctional.

Today's hearing is a variation of that theme. This morning we are looking at an instance where the government has never worked effectively. It's been a bipartisan failure for over 40 years.

It's also a modern American tragedy. For decades the Navajo nation has been dealing with the deadly consequences of radioactive pollution from uranium mining and milling. Last year a superb series of articles in the Los

Angeles Times described the impacts of the pervasive contamination. It has been devastating for the Navajo people and their lands.

The primary responsibility for this tragedy rests with the federal government, which holds the Navajo lands in trust for the Tribe. Our government leased the lands for uranium mining, purchased the uranium yellowcake produced from the mines to supply our nuclear weapons stockpile, and then allowed the operators of the mines and mills to walk away without cleaning up the resulting contamination.

The federal government's responsibility dates back to the late1940s when mining began under the Truman Administration. The contamination continued and remained largely unaddressed through the next ten Administrations, Republican and Democratic alike.

As we will hear today, the federal government has, over the past 30 years, taken some important steps to help the Navajo reclaim some of their lands. But, as we will also hear today, much contamination remains, both on the surface and in the groundwater. It is the federal government's responsibility to see that this contamination is fully remediated.

As you can see from this map **[gesture to screen]**, the Navajo Nation covers an area larger than the state of West Virginia. It lies within the states of Arizona, New Mexico, and Utah. Today, over 250,000 Navajos are members of the Navajo Nation, which has its own government.

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a nuclear weapons stockpile for the Cold War. For many years, the U.S. government was the sole customer for this uranium.

After the mining ended in the late 1980s, literally hundreds of radioactive mines in the Navajo Nation were abandoned. The companies that had leased the lands simply walked away without cleaning them up. Many of these sites were abandoned in the 50s, 60s, and 70s. In most cases, the mines were left wide open with no warnings about the dangers they posed. Five mill sites, where uranium ore was processed, were also left behind with their giant mounds of radioactive uranium tailings.

Over the years, open pit mines filled with rain, and Navajos used the resulting pools for drinking water and to water their herds. Mill tailings and chunks of uranium ore were used to build foundations, floors, and walls for some

Navajo homes. Families lived in these radioactive structures for decades. Radioactive dust from abandoned mines and waste piles blew in the air and was inhaled by those who lived nearby. Navajo children played in the mines and the piles of radioactive debris. They drank contaminated water that came straight from the mines.

This isn't something that only happened during a bygone era when school children kneeled under their desks during nuclear bomb drills and Americans built underground bomb shelters in their back yards.

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If a fraction of the deadly contamination the Navajos live with every day had been in Beverly Hills or any wealthy community, it would have been cleaned up immediately. But a different standard applied to Navajo lands. Half-measures or outright neglect has been the official response. It's hard to review this record and not feel ashamed. What's happened just isn't right.

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know how we will finish cleaning up the mess that was created by the federal government's past need for uranium and the ensuing failure to ensure that the mines and mills that produced this uranium did not contaminate the land and the groundwater.

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I look forward to hearing from our witnesses and to working with all of them to correct this unacceptable situation as quickly as possible.

Mr. DAVIS OF VIRGINIA. Thank you, Mr. Chairman, for holding this hearing.

Renewed interest in nuclear energy has unearthed a sad and dangerous legacy from the first atomic era. Those looking to mine uranium to fuel future reactors face a desolate landscape littered with abandoned mines and mill sites, still generating unknown levels of health and environmental damage. That history of negligence stretches from the Manhattan Project, through the cold war and perhaps beyond.

The tragedy is compounded by the fact Native American lands and all those living there were exploited by the uranium processing operations. They were left to live and die with the potentially toxic after-effects.

The repercussions of reckless uranium extractions fall particularly harder on the Navajo Nation, that saw the promise of jobs and economic growth fade into the lingering curse of contaminated lands, fouled water and likely health effects that could haunt them for generations.

So this hearing is an important opportunity to assess what national and tribal governments are doing to address the environmental and public health impacts of uranium pollution and to discuss what more needs to be done to protect health and repair the earth after uranium mining. The limited steps taken so far by Federal agencies, even to determine the scope of the problem, offer little hope those efforts will find adequate solutions any time soon. The old adage about too many chiefs comes to mind.

With the Department of Energy, the Environmental Protection Agency, the Nuclear Regulatory Commission and the Department of Interior all involved to various degrees in these issues, each can point to the others when hard questions arise about legal authority and spending priorities. Interior's Bureau of Indian Affairs and the Indian Health Service face well-documented challenges meeting their basic obligations to Native American communities. Add to that dysfunctional mix the obligation to respect the sovereign rights of tribal governments, and it becomes clear by the large-scale problems the uranium contamination has languished for too long.

Meanwhile, serious cleanup is underway at only one of the more than 500 mines EPA found on Navajo lands. Baseline health surveys to determine the incidence of radiation-related illnesses among Navajo families exposed to contaminated ground and water are just getting underway. The power and skill of all the agencies needs to be marshaled to focus and accelerate cleanup efforts, to cap the 40 most dangerous open mines, to limit groundwater contamination and to distinguish discrete uranium-related health consequences from other public health challenges faced by the Navajos.

Not surprisingly, there is talk of litigation to sort out the myriad of conflicting jurisdictions, legal authorities and potential liabilities. That may be necessary. It may be inevitable. But protracted and costly lawsuits would also freeze an unacceptable status quo while diverting scarce fiscal resources from cleanup to the courtroom.

I hope today's testimony will lead to a candid discussion of the best path to justice for the Navajo people and the best policies to address the environmental damage and public health threats posed by uranium mining. Thank you.

[The prepared statement of Hon. Tom Davis follows:]

HENRY A. WAXMAN, CALIFORNIA
CHAIRMAN

TOM DAVIS, VIRGINIA
RANKING MINORITY MEMBER

ONE HUNDRED TENTH CONGRESS
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Statement of Rep. Tom Davis
Ranking Republican Member
Committee on Oversight and Government Reform
"URANIUM CONTAMINATION IN THE NAVAJO NATION"
October 23, 2007

Renewed interest in nuclear energy has unearthed a sad and dangerous legacy from the first atomic era. Those looking to mine uranium to fuel future reactors face a desolate landscape littered with abandoned mines and mill sites still generating unknown levels of health and environmental damage. That history of negligence stretches from the Manhattan Project through the Cold War and perhaps beyond. The tragedy is compounded by the fact Native American lands, and all those living there, were exploited by the uranium processing operations. They were left to live – and die – with the potentially toxic aftereffects.

The repercussions of reckless uranium extraction fall particularly hard on the Navajo Nation, who saw the promise of jobs and economic growth fade into the lingering curse of contaminated lands, fouled water and likely health effects that could haunt them for generations. So this hearing is an important opportunity to assess what national and tribal governments are doing to address the environmental and public health impacts of uranium pollution, and to discuss what more needs to be done to protect health and repair the earth after uranium mining.

The limited steps taken so far by federal agencies even to determine the scope of the problem offer little hope those efforts will find adequate solutions any time soon. The old adage about too many chiefs comes to mind. With the Department of Energy, the Environmental Protection Agency, the Nuclear Regulatory Commission, and the Department of Interior all involved to various degrees in these issues, each can point to the others when hard questions arise about legal authority and spending priorities. Interior's Bureau of Indian Affairs and the Indian Health Service face well-documented challenges meeting their basic obligations to Native American communities. Add to that dysfunctional mix the need to respect the sovereign rights of tribal governments, and it becomes clear why the large-scale problem of uranium contamination has languished for so long.

Meanwhile, serious clean up work is underway at only one of more than five hundred mines EPA found on Navajo lands. Base-line health surveys to determine the incidence of radiation-related illnesses among Navajo families exposed to contaminated ground and water are just getting underway. The power and skill of all the agencies needs to be marshaled to focus and accelerate clean-up efforts: to cap the forty most dangerous open mines, to limit ground water contamination, and to distinguish discreet uranium-related health consequences from other public health challenges faced by the Navajos.

Not surprisingly, there is talk of litigation to sort out the myriad of conflicting jurisdictions, legal authorities and potential liabilities. That may be necessary. It may be inevitable. But protracted and costly lawsuits would also freeze an unacceptable *status quo* while diverting scarce fiscal resources from clean-up to the courtroom. I hope today's testimony will lead to a candid discussion of the best path to justice for the Navajo people, and the best policies to address the environmental damage and public health threats posed by uranium mining.

Chairman WAXMAN. Thank you, Mr. Davis.

I want to ask unanimous consent that members who represent the Navajo Nation, Mr. Matheson, Mr. Udall and Mr. Renzi, be permitted to participate in this hearing. Without objection, so ordered.

I would also ask unanimous consent that this statement that I have, and I think it's been reviewed by the minority, unanimous consent that the statement from the Bluewater Valley Downstream Alliance be included in the record. Without objection, that will be the order.

[The information referred to follows:]

U. S. House of Representatives Oversight and Government Reform Committee
Uranium Contamination Hearing
Submitted October 20, 2007 to Congressman Waxman via Jeff Baran
By the Bluewater Valley Downstream Alliance
Hearing Scheduled October 23, 2007

Overview:

WHO WE ARE

- 6th generation New Mexicans/Historically rural culture
- Former underground uranium miners
- Ranchers
- Farmers
- Environmentalists
- Business owners
- Wage earners

HISTORY OF THE CONTAMINATION

- 1956, Homestake Mining (now Barrick Gold) located uranium mill tailings facility less than ½ mile NE of Murray Acres—part of our community.
- Purpose:
  - Process uranium ore for nation— profit for company
  - Provide tax dollars for Cibola County (formerly Valencia County)
- Unlined tailings pond seepage
- Uncovered windblown tailings
- 1961—Homestake (Barrick Gold) & Anaconda (now ARCO)warned by New Mexico Public Health Service of a serious health risk due to pollution of alluvial aquifers
- 1975—NMED/USEPA find drinking water unsafe
- Homestake/Barrick Gold provides bottled water for residents
- 1983—Group of Murray Acres residents file suit against Homestake for contamination of the Alluvial aquifer
- 1985 Lawsuit settled with provisions:
  - Homestake provides Milan water to residents and pays residential water bill for 10 years
  - Promises by Homestake (verbally) to fully restore clean water within 10 years
- Site is simultaneously listed as a federal EPA Superfund site. Residents believed EPA would successfully regulate Homestake/Barrick's remediation efforts
- Residents assured only alluvial aquifer (top) had been affected. No other aquifers in danger.

CLEANUP DATE PASSES

- 1995 – Homestake/Barrick's remediation fails--

- ☐ Residents' wells still unusable
- ☐ Property devalued due to publicity from the lawsuit and local knowledge of contamination

CONTAMINATION WORSENS

- ☐ Homestake/Barrick, knowing it cannot meet earlier promises, asks for a more lenient cleanup standard far exceeding clean water drinking standards
- ☐ Not only alluvial aquifer, but also Upper, Middle, and Lower Chinle Aquifers contaminated. Now affecting 9 sections downstream of site
- ☐ Contamination of San Andres Aquifer, the water supply for Milan and Grants, NM
- ☐ NRC, with consent of the USEPA and NMED concludes the Homestake/Barrick Gold site has suffered from upstream contamination by other companies, so Homestake/Barrick Gold only responsible for cleanup standard far below safe drinking water standards
- ☐ 2007--Review of the Second Five-Year Report for Homestake Mining Company Superfund Site, Grants, NM. NMED DP-200, NRC License SUA-1471and Discharge Permit App. DP-725

Our Findings:

- ☐ Chinle aquifers inadequately regulated—improper maximum concentration levels and wrong point of compliance
- ☐ Homestake/Barrick Gold's Injection Wells/Drilling Practices adding to Chinle Aquifer pollution
- ☐ Mist from evaporation jets extending beyond site berms
- ☐ Unknown effects of potential radon exposure from windblown tailings
- ☐ Undetermined extent of structural damage to houses in nearby communities from injection wells and concomitant changes in local geohydrology
- ☐ Contamination from Homestake/Barrick now mixing with DOE-controlled Anaconda (now Atlantic Richfield Oil—ARCO and polluting additional communities

ABOUT HOMESTAKE MINING

- ☐ Bought out in 2001 by Barrick Gold www.barrick.com
    - ☐ Total Sales
        - ☐ 2004 – $1.9 billion
        - ☐ 2005 -- $2.3 billion

- ☐ 2006 -- $ 5.6 billion
- ☐ Net Income for 2006 was $ 1.5 billion

SITUATION TODAY

As of today, the contamination plumes are in contact with the boundaries of the Village of Milan, a community of several thousand people and threaten the water supply for Grants, a much larger community. In 1975, our little farming community was assured only the alluvial aquifer could be affected. Now we have been told the alluvial as well as 3 lower aquifers have been polluted (Chinle aquifers) and there is evidence of pollution in the deepest aquifer (San Andres) which is the aquifer that provides the main drinking water for Milan and Grants. No monitoring wells were ever placed ahead of the contamination plume to determine accurate background concentrations. Other areas in our community have not been investigated thoroughly but there is some evidence that leakage from the Anaconda mill water disposal well seeped into the San Andres aquifer while the company was trying to put mill water into the Yeso aquifer below the San Andres. Ananconda has never been investigated to determine the extent of this contamination and the site is no longer the company's responsibility as it has been turned over to the U.S Department of Energy.

MAJOR ROADBLOCKS

Under **current laws**, including the Atomic Enery Act of 1954, the Clean Water Act, and UMTRA, the U.S. EPA and the New Mexico Environment Department have no real regulatory authoritiy. The U.S. Nuclear Regulatory Commission has sole and ultimate authority.

Uranium mill tailings and water discharge are considered byproduct materials not pollutants. Therefore they do not come under the Clean Water Act or UMTRA.

ACTION NEEDED

Please consider working with Senator Bingaman to:

- Change the Atomic Energy Act of 1954, so that these **obvious pollutants become classified as pollutants**. This way, the mill tailings discharge can be regulated by the USEPA and NMED, and the Clean Water Act can be enforced.
- **Restore our communities. This probably means funding by Congress to right the wrong that was done to us in the name of the nation's defense. To keep as much of the burden as possible off the nation's taxpayers, you will need to force the former mining companies, not just Homestake/Barrick Gold, but ALL THAT WERE INVOLVED, many of which have since been purchased by other big mining**

companies, to pay for their share of the cleanup. The New Mexico Environment Department will need some funding and staffing to make those determinations.

FURTHER CONSIDERATION OF URANIUM MINING IS ABSURD UNTIL YOU CAN ASSURE US WE CAN RECOVER FROM WHAT HAS ALREADY BEEN DONE IN THE NAME OF THE NATION'S DEFENSE.

Chairman WAXMAN. Because we have so many witnesses on our panels today, we are going to limit the opening statements to Mr. Davis' and mine and to the chairman and the ranking member of the Domestic Policy Subcommittee. Mr. Kucinich.

Mr. KUCINICH. I thank the Chair for holding this hearing.

Native Americans have been victims of an extraordinary level of exploitation and injustice. This injustice has extended over hundreds of years. They have borne a disproportionate burden of the toxic legacy from this country's pursuit of nuclear weapons and nuclear power. This is a topic that has been important to me for a long time.

In this classic environmental justice story, we see how long native peoples have been burdened with inhumane levels of contamination and we see how long it can take just to begin to undo the damage that the contamination brings. The stories we will hear today will also make clear that quests for power, be they political or electrical, have no respect for life and exact an unacceptable cost to human health and the environment.

The EPA guesses that there are about 520 abandoned uranium mines in the Navajo Nation and 1,200 abandoned mines in the area. The Navajo Nation is home to five old uranium mills. Each of the mill sites and mine sites represents a potential groundwater contaminationsite, in addition to being a source of air and soil contamination. There are many potential exposure routes: children play in the water that accumulates in the radioactive tailing piles; homes and hogans are built out of material that is radioactive; windblown dust from tailings is inhaled; groundwater is contaminated with uranium and its byproducts; wildlife and plant life concentrate the contamination and become food for other wildlife or for Navajo living off the land.

Uranium can be toxic in two ways. First, its properties as a chemical confer an ability to irreversibly destroy parts of the kidney when acting in isolation. But like lead and mercury, it is a metal which interacts with the human body. Native Americans are known to experience disproportionately high levels of lead poisoning. When uranium and lead both make their way into a person, the toxic effect on the kidney can be additive and even synergistic.

Uranium is also toxic because it naturally decays into other elements like radium, thorium and radon, each of which is also radioactive. Radon alone is the No. 2 cause of lung cancer in the United States, behind smoking.

The industrial process of extracting and concentrating uranium uses a host of other highly toxic compounds like various acids and cyanide, which are common mine tailing contaminants, and of course, there are other elements which co-occur with uranium, like arsenic and fluoride, which are left behind when uranium is refined. Each of these compounds bears its own list of health effects, and each combination of two or three or more of these compounds brings their own set of health effects. It could take generations just to completely understand the health effects of all these sites in question, making things worse. It is a formidable challenge just to understand the magnitude of the contamination; so much so, it hasn't even been done yet. No comprehensive review of groundwater contamination of all the mine sites has been done. No com-

prehensive review for the presence of elevated levels of radiation in Navajo houses has been done, even though there are dozens known to have been built with radioactive materials. No comprehensive review of the health effects of the contamination from the mines and mills has been done. There is no way we can begin to address the problem if we can't define it.

Mr. Chairman, one estimate I have heard is that the entire cleanup cost would be around $500 million. I think that is really low. Efforts just to clean up the groundwater at three of the old mill sites on the Navajo Nation are predicted to take 20 years. Already the contamination has spanned generations and will span many more if we continue the current pace of cleanups.

Some effects can't be cleaned. Before the mines were opened, the Navajo way of life was heavily dependent on natural resources, which fostered a healthy respect for the environment. Not only did they rely on it for clean water and abundant food, but they incorporated it into their customs, their religion and their way of life. Carol Marxim and Perry Charlie pointed out in their chapter of the Navajo People and Uranium Mining that the contamination of livestock, of the medicinal herbs they use, and of the water bodies their children played in changed the view of the land that was embraced and used as a conceptual center for their way of life. After the contamination, they feared it.

It is hard to imagine how destabilizing it would be if we thought radioactive contamination permeated all that we rely on to be safe and clean. Now, 60 years after the first uranium contamination began, there are corporations that want to reopen some of the very same mines and extract more uranium for nuclear power plants. Never mind the contamination already created that we are trying to define, let alone clean up. Never mind the permanent social damage inflicted by this contamination. Never mind that nuclear power is nowhere near economical. Never mind the lack of viable or safe storage facilities for the waste that will continue to be toxic for thousands of years.

Mr. Chairman, this is an important hearing, not only because it gives a chance for our Native brothers and sisters to be able to bring to this committee their story, but it is an important opportunity to begin to put a focus on people from this nuclear uranium mining industry. Because they have a story to be told too, and I hope that when it is told under oath, we will be given an opportunity to get to the bottom of what they are up to.

Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Kucinich.

We will hold the record open for any Member that wishes to insert an opening statement for this hearing.

Our first panel represents the Navajo Nation. The Honorable George Arthur is chairman of the Resources Committee of the Navajo Nation Council. The Honorable Stephen Etsitty is Director of the Navajo Nation Environmental Protection Agency. Dr. Doug Brugge is an associate professor in the Department of Public Health and Family Medicine at Tufts University School of Medicine in Boston, MA. Uranium mining and the Navajo Nation has been a major focus of his research.

Mr. Larry King is a member of the Navajo Nation who lives in Gallup, NM. Ms. Edith Hood is a member of the Navajo Nation who lives in Church Rock, NM. Mr. Phil Harrison is a member of the Navajo Nation who lives in Window Rock, AZ. And Mr. Ray Manygoats is a member of the Navajo Nation who lives in Tuba City, AZ.

I want to thank all of you for being here and for your willingness to testify before us. It is the policy of this committee that all witnesses that appear before us take an oath, so I would like to ask you to rise and raise your right hands, if you would.

[Witnesses sworn.]

Chairman WAXMAN. Thank you. The record will show that each of the witnesses answered in the affirmative.

Your prepared statements will be in the record in their entirety. We would like to ask you to limit the oral presentation to around 5 minutes. We will have a clock that will be green and then will turn to yellow for a minute and then red, which will indicate that the 5-minutes is up.

Mr. Arthur, why don't we start with you.

STATEMENTS OF GEORGE ARTHUR, CHAIRMAN, RESOURCES COMMITTEE, NAVAJO NATION COUNCIL; STEPHEN ETSITTY, EXECUTIVE DIRECTOR, NAVAJO NATION ENVIRONMENTAL PROTECTION AGENCY; DOUG BRUGGE, PH.D., M.S., ASSOCIATE PROFESSOR, DEPARTMENT OF PUBLIC HEALTH AND FAMILY MEDICINE, TUFTS UNIVERSITY SCHOOL OF MEDICINE; LARRY J. KING, MEMBER, NAVAJO NATION; EDITH HOOD, MEMBER, NAVAJO NATION; PHIL HARRISON, MEMBER, NAVAJO NATION; AND RAY MANYGOATS, MEMBER, NAVAJO NATION

STATEMENT OF GEORGE ARTHUR

Mr. ARTHUR [Greeting in native tongue]. Good morning, Mr. Chairman and honorable members of this committee. Before I proceed with my statement, I would like to acknowledge that the Navajo Nation is concerned and also offers its prayers for the Congresswoman from California that is present with us in the devastation of the fires that they are experiencing. We would like to send our prayers to the great State of California at this time.

Thank you, Mr. Chairman Waxman and the members of the committee. I am George Arthur, chairman of the Resources Committee of the Navajo Nation Council. The Resources Committee oversees the Nation's minerals and water resources and the Navajo Nation's Environmental Protection Agency, as well as other natural resources within the Navajo Nation. I speak here as a representative of the Navajo Nation government.

Few members of the committee are from the West. Many may not have ever been to an Indian reservation like the Navajo Reservation. I would like to give you a flavor of my land and my culture.

The Navajo-Federal relationship is based on two treaties, the second one signed in 1868 after about one-third of my ancestors died in Federal concentration camps. Navajo Indian Country now includes about 17 million acres of land within Arizona, New Mexico

and Utah. Navajo land is blessed with mineral resources. But the Navajo people have not benefited much from these minerals until recently, because the Reservation has served, in the words of a Government study, as an "energy colony" for the United States. Navajo warriors have served the United States with distinction in all major conflicts since World War I, since before the Navajo Nation became citizens and since before the Navajo people became voters. Within these conflicts came the great representatives of the Navajo Code Talkers, whom you may have heard of.

The Navajo Nation is not a rich tribe. Because of Federal neglect and historic discrimination by the State, the Navajo Nation had an infrastructure deficit of $3.7 billion in 1975, and that deficit is much greater today. We have few paved roads. We have few hospitals or clinics, and substandard schools. Many of our people lack running water and electricity. Unemployment is near 50 percent.

The Navajo Nation has no casinos, nor the surrounding affluent population needed for substantial gaming revenues. We rely solely on the land and on the scarce water resources available to us. We live, and we will continue to live, within the four sacred mountains.

We have maintained our language and traditions, including one where the umbilical cords of Navajo babies are buried in the land of their parents. The Navajos' ties to the land where they are born is profound. We don't just move when conditions become difficult. As a Federal district court observed in a case where the United States unsuccessfully sought to relocate a Navajo woman from land where she had lived all her life, relocating a Navajo from her ancestral land "is tantamount to separating the Navajo from her spirit."

Uranium mining and milling on and near the Reservation has been a disaster for the Navajo people. The Department of the Interior has been in the pocket of the uranium industry, favoring its interests and breaching its trust duties to Navajo mineral owners. We are still undergoing what appears to be a never-ending Federal experiment to see how much devastation can be endured by a people and a society from exposure to radiation in the air, in the water, in mines and on the surface of the land. We no longer are willing to be the subjects of that ongoing experiment.

In legislation passed in 2005, the Navajo Nation Council made detailed findings about the devastation caused by uranium mining and processing. We found that "the social, cultural, natural resources and economic damages to the Navajo Indian Nation from past uranium mining and processing is ongoing due to: (i) the continuing need for full monetary compensation of former Navajo uranium workers and their family workers for their radiation and mining-induced diseases; (ii) the presence of hundreds of unremediated or partially remediated uranium mines, tailing piles and waste piles located in Navajo Indian Country; and (iii) the absence of medical studies on the health status of Navajos who have lived in uranium mining-impacted communities.

Because of these and other findings, the Navajo Nation has banned uranium mining and processing within Navajo country.

Many of us were and are directly affected by uranium mining and processing in Navajo country. The largest release of radioactive contamination in the United States occurred within the Church

Rock spill, where 94 million gallons of radioactive sludge from a United Nuclear Corp. facility poured into the wash that Navajo people and livestock used and now use in their daily lives. I myself was present in Shiprock, the largest community on the Navajo Nation in the late 1970's when Federal officials decided to simply pile up all the radioactive mill tailings on land near the center of town, with no lining under the waste and a lot of rocks on top to limit erosion.

In what other town would the Government allow this to occur and remain? Under today's environmental laws, it is practically impossible to construct a municipal solid waste landfill, one that takes ordinary household waste, without any liner to protect underground aquifers used for drinking water.

In Tuba City, however, an open dump and mill tailings piled up without a liner, like those in Shiprock, poses an immediate threat to the main aquifer in the western Navajo area. The Government has devoted the money needed to remove similar tailings from a rural area near Moab. Are those people or their water resources more valuable than Navajos?

I regret to say that the Federal EPA, BIA, DOE and NRC would be doing virtually noting to protect the Navajo people and the Navajo environment at Tuba City, Church Rock and other locations within Navajo Country if the Navajo citizens and their government had not acted. This Federal neglect and environmental injustice must stop. The Navajo Nation has six specific recommendations that we firmly believe should be adopted and implemented by the Congress through legislation. These are set forth as attachments to my written statement and I will be pleased to discuss them with the committee.

[The prepared statement of Mr. Arthur follows:]

TESTIMONY OF THE NAVAJO NATION FOR THE
HOUSE COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

GEORGE ARTHUR, CHAIRMAN
RESOURCES COMMITTEE
NAVAJO NATION COUNCIL

October 23, 2007

Thank you Chairman Waxman and members of the Committee. I am George Arthur, Chairman of the Resources Committee of the Navajo Nation Council. The Resources Committee oversees the Navajo Nation's mineral and water resources and the Navajo Nation EPA. I speak here as the representative of the Navajo Nation Government.

Few members of this Committee are from the West. Many may not have ever been to an Indian reservation like the Navajo Reservation. I would like to give you a flavor of my land and culture.

The Navajo/federal relationship is based on two treaties, the second one signed in 1868 after about one-third of my ancestors died in a federal concentration camp. Navajo Indian country now includes about 17 million acres in Arizona, New Mexico and Utah. Navajo land is blessed with mineral resources, but the Navajo people have not benefitted much from these minerals until recently, because the Navajo Reservation has served, in the words of a Government study, as an "energy colony" for the United States.[1] Navajo warriors have served the United States with distinction in all major conflicts since World War I.

The Navajo Nation is not a rich tribe. Because of federal neglect and historic discrimination by the States, the Navajo Nation had an infrastructure deficit of 3.7 billion dollars in 1975,[2] and that deficit is much larger now. We have few paved roads, few hospitals or clinics, and substandard schools. Many of our people lack running water and electricity. Unemployment

remains at about 50%.

The Navajo Nation has no casinos, nor the surrounding affluent population needed for substantial gaming revenues. We rely on the land and the scarce water resources available to us. We live, and will continue to live, within the four sacred mountains.

We have maintained our language and traditions, including one where the umbilical cords of Navajo babies are buried in the land of their parents. The Navajos' ties to the land where they are born is profound. We don't just move when conditions become difficult. As a federal district court observed in a case where the United States unsuccessfully sought to relocate a Navajo woman from land where she had lived all her life, relocating a Navajo from her ancestral land "is tantamount to separating the Navajo from her spirit."[3]

Uranium mining and milling on and near the Reservation has been a disaster for the Navajo people. The Department of the Interior has been in the pocket of the uranium industry, favoring its interests and breaching its trust duties to Navajo mineral owners.[4] We are still undergoing what appears to be a never-ending federal experiment to see how much devastation can be endured by a people and a society from exposure to radiation in the air, in the water, in mines, and on the surface of the land. We are unwilling to be the subjects of that ongoing experiment any longer.

In legislation passed in 2005, the Navajo Nation Council made detailed findings about the devastation caused by uranium mining and processing. We found that

> the social, cultural, natural resource, and economic damage to the Navajo Nation from past uranium mining and processing is ongoing due to (i) the continuing need for full monetary compensation of former Navajo uranium workers and their family members for their radiation and mining-induced diseases, (ii) the presence of hundreds of unremediated or partially remediated uranium mines, tailings piles, and waste piles located in Navajo Indian Country, and (iii) the absence of medical studies on the health status of [Navajos] who live in uranium mining impacted communities.[5]

Because of these and other findings, the Navajo Nation has banned uranium mining and processing within Navajo Indian country.

Many of us were and are directly affected by uranium mining and processing in Navajo country. The largest release of radioactive contamination in the United States occurred in the Churchrock Spill, where 94 million gallons of radioactive sludge from a United Nuclear Corporation facility poured into the wash that Navajo people and livestock used and now use in their daily lives. I myself was present in Shiprock (the largest community on the Reservation) in the late 1970s when federal officials decided simply to pile up all the radioactive mill tailings on land near the center of town with no lining under the wastes and a lot of rocks on top to limit erosion.[6] In what other town would the Government allow this to occur and remain?

Under today's environmental laws, it is practically impossible to construct a municipal solid waste landfill, one that takes ordinary household wastes, without a liner to protect underground aquifers used for drinking water. In Tuba City, however, an open dump and mill tailings piled up without a liner, like those in Shiprock, pose an immediate threat to the main aquifer in the Western Navajo area. The Government has devoted the money needed to remove similar tailings from a rural area near Moab. Are those people or their water resources more valuable than Navajos?

I regret to say that the federal EPA, BIA, DOE and NRC would be doing virtually nothing to protect the Navajo people and the Navajo environment at Tuba City, Churchrock, and other locations in Navajo country if the Navajo citizens and their government had not acted. This federal neglect and environmental injustice must stop. The Navajo Nation has six specific recommendations that we firmly believe should be adopted and implemented by the Congress through legislation. These are set forth as an attachment to my written statement, and I will be

pleased to discuss them with the Committee.

Thank you for this opportunity to speak with this Committee, Mr. Chairman.

ENDNOTES

1. U.S. Commission on Civil Rights, The Navajo Nation: An American Colony (1975).

2. Id. at 42.

3. United States v. Tsosie, 849 F. Supp. 768, 775 (D.N.M. 1994), aff'd, 92 F.3d (10th Cir. 1996).

4. McClanahan v. Hodel, No. Civ. 83-161-M, 14 Indian L. Rep. 3113 (D.N.M. 1987) (invalidating fraudulently obtained uranium leases approved by the BIA and observing that "[t]he BIA and Interior generally seem to have been more concerned throughout the leasing processing with their relationship with Mobil [the uranium lessee] than their relationship with the Indian owners"), appeals dism'd, vac. as moot, nos. 87-1186 and 87-1234 (10th Cir. 1988).

5. Resolution no. CAP-18-05 (April 19, 2005) § 3 (amending 18 N.N.C § 1301(E) (2005).

6. Federal officials use the pile for training heavy equipment operators.

Chairman WAXMAN. Thank you very much, Mr. Arthur. You may notice that some of our colleagues have left. There is a vote on the House floor on a procedural issue. I consider this hearing one that I want to stay for rather than go for that vote, so we will continue on with the hearing. They will be coming back.

Mr. Etsitty.

STATEMENT OF STEPHEN ETSITTY

Mr. ETSITTY. Good morning, honorable members of this committee and the Honorable Chairman Waxman. Thank you for convening this important hearing.

My name is Stephen Brian Etsitty. I am a member of the Navajo Nation and the Executive Director of the Navajo Nation Environmental Protection Agency. [Greeting in native tongue.] I am Water Flows Together Clan and I am born for the Salt Clan.

The legacy of uranium mining and processing blankets the Navajo Nation from the Eastern Agency on up to the Northern Region near the Four Corners, across the beautiful Chuska mountains to my home area of Lukachukai, AZ, and from there westward toward the Grand Canyon. All these areas are a part of what we refer to as Dine Bikeyeah, or the Peoples' Land, and all have suffered and continue to suffer the health and environmental impacts from uranium mining and processing.

This unfortunate legacy resulted from several past activities: uranium exploration, the mining of uranium, either underground or open pit mining, and the processing of the mined uranium done at facilities that produced yellowcake for the U.S. nuclear weapons arsenal. The legacy lingers, due to the current slow pace of cleanup and the poor quality of remediation of known contaminated sites.

As stated, there are five former uranium processing sites spread across the Navajo Nation. All of these sites were decommissioned by the U.S. Government, meaning that radioactive mill tailings were capped with clay and rock and left in place at or adjacent to the former mill site. However, none of the sites were lined, no barriers were placed underneath the radioactive materials to keep the radioactive waste from leaching into the groundwater. And we believe that is exactly what is happening.

We know there is radioactive and chemical groundwater contamination under all of these sites, and that in Tuba City, AZ and Shiprock, NM, contamination is moving toward municipal drinking water wells. We know that the Federal Government is working on that contamination and claims that things will be better in 20 or 30 years. We also know that it is extremely difficult, if not impossible, to construct a solid or hazardous waste landfill in your home State today in accordance with current environmental laws and regulations unless that landfill was built with a liner to protect your groundwater. Yet in my homeland, the Navajo Nation, we have four unlined radioactive waste dumps threatening our groundwater.

Not one of the four mill sites has been properly remediated with contaminants removed from the living areas of the Navajo. As we gather mounting evidence that these unlined landfills seep uranium waste into our groundwater, we watch the Federal Government dig up and properly remediate a similar site located near

Moab, UT, which is outside of the Navajo Nation borders. Why is this not happening on the Navajo Reservation? Are we seeing environmental justice in action once again?

Regarding former uranium mining, there are over 600 former uranium mining sites, either on or within 1 mile of Navajo lands, and there are over 1,200 mining sites or site features, such as contaminated waste piles, associated with these sites. Many of these site features have been reclaimed, meaning that mine shafts have been sealed and other physical site dangers addressed. Only one of the abandoned mine sites has been thoroughly assessed in accordance with U.S. EPA Superfund program protocols, and that assessment has only been completed within the past year.

Waste from the mines and mills found their way over the years throughout the Navajo Nation. Radioactive building materials have been found in Navajo homes. Grazing animals drink water from contaminated ponds. A public highway, New Mexico State Road 566, became contaminated with radioactive materials spilling from mining trucks. A Geiger counter held while driving that highway today will click and scream, revealing a radioactive public transportation corridor.

But these statistics do not tell the full story. I would like to share with you two stories that illustrate the efforts being made by the Navajo people to address deadly contamination that has been largely ignored by the U.S. Government. The stories involve the communities of Tuba City, located near Flagstaff, AZ, and Church Rock, located near Gallup, NM. I will start with a demonstration involving a sample of radioactive, contaminated soils we have had shipped here from Tuba City/Rare Metals UMTRCA site. The sample was obtained by our consultant, Dr. Bill Walker. Navajo EPA was left with no choice but to initiate its own site investigation, depleting our limited funds, after U.S. EPA refused to move forward with its own assessment of the area.

I have also brought here the report that was finalized by Dr. Walker, which has allowed us to move forward to begin a more thorough environmental assessment in the Tuba City area. We will leave copies here for the committee, not only for its scientific content, but as a symbol of the fact that any progress occurring in both the Tuba City and Church Rock areas results from Navajo initiative, not Federal initiative. So the sample that we have here today is obtained from the Tuba City area, a site that we call Highway 160, and I have in front of me an instrument that our Superfund program, the Navajo Superfund program, uses to detect radioactive contaminants.

It is important to understand that background is usually established as we search for samples or radioactive areas on the Navajo Nation. In this particular site near Tuba City, background was established at about one or two micro-Rankins per hour, and the sample, as recorded in the report, was determined to be about 30 micro-Rankins per hour. And this is an isolated sample that we have brought here today. You can hear the beeping.

This particular device detects gamma radiation, and gamma radiation is all throughout the cosmos and the atmosphere, so it will beep from time to time. The sample that I have before me is covered, and as we get closer to it, you will hear the detection device

starting to recognize the gamma radiation from the source. I will remove the cover and just let the device tell you what is going on.

[Detection device beeping rapidly.]

Mr. ETSITTY. This is a very basic instrument that we have within our capability as a program. Oftentimes, when we do detect areas on the Nation that are high, in this case it would be 30 times or higher above background, it is definitely cause for concern and more investigations. That is one of the reasons we have gone forth and taken the initiative to provide this report.

Of course, the sounds that you heard are just a small demonstration that shows that Navajo families are living within oftentimes a few hundred yards of materials that we are told we shouldn't be exposed to for more than an hour. But we have Navajo residents that have been living in these areas for sometimes more than 40 or 50 years.

So the story about Tuba City is that it took Navajo funds, Navajo EPA employees and Navajo local residents to get U.S. EPA's attention and get them to admit that something needs to be done to protect Navajo citizens. The same thing happened in Church Rock. Navajo residents were able to wrestle a small grant from a nonprofit organization to initiate a local monitoring project. Think about that.

Lacking a properly funded U.S. EPA investigation, local Navajos took it upon themselves to carry radiation detection devices across our lands, these former uranium mining sites. As a result of their work and the encouragement from our agency, U.S. EPA finally recognized the need for emergency action and recently completed the excavation of approximately 5,000 to 6,000 cubic yards of radium contaminated soils located next to and in some cases inside Navajo residences. That is the good news.

The bad news is that about 300,000 cubic yards of the toxic waste remains still on the mine site. We hope to have that addressed very soon.

So our problems are just now beginning to be addressed. I am sure that you understand, and as you will hear from the other witnesses, that for many of these families that live next to these toxic substances, it is very difficult to see a great deal of progress. But I am here today, not only as a spokesman for the Navajo Government, but as an individual Navajo who has walked across these sites, come to know the families and the people here, our witnesses, feel their anger and has heard their stories of unexplained cancers, kidney failures, birth defects and sores that don't heal.

I am here before you to request your help in putting this pitiful response to an obvious disaster to an end and to accept that the Navajo Nation has proven that it is capable of being a true and equal partner with the United States in restoring our lands and our people to hozho, or harmony. But we can't do it with our current woefully under-funded budgets and diminishing resources. We can't continue to have to beg the U.S. Government for help, only to be rejected and have to prove time and time again that we know our lands better than the Federal authorities.

We opened the borders of our land for uranium mining in an act of patriotism during the cold war era. Now we are left with the legacy of uranium contamination without substantial Federal mone-

tary help. Navajo patriotism and Navajo per capita contributions to American armed forces are now and always have been unsurpassed. It is time for America to support the people who support America.

We are a people who have a treaty with the Government of the United States, the Treaty of 1868. It is sacred to our people and we have always honored our obligations under that treaty. The presence of unpermitted and unlawful hazardous waste dumps on our lands amounts to a taking of our lands in violation of this treaty. We now look to the Government we have faithfully served to honor its obligations.

Thank you, Mr. Chairman, for your leadership and attention. I would also like to thank my staff of the Navajo EPA for their help.

[The prepared statement of Mr. Etsitty follows:]

Testimony of Stephen Etsitty

My name is Stephen Etsitty. I am a member of the Navajo Nation and the Executive Director of the Navajo Nation Environmental Protection Agency. It is my privilege to be here this morning representing the Navajo people and the Navajo Environmental Protection Agency. The "legacy" of past uranium mining and processing blankets the Navajo Nation from the Eastern Agency communities of Smith Lake and Ambrosia Lake, to Church Rock, near Gallup, on up to the northern region near the four corners area that includes the Navajo communities of Shiprock, New Mexico and Cove, Arizona, across the beautiful Chuska mountains to my home area of Lukachukai and from there westward to Tuba City and Cameron, only a few miles from the Grand Canyon. All of those areas, all are a part of what we refer to as Diné Bikeyeah, and all have suffered and continue to suffer the health and environmental impacts from past uranium mining and processing.

This unfortunate legacy resulted from several past activities, uranium exploration, the mining of uranium, either underground or open pit mining, and the processing of the mined uranium done at facilities producing yellow-cake for the United States nuclear weapons arsenal. The legacy lingers due to the current slow pace of cleanup of known contaminated sites.

There are four former uranium processing sites spread across the Navajo Nation at Church Rock, Shiprock, Mexican Hat and Tuba City. All of these sites were decommissioned by the United States government, meaning that the radioactive mill tailings were capped with clay and rock and left in place at or adjacent to the former mill site. None of the sites were lined meaning that there was nothing placed underneath the

radioactive materials to keep the radioactive waste from leaching into the groundwater, and, we believe that is exactly what is happening today. We know there is radioactive and chemical groundwater contamination under all of these sites and that in Tuba City and Shiprock the contamination is moving towards municipal drinking water wells. We know the federal government is working on that contamination and claims that things will be better in twenty or thirty years. We also know that it would be extremely difficult, if not impossible to construct a solid waste, not to mention a hazardous waste, landfill in your home state today in accordance with current environmental laws and regulations unless that landfill was built with a liner to protect the underlying groundwater. Yet, in my homeland, the Navajo Nation, we have what amounts to four unlined radioactive waste dumps threatening our groundwater.

Not one of the four mill sites have been properly remediated with contaminants removed from the living areas of the Navajo. As we gather mounting evidence that these unlined landfills seep uranium waste into our groundwater, we watch the federal government dig up and properly remediate a similar site located near Moab, Utah, which is outside the borders of the Navajo Nation. Why is this not happening on the Navajo reservation? Are we seeing environmental injustice in action once again?

With reference to former uranium mining we know that there are over 600 former uranium mining sites either on or within one mile of Navajo lands and that there are over 1200 site features, such as contaminated waste piles, associated with these sites. Although many of these site features have been reclaimed, meaning that mine shafts have been sealed and other physical site dangers addressed, only one of the abandoned mine

sites has been thoroughly assessed in accordance with U.S. EPA Superfund program protocols and that assessment has only been completed within the past year.

Waste from the mines and mills found their way over the years throughout the Navajo Nation. Radioactive building materials have been found in Navajo homes. Grazing animals sip water from contaminated ponds. A public highway, state road 566, became contaminated with radioactive materials spilling from mining trucks.. A Geiger counter held while driving that highway today will click and scream, revealing a radioactive public transportation corridor.

But these statistics alone do not tell the full story. I'd like to share with you two stories which illustrate the efforts being made by the Navajo people to address deadly contamination that has been largely ignored by the U.S. government. The stories involve the communities of Tuba City, located near Flagstaff, Arizona and Church Rock, located near Gallup, New Mexico. I will start with a demonstration involving samples of radioactive contaminated soils we've had shipped here from the Tuba City/Rare Metals UMTRCA site. These samples were obtained by our consultant Dr. Bill Walker. Navajo EPA was left with no choice but to initiate its own site investigation, thereby depleting limited Navajo funds, after U.S. EPA refused to move forward with its own assessment of the area. Let me demonstrate for you how we detect radio-active contaminates in soils. The report we brought here with us is Dr. Walker's report and it alone has allowed us to move forward to begin a more thorough environmental assessment in the Tuba City area. We're leaving you some copies not only for its scientific content, but also as a symbol for the fact that any progress occurring in both the Tuba City and Church Rock areas results from Navajo initiative, not federal initiative.[Demonstration]

The sounds that you have heard come from an instrument called a Ludlum 19 and show that Navajo families are living within a few hundred yards of materials that we're told we shouldn't be exposed to for longer than an hour.

So the story about Tuba City is that it took Navajo funds, Navajo EPA employees and Navajo local residents to get U.S. EPA's attention and get them to admit that something needs to be done to protect Navajo citizens.

The same thing happened in Church Rock. Local Navajo residents were able to wrestle a small grant from a non-profit organization and initiate the Church Rock Uranium Monitoring Project (CRUMP). Think about that. Lacking a properly-funded U.S. EPA investigation, local Navajos took it upon themselves to carry radiation detection devices across former uranium mining and processing sites. As a result of their work and with the help and encouragement of the Navajo EPA, U.S. EPA finally recognized the need for emergency action and recently completed the excavation of approximately five to six thousand cubic yards of radium contaminated soils located next to, and in some cases inside of Navajo residences. That's the good news. The bad news is that 300,000 cubic yards of the toxic waste remains on site.

Both of these stories involve problems that are just now beginning to be addressed. I'm sure you understand that for the families living next to these toxic substances it's difficult for them to see a great deal of progress. I'm here today not only as a spokesperson of the Navajo government, but also as an individual Navajo who has walked across these sites, come to know these families, felt their anger, heard their stories of unexplained cancers, kidney failures, birth defects and sores that don't heal. This pitiful response to an obvious disaster must end. Please accept that the Navajo Nation

has proven that it is capable of being a true and equal partner with the United States in restoring the Navajo land and people to hozho (harmony). But we can't do it with our current woefully under funded budget and diminishing resources. We can't continue to have to beg the U.S. government for help only to be rejected and have to prove time and time again that we know our land better than the federal authorities.

We opened the borders of our land for uranium mining in an act of patriotism during the Cold War Era. Now we are left with a legacy of uranium contamination without substantial federal monetary help. Navajo patriotism and Navajo per capita contributions to American armed forces are now, and always have been unsurpassed. It's time for America to support the people who support America. We are a people who have a treaty with the government of the United States. The treaty of 1868 is sacred to my people. We have always honored our obligations under that treaty. The presence of unpermitted, unlawful hazardous waste dumps on our land amounts to a taking of our land in violation of this treaty. We now look to the government we have faithfully served to honor its obligations.

Chairman WAXMAN. Thank you very much, Mr. Etsitty.

Dr. Brugge.

STATEMENT OF DOUG BRUGGE

Dr. BRUGGE. Good morning, Chairman Waxman and members of the committee. My name is Doug Brugge. Just to give you some of my credentials, because I will be speaking as a technical witness: I have a Ph.D. in cellular and developmental biology from Harvard University and an M.S. in industrial hygiene from the Harvard School of Public Health. I am currently an associate professor in the Department of Public Health and Family Medicine at Tufts University School of Medicine. I also direct the Tufts Community Research Center.

I have over 20 academic publications about uranium and the Navajo people, including a 2006 book that I co-edited, entitled, "The Navajo People and Uranium Mining." I have focused on the Navajo situation with uranium because it amounts to such a large crisis for the Navajo Nation.

Appearing before this congressional hearing today reminds me of the long history of hearings beginning in the 1960's and continuing through the 1970's, 1980's and 1990's that sought and eventually achieved a semblance of compensation for Navajo and other uranium miners. I am deeply saddened by the fact that so little has been accomplished over those decades to eliminate the health hazards faced by the enormous quantities of uranium waste in the Navajo Nation. There has been too little research on the health impacts of uranium mining in Navajo communities. One study underway, for example, will mostly assess kidney disease, but not birth defects, cancer or neurological problems.

Today, as we begin the public process of addressing community exposures, I can only hope that the path for the Navajo communities is shorter than the one traveled by the uranium miners and their families.

I will now spend a few minutes describing the hazards faced by the Navajo people today. Clearly, uranium ore is a toxic brew of numerous, nasty, hazardous materials. Uranium itself is highly toxic and gives rise, as has been mentioned earlier, to a series of other radioactive decay elements that are found in raw, natural ore. Most significant among these are radium and thorium, both of which are highly radioactive. When radium decays, it produces radon gas, a highly potent toxicant. Because it is a gas and becomes airborne, when radon decays it transforms into a series of highly radioactive radon daughters that can lodge in the lungs.

The primary heavy metal toxicants in uranium ore, that is the chemical toxicants, include uranium itself and arsenic, as well as vanadium and manganese, among others. During the first phase of processing uranium, most of the uranium is removed, leaving behind mill tailings which retain most of the other toxic contaminants from the ore. This is what you have heard the Honorable Mr. Etsitty speaking about.

The milling of uranium is an industrial process that involves crushing and grinding of the rocks and the addition of acids and organic solvents to facilitate concentration and removal of uranium.

Hence, uranium mill tailings and mill tailing effluent are not only high radioactive, but also acutely hazardous.

The health effects of uranium and its associated radioactive decay products and the heavy metals in uranium ore have been studied extensively. Many of them are proven or near-proven to have causal links with health effects. I will list only a few of these. One is radon, which causes lung cancer, and in fact is the primary source of lung cancer among Navajo uranium miners. Two is uranium, which is a heavy metal that causes damage to the kidneys, as you have heard previously; there is also strong evidence that it causes birth defects and may cause changes to the bones as well. Three is radium, which causes bone cancer, cancer of the nasal sinuses and mastoid air cells and leukemia, among other things. And four is arsenic, which causes lung and skin cancer, as well as neurotoxicity, hyper-pigmentation and hyperkeratosis of the skin.

There may be many other negative health effects from exposure to uranium and its byproducts. In short, there is a clear causal link between uranium ore exposure and human health. The Navajo people, continually exposed to uranium and its byproducts, even today, face grave threats to their health.

I would like to conclude with some observations about the Navajo community of Church Rock, both historical and present day. Church Rock, as you have heard, is located outside of Gallup, NM, in the Navajo Nation. The Church Rock tailings spill, also as mentioned previously, is the largest release of radioactive waste in the history of the United States. This release was substantially larger than the release at Three Mile Island, which happened about 4 months before the release at Church Rock. It is interesting to me that this incident has been virtually ignored in the press and even in the scientific literature.

For the people in Church Rock and other Navajo communities contaminated for decades with uranium ore tailings, there are no good options. Too much harm has already been done. But there are ways we can gradually make things better, so that maybe the children and grandchildren of the Navajo uranium miners are not still grappling with this toxic legacy. A good start would be to provide sufficient resources to secure or remove contamination at these hazardous waste sites, and to do so in a manner that prevents additional exposure to nearby residents. Congress should fund the Navajo Nation and Federal health agencies to provide resources for health studies as well, among the tens of thousands of Navajo community members who live next to abandoned mines and mill sites.

I leave you to ponder a simple observation about this egregious situation. As terrible as the health effects that we know arise from toxins and uranium tailings, there are almost certainly additional ways that the health of the Navajo people living near uranium mill and waste sites has been affected. If we are to understand the full extent of this injustice, we will also need additional health studies.

Thank you.

[The prepared statement of Dr. Brugge follows:]

Testimony before the Committee on Oversight and Government Reform
Congress of the United States
House of Representatives
October 23, 2007
By Doug Brugge, PhD, MS

Good morning/afternoon Chairman Waxman and members of the committee. My name is Doug Brugge, I have a PhD in cellular and developmental biology from Harvard University and an MS in industrial hygiene from the Harvard School of Public Health. I am currently associate professor in the department of public health and family medicine at Tufts University School of Medicine. I also direct the Tufts Community Research Center. I have over 20 academic publications about uranium and the Navajo people, including a 2006 book that I co-authored, entitled The Navajo People and Uranium Mining. I have studied the Navajo people in part because they are facing a crisis in uranium contamination.

Appearing before this congressional hearing today reminds me of the long history of such hearings, beginning in the 1960s and continuing through the 1970s, 80s and 90s, that sought and eventually achieved a semblance of compensation for Navajo and other uranium miners. I am deeply saddened by the fact that so little has been accomplished over those decades to eliminate the health hazards faced by the enormous quantities of uranium waste on the Navajo reservation. There has been too little research on the health impacts of uranium mining in Navajo communities. The one study underway, for example, will mostly address kidney disease and not birth defects or cancer. Today as we begin the public process of addressing community exposures, I can only hope that the path is far shorter than the one traveled by the uranium miners and their families.

I will now spend a few moments describing the hazards faced by the Navajos today. Clearly, uranium ore is a toxic brew of numerous nasty hazardous materials. Uranium, itself highly toxic, gives rise to a series of other radioactive decay elements that are found in raw, natural ore. Most significant among these are radium and thorium, both of which are highly radioactive. When radium decays it produces radon gas, a potent toxicant. Because it is a gas that becomes

airborne, when radon decays it transforms into a series of highly radioactive "radon daughters" that can lodge in the lungs.

The primary heavy metal toxicants in uranium ore include uranium itself and arsenic, as well as vanadium and manganese. During the first phase of processing uranium, most of the uranium is removed, leaving behind mill tailings which retain most of the other toxic contaminants from the ore. The milling of uranium is an industrial process that involves crushing and grinding of the rock and the addition of acids and organic solvents to facilitate concentration and removal of the uranium. Hence, uranium mill tailings and mill tailings effluent are not only highly radioactive, but they are acutely hazardous.

The health effects of uranium and its associated radioactive decay products and heavy metals that rise to the level of proven or near-proven causal links include:

1) Radon, which causes lung cancer and in fact, it is the primary source of lung cancer among Navajo uranium miners;
2) Uranium, which as a heavy metal causes damage to the kidneys and birth defects ;
3) Radium, which causes bone cancer, cancer of the nasal sinuses and mastoid air cells and leukemia; and
4) Arsenic, which causes lung and skin cancer, as well as neurotoxicity, hyperpigmentation and hyperkeratosis of the skin.

There are may also be many other negative health effects from exposure to uranium and its byproducts. In short, there is a clear causal link between uranium exposure and human health. The Navajos continually exposed to uranium and its byproducts even today face grave threats to their health.

I would like to conclude with some observations about the Navajo community of Church Rock, both historical and present day. Church Rock is located outside of Gallup, New Mexico, in the Navajo Nation. The Church Rock tailings spill remains the largest industrial release of radioactive wastes in the history of the United States. In 1979, only months after the Three Mile

Island release, a dam holding back a tailings lagoon maintained by United Nuclear Corporation failed, sending 94 million gallons of radioactive and acidic wastewater and 1,100 tons of toxic and radioactive mill waste into the Puerco River. This release, which was substantially larger than the release at TMI, flowed into a low-income, largely Native American community. This incident has been virtually ignored in the press and scientific literature.

For the people in Church Rock and other Navajo communities contaminated for decades with uranium ore tailings there are no "good" options, too much harm has already been done. But there are ways that we can gradually make things better so that maybe the children and the grandchildren of the Navajo uranium miners are not still grappling with this toxic legacy. A good start would be to provide sufficient resources to secure or remove contamination at these hazardous waste sites and to do so in a manner that prevents additional exposure to nearby residents. And Congress must fund the Navajo Nation and federal health agencies to provide resources for health studies among the tens of thousands of Navajo community members who still live next to abandoned mines and-or who were exposed to uranium from the contaminated dusts brought home by their working relatives.

I leave you to ponder a simple observation about this egregious situation: As terrible as the health effects that we know arise from toxins in uranium tailings, there are almost certainly additional ways that the health of Navajo people living near uranium mill and mine waste has been affected. If we are to understand the full extent of this injustice, we will also need additional health studies.

Chairman WAXMAN. Thank you very much, Dr. Brugge.

Mr. King.

STATEMENT OF LARRY KING

Mr. KING. Good morning, honorable members of this committee, and honorable Chairman Waxman. [Greeting in native tongue.]

My name is Larry J. King. I am 50 years old. In the Navajo clan system, Edith Hood, who is sitting here next to me, is my sister. I was born and have lived all my life in a traditional Navajo community called Church Rock Chapter, which is located a few miles northeast of Gallup, NM. In the Church Rock area, we raise sheep and cattle in the traditional Navajo way. I still raise cattle on the land my father left to me and my two sisters.

Between 1975 and 1983, I worked for United Nuclear Corp. [UNC], as an underground mine surveyor and mill worker. I am currently employed as a water system technician. I have been active for my community on uranium issues for the last 10 years.

Church Rock and its neighboring communities of Pinedale, Coyote Canyon and Iyanbito have suffered widespread impacts of past uranium mining. As you have already heard, the biggest spill of radioactive waste in the United States occurred in our community July 16, 1979, only about 2 miles from where I live. The contaminated fluids that escaped from the UNC uranium mine tailings pond ran right through our property, in the Puerco River, where we watered our livestock. I remember the foul odor and the yellowish color of the fluids. I remember that an elderly woman was burned on her feet from the acid and the fluid when she waded in the stream while herding her sheep.

Many years later, when water lines were being installed in the bed of the Puerco River, I noticed the same odor and the same color in a layer about eight feet below the stream bed. To this day, I don't believe the contaminations from the spills have gone away. Our community also continues to suffer from the poisons left from the mining operations that began in the early 1950's. There are about 20 abandoned uranium facilities in the Church Rock area. More than half of those were developed by companies that sold uranium ore to the U.S. Atomic Energy Commission for use in the Nation's nuclear weapons program, and have not been cleaned up.

I think many of us knew in our hearts that we lived in a contaminated area, but it wasn't until 2003, when the Chapter started the Church Rock Uranium Monitoring Project [CRUMP], that we found out how bad the problem was, and still is, with the assistance of many outside organizations and the agencies which sample our air, water and land. I submitted a copy of a recent Power Point presentation that summarized many of the CRUMP findings. You should have that in your possession already.

Let me tell you about just two of those in the time I have today. The first is that the Old Churchrock Mine, which is located within a quarter mile of my home and the homes of my two sisters, remains highly contaminated and has never been properly cleaned up. In the CRUMP survey, which I was trained for and participated in, we found high levels of gamma radiation, up to 16 times what is considered normal for the area outside of the mine site,

even on my grazing land, which is immediately adjacent to the mine.

The Old Churchrock Mine was once operated by the Phillips Petroleum Co. and UNC. It is now occupied by Hydro Resources, Inc. [HRI], which has received a Nuclear Regulatory Commission license to build a uranium in situ leach mine there. Two years ago, the NRC ruled that the radiation from the site doesn't have to be included in the public dose calculations, that the wastes there are now part of "background" as though the Great Spirit had placed them there from the beginning of time. NRC said it doesn't regulate mine waste. I guess its mandate to protect the public health and safety just doesn't apply to us Navajos.

The second major finding of our CRUMP study was that the soils around some of the homes of my relatives in the Red Water Pond Road area, where Edith Hood lives, were also contaminated with high gamma radiation levels and with uranium in amounts of up to 30 times what is considered natural. Two abandoned mines lie on both sides of this community. One, the Northeast Churchrock Mine, was operated by UNC and is now owned by General Electric Co. A Navajo residence is about 500 feet away.

As Edith Hood will tell you in her testimony, there is much sickness among the residents of her community: cancers, kidney disease, and miscarriages. We believe that all these illnesses are related to the past mining and milling operation, but it is difficult to prove because no comprehensive health study has ever been done in our community. My own family suffered during the uranium era. One of my uncles and his in-laws were all killed when their car collided with a uranium ore truck on New Mexico State Road 566, about a mile south of the UNC mill in 1975. Two years later, my brother was killed in a head-on collision with a uranium ore truck at the gate to the old Churchrock Mine.

As a former underground mine surveyor for UNC, I often worry about my own health. I am not, and never have been, a smoker, but in the past year, I have developed breathing difficulties. My doctors can't find anything wrong with me—yet. I don't have enough time to tell you how bad the conditions were for the workers at UNC and how the company was not concerned about the safety of its employees. I will tell you that as a kid, I played on the big piles of ore and mine waste across the road from our home, unaware of the dangers.

On behalf of my community and my family, I beg that you do something to end this horrible experiment that the nuclear industry and the U.S. Government have been carrying out on the health of the Navajo people. I beg you to support our Navajo law and order the NRC to deny permits to companies that want to mine uranium in the Navajo communities again. Many of our elderly do not speak English, but we all know that what is happening is wrong. Please help us see that justice is done for our people and our communities.

Thank you.

[The prepared statement of Mr. King follows:]

TESTIMONY OF LARRY KING

Good morning honorable members of this Committee and honorable Chairman Waxman.

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I think many of us knew in our hearts that we lived in a contaminated area. But it wasn't until 2003 when the Chapter started the Church Rock Uranium Monitoring Project, or CRUMP, that we found out how bad the problem was, and still is. With the assistance of many outside organizations and agencies, we sampled our air, water, and land. I submit for your record a copy of a recent PowerPoint presentation that summarizes many of the CRUMP findings. Let me tell you about just two of them in the time I have today.

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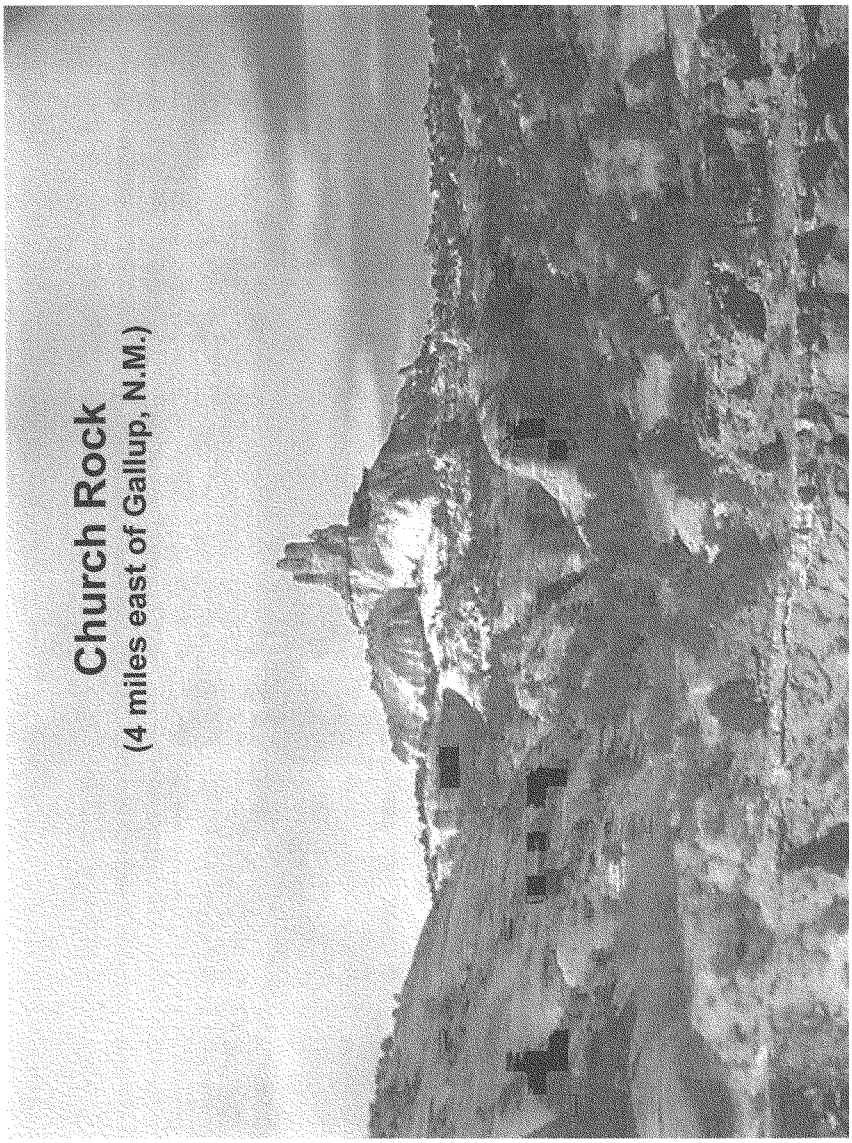
Church Rock Uranium Monitoring Project

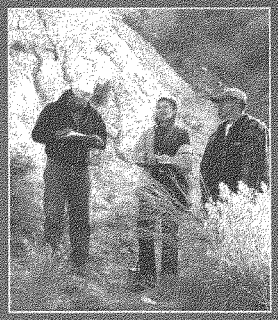
Larry J. King
Resident, Churchrock Chapter,
Navajo Nation, New Mexico

USEPA Community Involvement Conference, June 2007


Church Rock
(4 miles east of Gallup, N.M.)

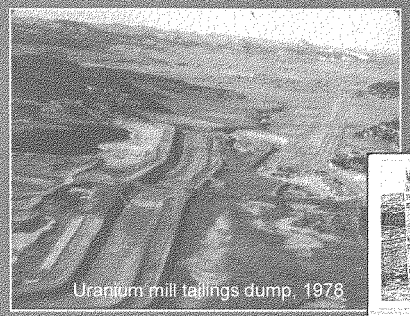
My Story (briefly)

- Lifelong resident of Churchrock Chapter
- Played on uranium waste piles as kid
- Worked in underground mine for 7 years in 1970s-1980s
- Home, grazing land next to abandoned uranium mine, site of proposed new mining
- Water, sewer technician for Indian Health Service
- Community liaison for CRUMP, involved in assessments (photos at right)
- Joined Eastern Navajo Diné Against Uranium Mining in 1997 to oppose proposed *in situ* leach mining on my grazing lands

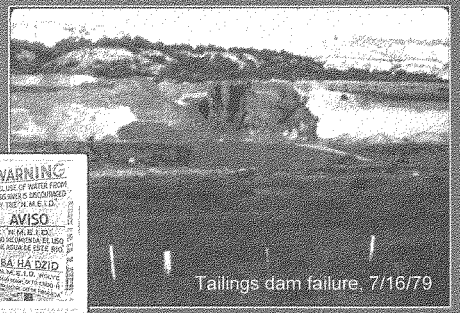


Our Community's Story:

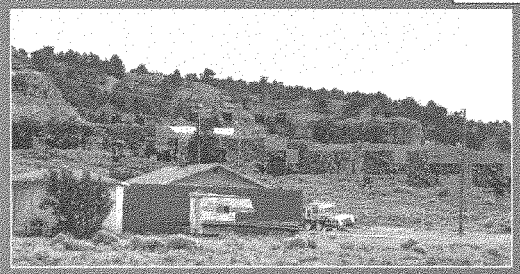
50 Years of Impacts from Uranium Mining



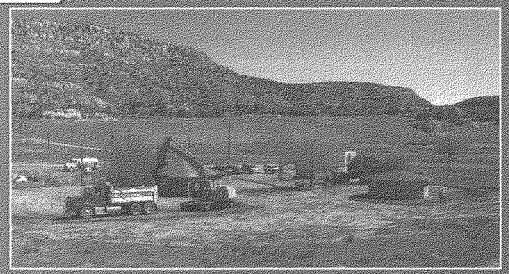
Uranium mill tailings dump, 1978



Tailings dam failure, 7/16/79



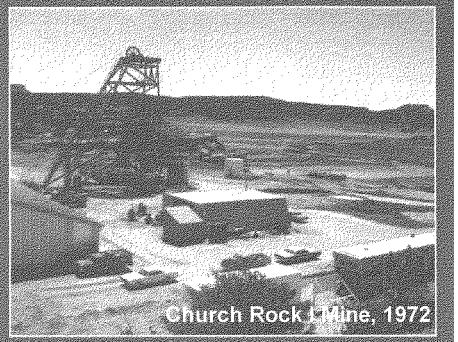
Navajo home next to uranium mine waste dump, 2005



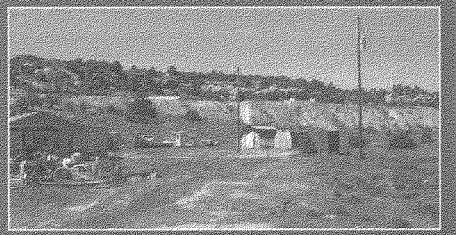
Radium-contaminated soil removal, Red Water Pond Road, 2007; partially reclaimed abandoned mine in rear

Church Rock Mining History (cont'd)

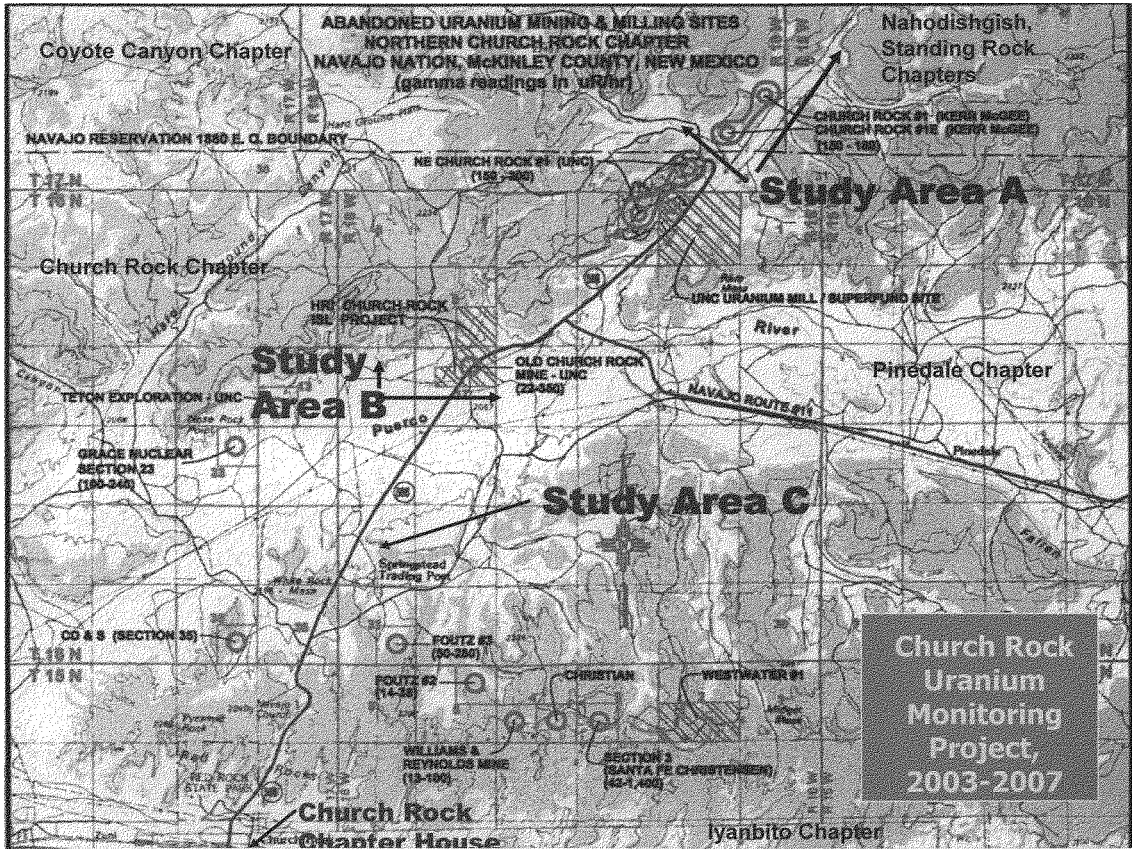
- Active mining, early-'50s thru mid-'80s
- 19 abandoned mines, 1 closed uranium mill in area (see map, next slide)
- '79 tailings dam failure — U.S.'s largest release, by volume, of radioactive waste
- Mine dewatering for 20 years
- Livestock studies of '80s —
  - uptake of radionuclides in muscle, organs of sheep, cattle
- Little environmental monitoring since
- **No health studies <u>ever conducted</u>**
- New ISL mining proposed in Churchrock, Crownpoint chapters



Church Rock I Mine, 1972



Unreclaimed mine waste dump next to residence, 2007


ABANDONED URANIUM MINING & MILLING SITES
NORTHERN CHURCH ROCK CHAPTER
NAVAJO NATION, McKINLEY COUNTY, NEW MEXICO
(gamma readings in uR/hr)
Coyote Canyon Chapter
Nahodishgish, Standing Rock Chapters
NAVAJO RESERVATION 1880 E. O. BOUNDARY
NE CHURCH ROCK #1 (UNC)
Study Area A
Church Rock Chapter
UNC URANIUM MILL / SUPERFUND SITE
HRI CHURCH ROCK ISL PROJECT
River
Study Area B
OLD CHURCH ROCK MINE - UNC
Pinedale Chapter
NAVAJO ROUTE #11
TETON EXPLORATION - UNC
GRACE NUCLEAR SECTION 23
Study Area C
Springstead Trading Post
CD & S (SECTION 35)
FOUTZ #3
FOUTZ #2
CHRISTIAN
WESTWATER #1
WILLIAMS & REYNOLDS MINE
SECTION 2 (SANTA FE CHRISTENSEN)
Church Rock Chapter House
Iyanbito Chapter
Church Rock Uranium Monitoring Project, 2003-2007

CRUMP History

- Church Rock Uranium Monitoring Project (CRUMP) formed in 2003 to assess impacts of past uranium mining in community
- Churchrock Chapter resolutions adopted opposing new mining, requesting environmental, health studies (2000, 2003)
- 900-home housing project proposed (2001)
- Environmental data needed for community planning, decision-making
- MTA-Fund grants (2003, 2004), plus in-kind support from community members, tribal, state, federal agencies, universities
- Grant report to RESOLVE, Inc., 2007

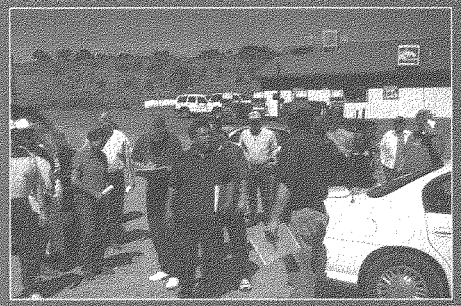
Former Churchrock Chapter CSC Edward Carlisle (top); EH training 12/3/02 (center); CRUMP meeting, 6/24/03

CRUMP Goals

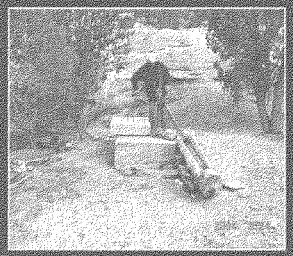
- Assess contaminants in water, on land, in air in residential areas near abandoned uranium mines
  - Establish human exposures for future health studies
- Train, involve local people in assessments
- Ensure community oversight of mine cleanup
- Educate, report findings

CRUMP Collaborators

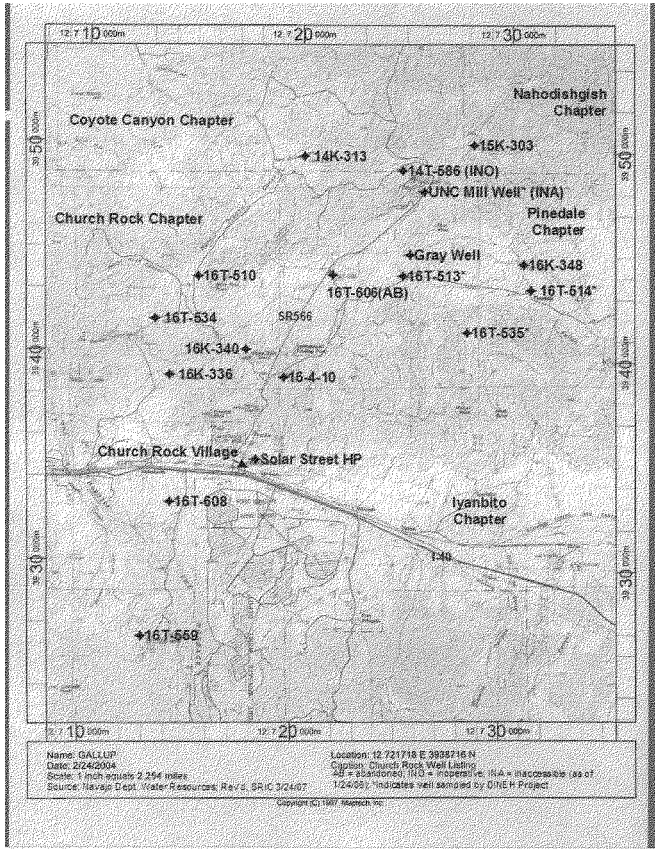
- Churchrock Chapter, NN
- Diné College UEP
- Navajo AML, Navajo EPA, Navajo Dept. Water Resources
- NM Environment Department
- Southwest Research & Information Center
- TAMS Center-NAU/ITEP
- UNM/CEHP
- USEPA-9, Las Vegas Lab



Water Quality Assessment



- 1999 survey: >80% CR residents haul water even when connected to public water supply system
- Water is hauled for all uses: human consumption, domestic, livestock
- Tested for general chemistry, heavy metals, radionuclides
  - no testing for bacteria, solvents, petroleum products



Water Quality Assessment (cont'd)

- Focused on "unregulated" water sources
  - wells, springs not regularly tested, treated for safety
- 9 in Church Rock Chapter
- 2 in Coyote Canyon
- 5 in Pinedale
- 1 in Nahodishdish (Dalton Pass)

Presentation of Water Quality Results:

"Red light", "Yellow caution", "Green light" use recommendations

Well or Water Source	Pollutants Exceeding NPDWS	Pollutants Exceeding NSDWS	2005 Status	Use Recommendations		
				Human	Domestic	Livestock
Annie Grey	Uranium (1/2 std.)	Sulfate, TDS	OP	○	○	▲
Solar St.	Iron	pH, Sulfate, TDS	INOP (2004)	○	▲	○
14K-313	Iron	Sulfate, TDS, Tot. Hardness	OP	○	○	○
14T-586	#Arsenic, Iron, #Selenium	Sulfate, TDS, Tot. Hardness	ABD (2003)	○	○	▲
15K-303	#Arsenic, Iron, Selenium	Sulfate, TDS	OP	○	○	▲
16-4-10	Gross alpha, Uranium		OP-LS only	○	○	▲
				NO HUMAN USE ADVISORY 2003		
16K-335	Iron	TDS	OP	▲	▲	○
16K-346	#Arsenic, Iron	Sulfate, TDS, Tot. Hardness	OP	○	○	▲
16T-348		pH, TDS	OP	▲	○	○
16T-518	Arsenic	Not tested	INOP (2005)	○	○	▲
16T-513*	Iron	Sulfate, TDS**	OP	○	▲	▲
16T-514*		pH, TDS	OP	▲	○	○
16T-534	#Arsenic, Iron, #Selenium	pH, SO_4, TDS	OP	○	▲	▲
16T-535*	Iron	Fluoride, pH	OP	▲	▲	○
16T-559	#Selenium	PH	OP	▲	○	○
16T-606	Gross alpha, Iron, Radium	Sulfate, TDS, Tot. Hardness	ABD (2005)	○	○	○
16T-608	#Selenium	Chloride, pH, TDS	OP	○	○	▲

*Notes: * Wells sampled by OWEH Project, 2005-2006. ** TDS estimated from conductivity values (2005 = 5cm – 800 mg/l). # Indicates average of two or more values exceeds NPDWS. Abbreviations: ABD = abandoned; INOP = inoperative; LS = livestock-only use; OP = operating.*

Summary of Water Quality Findings

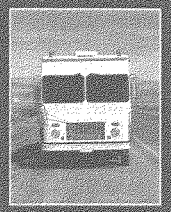
- Water quality results compared with USEPA's national primary and secondary drinking water standards (NPDWS, NSDWS)
  - Identical to Navajo Nation Safe Drinking Water standards
- None of 17 water sources tested met all primary and secondary standards, and could not be recommended for human consumption
  - 3 of 17 recommended for domestic uses (cooking, bathing, etc.)
- 1 well (16T-606) exceeded NPDWA standard for radium-226
  - Windmill located <0.5 mile from abandoned mine, completed in same formation;
  - Abandoned in 2005 at request of Churchrock Chapter
- 1 well (16-4-10) exceeded NPDWA standard for uranium
  - Well is operable, but use is discouraged; local residents given health advisory
- 7 water sources suitable for livestock, another 9 are marginal for livestock watering
- Avoid human use of unregulated water sources

Gamma Radiation Monitoring

- 20+ people from Churchrock, Navajo Nation, SRIC, TAMS Center, USEPA participated in surface gamma surveys
  - community members trained in instrument calibration, field use, data transcription (left)
- Gamma radiation levels measured with hand-held instruments (middle and bottom left), USEPA "Scanner Van" (below) in October 2003

Instrumentation:

- Hand-held: Ludlum-19 gamma detectors, lent by NNEPA-Superfund, Navajo AML
- Scanner Van: 2 Sodium-Iodide (NaI) detectors that "scan" up to 200' from truck; provided by USEPA Las Vegas lab



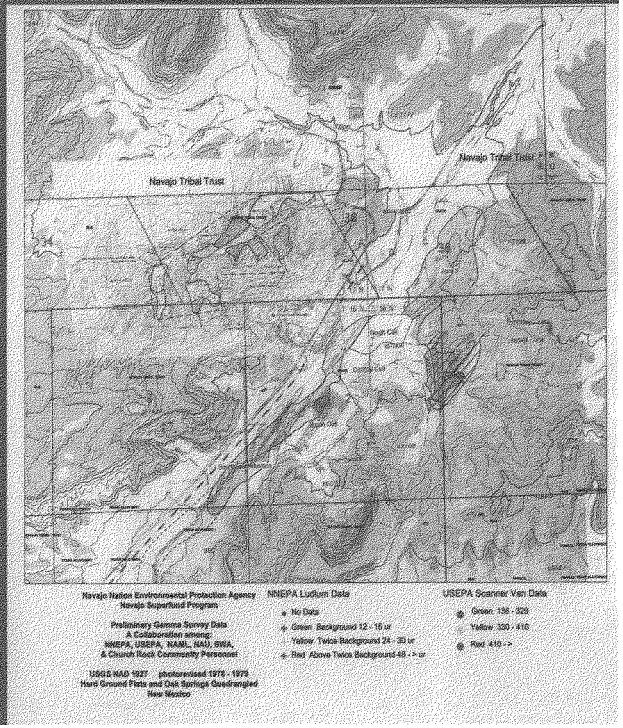
Summary of Gamma Survey Results

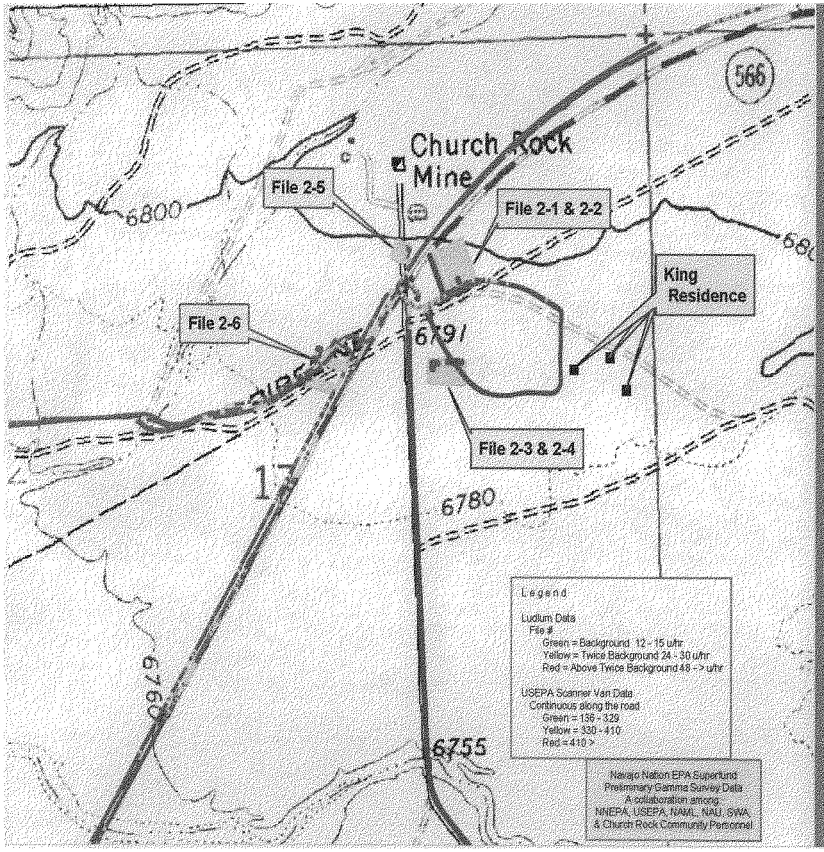
"Background," or normal, gamma rates established from Scanner Van, hand-held measurements

- 11-13 uR/hr

Gamma rates significantly elevated over background along State Rt. 566 from Old Churchrock Mine, past UNC uranium mill, to Northeast Church Rock mine (right)

Surface radiation levels significantly above background detected near residences in Study Areas A and B





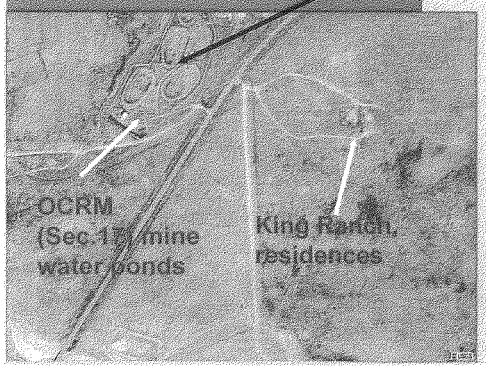
Study Area B: Offsite transport of contaminated mine waste

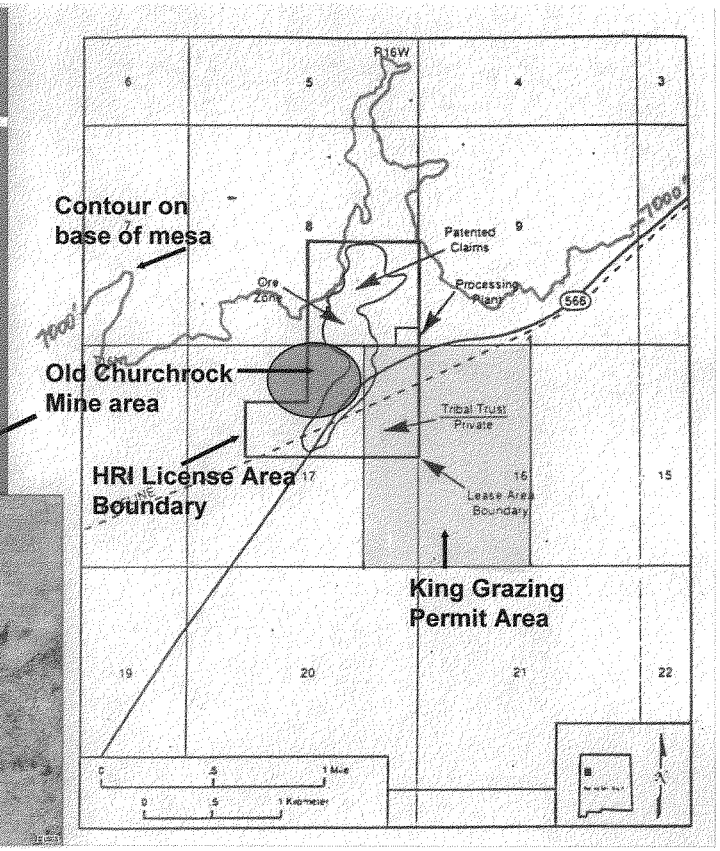
Gamma rates >2x back-ground (shown in red) indicate transport of residual mine waste from Old Church Rock Mine onto King Ranch land

June 20, 2007

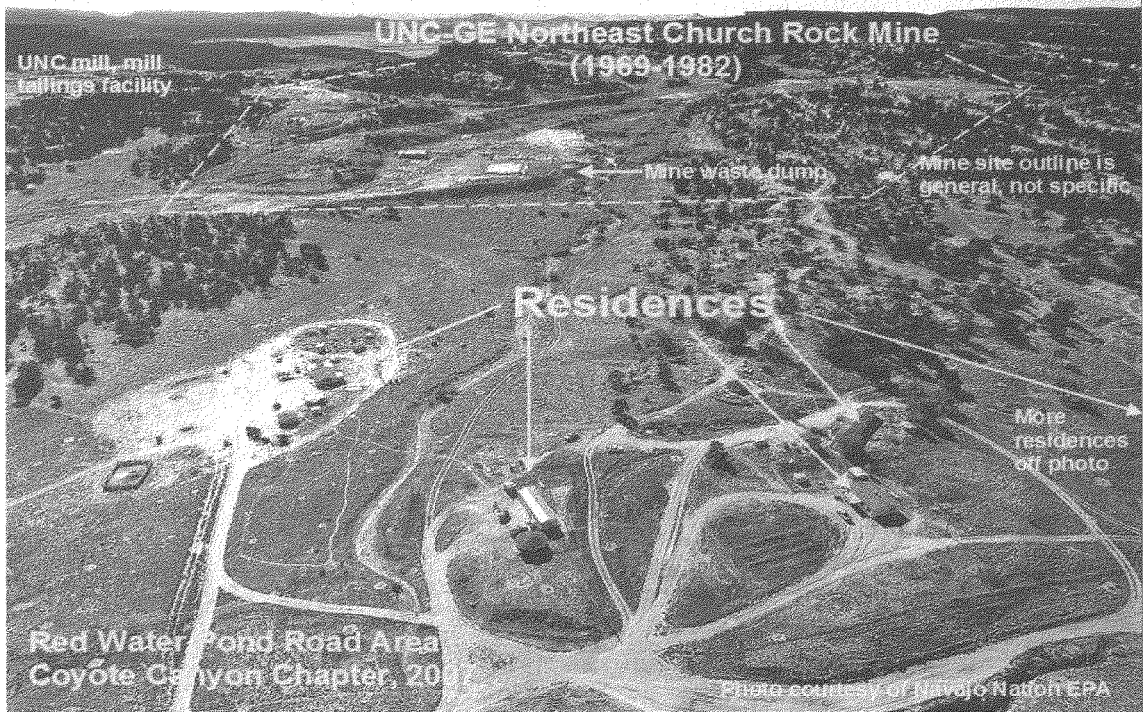
Environmental Exposures

Old Church Rock Mine (shaded oval, right; aerial below) operated '60-'62, '78-'82; King Ranch lands in yellow shaded area

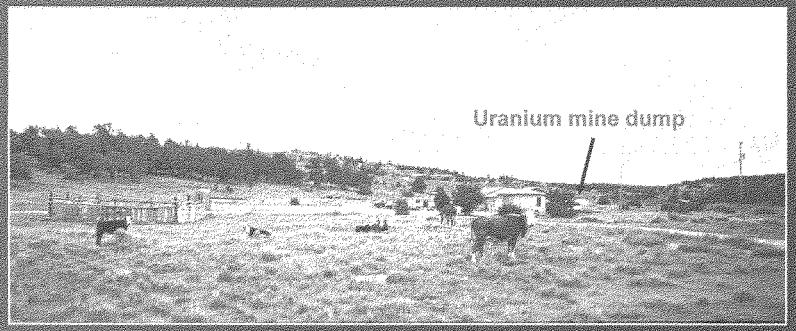




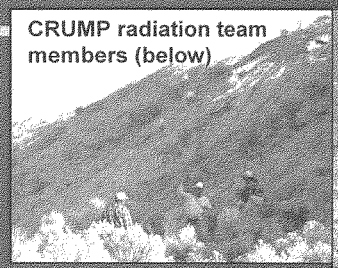
Northeast Church Rock Mine Area (Study Area A1)

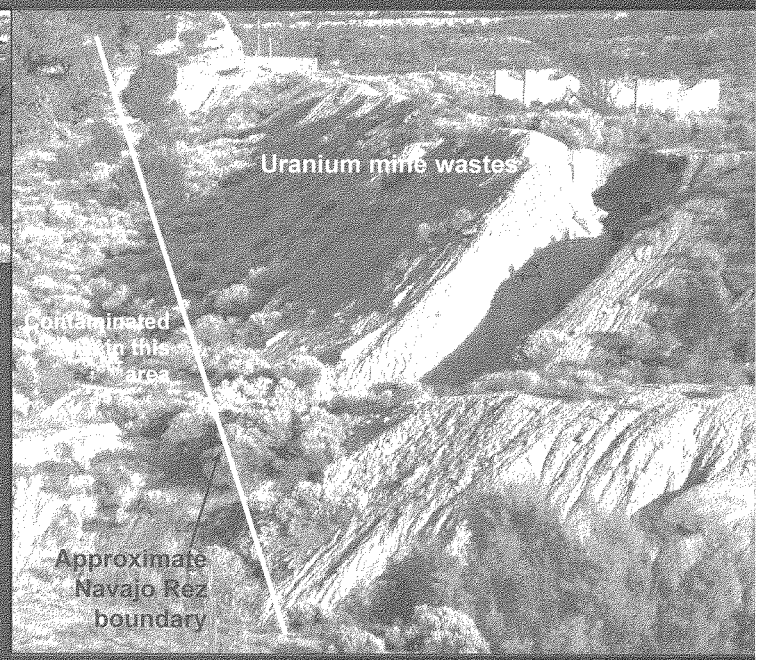


Chronic Environmental Exposures, Red Water Pond Road area



- 14 Navajo homes located within 0.5 mile of two abandoned mines
- Gamma radiation levels 9x to 12x greater than background in sands in the arroyo that received mine dewatering effluents for nearly 20 years
- *Local kids played in sand having gamma levels 5 to 10x background!*
- Cattle, sheep routinely grazed on and near mines, drank water discharged from underground mines; local people consumed livestock



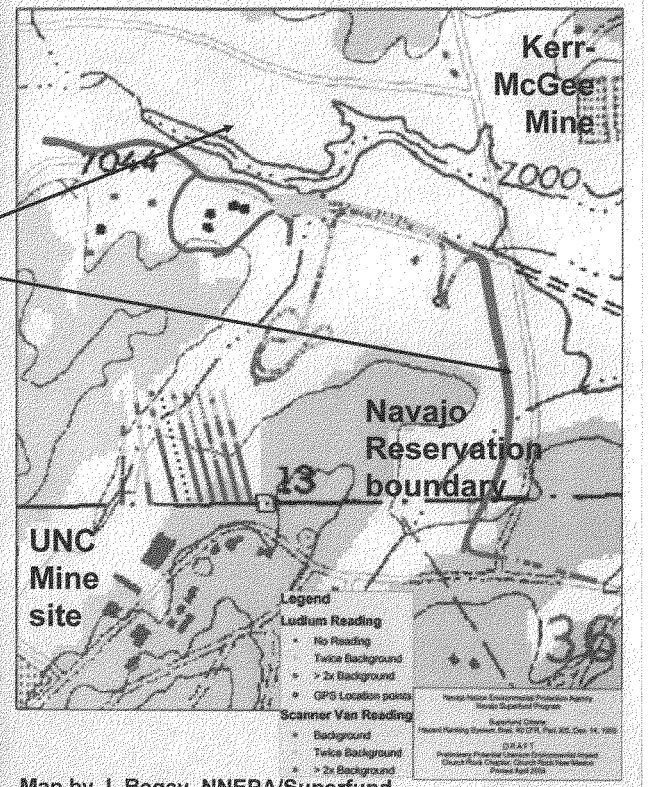


Gamma radiation levels at the base of mine-waste pile ranged up to 20x background at the Reservation line; soils contained elevated U

Study Area A1: Map of Gamma Radiation Levels

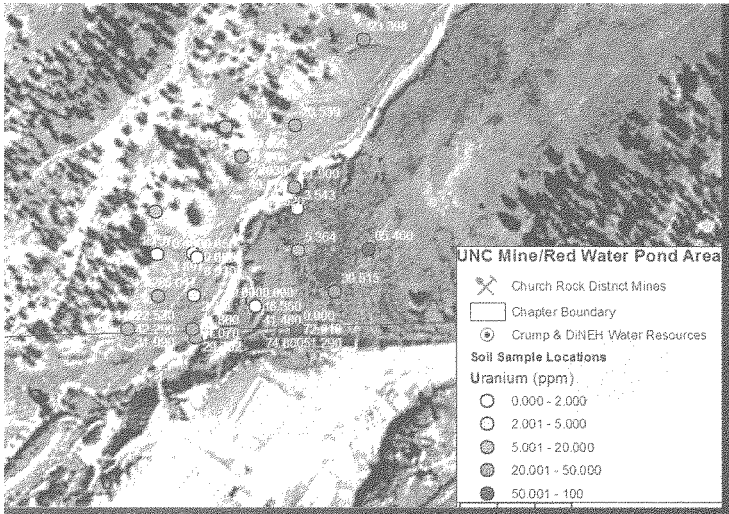
Red Water Pond Road

- 14 Navajo residences sandwiched between two large abandoned uranium mines
- Gamma radiation levels >2x background shown by red dots and lines



Map by J. Begay, NNEPA/Superfund

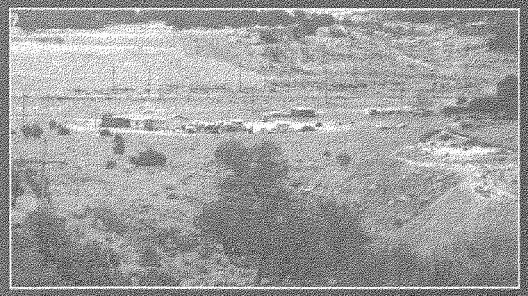
Soil Sampling for Uranium, Heavy Metals in Study Area A1



Soil samples collected north of NECR Mine waste dump by Stanford Univ. student C. George, December 2004 and August 2005

- 74% (37 of 50) samples > 5 ppm, which is upper limit of "background"
- 58% (29 of 50) samples > 16 ppm, which is USEPA's Preliminary Remediation Goal for cleanup of contaminated soils around residences
- Uranium levels *increased* with depth in soil column
- Uranium levels *decreased* with distance from mine waste dump

Reclamation, Regulatory Issues



- CRUMP gamma surveys, uranium-in-soil studies prompted responses by USEPA, NNEPA
- May 2007: USEPA removed nearly 6,000 cubic yards of radium-contaminated soils from around residences (upper left)
  - Soil removal may not be sufficient for long-term protection of public health
- 2007-2009: Reclamation of NECR mine site (lower left)
  - Goal of community, Navajo Nation is complete removal of mine wastes from tribal trust land

Indoor Radon Monitoring

- 7-day radon canisters placed in 150 homes in Feb.-March '04; valid results from 143 homes
  - 36 homes (~25%) had Rn levels greater than the USEPA "action level" of 4 pCi/l-air
  - Action level carries lifetime lung cancer risk equivalent to smoking 1-2 packs of cigarettes per day
  - 29 homes (~20%) had Rn 2-4 pCi/l
- Estimated 80% of homes with high Rn located on outcrop of uranium-bearing rock formation
- Mitigation measures shared with residents; retests anticipated in 2007

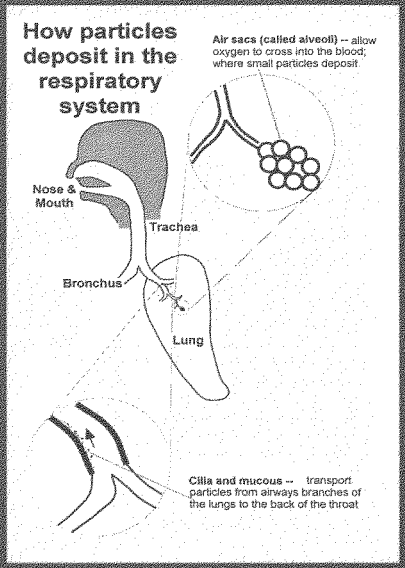
John Plummer, NNEPA Radon Program, shows Pipeline Road resident the charcoal inside a radon canister

Radon Facts:

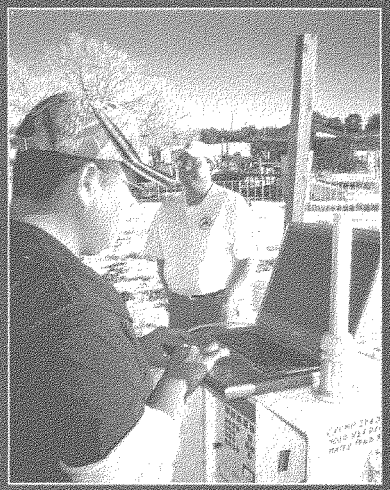
- Decay product of naturally occurring uranium (U-238)
- Released from soils, rocks
- Second-leading cause of lung cancer in U.S., according to USEPA

Air Particulate Monitoring

- Tiny dust particles irritate lungs, make breathing problems worse; can lead to more severe respiratory disease
- Dust may be contaminated with radioactive elements that occur naturally or from mines, mills
- People living near uranium mine wastes more likely to be exposed



Air Particulate Monitoring (cont'd)



- Monitoring began May 2006
- Two sites: Red Water Pond Road, Pipeline Canyon Road close to residences, abandoned mines
- Compare dust levels with federal particulate limits
  - Thru Feb. 2007, highest 24-hr concentration was 15% of national air quality standard for particulate matter
- Requesting USEPA-LV lab analyze 10% of filters for radionuclides
- Develop, validate predictive model of inhalation exposure

CRUMP Recommendations

- Create, fund federal abandoned uranium mines cleanup program
- Develop, expedite comprehensive health studies in uranium-impacted Native American communities
- Navajo Nation: Develop its own regulatory programs for addressing cleanup of AUMs, conducting health studies
- Replace contaminated wells with new wells that tap high-quality aquifer in Eastern Navajo Agency
- Remove all mine wastes from Northeast Church Rock Mine site, which is tribal trust land
- Conduct radiation surveys needed in residential areas affected by AUMs in at least 13 chapters of Eastern Navajo Agency
- Retest homes with high radon levels in Churchrock area
- Continue, expand air monitoring in residential areas near mines

Chairman WAXMAN. Thank you very much.
Ms. Hood.

STATEMENT OF EDITH HOOD

Ms. HOOD. Good morning, Mr. Chairman and everyone who is here.

There is no place like Dinetah, a place of the Naabanis. But if you are not from the Rez, you don't know the white dawn of morning, you don't know the clear blue sky, an autumn twilight and the twinkling stars of the night. Where I am from, there are pinon-covered mesas, our beautiful and sacred mountains, sandy deserts. Where I am from, in a place called Red Water Pond, there is also yellowcake, uranium waste and sickness. I live about 12 miles north of Church Rock on the Navajo Reservation, between two abandoned mine sites.

I grew up with cultural teachings of a loving grandfather, a medicine man, a traditional leader. He taught us to respect Mother Earth, for she gives all the necessities of life. There is a Navajo concept called hozho. Hozho is how we live our lives. It means balance, beauty and harmony between us, the Five-Finger people, and nature. When this balance is disturbed, our way of life, our health and our well-being all suffer. The uranium contamination and mining wastes at my home continue to disrupt hozho.

I think it was in the 1960's, when I was only a teenager that strangers arrived. I remember Grandma running to stop them from making roads into the wooded areas. The stakes she drove into the ground did not keep them out. No one ever told her what was happening. The exploratory drilling people had arrived. There was no respect for people living there, and certainly no respect for Mother Earth.

Today, as I pray in the early morning dawn, there is a man-made mesa of radioactive and hazardous waste about a quarter of a mile northeast of my residence. In the other direction, to the south, about 1,000 feet away, is another mound of uranium mining waste. At least the one to the northeast has some dirt on top. The one to the south has been left uncovered since it was created in 1968, and since the company stopped mining 25 years ago. From my front yard, I can see these waste piles. This waste seems to be piled everywhere. There are mountains of it, 50, 60 feet high. These are the tailings, or the muck of pulverized uranium ore. I don't know what else is in them.

They told us it is low-grade, that most of the uranium has been extracted from it. This stuff is spread by wind and water. We breathe it and live with it every day. Our community continues to live under these conditions. The mining companies have gone, but there is still equipment and tools, concrete blocks, pieces of protective clothing, brattice cloths, bolts, mesh wire and the vet bags sticking out of the earth, scattered about.

My family and relatives live among these sites. Children still play in the fields and ditches among the rocky mesas and the arroyo that once carried contaminated mine water. The sheep still get through the fence that is supposed to barricade these uranium mine tailings, and yet we still eat the sheep for mutton.

These places are still contaminated. I know because I learned how to survey the ground for radiation when our community got involved in a monitoring program in my area 4 years ago. I know because the Government people told us it was. I watched as the EPA people dug up the contaminated soils from around the home of my sister and other relatives this May.

I worked at the Quivira, also known as the Kerr McGee Mine, 2,000 feet underground with a geology unit. I was diagnosed with lymphoma in the summer of 2006. My father has pulmonary fibrosis. My mother was diagnosed with stomach cancer. My grandmother and grandfather died with lung cancer. Many of my family members and neighbors are sick, but we don't know from what.

Today there is talk of opening new mines. How can they open new mines when we haven't even addressed the impacts and environmental damage of the old ones? Mining has already contaminated the water, the plants and the air. People are sick and dying all around us.

Waste is seeping into the ground and may have already reached the underground water supply. I think about the shaft and vent holes that brought out exhaust from underground, where they cemented and sealed. If so, was the work done properly? If not, could there be poisonous gases escaping from these vents? Is the shaft acting as a passageway to the groundwater?

We need your help to clean up the mess that the mining companies and the U.S. Government have burdened us with. We need help to stop mining companies from coming in and making new ones. We need to restore hozho, so that we may live in balance and harmony with each other and nature, as Navajo people and as Dine.

[The prepared statement of Ms. Hood follows:]

Draft Testimony of Edith Hood

"Where I'm from…"

There is no place like *Dinétah*, a place of the *Naabanis*. But if you are not from the Rez, you don't know the white dawn of morning, you don't know the clear blue sky, an autumn twilight and the twinkling stars of the night. Where I'm from, there are pinon-covered mesas, our beautiful and sacred mountains, sandy deserts. Where I'm from, in a placed called Red Water Pond Road, there is also yellowcake, uranium waste, and sickness. I live about 12 miles north of Church Rock on the Navajo Reservation, between two abandoned mine sites.

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Today, there is talk of opening new mines. How can they open new mines when we haven't even addressed the health impacts and environmental damage of the old mines? Mining has already contaminated the water, the plants, and the air. People are sick and dying all around us.

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new mess. We need to restore *Hózh=* so that we may live in balance and harmony with each other and nature as Navajo people, as *Diné*.

Chairman WAXMAN. Thank you very much.
Mr. Harrison.

STATEMENT OF PHIL HARRISON

Mr. HARRISON. Good morning, honorable members of this committee and Honorable Chairman Waxman.

My name is Phil Harrison, and I reside in Red Valley, AZ. I am 57 years old, and an enrolled member of the Navajo Nation, a veteran of the U.S. Armed Forces and an elected delegate to the 21st Navajo Nation Council.

I am not here today as an official representative of the Navajo Government. I am here as a private citizen, a proud citizen of the Navajo Nation and a proud citizen of the State of Arizona, and a proud citizen of the United States of America. I am here to tell a story. In one sense, it is my story. But in a broader sense, it is a story of my people.

I am also here to look forward, not backward, and to tell you what I think needs to be done to assist my people and my land in recovering from the devastation caused by short-sighted and in some cases mean-spirited people who put their own private interests first and ignore the fact that their choices and decisions would result in an inhumane experiment being conducted on indigenous people.

I grew up in the uranium mining camps. I drank uranium-contaminated water from those mines. We washed our clothes in uranium-contaminated water. I watched children going into the mines and playing on the waste piles. We made our coffee with the uranium-contaminated water. In all likelihood, I have continued to drink uranium-contaminated water through the years.

For example, there are two wells in Cove, AZ, near where I live. Both tested positive for uranium and other radionucleides. One of the wells was closed by Indian Health Service, but with the other, all they did was blend the water with water from another source and tell us the problem was resolved.

My father started working in the uranium mines in about 1950. I worked in the uranium mine in the summer of 1969. I saw cisterns in the mines and watched miners drink three to four cups of water a day from the mine.

My little brother, Herman James Harrison, died of a stomach ailment at the age of 6 months. He drank the contaminated water. Please realize when I tell you about uranium-contaminated water, we are not just talking about a situation that occurred 30, 40 or 50 years ago. We are talking about a situation that is occurring today in places like Tuba City, AZ and other places throughout Navajo Indian Country.

The experiment on our health and welfare being conducted with the complicity of the U.S. Government continues. We are an indigenous people. We raise sheep and cattle. We drink water where we find it, and the sad story is that there is, in all likelihood, plenty of uranium-contaminated water to be found on our land. I know many people suffering from kidney problems, and I wonder if they are drinking contaminated water.

The Navajo people revere Mother Earth as sacred within a highly spiritual context. So when uranium mining occurs, it is consid-

ered ripping out the guts of Mother Earth. For the Navajo people, sacred sites are the foundation of all our beliefs and practices, communing with higher spiritual powers, because they represent the presence of the sacredness in our lives. It properly informs us that we are not greater than nature and that we have a responsibility to the rest of the natural world that transcends beyond mere human desires. The more we destroy our Earth, we shall have to learn a bitter lesson in the future.

My father died of lung cancer in 1971 at the age of 46. My cousin's father, also a mine worker, died of lung cancer at the age of 42. All my brothers and sisters have thyroid problems and disorders. They did not work in the mines, but they grew up in places around contamination. I had scarring on my left lung in 1999 and my kidneys failed. I was on dialysis until 2001, and I received a kidney transplant from my sister. My story is not unusual. I only worked in the mines for a few months, but I have lived in the uranium mine waste land all my life. This is the story of my people, a people whose patriotism and loyalty to the United States of America is unparalleled. Code Talkers are finally being recognized in the movies and the newspapers for the heroes that they are. Yet I have known some of these very same Code Talkers who have suffered and died from diseases caused by continued experiments on my people. When will this experiment end?

I don't know what will happen next to me. I suffer from a skin disorder that I have been told is connected with exposure to uranium. I don't know what if anything will happen as a result of the scarring on my lung. I consider it to be very lucky to be here today, and in one sense, I consider myself to be in great shape for the shape I am in.

Having said all this, I believe that I lead my life looking forward and not backward. You have the power to change things. You have the power to end this tragic experiment. Here are some of the steps that you can take, starting today, to bring life in what we call Dine Bikeyeah back into harmony. And harmony, or hozho, is perhaps the most central concept in our view of the world.

You can support the proposed amendments to the Radiation Exposure Compensation Act of 2000 as set forth in the exhibit to be submitted with my testimony. You can remove the illogical barriers to provisions of compensation to former Navajo uranium workers and their families. For 65 years, since 1942, Navajo men, women and children have been subject to the catastrophic health effects of exposure to uranium mining and milling and the effects of the downwind exposure to nuclear test sites. This has benefited the United States, but has been a tragedy to the Navajo Spirit. It is too late to help those like my father who have died from this devious exposure. Apologies are appreciated; however an apology is hollow without just compensation. Please change the laws to allow justice for the Navajo people. You can also support the measures set forth in the testimony of our Resources Committee chairperson, George Arthur.

It has been about 25 years since the last mine closed. My people should not have to wait another 25 years for the Federal Government to accept the responsibility that it should have accepted many years ago.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Harrison follows:]

TESTIMONY OF PHIL HARRISON

Good morning honorable members of this Committee and honorable Chairman Waxman.

My name is Phil Harrison. I'm fifty years old, an enrolled member of the Navajo Nation, a veteran of the United States Armed Forces and an elected delegate to the Navajo Nation Council. I am not here today as an official representative of the Navajo government. I'm here as a private citizen, a proud citizen of the Navajo Nation, a proud citizen of the State of Arizona and a proud citizen of the United States of America.

I'm here to tell a story. In one sense it's my story. But, in a broader sense it's the story of my people. I'm also here to look forward, not backward, and to tell you what I think needs to be done to assist my people and my land in recovering from the devastation caused by short-sighted, and, in some cases, mean spirited people who put their own private interests first and ignored the fact that their choices and decisions would result in an inhumane experiment being conducted on an indigenous people.

I grew up in uranium mining camps. I drank uranium contaminated water from those mines. We washed our clothes in uranium contaminated water. I watched children going into the mines and playing on the waste piles. We made our coffee with the uranium contaminated water. In all likelihood I've continued to drink uranium contaminated water through the years.

There were two wells in Cove Arizona near where I live. Both tested positive for uranium and other radio nuclides. One of the wells was closed by IHS but with the other all they did was blend the water with water from another source and tell us the problem was solved. My father started working in the uranium mines in about 1950. I worked in

a uranium mine in the summer of 1969. I saw cisterns in the mines and watched miners drink three or four cups a day of water from the mine.

My little brother, Herman James Harrison, died of a stomach ailment at the age of six months. He drank the uranium contaminated water. Please realize when I tell you about uranium contaminated water we're not just talking about a situation that occurred thirty, forty or fifty years ago. We're talking about a situation that is occurring today in places like Tuba City, Arizona and other places throughout Navajo Indian Country. The experiment on our health and welfare, being conducted with the complicity of the United States government, continues. We are an indigenous people. We raise sheep and cattle. We drink water where we find it and the sad story is that there is, in all likelihood, plenty of uranium contaminated water to be found on our land. I know many people suffering from kidney problems and I wonder if they're drinking uranium contaminated water.

The Navajo people revere Mother Earth (land) as sacred within a highly spiritual context. So, when uranium mining occurs, it's considered ripping out the guts of Mother Earth. For the Navajo people, sacred sites are the foundation of all our beliefs and practices (communing with higher spiritual powers) because they represent the presence of the sacredness in our lives. It properly informs us that we are not greater than nature and that we have a responsibility to the rest of the natural world that transcends beyond our mere human desires. The more we destroy our planetary nest, we shall have to learn a bitter lesson in the future.

My father died of lung cancer in 1971 at the age of 46. My cousin's father, also a mine worker, died of lung cancer at the age of 42. All of my brothers and sisters have thyroid problems and disorders. They didn't work in the mines but they grew up in areas

contaminated by the mine wastes. I have scarring on my left lung. In 1999 my kidneys failed and I was on dialysis until 2001 when I received a kidney transplant from my sister. My story is not unusual. I only worked in the mines for a few months but I've lived in a uranium mine waste contaminated land all my life. This is the story of my people, a people whose patriotism and loyalty to the United States of America is unparalleled. Code Talkers are finally being recognized in the movies and the newspapers for the heroes that they were. Yet, I've known some of these very Code Talkers who have suffered and died from diseases caused by this continuing experiment on my people. When will this experiment end?

I don't know what will happen next to me. I suffer from a skin disorder that I've been told is connected with exposure to uranium contaminated substances. I don't know what, if anything, will happen as a result of the scarring on my lung. I consider myself to be very lucky to be here today and, in one sense, I consider myself to be in great shape for the shape I'm in.

Having said all this I believe that I lead my life looking forward, not backward. You have the power to change things. You have the power to end this tragic experiment. Here are some of the steps that you can take, starting today to bring life in what we call Diné Bikeyeah back into harmony, and harmony, or hozho, is perhaps the most central concept in our view of the world.

You can support the proposed amendments to RECA as set forth in an exhibit to be submitted with my testimony. You can remove illogical barriers to the provisions of compensation to former Navajo uranium workers and their families. For sixty five years since 1942, Navajo men, woman and children have been subjected to the catastrophic

effects of exposure to uranium mining milling, and the effects of downwind exposure to nuclear test sites. This has benefited the United States, but has been a tragedy to the Navajo Spirit. It is TOO late to help those like my father who have died from this devious exposure. Apologies are appreciated, however an apology is hollow without just compensation. Please change the laws to allow justice for the Navajo people. You can also support the measures set forth in the testimony of Resources Committee Chairman George Arthur.

It's been about twenty-five years since the last mines closed. My people shouldn't have to wait another twenty-five years for the federal government to accept a responsibility that it should have accepted many years ago.

Chairman WAXMAN. Thank you very much, Mr. Harrison.

Mr. Manygoats.

STATEMENT OF RAY MANYGOATS

Mr. MANYGOATS. Good morning, Mr. Chairman. My name is Ray Manygoats, and I am 53 years old. I live near Tuba City, AZ, on the land where my family has lived for many generations.

A uranium mine was built near our home and the home of other family and community members when I was a young child. My father and other family members were recruited to work in the mill. They had no training or background in the processing of uranium.

The Rare Metals Corp. of America promised to train my father and other family members to keep them safe. But these promises were lies. The company failed to protect my father and the other workers. I am told the Department of Energy and the U.S. Environmental Protection Agency and the Bureau of Indian Affairs all had promised to guard our health to make sure that we would not suffer from the consequences of uranium mining and processing. But our land today is poisoned. Today, I am a man who has lost his health and family, and that is just a way of life because of uranium. I am here today to ask you to stop the suffering and the needless death of my people.

On our homeland near what is now called Tuba City, AZ, we cared for our grandparents, herded sheep, planted vegetables and raised our children. As a young boy, I remember seeing the Rare Metals Mill, which had been built across the highway from our home. My father was recruited to work at the mill. The company provided him with a uniform that he was asked to wash at home. When he would come home each day, he was covered with yellow, thick dust. Each day, we would wash his uniform. To wash the uniform, we would gather water near the uranium mill. We scrubbed, but the uniform was always yellow with dust.

The Rare Metals Mill had no fence around it. Our horses, sheep and livestock would graze on the grass growing in and around the mill. We planted and ate food grown in the area. As we had done for generations, we made use of what we found around us. We cooked on grills my father brought back from the mill. These grills had been used to sift the yellowcake uranium. My father also brought home large metal drums from the mill. We played in the drums and used them to store our food and belongings.

My brother Tommy and I would often bring lunch to my father at the mill. Yellow stuff was always everywhere. I saw liquids bubbling and tried to stay away from them. But 1 day my sister Daisy walked through one of the open ponds near the mill and burned her feet.

We would play in the yellowcake sand near the mill, jumping and rolling around in it. We also found many small metal balls at the mill. The balls were used to crush and process the uranium. We played marbles with them and had contests to see how far we could throw them.

My father began to have trouble breathing. His breathing troubles never went away, even after the mill was closed. I have always had problems with my ears and eyes. I have had surgery three times to remove growths from my eyes and I have sores on my

ears. Many of my sisters and brothers also have problems with their eyes. I lost my mother to lung cancer and stomach cancer that grew inside her lungs and throughout her body. Another family member, Lucille, was never able to grow hair and has worn a wig all her life.

Today, I still live in the same area, the land of my family. The mill is no longer in operation but the waste from the mill is everywhere. Today I walk the land and see streaks of yellowcake uranium in our washes and our topsoil. It is always windy, and the wind blows the earth into the air. I see the uranium marbles of my youth in areas where trucks dumped materials and waste from the mill back across the highway into our land. I see in the ground old rusting chemical barrels and cables that were once used to operate the mill.

We now know that we are sick because of the uranium. Now people come with machines called Geiger counters and they click and make noise. The noise tells me what I already know: that my family's land is poisoned. But no one helps us to remove the poison. I am here on behalf of my community to ask you for your help; to ask that we move past promises to actions, actions that may save our children from the sickness and the poison that we are now living with.

Thank you.

[The prepared statement of Mr. Manygoats follows:]

Testimony of Ray Manygoats

My name is Ray Manygoats. I am 53 years old. I live near Tuba City, Arizona, on land that my family has lived on for many generations. A uranium mill was built near our home and the homes of other family and community members when I was a young child. My father and other family members were recruited to work in the mill. They had no training or background in the processing of uranium. The Rare Metals Corporation of America promised to train my father and other family members and to keep them safe, but these promises were lies. The company failed to protect my father and the other workers. I am told that the Department of Energy, the United States Environmental Protection Agency, and the Bureau of Indian Affairs all have promised to guard our health and make sure that we would not suffer from the consequences of uranium mining and processing. But our land today is poisoned. Today, I am a man who has lost his health, his family and his ancestral way of life because of uranium. I am here today to ask you act today to stop the suffering and needless deaths of my people.

On our homeland near what is now called Tuba City, Arizona, we cared for our grandparents, herded sheep, planted vegetables and raised our children. As a young boy, I remember seeing the Rare Metals Mill, which had been built across the highway from our home. My father was recruited to work at the mill. The company provided him with a uniform that he was asked to wash at home. When he would come home each day, he was covered with a thick yellow dust. Each day we would wash his uniform. To wash

the uniform, we would gather water near the uranium mill. We scrubbed but the uniform was always yellow with the dust.

The Rare Metals Mill had no fence around it. Our horses, sheep and livestock would graze on the grass growing in and around the mill. We planted and ate food grown in the area. As we had done for generations, we made use of what we found around us. We cooked on grills my father brought back from the Mill. These grills had been used to sift the yellowcake uranium. My father also brought home large metal drums from the mill. We played in the drums and used them to store our food and belongings.

My brother Tommy and I would often bring lunch to my father at the Mill. Yellow stuff was always everywhere. We saw liquids bubbling and tried to stay away from it. But one day, my sister Daisy walked through one of the open ponds near the mill and burned her feet.

We would play in the yellowcake sand at the mill, jumping and rolling around in it. We also found many small metal balls at the mill. The balls were used to crush and process the uranium. We played marbles with them and had contests to see how far we could throw them.

My father began to have trouble breathing. His breathing troubles never went away, even after the mill was closed. I have always had problems with my ears and eyes. I have had surgery three times to remove growths from my eyes and often have sores on

my ears. Many of my sisters and brothers also have had problems with their eyes. I lost my mother to a cancer that grew in her lungs and throughout her body. Another family member, Lucille, was never able to grow hair and has worn a wig all her life.

Today I still live in the same area, the land of my family. The Mill is no longer operating, but the waste from the Mill is everywhere. Today I walk the land and see streaks of yellowcake uranium in our washes and our topsoil. It is always windy and the wind blows the earth into the air. I see the uranium marbles of my youth in areas where trucks dumped materials and waste from the mill back across the highway into our land. I see in the ground old rusting chemical drums and cables that once were used to operate the mill.

We know now that we are sick because of the uranium. Now people come with machines called Geiger counters and they click and make noises. The noises tell me what I already know: that my family's land is poisoned. But no one helps us to remove the poison. I am here on behalf of my community to ask for your help. To ask that we move past promises to actions. Actions that may save our children from the sickness and the poison that we are now living with.

Chairman WAXMAN. Thank you very much, Mr. Manygoats.

Let me thank all of you for your presentation to us. You have given us very powerful testimony. And all of us here feel empathy with you and your family and people we haven't even met who we know have suffered. I have to say that I feel enormous shame that the Federal Government has treated the Navajo Nation as poorly as it has.

I want to ask some questions. And each Member will have a chance to ask questions as well.

Mr. King, Church Rock, NM is a few miles outside the Navajo Reservation, and there is an abandoned uranium mine there now. It is called the Northeast Churchrock Mine, and it was the largest underground uranium mine in the country. You worked there for 8 years, is that right?

Mr. KING. Yes, sir, 7 years underground and 1 year at the mill site.

Chairman WAXMAN. And Ms. Hood, you lived your whole life in the immediate area near that mine, is that correct?

Ms. HOOD. Yes, I have.

Chairman WAXMAN. Mr. King, the mine was operated by the United Nuclear Corp. [UNC]. Did UNC clean up the mine site when it closed it in the 1980's?

Mr. KING. No, sir. We have been conducting tours and we have also been in contact with the former worker. He was one of the last few to go. He tells about a lot of contaminated materials that he had to bury, per instructions from the supervisor.

Chairman WAXMAN. But the company that ran the business, they closed it and they never cleaned it up?

Mr. KING. They never cleaned it up. Everything is still there.

Chairman WAXMAN. Everything is still there, including, Ms. Hood, mounds of ore waste from the mine, is that right?

Ms. HOOD. Yes, that is right.

Chairman WAXMAN. How high are some of these mounds?

Ms. HOOD. Fifty, 60 feet high.

Chairman WAXMAN. Is it hard, solid, or is it dusty?

Ms. HOOD. In part, it is hard. Then in the soft parts, well, when the wind blows, you can see it in the air.

Chairman WAXMAN. When the wind blows, where does it blow the dust from that mound of ore?

Ms. HOOD. To the homes that are nearby.

Chairman WAXMAN. And how far away is this mound from your home?

Ms. HOOD. About 1,000 feet.

Chairman WAXMAN. Can people walk up to that pile?

Ms. HOOD. Yes, they can.

Chairman WAXMAN. And do children sometimes play in that pile?

Ms. HOOD. Yes, they do.

Chairman WAXMAN. Now that people know better, I assume they try to keep the kids away?

Ms. HOOD. We try to do that, but children still get up there.

Chairman WAXMAN. People have sheep and when the rains come, do they cause some of the erosion of the mounds to go into the water where the sheep drink?

Ms. HOOD. Yes, it does. The water comes back down into the ditches or the ground and into the plants where the sheep graze.

Chairman WAXMAN. We heard earlier that when the U.S. Environmental Protection Agency tested the mine area, the radium levels were 270 times the EPA standard. That is a very exceptionally high cancer risk. When the wind blows, people breathe this in. When the water runs in there, the water runs over the piles and it goes into the ditches, into the river; livestock drink from the water. Have you seen any impact on any of the livestock, the lambs or any of the other animals?

Ms. HOOD. Yes, we have. We have lambs that did not have wool, hair, but they died within days. And we have butchered sheep and in one case the fat was yellow, which is not normal.

Chairman WAXMAN. So people get exposed in many different ways. You described some of the health effects in your family. Could you just go through those again?

Ms. HOOD. OK.

Chairman WAXMAN. You yourself?

Ms. HOOD. I myself have had lymphoma, went through chemotherapy. And my father has pulmonary fibrosis. My mother was diagnosed with stomach cancer and my grandparents both had lung cancer.

Chairman WAXMAN. And there are eight other families that live near you, is that right?

Ms. HOOD. Yes.

Chairman WAXMAN. I am very sorry to hear what you are telling us. The U.S. Environmental Protection Agency obviously needs to clean up this area. It is absolutely unacceptable that you and other American citizens, have continued to be exposed to the mine waste, radioactive dust and contaminated water. This is really just unacceptable. That is why I hope this hearing will lead to some clear result, a final cleaning up of this area. Thank you very much. I thank all of you.

Mr. Issa.

Mr. ISSA. Thank you, Mr. Chairman, and thank you for both shedding light on it, and I look forward to the second panel to find out whether oversight is sufficient or whether reform will be necessary. Certainly uranium is not the only contaminant that we deal with in America. I grew up in Ohio, where quite frankly, the side effects of coal, which today still gives us 51 percent of our electricity, has left us with polluted water, particularly water generating high lead contents. As Arizonans, I know you deal with arsenic as a naturally occurring but clearly carcinogenic poison.

We have an obligation to make sure that either the companies that mined those facilities or the U.S. Government, if necessary, clarify what the responsibilities are and get it fixed and get it fixed, in a timely fashion. And on a bipartisan basis, you have an assurance from this committee that, not just when we hear from the EPA in the second panel, but on an ongoing basis, this is something that once started, I believe that we will continue to work on until we get you a resolution.

I do have one question for Mr. Harrison. Because in my briefing book, it said that cancer rates now have dropped below the national average. What would you say, or from your experiences, and maybe

this isn't for you, but how much of that is a result of the stopping of mining, how much is the result of cleaner water and how much is some other basis? Because I know the EPA is going to come in and say, we are doing better, things have been done. I would like to have a feel for whether that anecdotal information is something you think is real or whether there is more to be done besides what you have covered here today.

Mr. HARRISON. Thank you. I am not a technical person, but I live in the midst of all my Navajo people, friends and relatives. I hear stories almost every day about who gets diagnosed with kidney failure, who has cancer. I know these are coming from communities that dealt with uranium mining. I have not seen anyone from the eastern side coming in saying that, I have lung disease or I have cancer. It mainly has been from the community people who have dealt with the uranium.

Mr. ISSA. OK.

Doctor, you are one of the technical, although not quite the perfect one, I mean, the information we received seemed to be more than anecdotal. To what do you attribute the drop to lower than the national average in cancer overall for the Navajo?

Dr. BRUGGE. I am not exactly sure which statistics you are referring to. One of the things that keeps lung cancer, in particular, levels low in the Navajo people is that smoking is very low. And one of the truly striking findings from research to date about uranium mining is that is a conclusion which is in the scientific literature and I agree with, and I think most of us who have worked on the issue would agree with, that for the Navajo people, uranium mining is the largest single cause of lung cancer. That is an unusual finding, because in most other populations, smoking would be either a major contributing factor or the major factor.

Mr. ISSA. So in your case, you would suggest we look at the higher incidence of kidney as perhaps not offset by lifestyle, where the lower incidence of lung cancer is partially offset by lifestyle?

Dr. BRUGGE. There is no question in the Navajo population that most of the lung cancer historically has been caused by uranium mining. And there is no question that uranium is clearly a kidney toxicant and that studies in other communities that are exposed to uranium in drinking water have shown associations with kidney disease. The study that is currently underway in the Navajo area and the Eastern Agency is not completed yet. When its findings come out, I think we will know more about the magnitude and the nature of the association with kidney disease as well.

Mr. ISSA. I appreciate that.

Mr. Chairman, I think the case has been made very well, and I look forward to getting to the second panel to see what is going to be done to clean up these sites. I yield back.

Chairman WAXMAN. Thank you very much, Mr. Issa.

In fact, Dr. Brugge, as I understood it, people at one point thought Navajos were immune to lung cancer because there was so low an incidence of lung cancer in the communities.

Dr. BRUGGE. Right. I think that would have been in the 1960's when there was not a full understanding of all of the etiology of lung cancer.

Chairman WAXMAN. Before the exposure to the uranium mines?

Dr. BRUGGE. Well, it was pretty clear by the early 1960's that uranium miners were developing lung cancer in the United States, including Navajo miners. It was clear 30 years before that or 50 years before that, that in Europe, uranium miners developed lung cancer and died. So the relationship between mining and lung cancer has long been established and is one of those associations that is very, very strongly proven.

Chairman WAXMAN. Thank you.

Mr. Yarmuth.

Mr. YARMUTH. Thank you, Mr. Chairman. I want to thank all the witnesses as well.

I must say that in my 10 months on this committee, I have sat through a lot of hearings that made me sad and angry. But I am not sure that any hearing has shocked me as much as this one. This is truly a stunning example of failure on the part of our Government. I commend the chairman and Members of both parties for wanting to get to the bottom of this and to make sure that our Government responds in the way it should.

We have heard from Ms. Hood and Mr. King about the contamination at the Northeast Churchrock Mine and about all the disease and health problems that have occurred there in proximity to that area. I would like to ask a little bit about the efforts of the Environmental Protection Agency to clean up that site.

Mr. Etsitty, this is apparently, as I understand it, the only abandoned mine site in Navajo Country that the EPA is working on, is that correct?

Mr. ETSITTY. That is correct, in terms of getting to a cleanup. But we have been working with EPA on a more comprehensive inventory of many sites. But the Northeast Churchrock Mine site is the one that we have actually begun turning dirt on and removing contaminated soils from.

Mr. YARMUTH. According to EPA, so far the agency has removed about 6,000 cubic yards of uranium-contaminated soil from the four properties. That doesn't sound like a lot of removal to me, when we hear about mountains of soil that are 50, 60 feet high. Is this just a drop in the bucket and what remains to be done, in your opinion?

Mr. ETSITTY. Thank you, Representative Yarmuth. The amounts are the beginnings of a process that is going to continue. It was determined that initially, we would concern ourselves with cleaning up 135 acres of the Northeast Churchrock Mine site. But my staff and our agency pressed, because we knew that there were residences nearby to the north of the mine site. We did get additional analyses done to determine that those residences did indeed have a problem. We worked with U.S. EPA to take care of that in a time critical fashion, knowing that there is still a lot of work left to do at the mine site.

We have yet to remove any contaminated soil from the mine site. We have done work to characterize the levels of contamination across the 135 acres. But the 6,000 cubic yards you are talking about does reduce much of the exposure risks that the residents have been living with for all these years, and puts it to a much safer level and gives us now the opportunity to turn our attention back to the mine site.

We do expect to work with EPA to make a final determination as to the actual remedy that will be applied to the mine site. And we do this, knowing full well that the residents will be concerned, since they still live in close proximity, that any recontamination may occur. We are going to do our best to work with EPA to avoid that.

But there is still a considerable amount of work to clean up surface soil. It is going to be costly. It is going to take a lot of engineering. And we are looking for adequate disposal capacity in the region, in the western United States. We would like to have all this contaminated soil moved off the nation.

But as I close, we are talking just about soil, surface soil contamination. There are other questions regarding subsurface and groundwater that we haven't started to examine fully yet.

Mr. YARMUTH. Is there any way you can estimate what percentage of the problem has been rectified by removing the 6,000 cubic yards?

Mr. ETSITTY. It would have to be a figure less than 1 percent.

Mr. YARMUTH. Thank you.

Dr. Brugge, I would like to ask you one question, because Ms. Hood talked about solving these problems for future generations. I am curious as to whether there is any way to know what the long-term ramifications of these health problems are for future generations. Is this something that generations are going to be affected by, even if we were to clean it all up today?

Dr. BRUGGE. I am afraid that is certainly possible. Especially with uranium itself, there is increasing evidence, and has been evidence for about 15 years and that is growing, that it is associated with birth defects; most recently, that it may be an estrogenic compound. So based on that, I think you are right, there is a concern, and there may be a health legacy that is passed on even after these sites are remediated.

Mr. YARMUTH. Thank you. My time is expired. Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Yarmuth.

Ms. McCollum.

Ms. MCCOLLUM. Thank you, Mr. Chair.

Mr. Arthur, Mr. Etsitty, Dr. Brugge, Mr. King, Ms. Hood, Mr. Harrison and Mr. Manygoats, I apologize for the disruption and my leaving for a while, but I was called on the floor to vote. I want you to know that I read your testimony and it was no disrespect that I left while you were speaking.

You have all suffered greatly, and in my opinion, needlessly for corporate greed and for our Nation's weapons program. I am personally embarrassed at the lack of concern for the Navajo people who lived and continue to live, those who have passed, I offer my condolences to your families for your loss. As you pointed out, the Navajo have stood valiantly by the United States in their time of need. As an American, I thank you for that.

I can't go back and change the past, but I am here today to do what I can to make a better future for our children and for our planet. So I am going to ask you, and I would like you to be as specific as possible—I am sure my colleagues will followup with more extensive questions—what you think the Federal Government

needs to be doing? Flying overhead in helicopters and taking photographs and doing very cursory studies of where there may or may not be uranium waste is not my idea of doing a full-scale cleanup.

What do you think needs to be done in health effects, studies, care, treatment, cleanup of water and land? And I understand there are tunnels underneath that connect some of the water. Are you concerned about the rising costs of uranium right now on the market and the pressures that might come to be, when this problem has not been addressed fully?

I will just listen. Thank you.

Mr. ARTHUR. Mr. Chairman, members of the honorable committee here, I would also like to recognize our Congressman, the Honorable Mr. Udall, also the Honorable Mr. Matheson, who are present in this room. The Navajo Nation asks for a few things. I had stated in my closing remarks that I would be willing to discuss those issues and also recommendations.

First, we would ask the Federal Government to establish a moratorium on any uranium mining and processing in Navajo Indian Country, as we have established legislation of our own that bans that. We also ask that until the following things happen, that the human costs of past activities be adequately addressed and compensated when the Navajo Nation and EPA have jointly determined that all contaminated sites have been cleaned up, consistent with their standards.

Second, the United States should provide funding for at least 20 full-time employees and should detail up to 20 Federal environmental specialists at the Navajo EPA offices to address groundwater, surface and air and human health impacts of prior uranium mining activities with an appropriation of at least $5 million for overhead and indirect costs.

Third, all contaminated materials at the four so-called UMTRCA sites on the Navajo Nation should be removed and disposed of off-reservation in the same manner that our Honorable Congressman's State of Utah, and several other UMTRCA sites in non-Indian areas.

Fourth, the Federal Government should fund and conduct comprehensive health assessments and site assessments at all 520 or so abandoned uranium mines in Navajo Country. Fifth, there is sufficient data available today showing an urgent need to take comprehensive remedial action at the Tuba City and Church Rock sites, and that action should be mandated.

Finally, based on the costs of cleaning up comparable sites, the Navajo Nation estimates that an initial appropriation of $500 million is needed for the cleanup of radioactive waste throughout the Navajo Nation. In conclusion, Mr. Chairman, I would just state again that in this room, there are honorable members of this committee, as well as highly intelligent staff that are associated with you as individual representatives. I heard earlier that maybe you do not represent us directly. But as elected officials, such as myself, although I come from one particular region of Navajo Nation, I speak here before you as a representative of all Navajo.

Thank you.

Chairman WAXMAN. Thank you very much. Thank you, Ms. McCollum.

Ms. MCCOLLUM. Mr. Chair.

Chairman WAXMAN. Yes.

Ms. MCCOLLUM. For the record, I am going to submit an article called Yellowcake Blues. It was published on October 11, 2006, and it speaks to the resolution that the Honorable Mr. Arthur spoke to. It was a vote of 63 to 19.

Chairman WAXMAN. Without objection, that will be made part of the record.

[The information referred to follows:]

REPORTER

COVER STORIES

Yellowcake Blues

By Laura Paskus

Published: October 11, 2006

The Navajo Nation has learned a lesson about uranium—has anyone else?

Cover art ©Cathleen Toelke, www.cathleentoelke.com; cover design by Angela Moore.

"At the time, the compensation was fair enough for me," William Lopez, an elderly Navajo man who, 40 years ago, worked as shift foreman at the Rare Metals Corporation mill in Tuba City, says. He was first hired in 1959, when few other jobs existed on the reservation. "I made a little more money there than I could get at any other job in that locality."

For almost eight years, Lopez and his brother-in-law, George Brown, crushed uranium ore, separating it into different grades, then mixing slurry and leaching uranium from the liquid. Until the plant closed in late 1966, the men worked each day enveloped in a cloud of uranium dust, returning home to their families each afternoon with uranium caked beneath their fingernails and stuck within the divots of their shoes.

Beginning with the discovery of uranium near Grants, NM, in 1950, the Navajo reservation hosted four mills and more than 1,000 mines. But by the early 1990s, when the price of uranium busted out at $7 per pound, the boom had ended and many of the companies vanished, leaving the reservation pocked with mines and mills that were both radioactive and toxic. Dry tailings piles blew dust through homes and hogans and, when it rained, sent torrents of poisonous water down normally dry arroyos.

Photo by Jared Boyd.

It was only decades after the Tuba City mill closed that Lopez, Brown and others learned they had been exposed to radioactive uranium and toxic chemicals, putting them at risk for diseases such as lung cancer and pulmonary fibrosis, and perhaps kidney disease and lymphoma. "There should be a penalty for not letting people know," Brown says, obviously still angry with the US government. "You put all these years in for them and then they turn their back."

But while the Navajo Nation has decided it's better off without uranium, the industry is eager to use new technology that will extract ore from beneath the reservation using water and chemicals rather than strip mines and tunnels. And while the state of New Mexico dodges issues of tribal sovereignty, the federal government is poised to approve a whole new generation of uranium mines on the Navajo reservation.

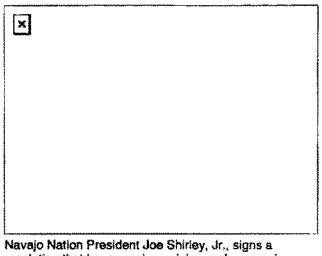
Stories passed down from generation to generation warn that certain substances are better left alone. For the Navajo, uranium is one of those substances. Last April, the tribal council banned uranium mining and processing from the reservation. The resolution, which passed by a vote of 63 to 19, acknowledges the harm uranium has

caused—to people's health, the environment and the tribe's economy—and asserts the tribe's sovereign right to control its own natural resources.

President Joe Shirley, Jr.—who frequently uses the word "genocide" when talking about uranium mining's legacy on the reservation—signed that resolution, then followed it with an executive order that bans anyone from even negotiating with companies proposing to mine uranium.

With traditional mining, uranium ore is extracted from the ground, then sent to a mill, where it's processed into a fine powder called "yellowcake." From the mill, the powder is sent off to a conversion plant that produces uranium hexafluoride for use in nuclear power plants.

"Week in and week out, uranium seems to be an issue [President Shirley], the Navajo Nation, has to deal with, at a sacrifice," George Hardeen, communications director for the tribe's president and vice president, says. "But the greater sacrifice is the loss of lives, loss of knowledge, of wisdom, songs, ceremonies. There were medicine people who were also miners [who have] passed on. This is a cultural loss, not just a loss to individual families."

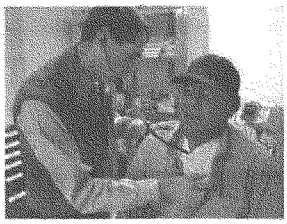


Navajo Nation President Joe Shirley, Jr., signs a resolution that bans uranium mining and processing on the reservation. (Photo by George Hardeen.)

The most recent chapter in the Navajo battle opened in 1988 when the US Nuclear Regulatory Commission (NRC) granted a license to Albuquerque-based Hydro Resources, Inc., (HRI) to begin mining at four sites within the Navajo communities of Crownpoint and Church Rock. Local activists, with help from the Albuquerque-based Southwest Research and Information Council and the Santa Fe-based New Mexico Environmental Law Center, have spent the past eight years requesting hearings, filing challenges and, essentially, keeping the mining company at bay. But the adjudication process is nearing its end, Dave McIntyre, NRC spokesman, says. "So once the commission has issued its final rulings, and the staff and HRI have complied with any requirements the commission might impose, the license will become valid from NRC's point of view."

The proposed mine does more than threaten the eastern Navajo and their drinking water, according to Eric Jantz, staff attorney with the New Mexico Environmental Law Center. "We're on the cusp of a uranium boom," he says. He believes that HRI is just the first of many companies that want to mine uranium in the area, and its case before the NRC is a test case for other companies to watch: "Can they push around the community? What standards will they have to meet?"

Everything in Jantz' office suggests he is a man if not obsessed, then at least consumed: His laptop computer claims the only flat surface on his desk; an old yellow couch is piled high with papers and folders. He's currently representing activists before the NRC in the New Mexico Court of Appeals and before the US Environmental Protection Agency. Before coming to Santa Fe, he worked in Crownpoint; before becoming an attorney, he received a bachelor's degree in anthropology. Straddling all these different worlds can be mind-numbing. But this work, he knows, is important: "This isn't about four mines," he says. "This is potentially about hundreds of mines in New Mexico, Colorado, Arizona and Utah.



Dr. Bruce Baird Struminger has screened more than 1,750 former uranium workers trying to receive federal compensation and is an outspoken critic of RECA. (Photo by Eve Todacheenee.)

If anyone has watched the Navajo struggle with the psychological burden of uranium, it is Dr. Bruce Baird Struminger. As the medical director of the federal Radiation Exposure Screening and Education Program on the Navajo reservation, Struminger has screened more than 1,750 former uranium workers, most of them two or three times, in order to help them apply for federal compensation.

In 1990, Congress passed the Radiation Exposure Compensation Act (RECA). The legislation compensates those who can prove they are sick because of their work in the uranium mines and mills between 1947 and 1971, when the US government was the sole purchaser of the metal for nuclear bombs and reactors. Those who worked in the industry following 1971 are not eligible for federal compensation.

Those workers who can prove they have lung cancer or pulmonary fibrosis are

Under the Radiation Exposure Compensation Act (RECA), "downwinders" must only prove they lived in certain parts of Utah, Arizona or Nevada between January 1951 and October 1958 or between June and July 1962, when the government tested nuclear bomb tests in the Nevada desert.

eligible to receive a payment of $150,000 from the Department of Justice. And now the Department of Labor will compensate sick workers up to an additional $250,000 if they can prove they lost wages due to their illnesses. "It's an awkward and awful situation," Struminger says. "When we find out someone's lungs are in great shape, some are happy, but most are not because they're not going to get any compensation."

It's obvious that four years of this work has taken a toll on Struminger. Unlike most members of the medical profession—who often remain apolitical and stick to keeping their mouths shut—Struminger is an outspoken critic of the law that created his program. Even before resigning as medical director in June, Struminger questioned those who wrote the original legislation, needled Department of Justice officials for exact numbers concerning compensation claims and, in general, refused to play the role of the quiet doctor.

"Today I saw the children of a miner, who asked me, 'Do you think anything was passed on to us genetically?'" Struminger said in May 2005 from Shiprock. "That was a real worry for them."

There's no evidence to prove that uranium miners suffered genetic damage—but that's because the government has never undertaken a "statistically significant" study. It's the same with birth defects, kidney disease and neuropathy, diseases that may or may not be linked with the uranium industry and the aftermath of the boom. "My guess is [genetic damage] will never be studied," Struminger says. And there's the issue of trust. "If the government funded it," he says, "people [on the Navajo reservation] wouldn't believe the results. But if the government doesn't do it, no one will."

Neither George Brown nor William Lopez—both of whom worked in the Tuba City mill—are sick enough to qualify for federal compensation. Both see RECA as another policy that fails Native Americans. (Photo by Dr. Bruce Baird Struminger.)

Fueling further distrust of the government is the fact that "downwinders" must only prove that they lived in the Arizona, Utah or Nevada counties eligible for compensation under RECA. And despite recent studies that show people in Idaho and New Mexico were exposed to fallout as well, RECA does not include residents outside Utah, Arizona or Nevada. This poses a particular challenge to the Navajo; those living in Chinle or Teec Nos Pos might be eligible, while those living on the New Mexico side of the reservation are not.

Eric Jantz is staff attorney with the New Mexico Environmental Law Center, which has spent nearly a decade fighting legal battles to stop uranium mining. (Photo courtesy New Mexico Environmental Law Center.)

"A huge benefit of the doubt is given to the downwinder population," Struminger says. "For whatever reason, they set it up that way originally—but that needs to change." Last year the National Research Council released an evaluation of the Radiation Exposure Screening and Education Program that concluded that many people who received high doses of radiation were ineligible for compensation simply because they lived outside the boundaries set up by the 1990 law. Although the report presented 22 recommendations to improve the program, thus far there has been no official response to the report.

"My first take on that is Congress hasn't done the oversight it needs to do," US Rep. Tom Udall, D-NM, says. In the 16 years since RECA was passed, Congress has never held hearings to review the program, nor has it called for witnesses to testify about its effectiveness. The law is due for a close look, but that's not likely to occur while Republicans hold the majority in Congress; only the chair of the committee that created the law can call for hearings and investigations into the program, and, sadly, Udall says, "Oversight has not been a strong point of Congress since 1994."

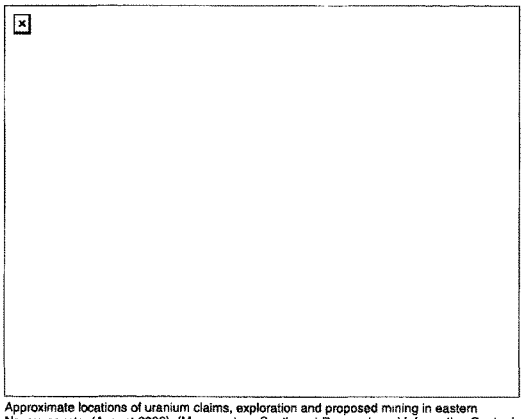
For people like George Brown and William Lopez—both of whom worked in the Tuba City mill; neither of whom are sick enough to receive compensation—the programs are just another example of a failed federal policy toward American Indians. "We're just like a time bomb, I guess," Brown says. Like many others he worked with, he is giving up on the RECA screening—"too much red tape," he says. He believes workers should be compensated based on how many years they worked. Period. "I wish that they would say, 'You worked so many years, you were exposed and we don't know

what the future holds for you,'" he says.

Struminger agrees. "Let's let these people move on with their lives," he says. "The money is just a token. It's a significant token, especially for people out here. But it's about the government totally owning up and saying, 'We're sorry.'" For the Navajo—especially those who return year after year to his clinic, hoping for a diagnosis that will earn them compensation—it's not really about the money, Struminger says. "They want to feel the government is serious about its apology...but to drag this on until 2022..." he trails off, obviously frustrated by all he has seen in the past four years.

In the 10 years it operated, the former Rare Metals Corporation uranium mill in Tuba City processed 796,489 tons of uranium ore. In 1996, when it began restoration of the contaminated aquifer beneath the mill, the US Environmental Protection Agency estimated the project would last until 2030 and cost $99.23 million.

According to the industry, today's uranium mining technology is easier, safer and cheaper. "Look, with underground mining, you're moving tons of rock. Just think about what you're moving and then sending to the mill," Tom Ehrlich, chief financial officer of Uranium Resources, Inc., parent company of HRI, says. "With solution mining, you're moving water. Water which is fortified with bicarbonate of soda."



Approximate locations of uranium claims, exploration and proposed mining in eastern Navajo country (August 2006). (Map courtesy Southwest Research and Information Center.)

During solution mining, or "in situ leach mining," the uranium is removed from the resulting sludge and the water is returned to the underground aquifer. According to HRI, the new in situ leach mining process protects workers—and the NRC has repeatedly ruled that the mines will not cause "significant" environmental, public health or safety impacts. But opposition within the Navajo communities of Crownpoint and Church Rock remains fierce.

Activists by necessity rather than by choice, Mitchell and Rita Capitan founded Eastern Navajo Dine Against Uranium Mining from their home in Crownpoint. "In 1994, when we heard about the new mining, we immediately began to discuss it at our table," Rita said last fall. "Then we decided to hold a community meeting to see what other people thought." The Capitans also reached out to Chris Shuey with Southwest Research and Information Council.

"In 1994, 1995, uranium mining became our life, and it's been nonstop ever since," the tall, booming Shuey says. He frequently punctuates technical discussions of environmental health epidemiology with less technical pleas for reason in a debate that involves what he sees as an experimental technology and a pure drinking water source in a desert community. A six-shelf bookcase behind him is filled and stacked with three-ring binders. There's more background information in the room behind him; everywhere he points in the dingy office sit piles of court briefs, health studies, groundwater models and federal nuclear regulations.

"We've spent well over $2 million fighting this," he says. "It's quite defeating, morally, to spend all this time and to feel

like you're doing the rigorous work the commission should have been doing on the behalf of the public."

Shuey and the Capitans have long held that the mines would contaminate the local drinking water and nearby municipal wells. They worry that cracks in the underground rock structure might allow the chemical solution to leach into the aquifer and that companies will be unable to clean the chemical-laden water to its original state.

In southeastern Texas, residents say the Kingsville Dome and Rosita ISL plants run by Uranium Resources, Inc., have contaminated private wells. They have sued the company, but since no groundwater or well data exists from before the facility's construction, the company has denied that contamination of local wells is the result of its operations.

According to the US Department of Justice, as of mid-August, the agency has compensated a total of 16,022 people under RECA. Of those, 10,060 have been "downwinders."

Then, last summer, the US Geological Survey released a report commissioned by the NRC. Activists say that report, which analyzes a pilot groundwater restoration project at the Ruth In-Situ Leach Uranium Mine facility, supports their position that groundwater remediation may not be possible.

But less than a month after the report was released, an NRC judge ruled against activists, dismissing the contamination concerns they raised. "None of [the report's models and conclusions] should be interpreted as saying a particular event will happen, only that certain outcomes might occur if events unfold in a certain manner," the NRC's McIntyre says. "The report is not predictive of what will happen at the HRI sites."

Activists suffered another setback in May when the commission ruled that radioactive contamination that already exists on the Church Rock site from a previous uranium mine is officially considered "background" radiation—and will not count toward the limits on radioactivity HRI must achieve in order to be considered safe.

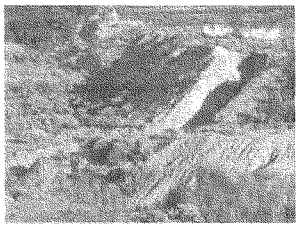
Shuey expresses disbelief at this decision: Not only will the existing sites not be cleaned to safe standards, he says, but new projects will contaminate them further. The decision to allow mining, Shuey says, means the Navajo will be treated as an "expendable population" by the US government in pursuit of uranium. "It doesn't look like Manhattan or [Washington,] DC, but the last time I looked, these people have the same right to life, liberty and the pursuit of happiness as anyone else."

He adds: "We didn't go into this with rose-colored glasses. The NRC lends notorious support to industry. I don't know what else I'd tell someone in the same situation; we couldn't have ignored the NRC, because the company would be out there already."

For its part, New Mexico state officials seem unsure if the state will require further cleanup of contaminated sites before new mines can open. "My understanding is they did some reclamation previously," Karen Garcia, the state's mine regulation bureau chief, says. "Once we determine that the state has jurisdiction over the area, if the mining company were to open a mine, it would be required to clean it up."

For the Navajo, there is even more at risk than their groundwater. And that's their ability to determine what happens within the boundaries of their reservation.

"The simplest definition of sovereignty is the right for native people to make their own laws and live by them," George Hardeen says. President Shirley has spent the past year and a half—since the tribe first passed its resolution banning uranium mining from the reservation—traveling around the nation and the world, seeking support for the ban. "Everyone says they do and will respect sovereignty, do and will respect the law," Hardeen says. "So far, no one has challenged this, but boy, it's going to be an expensive thing to defend."



While Shirley has received support from the heads of international unions and from activists worldwide and even received an award in Oslo, Norway, Gov. Bill Richardson has been notably silent on the issue. After meeting with Shirley last summer in Window Rock, Hardeen says, "The governor told the president he would be in touch with the president before he made any decision. We know that's not the same as saying there won't be any uranium mining," he says. "President Shirley knows Gov. Richardson has an extremely tough decision to make. We can only hope, waiting for that day, that he can have respect for Navajo people."

Once the NRC issues HRI's license, the company will still require

The waste dump at UNC Northeast Church Rock mine, New Mexico, is near Navajo homes. (Photo courtesy Southwest Research and Information Center.)

an Underground Injection Control Permit, an issue currently hung up within the EPA. The state believes it has the authority to issue that permit—and, in fact, it issued one in 1989—while the EPA believes it regulates water issues on Indian land. "The EPA has yet to rule on this," Bill Brancard, director of the Mining and Minerals Division at New Mexico's Energy, Minerals and Natural Resources Department, says. The permit is issued under the federal Safe Drinking Water Act, he explains, and the EPA has the authority to decide the extent of its delegation to the state. "It's a question of who the EPA can delegate its authority to," Brancard says, "and the state's position is that we should be the ones to issue the underground injection permit."

As for tribal sovereignty, "In general, the state recognizes the right of the Navajo Nation to control resources on its lands," Brancard says. "But we haven't taken a public position. One of the big issues," he says, "[concerns] how far is tribal jurisdiction and how far can they impose the ban." Although all four mine sites lie within the external boundary of the reservation, one is on private land; the other, though it's on tribal land, has private mineral rights. This issue of jurisdiction complicates the matter. While the tribe insists it has control over anything within the external boundary of the reservation, both the state and federal governments appear to feel otherwise.

"The flip side that no one ever acknowledges is the money that the Navajo Nation is giving up by not having uranium mining on its lands," Hardeen says. He points out that there are "unmet needs" across the reservation. "That's not rhetoric," he says. "It's a fact the Navajo Nation needs money." The tribe plans to open its first casinos and has even welcomed Sithe Global and its plans to build a coal-fired power plant between Shiprock and Farmington. "But because of the uranium legacy," he says, "the Navajo have made the decision they're not going to exploit that resource."

As uranium prices continue to rise—a pound of the metal currently fetches $54 on the market—mining has seen a resurgence in Colorado and Texas; more mines are planned for Wyoming, a Canadian company is drilling exploratory wells in Utah, and the US Bureau of Land Management last year saw a rush on mining claims on the Arizona Strip, that wild patch of land between the Grand Canyon and Vermillion Cliffs National Monument. So what's in store for New Mexico?

An estimated 4,000 Navajo worked in the uranium industry prior to 1971. Approximately 1,500 have died, 1,191 have been compensated under RECA, and between 1,000 and 1,500 are still trying to file for compensation.

"There's a lot of speculation," Brancard says. "Numerous entities are looking to get leases, mineral rights, mine claims. But it's my understanding there's very little on the groundwork. As they get more serious, they'll start to do more drilling." For now, he says, it appears as though there are just a lot of people positioning themselves.

Indeed, in August, Canadian-based Strathmore Minerals Corporation announced it had acquired 51 new claims near Church Rock and Crownpoint—that's in addition to the two mines it bought from Kerr McGee and plans to reopen on the Navajo reservation in McKinley County near Church Rock. And according to spokesman Dave McIntyre, the US Nuclear Regulatory Commission has had "discussions" with one company already interested in opening a mine near HRI's.

For his part, William Lopez doesn't understand why new development is posed to unfold on the reservation when local residents oppose it and tribal leaders have said they won't allow it. "Our resources are not being honored, the community votes are being ignored and the resolution [banning uranium mining] is being ignored." He adds, unable to quite articulate what he thinks might be going on, "I believe the uranium companies are finding other ways to establish opportunity for themselves—which is probably foreign and strange business to the local Navajo residents."

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Chairman WAXMAN. We have Mr. Welch next.

Mr. WELCH. Thank you, Mr. Chairman.

Distinguished members of the panel, I too would like to apologize for being called to vote. I did not wish to suggest any offense by leaving, Mr. Arthur, during your testimony.

I also agree with my colleague, Mr. Yarmuth from Kentucky, that serving on this committee, we have heard some pretty bad things. But nothing quite so bad, quite so arrogant, quite so thoughtless, quite so consequential as what has happened on your lands. I think I speak probably for all of us.

Ms. Hood, you talked about harmony and respect for Mother Earth and the way you were raised. It would do us all a lot of good to pay more respect to that.

So I do have some questions. One of the incredible challenges that you all have talked about is the cleanup. Literally, we have hundreds of abandoned uranium mines. The EPA admits to 520 mines in the Navajo Nation, and depending on how I guess we define a mine, it could be up to 1,200. My understanding about your study is that 90 percent of these mines have been capped or filled by the Navajo Nation itself. But those caps don't do anything about the groundwater. They don't eliminate the radiation threat from the mines that you are exposed to, that your children are exposed to and in all likelihood, your grandchildren are or will be exposed to. We definitely need the EPA to do that.

And the first step, in cleaning up the mines, is doing environmental site assessment. Mr. Etsitty, the U.S. EPA has done a site assessment at one mine, I guess the Northeast Churchrock Mine, is that right?

Mr. ETSITTY. That is correct.

Mr. WELCH. So they have one done and 519 more to go?

Mr. ETSITTY. There are numerous other mines to be addressed. But we have been working with the U.S. EPA and receiving grants to build our Navajo Superfund program. Through grants, we have amassed capacity and we now do several site assessments a year.

Mr. WELCH. So that is you, the Nation is doing that?

Mr. ETSITTY. Yes.

Mr. WELCH. What I understand from our briefing is that the EPA flew over the mines and took aerial radiation levels. But they aren't detailed enough to create a cleanup plan. So they just gave you a list of the mines with information about nearby settlements in the water sources and asked you to prioritize them? And the EPA said it would then begin site assessments on the highest priority? Is that your understanding of what is going on?

Mr. ETSITTY. Yes. We have had a project going back several years to inventory and identify as many of these sites, and it did begin with aerial surveys. Now we are at a point where we have prioritized the top 32 sites with Northeast Churchrock being the top priority site on that short list.

Mr. WELCH. How long has the EPA had your list of priorities?

Mr. ETSITTY. We have been on this project, which we call the Abandoned Uranium Mine Collaborative, and we have been working with EPA pretty close to 10 years. The list was developed early on. It was just a matter of compiling all the site characteristic data into a data base. We did have ambitious goals at the beginning. We

ran into cost difficulties with the final product, but we do have a completed product.

I would say that the information has been available for about 8 years.

Mr. WELCH. So has the EPA begun any site assessment of the mines you have identified?

Mr. ETSITTY. Directly, just the Northeast Churchrock Mine site.

Mr. WELCH. So just one?

Mr. ETSITTY. Yes.

Mr. WELCH. So we haven't even begun the assessments, let alone the cleanup?

Mr. ETSITTY. As I said earlier, through the Navajo Superfund program, we have done preliminary assessments and site investigations of some of the known abandoned uranium mine sites. We have information that we have collected in coordination with U.S. EPA, so we have information on other mine sites.

But EPA has taken the initial remedial action at Northeast Churchrock alone.

Mr. WELCH. So there is a long way to go, obviously.

We have heard a lot of testimony about some of the Navajo homes being built with radioactive materials. I gather you build homes in the traditional way, with materials that are on your lands. You didn't realize, obviously, that there was any threat of danger. Has the Navajo Nation, has EPA tested homes to see how many of them might be contaminated? Have you had any testing on them from the EPA?

Mr. ETSITTY. Through another grant program, under the radon program we have done surveys of hundreds of homes across the Navajo Nation. We have identified a number of those homes that do have high radon readings.

Mr. WELCH. And these are homes that people are now living in?

Mr. ETSITTY. Homes that people did live in, and in some places continue to live in. We are trying to assess how many people still live in homes with high radon levels. Again, radon is a naturally occurring element. But we are also trying to pinpoint those homes that have been constructed with materials that are radioactive.

Mr. WELCH. Let me ask Dr. Brugge, if I could, what type of threat that poses to the inhabitants?

Dr. BRUGGE. The homes that are built with uranium ore tailings or materials that have uranium in them are going to have all the decay products from uranium, including radium itself. Radium decays into radon. So there are going to be high levels of radon, especially if the space is enclosed and it doesn't have good ventilation. Depending on the amount of uranium and the ventilation, those levels can be very high. There was one very notable case in Monument Valley that was well documented, and the levels of radon in that home were exceedingly high, and in my opinion presented a very, very strong risk to the family that had lived there for a long time.

Chairman WAXMAN. Thank you, Mr. Welch. Your time is expired.

Mr. WELCH. Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you.

Ms. Norton.

Ms. NORTON. Thank you, Mr. Chairman.

Mr. Manygoats, I have a question for you. I understand there are five closed mills in the Navajo Nation, and my question concerns the Tuba City, AZ mill. I understand you grew up right across the highway from the Tuba City mill, and that your dad worked in the mill, is that correct?

Mr. MANYGOATS. Yes, it is.

Ms. NORTON. Did you ever play around the mill, Mr. Manygoats?

Mr. MANYGOATS. Yes.

Ms. NORTON. In what way were you playing?

Mr. MANYGOATS. I would play around, like a little kid would do, roll around and jump through the yellow powder.

Ms. NORTON. So you would roll around what amounts to be yellowcake?

Mr. MANYGOATS. Excuse me?

Ms. NORTON. So when you would roll around in the mill, you were really rolling in yellowcake, is that correct?

Mr. MANYGOATS. Yes, I did.

Ms. NORTON. Did anyone at the mill warn you or your dad about having you or youngsters playing in the yellowcake?

Mr. MANYGOATS. No, they didn't.

Ms. NORTON. In your testimony, you mention 3 to 4 inch metal balls that were used at the mill. Did you play with those balls?

Mr. MANYGOATS. Yes, I did.

Ms. NORTON. What did you think they were? How did you play with them?

Mr. MANYGOATS. Well, being a little boy, as a marble, shot put.

Ms. NORTON. Shot put, marbles?

Mr. MANYGOATS. Yes, seeing how far we could throw it.

Ms. NORTON. Could I ask Mr. Etsitty, are you familiar with these metal balls, and would they have been radioactive?

Mr. ETSITTY. Thank you, Representative Holmes Norton. I am familiar with the metal balls. They are part of the machinery and processing equipment that were present at the mills, not only metal balls but ceramic balls as well. The actual radioactive nature of these—they come in contact with the ore, they are usually part of the crushing of the raw ore, and creating the finer yellowcake dust.

The metal ores may take up some radioactivity and be radioactive themselves, but the ceramic balls——

Ms. NORTON. So these youngsters were essentially playing with radioactive marbles or balls?

Mr. ETSITTY. Yes, many of these materials were part of the processing process, so they came in contact directly with uranium ore and yellowcake.

Ms. NORTON. Mr. Manygoats, could I ask you, when your dad came home, what did his work clothes look like?

Mr. MANYGOATS. My father had a uniform, and the yellowcake was all over his uniform.

Ms. NORTON. So he came home with yellowcake on his clothes. Were there any other ways that you believe uranium yellowcake got into your home?

Mr. MANYGOATS. By my dad bringing his uniform with the dust on him.

Ms. NORTON. Is it the case that your parents actually cooked on a screen from the uranium mill?

Mr. MANYGOATS. Yes, we did.

Ms. NORTON. Did anyone warn your family that the yellowcake on this screen was radioactive and dangerous?

Mr. MANYGOATS. No, they didn't.

Ms. NORTON. Did you and your brothers and sisters ever get hurt from the waste that was at the mill?

Mr. MANYGOATS. Yes. My sister, Daisy, she stepped in one of the boiling chemicals and burned her feet and has scars. Also my brother, Tommy.

Ms. NORTON. Did anyone say that might be from uranium or yellowcake or anything radioactive? Did anyone tell your parents that?

Mr. MANYGOATS. No.

Ms. NORTON. Have you, or has anyone in your family had health problems?

Mr. MANYGOATS. Yes, all of my brothers and sisters, we have health problems.

Ms. NORTON. Including what?

Mr. MANYGOATS. Excuse me?

Ms. NORTON. What kinds of health problems?

Mr. MANYGOATS. We have our eyes and hearing, with our ears, and also the itchiness, the itch and the skin discoloration.

Ms. NORTON. Have you had three surgeries to remove——

Chairman WAXMAN. Ms. Norton, your time is expired and other Members are waiting.

Ms. NORTON. Could I just offer my appreciation to Mr. Manygoats for being here today to tell his story? I know in light of the three surgeries you yourself have had, and the growth in your own eyes and the problems with your sister's eyes, this has not been easy for you or for them, but you have done an important public service for the Navajo Nation and for the Congress and the Nation. Thank you very much.

Chairman WAXMAN. Thank you, Ms. Norton.

Mr. Shays.

Mr. SHAYS. Mr. Chairman, first, thank you very, very much for having this hearing. I thank you for acknowledging that this is a problem that crosses both sides of the aisle and goes back many, many years.

I purposely came back to this hearing, I had a bill on the House floor and we did have votes and I apologize for missing your statements. But I did want to personally say that I will support any legislation and I will speak to anyone within our Government that we need to speak with, and I will work with any of my colleagues to once and for all address this issue to the extent that we could address it. And I want to apologize to each and every one of you that, in the year 2007, we would still have to be dealing with this issue.

I don't know which one to ask this first question, but my question is, and maybe you will just decide it for me, my first question is, did the U.S. Government pay for these resources, or did we just simply say, we will provide you employment if you let us mine what is on your reservation?

Mr. ARTHUR. Mr. Chairman and members of the committee, Congressman Shays, the Navajo Nation did make lease agreements in the processing and also of mining the ores that were on the trust land. There are lands that are off the trust land but within Navajo Indian Country.

Mr. SHAYS. When you look at the 5 milling areas and the 520 mines, and you look at groundwater contamination, what do the experts tell you is the first, most serious health threat? That would be my question. And after that, which do they say is the most expensive aspect to deal with?

Mr. ETSITTY. Mr. Chairman, members of the committee, Congressman Shays, thank you for the question. I would have to say that most of what we have heard regarding the five mill sites, in getting to the question of cleaning up contaminated groundwater, has been primarily that the locations of these sites are far from high population centers and that there is very little threat to our groundwater. That is what we have heard in the past.

The costs to continue cleaning up groundwater is growing and making sure that the groundwater that is recognized as threatened, that the protections necessary to keep that groundwater safe for our purposes, for drinking water or for livestock or for other agricultural or other uses of that water, remain a top priority for us today. We would like to make sure that those resources are protected.

Mr. SHAYS. You can close off the mines, correct? You can block them, you can board them up, whatever you do. Is that true?

Mr. ETSITTY. Mine features and mines themselves, the exploratory holes or the actual mining vents, can be closed off physically.

Mr. SHAYS. Have they been?

Mr. ETSITTY. Many of them have, yes, under the authorities of SMCRA and the Abandoned Mine Lands——

Mr. SHAYS. Are the areas where you have had milling, are those basically fenced off, are they operational?

Mr. ETSITTY. The former mill sites have been closed under the UMTRCA law. Where they sit today, there are caps covering all the mill tailings and groundwater treatment systems in place to handle ongoing——

Mr. SHAYS. So is there a concern that we continue to contaminate the groundwater or that we just have to deal with what has already been contaminated?

Mr. ETSITTY. At the mill sites, the caps were placed, but there were no liners that were engineered at the time. We do have concerns now, knowing what we know now about putting in waste into the ground. We ask that these considerations be taken up by the Federal agencies and we take another look at exactly how proficient and how effective the current groundwater monitoring systems are, and take a look at the potentials for contamination coming out from underneath the UMTRCA caps.

Mr. SHAYS. Thank you.

Mr. Chairman, just a desire on my part to make sure that as this committee works on it, that we can collectively work together on this issue.

Chairman WAXMAN. Thank you very much, Mr. Shays.

Mr. Braley.

Mr. BRALEY. Thank you, Mr. Chairman. I want to thank all of our witnesses who traveled so far from the Navajo Nation to enlighten and inform us here today.

Mr. Arthur, you noted in your statement that Navajo warriors have served the United States with distinction in all major conflicts since World War I. I think you could make an argument, I wouldn't be sitting here today without the bravery and distinguished service of the Navajo Code Talkers who served on Iwo Jima.

The committee staff provided us with a map of the Navajo Nation showing these abandoned uranium mines. One of the sites that jumped out at me was the site in Mr. Matheson's district in Utah, Montezuma Creek. My father graduated from Montezuma High School in Iowa in 1943, before joining the Marine Corps and serving on Iwo Jima. One of the most moving things I have ever seen was the 50th anniversary on Iwo Jima, when a representative of the Navajo Nation sang the Marine Corps hymn in Dine on top of Mount Surabachi. So I want to thank you all on behalf of my family for allowing my father to return home.

Dr. Brugge, I want to talk to you about some of the chilling descriptions we have heard from the panel's witnesses about the contamination of soil and groundwater on the Navajo Nation with uranium mine and mill waste over the period of 30 to 40 years. What does science tell us about the health effects on a population with long-term exposures to uranium mine waste?

Dr. BRUGGE. The science is very extensive, and I don't have enough time to tell you all of it. But I will reiterate the primary points that I think are particularly salient and that also have the strongest science behind them. I think at the top of the list we have to put radon. Radon is an extremely potent lung carcinogen and off-gases from uranium ore. So I think that has to be on the list.

Uranium itself is more of a heavy metal toxin. It is well known in terms of its effects on kidneys, which you heard testimony about, concerns about kidney disease. It has also been shown to cause birth defects and numerous other health outcomes for which there may be somewhat less evidence but suggestive possibilities. Radium is a highly radioactive material in the uranium ore. Radium, among other things, is associated with bone cancer, with cancer of parts of the head, the mastoid air cells and the nasal sinuses. It is also associated with leukemia.

I would include arsenic as an important contaminant that is out in the Navajo area, which is strongly known to cause skin and lung cancer as well as skin changes. I was struck by the description of pigmentation changes, which are clearly associated with arsenic exposure. So there is a very large and deep scientific base that shows that these hazardous materials cause health effects. Some of them are proven at a causal level from a scientific perspective. Others are not so certain.

What we don't know, and I was struck by Mr. Manygoats' story, is what the health effects on a child rolling around in yellowcake might be, with the mixture of contaminants and at that age in particular, being a very young child. So I think there are some areas where we don't know all of the health outcomes, but we know enough to know that this is very hazardous stuff.

As I was coming here today, I though the analogy is, none of you would want your children playing in this uranium ore. None of you would permit it. We have in the Navajo Nation, lots of children playing in this ore as if it were a sandbox, almost.

Mr. BRALEY. You have reviewed the studies that have been done to date on the health effects of uranium contamination on the Navajo Nation, is that correct?

Dr. BRUGGE. That is correct.

Mr. BRALEY. In your view, are those studies adequate to determine whether the communities and individuals are at risk, and the types of health effects for which they are at risk?

Dr. BRUGGE. I believe there is a need for additional research, particularly because most of the studies showing these associations with uranium ore components have not been done in the Navajo area. So to know specifically what has happened out there I think is important.

Mr. BRALEY. Are you aware of any types of cluster studies that have been done from an epidemiological standpoint to analyze the types of cancer that have been reported and the locations to determine whether there is a causal relationship?

Dr. BRUGGE. That is something that has not been done in the Navajo area and could be done as one of the possible directions that research could take.

Let me just take a moment, though, to make clear that one thing that I want to be absolutely clear about is, we don't want to say that we need more research before we start remediating these sites. This contamination is highly toxic, we know it is toxic to humans. We know enough about the toxicity. The reason why we need more research is to understand more fully the extent of the injustice that was done out there, and how it has affected the Navajo people.

Mr. BRALEY. Has anybody done any type of economic analysis of the long-term health costs to the Navajo people resulting from this contamination and looking forward who will bear the ultimate responsibility for those costs?

Dr. BRUGGE. I am not aware of such a study.

Chairman WAXMAN. Thank you, Mr. Braley. Your time is expired.

Mr. Cummings.

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

Mr. Etsitty, this is serious business, isn't it? Or let me go to Dr. Brugge, I am sorry. I was getting my name tags mixed up. This is serious business, isn't it?

Dr. BRUGGE. I would agree with that, yes.

Mr. CUMMINGS. And I would take it that, I believe very strongly in what the Bible says, it says do unto others as you would have them do unto you. I just wonder, these houses that these folks lived in, are living in, it is kind of dangerous, isn't it?

Dr. BRUGGE. I would say that living in a home that is constructed with uranium-contaminated material is extremely dangerous, yes.

Mr. CUMMINGS. And going back to you, Mr. Etsitty, you provided the U.S. EPA with a list of homes that the Navajo Nation EPA believes may be radioactive, is that right?

Mr. ETSITTY. Yes, Representative Cummings, we have.

Mr. CUMMINGS. How long ago did you do that, sir?

Mr. ETSITTY. That list has been available for about 5 years, as we have developed all the inventory information.

Mr. CUMMINGS. So that the committee will be clear what you mean by available, did you present that to the EPA, or has it just been sort of out there?

Mr. ETSITTY. It was collected through our Abandoned Uranium Mining Collaborative effort, and it has existed in a list form.

Mr. CUMMINGS. So EPA would have possession of it, or wouldn't they?

Mr. ETSITTY. They do have possession of it, yes.

Mr. CUMMINGS. I see. And they have had it for 5 years, you said?

Mr. ETSITTY. Yes.

Mr. CUMMINGS. That is a long time, isn't it?

Mr. ETSITTY. Well, we have taken a long time in developing our inventory and putting together all this information, yes.

Mr. CUMMINGS. And they didn't even immediately offer to retest these homes and tear down and replace any radioactive homes that people were living in?

Mr. ETSITTY. Congressman Cummings, we were fortunate to have a visit by Representative Patrick Kennedy in 2001, which resulted in the cleanup of two homes.

Mr. CUMMINGS. Wait a minute. Let me get this right. How many homes were on the list? I thought I heard you say a little bit earlier 80 to 90.

Mr. ETSITTY. Eighty to 90 homes, yes.

Mr. CUMMINGS. Eighty to 90, and 2 were removed, is that right?

Mr. ETSITTY. Two were demolished, and new homes were constructed for those families back in 2001.

Mr. CUMMINGS. So I think you testified, is there still some ongoing testing with regard to radon in these homes?

Mr. ETSITTY. Yes. We have an annual program that does radon testing for many residents, and Head Start schools and elderly centers across the Nation.

Mr. CUMMINGS. Now, let me make sure I am clear on this. Is that above the 80 or 90 that you talked about? In other words, you have your 80 or 90 and then you are still testing for others? Is that right?

Mr. ETSITTY. Yes. The 80 or 90 refers to homes that were built with contaminated radioactive materials.

Mr. CUMMINGS. So they are still there?

Mr. ETSITTY. Yes.

Mr. CUMMINGS. Are people living in those homes to your knowledge?

Mr. ETSITTY. To some extent, we don't have exact information, and that is what we continue to try and update on an annual basis, those families that continue to use those homes for various purposes, including residing.

Mr. CUMMINGS. Wait a minute. Let me get this right. You have 80 or 90 homes, you know where they are, like 2014 Madison Avenue, and you mean you don't go to those homes and see if people are still living there? Is that what you are trying to tell me?

Mr. ETSITTY. From time to time we do, but we need to update that inventory on a regular basis.

Mr. CUMMINGS. So you don't know whether people are living in the 80 or 90 homes or not, is that what you are telling me?

Mr. ETSITTY. That is part of our situation, yes.

Mr. CUMMINGS. Let me ask you this, Dr. Brugge. We are going to have some higher-ups from the EPA come up in a few minutes. They are going to be sitting in those chairs that you are sitting in. Not very long ago, we had the head of FEMA and we were talking about trailers down in the Gulf Coast with formaldehyde. And as a result of our hearing, a hearing just like this, the head of FEMA said, you know what, we have to get those people out of there, we have to warn them, because they are in danger.

I am just curious, what would you want the EPA folks sitting behind you, and I am sure they wouldn't want their children or families to live in these houses, but I am just curious as to what you would love to see them do. This is the Government of the United States of America. We have a duty to treat people right. That is where our moral authority comes from. I am just wondering, what would you have them do? It is going to be interesting to hear what they have to say. Because I am going to ask them how they feel about what you are about to say.

Dr. BRUGGE. Thank you, Congressman.

I don't know the details of all those homes and exactly what level of contamination that they have. But to the extent that they are similar to the home in Monument Valley that was demolished and replaced, then I think that should happen to the rest of those homes as well. It is critical to understand that I believe the reason that hasn't happened is a lack of resources. You can't just condemn someone's house. You have to give them another place to live.

So I think that would be what I would want to see happen.

Mr. CUMMINGS. Thank you very much.

Chairman WAXMAN. Thank you, Mr. Cummings.

I want to now recognize our colleague, Representative Udall. Congressman Udall has talked to me about this issue a number of times. We are holding this hearing today, but I don't want anybody to think it is only a one hearing matter. We are going to continue to pursue this issue until we get it right. So Congressman Udall, I want to recognize you to question the witnesses and tell you that I look forward to working with you to get this situation resolved and restore justice to those people who have been denied it.

Mr. UDALL. Thank you very much, Chairman Waxman. I also apologize to the early witnesses for not being here during your testimony because of the vote that took place on the floor. Mr. Chairman, I would like to put an opening statement for myself into the record, if that would be acceptable.

[The prepared statement of Hon. Tom Udall follows:]

Statement of Representative Tom Udall

Before the Committee on Oversight and Government Reform

At a Hearing on Uranium Contamination in the Navajo Nation

October 23, 2007

Chairman Waxman and Ranking Member Davis, thank you very much for allowing me to join your committee today. I would like to welcome the Honorable George Arthur, the Chairman of the Navajo Nation's Resources Committee, The Honorable Stephen Etsitty, the Director of the Navajo Nation Environmental Protection Agency, Mr. Larry King and Ms. Edith Hood who are here from New Mexico as representative of the Navajo Nation, and Mr. Phil Harrison and Mr. Ray Manygoats who have traveled from Arizona to do the same. Thank you all for making the long trip to share your knowledge on the impacts of uranium mining on the Dine.

Part of the Navajo Nation comprises a significant portion of my northern New Mexico district, and I am proud to represent many Navajo people. As you may know, my father, the former Secretary of Interior, began fighting against uranium mining and the damage it has inflicted upon the Navajo people nearly four decades ago, yet we are still here today, facing this same issue. The United States inadequate clean-up and neglect of the Navajo people is an abomination.

I thank the Chairman for convening this hearing to focus on the clean-up of the surface contamination that still poisons many Navajo people. On November 8th, I will be hosting a Roundtable on Uranium and the Navajo people to further discuss the delay in clean-up as well as the gaps in the Radiation Exposure Compensation Program. Additionally, we will highlight the threat posed by the renewed interest in nuclear energy and thus in uranium mining.

It is my sincere hope that our efforts here will help force the government to once and for all eliminate this blight upon the Navajo people and reverse many decades of neglect and outright discrimination.

Again, thank you Mr. Chairman for allowing me to join you today and I look forward to hearing the testimony to be presented.

Mr. UDALL. Mr. Chairman, what you have done here is very, very important, because the legacy, by holding this hearing, the legacy of uranium mining has been a real tragedy for the Navajo people. I think each one of the witnesses today has talked about pieces and parts of that.

But the tragedy for the 250,000 people that live at the Navajo Reservation cuts across all families. The things that you are hearing today, where you could go to any home on the Navajo Nation and ask questions about these kinds of issues, and most families would have similar stories, and may have well lost a breadwinner due to uranium mining and to lung cancer or some other health problem. So it is absolutely clear that not only this committee but other committees of Congress need to do the things like a RECA update, the Radio Exposure Compensation Act. There are families, as Dr. Brugge and others have testified, that were exposed to health hazards and there have not been studies of those families and what the health care impacts have been.

There is a massive cleanup problem that the Navajo Nation is trying to tackle through Mr. Etsitty's agency, but it still is enormous and the Federal Government hasn't put the resources behind it. We have a situation today where a company is trying to move out onto the Navajo Reservation and mine in the groundwater under Crown Point with an experimental technology where these people that drink from this groundwater, their only source of groundwater, would be exposed to this experimental technology, and possibly have their groundwater polluted forever.

So there are many, many problems there. I think we need to remember when folks step forward and tell us that nuclear power is green power, that the real legacy of the nuclear age you are seeing here, you are seeing here first-hand. People don't know it, but the costs I know, because I have been involved with my family in a variety of lawsuits, the costs have been enormous. Thousands of claims have been paid by the Federal Government; hundreds of millions of dollars have been paid out in compensation for these injuries. When you talk about hundreds of millions of dollars, they were in sums of $100,000, $150,000, $50,000. So there have been some very, very serious injuries and deaths caused by what has happened.

I would like to talk a little bit with Mr. Harrison about exposures of mining families and ask you a couple of questions. Is it true, Mr. Harrison, that your father worked in different uranium mines when you were young, a number of different uranium mines?

Mr. HARRISON. Yes, Congressman Udall. My father started mining around Cove, AZ and eventually moved out to Colorado, worked the Colorado mines, then some small mines in the Utah area for over 20 years.

Mr. UDALL. Did your family live near where your father was working at the mine?

Mr. HARRISON. In early childhood, when we were not in school, we lived in the mining camps. We did that off and on for, I would say from the mid-1950's to the 1970's.

Mr. UDALL. While you were a child living at the camp, did you play on the piles and have occasion to see other children playing out on these piles?

Mr. HARRISON. All of these mining sites were up in the mountains, to the point where transportation would be a problem. So the miners would live right next to where they mined, and also the waste piles would be there, where all the families had access to these waste piles, living on them, and also children there would have access to the entrances of the mines, too.

Mr. UDALL. Where did you get your drinking water for your family?

Mr. HARRISON. If the water source runs out, you bring the water supply to the mountains. If the water source runs out, then you would go to the mines to collect water for drinking water.

Mr. UDALL. So you were drinking water that was out of the uranium mines?

Mr. HARRISON. Yes. If it was there, we would use the water for all purposes.

Chairman WAXMAN. Will the gentleman yield to me on that issue?

Mr. UDALL. Thank you very much, Mr. Chairman.

Chairman WAXMAN. Mr. Harrison, as I understood your opening statement, you said that the drinking water that had uranium in it was being mixed with water that had less contamination in it. This was at the urging of the Bureau of Indian Affairs. Is that an accurate statement?

Mr. HARRISON. Yes, Mr. Chairman——

Chairman WAXMAN. Or was that the Indian Health Service?

Mr. HARRISON. Indian Health Service. I stated that I lived in a community where the mining took place; I grew up in Cove, and I lived just east of Red Valley. We had two water wells that produced over 115 gallons a minute. Both of these wells exceeded EPA standards.

We tried to resolve that by working with General Electric. We were asked to pursue a grant through USDA. Because of the bureaucratic system that they had, we ran out of time to address the water well in a 24 month period. So the Indian Health Service went to another course of action, to blend that water well with another source of water to cut down the EPA readings.

Chairman WAXMAN. I just find that unbelievable, that their solution was to take contaminated water and mix it with less contaminated water and have people drink it. This is to me amazing that would be the solution that the Indian Health Service would come up with, after not being able to figure out what to do, they would come up with a solution that to me can't be a solution to protect people's health.

Mr. Davis.

Mr. DAVIS OF VIRGINIA. I just have a couple of questions, Mr. Chairman.

Chairman WAXMAN. Just a minute. Mr. Udall, were you finished?

Mr. UDALL. I would like to just wrap up with a couple more, if I still have time, Mr. Chairman.

Chairman WAXMAN. Please proceed.

Mr. UDALL. This contaminated water was used for making coffee, washing, and even baby formula, is that correct, in your household?

Mr. HARRISON. Yes, Congressman Udall. If there was a sufficient amount of water that was in a mine, the workers would make a

cistern in the mines where they would build almost like a pool of water, and there would be cups around it, where they had access to it. Many of these families would take this water home. They traveled back to the Navajo Nation from Colorado.

I remember very well, they would take water in a canvas bag, say that this is mountain water, and they would take it back to their homes.

Mr. UDALL. You lost a brother, 6 month old died of a stomach ailment, is that correct?

Mr. HARRISON. Yes, sir. He was born in June 1955 and he died in November 1955. My mother was telling me that she was taking this mine water and mixing it with the baby formula. Back then they had powdered milk. So they would use that to feed babies. I know of one family that lost four little babies during those years.

Mr. UDALL. Your father died of lung cancer?

Mr. HARRISON. My father died from lung cancer at the age of 46 in 1971.

Mr. UDALL. Three of your other siblings have thyroid problems?

Mr. HARRISON. They are on medication now to control and to correct the thyroid disorders.

Mr. UDALL. And we have heard that you lost a kidney. Thank you, Mr. Chairman, I hope we will get a chance for a second round.

Chairman WAXMAN. Thank you very much, Mr. Udall.

Mr. Davis.

Mr. DAVIS OF VIRGINIA. Thank you all very much.

I was recently reading a letter sent by Senators Bingaman and Domenici which states that the Navajo Nation believes it is the responsibility of the Department of Energy, pursuant to the Uranium Mill Tailings Radiation Control Act [UMTRCA], to clean up the sites in the vicinity of the uranium mill. Is this accurate? Is this your understanding? Let me just ask the Navajo leaders.

Mr. ETSITTY. Yes.

Mr. DAVIS OF VIRGINIA. OK. Do you think that a comprehensive health study would be either necessary or helpful to determine what the actual problems are that exist in the community healthwise?

Mr. ARTHUR. Mr. Chairman and members of the committee, another study would probably help. But I think today we have sufficient data and information to immediately proceed with solutions.

Mr. DAVIS OF VIRGINIA. OK. The reason I asked, the second panel takes a little bit different view on this. And if you can get something comprehensive, they may view some of this as anecdotal and the like. It could strengthen the case for it.

According to the EPA, they have done aerial surveys, sampled the water and looked at homes suspected of being made from contaminated material. But ultimately, they contend that how these mines are handled rests in the hands of the Navajo Nation. Do you agree with that?

Mr. ARTHUR. No, sir.

Mr. DAVIS OF VIRGINIA. If it is a matter of funding, has the Navajo Nation yet determined what, if any, additional funds will be necessary to address the problem?

Mr. ARTHUR. Mr. Chairman, members of the committee and Congressman Davis, we just recently, or in this testimony requested an estimated amount.

Mr. DAVIS OF VIRGINIA. Are we in the process of determining how much will be needed to resolve the issue? Is anybody doing a study at this point to try to get at how much is needed?

Mr. ETSITTY. Thank you, Congressman Davis.

The inventory that we have compiled gives us a list upon which we can start to construct an estimation. And the work that we have done with U.S. EPA at Northeast Churchrock Mine gives us some initial cost figures. But we have not done anything at this point that would lead toward something total and comprehensive.

Mr. DAVIS OF VIRGINIA. I guess the only question I would have from this vantage point is, we want to understand what the costs are as we get into this in a comprehensive way. I know you would want to do that too, before we jump in.

Thank you very much. I appreciate your testimony. Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Davis.

I am very pleased that Representative Matheson agreed to join us today, because he is a leader on environmental issues, especially cleanup issues and matters relating to uranium in Utah, not just on this issue, but on other issues as well. So I would like to recognize him for 5 minutes.

Mr. MATHESON. Thank you, Mr. Chairman. Thanks for the opportunity to participate, not as a standing member of this committee, thank you for the opportunity to participate in the hearing today.

I also want to thank all the witnesses for their time and their effort and their testimony. It is interesting, if you think about the environment in which all this started back in the 1940's, when uranium fever really swept this country, Congress passed something called the Atomic Energy Act in the 1940's and created the Atomic Energy Commission. By one estimate, Americans went out and bought 35,000 Geiger counters in 1953 alone. Native Americans became a big part of the effort to look for uranium supplies because of their knowledge of the land.

What should also be noted is that even back in the 1940's, the Government knew that folks were at risk when involved in this activity. A U.S. public health researcher named Henry Doyle found in 1949 that the Navajo workers were not given pre-employment exams and there were no medical programs for miners in those days. Adverse health effects to miners were already a concern at the time, to say nothing of the risk to the public and others in the Navajo Nation.

I am proud to represent the Navajo Nation, at least the Utah portion. It has been one of the best experiences I have had to be a Member of Congress, and I am honored to have that opportunity. I am the son of a down-winder who lived in southern Utah during the nuclear weapons testing. He died when he was 61 of multiple myeloma. I have worked with Representative Udall extensively on looking at the Radiation Exposure Compensation Act to see if there are ways that we ought to be amending that act and expanding it.

The important thing about the Radiation Exposure Compensation Act is not necessarily the compensation, but it is the acknowledgement on the part of the Federal Government that it did something wrong. Because back in this euphoria of the 1940's and 1950's, when the Atomic Energy Commission and uranium fever took over this country, a lot of mistakes were made. Folks in southern Utah were referred to by the Atomic Energy Commission as a low-use segment of our population. For those of us who had families there, we didn't really agree with that statement, and I am sure the Navajo Nation doesn't agree with that as well.

So it is important, and I thank the chairman for addressing this issue and bringing this matter to light in this hearing. There is so much work to be done.

I wanted to ask Mr. Harrison a question. I really appreciated your comments about the need to readdress RECA, particularly as it relates to the Navajo Nation. I have been concerned about this for some time, that we had some provisions in RECA that are very difficult to implement, because of the difficulty on the Navajo Nation in meeting the requirements for documentation to prove eligibility for RECA. It is something that I think Congress needs to address, and I would welcome any suggestions you may have on how we ought to be amending the Radiation Exposure Compensation Act. Do you have anything to offer on that?

Mr. HARRISON. Thank you, Mr. Matheson. Currently, Navajo Nation has drafted three technical amendments and three statute changes to pursue RECA changes. We would very much like to have Members of the U.S. Congress work these provisions to where all these former miners would be adequately compensated with less stringent requirements. It is very important also to consider the post-1971 uranium workers. We have many of them come to our offices to get compensation.

Mr. MATHESON. I look forward to reviewing those suggestions. I am very interested in pursuing that.

Dr. Brugge, I would like to thank you for the research you have done. You have asked that Congress conduct more health research, and I would like to know if you have suggestions about which studies you believe would be most beneficial. Again, I think you may face some of the challenges because of the lack of documentation and how that affects researchers trying to conduct statistical studies or epidemiological studies. Do you have any thoughts on what else we should be doing?

Dr. BRUGGE. Yes. I think there are basically two types of approaches that could be taken to future research studies. One would be what has been referred to here as sort of a comprehensive public health study that looks for a clustering of diseases and uses Indian Health Services cancer registry, maybe other data of that sort, to look for what diseases are higher in the communities that have more uranium exposure.

I think the other approach would be to look for some of the diseases that we know are associated with uranium from other studies, and see whether the same association holds. These are called case control studies, where perhaps you would identify children with birth defects and children without, and then look back at their exposure history. The kind of rich detail that Mr. Harrison was

providing has not been brought into those kinds of studies, and to do that, and see whether the baby formula, playing on the tailings piles and those sorts of things are clearly associated.

I think it would be interesting, but I would reiterate, not necessary, to proceed with remediation of these sites.

Mr. MATHESON. Thank you, Mr. Chairman. I will yield back.

Chairman WAXMAN. Thank you very much, Mr. Matheson.

I do want to thank all of you for your very powerful testimony. I guess there are two comments I want to make as we move on to the next panel. One, aside from the fact that this is very, very powerful, Mr. Etsitty brought in some dirt that he showed was very radioactive. As I understand it, Mr. Etsitty, that is not the most radioactive part of the dirt that is on your property. Is that correct?

Mr. ETSITTY. Mr. Chairman, that is correct. There are many other samples and places from where this sample came from that are much higher. But for the demonstration that we did here this morning, we had to abide by shipping constraints and also safety overall. What I demonstrated was exposure, and what we had here was very limited exposure. The levels that we picked up on the particular sample were high, but not putting us in this room immediately at risk. If members were to consider that the levels that people are being exposed to over the terms of tens of years, decades, it does amass to a grave public health concern.

Chairman WAXMAN. We had to go through extraordinary efforts to allow you to bring that sample into this hearing. The Capitol Police were very concerned about it. We had a lot of people who were concerned whether we should even bring that small little sample into the room. And yet we should realize that this is the kind of radioactive dirt that the Navajo people are being exposed to every single day.

The second point that I want to make, Mr. Harrison, is that the idea that we would have blended water, blended water, water contaminated with uranium; it is radioactive, and then blended with non-contaminated water; I don't think anybody in this Capitol would drink it. And yet we are asking people in the Navajo Nation to drink that water, and the Federal Government is giving its OK to this?

If we are not willing in this Congress to be exposed to the dirt or the water that you are exposed to every single day, then I don't think we ought to ask you to be exposed to it, either. And I think that is a telling point for how people here in Washington think it is maybe different for you. Why they should think it is different for you and they wouldn't want it for themselves underscores the neglect that we have given to this very serious problem.

I thank you, each and every one of you, for being here today. We are going to dismiss you and move on to the second panel.

But before we do that, I want to declare a 10 minute recess, just a short recess, then we will have the second panel here and move on with the hearing.

Mr. ARTHUR. Mr. Chairman, members of the honorable committee, on behalf of the Navajo people and certainly the Navajo Nation government, the Navajo Nation Council, that consists of 88 members, and we don't have a party system. I only ask that you do not approach this as a Republican or a Democrat or an Independent.

This is an issue related to the human being, my people. Please, I ask that you go forward with this discussion in a manner that would be more on the human concept, rather than on a party line.

Chairman WAXMAN. I appreciate that comment, and I am sure you noticed that both the Democrats and Republicans on this committee were very clear that we want to work together, that we are all outraged by what we have seen happening.

Mr. ARTHUR. Thank you, sir, and thank you, members of the committee.

Chairman WAXMAN. Thank you. Ten minute break.

[Recess.]

Chairman WAXMAN. The committee will please come back to order.

Our second panel consists of the relevant Federal agencies. Mr. Wayne Nastri is the Regional Administrator for Region 9 of the U.S. Environmental Protection Agency. Mr. Nastri will be accompanied by Mr. Keith Takata, Director of Region 9 Superfund Division, who will be available to help answer Members' questions.

Dr. David Geiser is the Deputy Director of the Office of Legacy Management at the U.S. Department of Energy. Dr. Charles Miller is the Director of the Office of Federal and State Materials and Environmental Management Programs at the U.S. Nuclear Regulatory Commission. Dr. Miller will be accompanied by two colleagues at the NRC who will be available to help answer questions: Mr. Francis Cameron, the Assistant General Counsel for Rulemaking and Fuel Cycle, and Mr. William von Till, Branch Chief for Uranium Recovery Licensing.

Mr. Robert McSwain is the Acting Director of Indian Health Service in the U.S. Department of Health and Human Services. Mr. McSwain is accompanied by two IHS experts who will be available to help answer questions, Rear Admiral Douglas G. Peter, M.D., Deputy Director, Chief Medical Officer for the Navajo Area, IHS, Gary Hartz, Director of the IHS Office of Environmental Health and Engineering. And Mr. Jerry Gidner is the Director of the Bureau of Indian Affairs in the U.S. Department of Interior.

I thank you all for being here today. It is the policy of this committee to swear all witnesses, and those who may be answering questions, and take the oath. I would like everybody to please rise and raise your right hands.

[Witnesses sworn.]

Chairman WAXMAN. The record will indicate that all of the witnesses answered in the affirmative.

Mr. Nastri, why don't we start with you? All of you should be aware that your prepared written statement will be in the record in its entirety. We would like to ask you, if you would, to please limit the oral presentation to around 5 minutes.

STATEMENTS OF WAYNE NASTRI, REGIONAL ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY, REGION 9, ACCOMPANIED BY KEITH TAKATA, DIRECTOR, REGION 9 SUPERFUND DIVISION; DAVID GEISER, DEPUTY DIRECTOR, OFFICE OF LEGACY MANAGEMENT, DEPARTMENT OF ENERGY; CHARLES L. MILLER, DIRECTOR, OFFICE OF FEDERAL AND STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS, U.S. NUCLEAR REGULATORY COMMISSION, ACCOMPANIED BY FRANCIS CAMERON, ASSISTANT GENERAL COUNSEL FOR RULEMAKING AND FUEL CYCLE AND WILLIAM VON TILL, BRANCH CHIEF FOR URANIUM RECOVERY LICENSING; ROBERT G. MCSWAIN, ACTING DIRECTOR, INDIAN HEALTH SERVICE, ACCOMPANIED BY REAR ADMIRAL DOUGLAS G. PETER, M.D., DEPUTY DIRECTOR, CHIEF MEDICAL OFFICER, NAVAJO AREA, IHS; GARY HARTZ, DIRECTOR, IHS OFFICE OF ENVIRONMENTAL HEALTH AND ENGINEERING; AND JERRY GIDNER, DIRECTOR, BUREAU OF INDIAN AFFAIRS, U.S. DEPARTMENT OF INTERIOR

STATEMENT OF WAYNE NASTRI

Mr. NASTRI. Thank you, Mr. Chairman, members of the esteemed committee. Mr. Chairman, as you note, our comments have been prepared and submitted for your review. I would just like to briefly summarize my thoughts on what we have heard thus far.

First off, I want to thank you for your attention on this matter. I too am sickened and saddened by what we heard today. Working with tribal nations has been an area of extreme importance for us. We have done extreme amounts of work with the tribal operations committee, with the regional tribal operations council. I myself have visited Navajo lands twice and had a chance to see first-hand the beauty of the land and to understand some of the challenges—it is so large, it is so vast—some of the challenges on an Indian nation, particularly Navajo, where over 30 percent of Navajo residents don't have access to safe drinking water.

We have many challenges on Navajo Nation. We have worked with Navajo Nation and Navajo Nation EPA for many years. The recent culmination of the inventory, I have brought a copy of the six documents that reflect the various chapters and regions where uranium mining is ongoing. We have identified this assessment through a number of different techniques, starting with helicopter surveys, followed up with additional historical research. This has really given us the foundation to evaluate the situation and to move forward.

We heard today about many sources of drinking water where people drink. I want to point out that there are literally thousands of drinking water sources that are unregulated. The definition of regulation for us is are there 25 people or more drinking from it, are there 15 connections. But I can tell you, when I visited Navajo and Hopi, I was out in the plains on the arroyo, and here was a giant rock, and there was a hole in it. They said, that is our drinking water. They said, you can drink that. And I wouldn't drink that.

But we have a lot of challenges that we try to get. One of the things that we have done is worked with Navajo Nation on out-

reach, trying to inform the communities about the hazards and to try to utilize its safe drinking water systems. We have worked to try to increase the amount of drinking water systems.

Mr. Chairman, I know you talked about the issue of blending. The issue of blending is one that I am sure we can get into a little bit later. But it is an area that we actually engage quite a bit in. So I would be more than happy to answer your questions on that.

I think in hindsight, there are certain actions, and what we heard today is that perhaps we have studied issues too long, and perhaps we needed to take action. With regard to some of the hogan issues, I am aware of two studies where we identified 28 hogans directly from Region 9 and 33 additional hogans from our Office of Radiation and Indoor Assessment. Those hogans where there was an immediate impact on the initial 28 assessments, we took action, we demolished those 2. Of the 33 that I am also aware of that were conducted by what we call ORIA, our Office of Radiation Indoor Assessment, one of the things we try to do is, we respect the sovereignty of the Navajo Nation. We work with Navajo Nation and we say, here is the information that we have. How do you think we should proceed?

It is easy to say we have developed an inventory and that we should take action. But there are a number of other factors that perhaps we don't appreciate, that we don't have the ability to understand the spirituality of the land. Those are issues that we need to work with Navajo Nation, so that we can understand and really develop a true prioritization that reflects both of our agencies.

We are going to continue to work and take action where necessary. We have a standing offer with Navajo Nation that if we need to take removal action, we will do so. There are various actions right now that we are contemplating, but because of the challenge in the courts and the other systems, we are on hold. We intend to move quickly where we have that ability. We intend to utilize the authorities where we have the authority. And we intend to work more closely together, and I think that is a common commitment that we all share and we all recognize that we do need to do a better job.

I don't think that when we work individually, whether it is here on Navajo Nation or in any area of the Nation, we get as much done as when we work in collaboration. I think by raising your attention and bringing this all together, you certainly have our commitment at EPA to address these issues in a collaborative approach, to address these issues in a manner that provides the hopefully efficient and speedier answer that we all need on these.

With that, I will conclude my comments. Thank you, Mr. Chairman.

[The prepared statement of Mr. Nastri follows:]

Testimony of Wayne Nastri
Regional Administrator
U.S. Environmental Protection Agency - Region 9
Before the Committee on
Oversight and Government Reform
United States House of Representatives

October 23, 2007

Mr. Chairman, members of the Committee, thank you for the opportunity to testify before you today. As the Regional Administrator for Region 9 of the U.S. Environmental Protection Agency (EPA), I have responsibility for protecting the public health and the environment in Arizona, California, Nevada, Hawaii, the Pacific Islands, and the 147 federally recognized tribes in the Pacific Southwest, including the Navajo Nation.

I am here today to discuss with you and to answer questions pertaining to the USEPA's ongoing efforts to address contamination from uranium mines in the Navajo Nation. We are working diligently with our Navajo governmental partners to protect human health and the environment.

From 1944 to 1986, nearly 4 million tons of uranium ore were mined from the Navajo Reservation from over 500 mines. Uranium mills processed this ore into refined uranium oxide, which was used for energy and nuclear weapons production. When these mines ceased operation, many of them were abandoned without proper reclamation. These abandoned mines have presented a variety of risks to the Navajo people, including physical safety hazards and radiation hazards. The physical hazards have largely been addressed by the Navajo Nation's Abandoned Mine Lands Program, using funds provided by the Department of the Interior under the Surface Mining Control and Reclamation Act (SMCRA). Remaining environmental risk may be addressed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980

(CERCLA) or other programs, such as Brownfields, SMCRA or enforcement by the Navajo.

In the early 1990s, at the Navajo Nation's request, USEPA conducted several removal actions at six of the abandoned uranium mines sites. In 1993, the Navajo Nation requested that USEPA and other federal agencies begin assessment of all abandoned uranium mines on Navajo Nation lands. With over 1000 potential sources spread over an area the size of West Virginia, USEPA Region 9 identified a three-pronged strategy for addressing the environmental hazards at abandoned uranium mines on Navajo lands. The strategy included, first, develop a process to identify the universe of uranium mine sites and evaluate cleanup options; second, use of Superfund authorities to immediately address the most imminent threats; and third, assistance to the Navajo Nation in building the capacity of its Superfund Program to take lead responsibility to assess and clean up more sites. The challenge posed by uranium mine sites in the Navajo Nation will need to be addressed through federal, state, and Tribal efforts.

From 1994 to 2007, USEPA conducted an investigation across all of the uranium mining areas on Navajo lands. We conducted aerial surveys over approximately 1,440 square miles to identify areas with elevated radiation readings. We sampled water at 226 agricultural wells and springs, and found that roughly 13% of them had elevated radiation, most likely naturally occurring in many cases. These were not regulated drinking water sources, although they might be used at times for domestic use. We surveyed 28 structures and identified two hogans with high levels of radon and gamma radiation. We mapped soils with elevated radiation, sampled wells and tested radon in Church Rock, New Mexico in a collaborative sampling event organized by a nonprofit community group. We also gathered documentary information from many sources identifying known mining operations.

Using all this information, we built an inventory of 520 abandoned uranium mine sites. The study cost almost $12 million. Under an agreement with the Navajo Nation Environmental Protection Agency, we provided the database to them for their use. The Navajo Nation EPA is now supplementing the database to reflect cultural considerations and other criteria. Navajo Nation EPA is in the process of prioritizing the mine sites. Navajo Nation EPA and USEPA will then meet to discuss a strategy for addressing the top priorities.

The second aspect of USEPA's strategy to address abandoned uranium mines in the Navajo Nation is to take action at sites that present an imminent and substantial endangerment to human health or the environment. We conducted Superfund removal actions at a cluster of six mines in Bluewater, New Mexico in 1991. The uranium waste piles were consolidated and returned to the workings and shafts, and the site was capped with clean fill, at a cost of $793,000. In 2001, we removed two hogans constructed of radioactive waste rock from nearby mines, in Monument Valley and the Four Corners area. The hogans were replaced or compensation provided to the residents where they were not replaced. The cost for this action was $84,000.

This summer, we removed 6,500 cubic yards of radium-contaminated soils around residences near the Northeast Church Rock Mine in New Mexico. USEPA spent $990,000 on the excavation, and required the responsible party, United Nuclear Corporation (UNC), to dispose of the soils at an additional cost of about $1.3 million. USEPA plans to require UNC to perform another Superfund removal action for cleanup of the balance of the site in 2008, by addressing additional contaminated soils with an estimated volume of 1.4 million cubic yards.

Capacity-building is the third part of USEPA's uranium mine strategy. USEPA has provided funding and technical support to the Navajo Nation EPA since 1981.

At present, we provide a total of $3.9 million annually through 11 grant programs. Over the last 16 years, we have provided $7.8 million specifically directed to the Navajo Nation Superfund Program for site assessment and for development of the Navajo response program. In addition, USEPA's Waste Management Division has provided over $4.5 million to the Navajo Nation's Waste programs since 1992.

Beginning in the mid-1970s, USEPA's Office of Radiation and Indoor Air (ORIA) has provided assistance to the Navajo Nation EPA to identify houses constructed with uranium mine and mill wastes. In 2001, we provided a $45K grant to the Navajo Nation EPA for this purpose. In addition, EPA provided grants totaling $325K during 2000-2004 to Northern Arizona University for uranium and radiation education outreach to Navajo schools. Region 9 Superfund and ORIA have coordinated their efforts and will continue to work with the Navajo Nation EPA on identifying structures which may pose radiation hazards.

USEPA has provided additional funds to expand and upgrade public drinking water systems to address uranium contamination. Since uranium is naturally-occurring in the Navajo Nation, impacts to drinking water aquifers may sometimes be attributable to natural sources rather than to mining.

USEPA Region 9 remains firmly committed to protecting public health and the environment by addressing the environmental affects of abandoned uranium mines on Navajo lands. We will continue to work closely with our Navajo Nation and other federal, state and local partners as we all help to address the environmental effects of abandoned uranium mines on the Navajo Nation.

This concludes my testimony. I am happy to answer any questions you may have.

Chairman WAXMAN. Thank you very much, Mr. Nastri.

Mr. Geiser.

STATEMENT OF DAVID GEISER

Mr. GEISER. Good afternoon, Mr. Chairman and distinguished members of the committee.

The Uranium Mill Tailings Radiation Control Act of 1978 required DOE to remediate four inactive uranium milling sites on the Navajo Nation. The four sites are referred to as Mexican Hat, Monument Valley, Shiprock and Tuba City sites. The remediation of these sites included the construction of three disposal cells and surface reclamation. Groundwater remediation continues at three of those sites.

The surface reclamation program was completed in 1998, and the authority of DOE to conduct further surface cleanup expired at that time. The cost of the surface cleanup on the Navajo Nation, including the construction of three disposal cells, was $137 million. The groundwater program is ongoing today, at a cost of approximately $3 million per year, and has no statutory expiration date.

The four Navajo Nation milling sites are being cleaned up under a cooperative agreement with the Navajo Nation that provides the opportunity for a participative decisionmaking process as required by the act. In addition, ongoing communication includes regular meetings and consultation on draft reports. This process ensures that DOE addresses the concerns of the Nation and that the Nation has full knowledge of current and planned activities related to the cleanup.

Work at the Tuba City site is staffed by Navajo operators under contract with the DOE technical assistance contractor. DOE has worked with the Navajo Nation over the last 20 years. We currently have a positive working relationship. DOE provides funding of approximately $300,000 per year to the Navajo Nation so that their staff can participate. Staff from the Navajo Nation assists with site inspections, monitoring and maintenance activities. DOE holds quarterly meetings with the Navajo Nation to update the progress of site cleanup, address the nation's concerns and plan for technology transfer and education opportunities.

DOE is currently remediating groundwater at the Tuba City, Monument Valley and Shiprock sites. The groundwater plumes are as a result of former uranium milling site ponds that contained large volumes of process water. I will briefly address groundwater remediation at each of these sites.

The primary contaminant of concern at the Monument Valley site is nitrate. There is a pilot study underway that uses native plants to facilitate the reduction of the nitrate in groundwater at the site. The pilot study was approved under environmental assessment in cooperation with the Navajo Nation. The pilot project has been successful to date, and a deeper well was recently drilled to continue to provide water for irrigation. In addition, a water line was built by DOE for the few residents who might be impacted by the groundwater plume.

The major contaminant of concern at the Shiprock site is uranium. There are two areas of groundwater contamination, the terrace and the floodplain. Both of these locations are difficult to re-

mediate, because of very small volumes of groundwater. We have taken actions both for the terrace and the floodplain. We believe those are having positive results in helping us contain the groundwater contamination.

The Tuba City site has a state-of-the-art treatment system to collect and treat contaminated groundwater. The system is effective enough that the treated groundwater can be re-injected into the ground. Navajo operators have been hired to operate the groundwater treatment plant.

In addition to conducting remedial action on the milling sites, DOE has also remediated contaminated soils surrounding the sites and properties in the vicinity of the sites as part of the vicinity property program. That was done between 1978 and 1998. DOE investigated ten properties near the Tuba City milling site for possible inclusion in this program. Out of the 10, 1 site was included, the other 9 did not exceed the standards, and therefore, no action was taken.

Groundwater issues generally do not occur on vicinity properties, because large volumes of process water normally used for milling are not present at those vicinity property sites, and so generally do not impact groundwater quality. Reauthorization of UMTRCA surface remediation authority would be required to perform additional remediation of vicinity properties.

I would be happy to answer any questions you may have on our activities.

[The prepared statement of Mr. Geiser follows:]

STATEMENT OF

DAVID GEISER

DEPUTY DIRECTOR, OFFICE OF LEGACY MANAGEMENT

DEPARTMENT OF ENERGY

BEFORE THE

COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

UNITED STATES HOUSE OF REPRESENTATIVES

October 23, 2007

Good morning Mr. Chairman, and distinguished Members of the Committee. My name is David Geiser and I am the Deputy Director of the Office of Legacy Management (LM) at the Department of Energy (DOE). LM is responsible for ensuring that DOE's post-closure responsibilities are met by providing long-term surveillance and maintenance, records management, workforce restructuring and benefits continuity, property management, and land use planning. By managing post-closure responsibilities, LM has better positioned DOE to continue focusing programs and personnel on achieving its diverse missions, including enabling the Environmental Management program (EM) to concentrate its efforts on the remaining cleanup and risk reduction.

DOE Legacy Management

The activities of DOE and its predecessor agencies, particularly during the Cold War, left a legacy of environmental impacts at over 100 sites nationwide. Addressing this environmental and human legacy has been, and will continue to be, a major DOE undertaking.

LM's primary goals are to protect human health and the environment through effective and efficient long-term surveillance and maintenance; ensure the preservation, protection, and accessibility of legacy records and information; support an effective and efficient work force structured to accomplish DOE missions and assure contract worker pension and medical benefits; manage legacy land and assets, emphasizing protective real and personal property reuse and disposition; and improve program effectiveness through sound management.

In Fiscal Year (FY) 2007, LM conducted long-term surveillance and maintenance at more than 70 sites. These sites included private sector or Formerly Utilized Sites Remedial Action Program (FUSRAP) sites, former uranium milling sites, nuclear reactors and former nuclear weapons test sites, and DOE sites where closure and cleanups have been completed.

At the uranium milling sites, tailings or waste were produced by the extraction or concentration of uranium or thorium from ore. Under the Uranium Mill Tailings Radiation Control Act of 1978, as amended (referred to as "the Act" or "UMTRCA"), Public Law 95-604, DOE is responsible for cleaning up inactive uranium milling sites that were abandoned at the time the legislation was enacted subject to the oversight of the State in which the tailings were located and the U.S. Nuclear Regulatory Commission (NRC). Sites that were operating in 1978, or thereafter, are cleaned up by the operator under state or NRC oversight. LM provides long-term surveillance and maintenance for sites that are transferred to the federal government for custodial care. For the UMTRCA sites, this includes both surveillance and maintenance of the disposal cells and cleanup of contaminated groundwater.

Uranium Mill Tailings Radiation Control Act of 1978 authorizes DOE Remedial Action Program

Title I of the UMTRCA originally required the cleanup of 22 inactive uranium milling sites and associated properties in the vicinity of the milling sites. The Act was amended a number of times: to extend the UMTRCA's expiration date; to add the Edgemont, South Dakota vicinity properties (but not the milling site); and most recently to add the Moab, Utah milling site.

Under the Act DOE's authority for surface (tailings) cleanup at the original 22 milling sites and vicinity properties (including Edgemont) expired in 1998. DOE's authority for groundwater remediation does not have an expiration date.

DOE remediated sites in accordance with standards promulgated by the U.S. Environmental Protection Agency (EPA) in 40 C.F.R. Part 192. The regulations provided standards for the cleanup of soil outside structures (radium-226 concentration in soils) and the cleanup of structural interiors (gamma radiation and radon-222). In addition, the regulations established the design standard for the longevity of disposal cells. The regulations also covered the cleanup of contaminated groundwater.

Over the years, DOE has developed alternatives for remedial action and then remedial action plans for each milling site and associated vicinity properties. These plans and alternatives provide for the cleanup of contaminated soils, groundwater, and structures, and the construction of disposal cells. In each case, NRC concurred on the remedial action plan and quality control procedures. For any given site, after surface remediation was performed (groundwater remediation is ongoing at many sites), a completion report documenting the cleanup and construction of the disposal cell was submitted to NRC for its concurrence.

After NRC concurs on a given completion report, the site falls under the NRC general license for Title I sites as established in 10 C.F.R. § 40.27. The Long Term Surveillance Plan written for each individual site becomes a condition of the general license and establishes the long-term surveillance and maintenance requirements. The long-term care responsibility is transferred to DOE's LM Program.

By 1998, DOE had remediated 22 milling sites and a total of 5,335 properties (4,266 in Grand Junction, Colorado; 1,038 in 18 other communities, including Edgemont; and 31 at the 4 Navajo sites). DOE also constructed 18 disposal cells. Program costs for all 22 milling sites and the vicinity properties totaled $1.476 billion for the cleanup of the milling sites and vicinity properties.

Health Risks Associated with UMTRCA Sites

Prior to surface remediation, the primary health risk from uranium mill tailings was radon exposure to people living in structures built over contaminated soil. Risks from gamma exposure and other radioactive materials at inactive milling disposal sites, such as the Tuba City disposal site, are low.

The risk to public health due to contaminated groundwater from the inactive uranium milling disposal sites is also low because groundwater use is prevented by institutional controls. Furthermore, the geologic conditions at most sites prevent seepage (precluding animal use) and make it difficult for humans to pump the water out. In addition, DOE built public water supplies to provide alternate water sources to communities in lieu of using contaminated groundwater (i.e., Mexican Hat, Utah; Riverton, Wyoming; Rifle and Gunnison, Colorado).

DOE's actions have significantly improved the protection of human health and the environment.

DOE prepared a remedial action plan for each milling site that explained the basis and approach for the remedial action. These plans included the design drawings and specifications for the remediation and the construction of the associated disposal cell. All designs followed applicable NRC and DOE guidance, including DOE's Technical Approach Document, which was written specifically for the design of the disposal cells. At the four sites on Navajo Nation lands, the NRC and the Navajo Nation concurred on the remedial action plans.

Disposal cells were designed for a 1000-year lifespan to the extent reasonably achievable, and, if 1,000 years was not achievable, the cells were designed to last for a minimum of 200 years. EPA standards required radon gas to not exceed 20 picocuries per square meter per second from the tailings placed in the cell. The disposal cell covers contain clay barriers to prevent the release of radon and minimize the infiltration of water and future maintenance. These clay barriers are in turn covered with soil and then rock for erosion protection.

As part of annual inspections, DOE maintains disposal cell integrity by monitoring erosion around the cell, plant encroachment, and other potential impacts. DOE performs repairs as necessary.

By stabilizing the radioactive tailings in disposal cells and remediating the groundwater that exceeds EPA pollution standards, DOE has been protective of human health and the environment.

DOE Activities on Navajo Nation Lands

Four of the original milling sites were located within the Navajo Nation. UMTRCA required DOE to remediate Navajo sites at no cost to the Navajo Nation (while participating states paid 10% on sites within that state). The Act required a cooperative agreement between the DOE and the Navajo Nation with the following major conditions: 1) the Navajo Nation and property owners agreed to release the U.S. from any liability associated with the cleanup; 2) all remedial action would be performed in accordance with the Act; 3) DOE would have a permanent right of entry to the milling sites; and 4) DOE would take title to the remediated tailings.

The four inactive uranium milling sites located on the Navajo Nation that have been remediated under the Act are: Mexican Hat, Utah; Monument Valley, Arizona (tailings moved to Mexican Hat); Shiprock, New Mexico; and Tuba City, Arizona. The remediation of these sites includes surface reclamation and ground water remediation. The surface reclamation program was completed in 1998, and the authority of DOE to effect further surface cleanups expired at that time. The cost of the surface cleanup at the four Navajo Nation sites was $137 million. The groundwater program is ongoing at a cost of $3.26 million per year. The groundwater program has no statutory expiration date.

The four Navajo Nation milling sites are being cleaned up through a cooperative agreement with the Navajo Nation that provides the opportunity for a participative decision-making process as required by UMTRCA. In addition, ongoing communication includes regular meetings and consultations on draft reports. This assures that DOE addresses the concerns of the Nation and that the Nation has full knowledge of current and planned activities related to the cleanup. Work at Tuba City is staffed by Navajo operators under contract with the LM technical assistance contractor. DOE also periodically employs students under an internship program, and gives technical presentations about the site at local colleges. Further, DOE conducts tours of the site giving local students the opportunity to enhance their educational experience.

DOE Working with Navajo Nation

DOE has worked closely with the Navajo Nation over the last 20 years and the two currently enjoy a positive working relationship. DOE provides funding (over $300,000 per year) to the Navajo nation so that Navajo UMTRA program staff can participate in decision-making. The Navajo Nation staff assist with site inspection, monitoring, and maintenance and review plans and information updates. DOE holds quarterly meetings with the Navajo Nation to update the progress of site cleanup, address any of the Nation's concerns, and plan for technology transfer and educational opportunities. The goals for FY 08 include increasing utilization of Navajo staff in site inspections, sampling, well-field repairs and construction, and periodic site cleanup.

DOE Groundwater Cleanup Program on Navajo Nation Sites

DOE is currently remediating groundwater at the Tuba City, Monument Valley, and Shiprock sites. The Mexican Hat site does not require cleanup. The groundwater plumes are a result of the past uranium milling site ponds that contained large volumes of process water.

Mexican Hat Site

The milling waste from Monument Valley was co-located at the Mexican Hat site for disposal. There is little groundwater at this site, and following several years of monitoring four wells and several seeps near the cell, further monitoring has been discontinued in consultation with the Navajo Nation. DOE conducts periodic inspections of the area, and if seep flow returns, sampling will resume. The four groundwater monitoring wells were recently decommissioned because it is not anticipated that the collection of additional samples will be necessary. Further, closing the wells to surface flow reduces environmental risk.

Monument Valley Site

The primary contaminant of concern at the Monument Valley site is nitrate, although selenium and sulfate are also present. Nitrate is a result of the natural oxidation of ammonia compounds used in processing the ores and is not a radioactive substance. Consequently, a technique called phytoremediation, which utilizes native plants, is being used to clean up the nitrate. There is a pilot study underway utilizing native plants to facilitate the reduction of the nitrate in ground water at the site. The pilot study was approved under an Environmental Assessment in cooperation with the Navajo Nation. Native plants that are naturally water-seeking are planted and contaminated water is pumped from the aquifer to irrigate them. The pilot project has been so successful to date that the well has gone dry and a deeper well was recently drilled to continue to provide contaminated water for irrigation. Once established, these deep rooting plants use the nitrate and water, reducing both the volume of contaminated water as well as the concentration of the nitrate. It is anticipated that there will not be a need to expand the program beyond the pilot stage in order to fully address the nitrate plume, which is about equal in areal extent to the original milling site. DOE employs local labor and students to help operate the system. In addition, a water line was built by DOE for the few residents who might be impacted by the groundwater plume so that they have an alternate supply of clean water.

Shiprock Site

The major contaminant of concern at the Shiprock site is uranium. There are in general two areas of groundwater contamination at the Shiprock site, the terrace and the floodplain. Because of this, Shiprock site groundwater is pumped from a series of wells to a large evaporation pond. The mill was located on the terrace area, as is most of the

town, while the floodplain is at the river level. The biggest technical challenge is capturing the small volume of contaminated water on the terrace. Due to the nature of the soil in the terrace area, one well may produce significant contaminated water during extraction while another very close by will not. In an attempt to circumvent this problem, a large excavation pit was recently dug and observations indicate that the water is seeping into the pit in small, discrete areas rather than throughout. It is anticipated that this effort will greatly enhance the extraction of contaminated water on the terrace and accelerate the site towards ground water compliance.

It is also difficult to consistently extract contaminated groundwater from the floodplain. However, an effort a year ago to emplace two 200 foot long drains has proven very successful in increasing the production in this area, nearly doubling the total amount of contaminated water being pumped to the evaporation pond. Some elevated concentrations of uranium still enter the San Juan River, but they quickly dissipate to non detectable levels in the river water.

Tuba City Site

The Tuba City site has a state-of-the-art treatment system to collect and treat contaminated groundwater. Because the system is so effective in removing molybdenum, nitrate, selenium, and uranium contaminants, the treated groundwater can be reinjected back into the ground. This was done at the request of the Navajo Nation so that there would be minimal impact to area groundwater. The extraction well network associated with the treatment plant has mitigated movement of the plume away from the former milling site location, and the contaminated groundwater does not discharge to a seep or surface water (e.g., a stream). Separated wastes are placed in a lined pond where dust is minimized by keeping the sediments in the lined structure wet. A study conducted by DOE on the pond water showed that there is no ecological risk based on observed species and pond chemistry. The contaminants in the pond will be disposed of at a future date. Navajo operators have been hired to operate the groundwater treatment plant.

Vicinity Property Program

In addition to conducting remedial action on the milling sites, DOE also remediated contaminated soils surrounding the sites and properties in the vicinity of the sites, as part of the Vicinity Property Program ("the Program"). DOE conducted investigations for contaminated properties through aerial surveys, mobile scans, and advertising. Participation in the Program was voluntary, and DOE conducted a radiological survey at a property upon request.

DOE investigated 10 properties near the Tuba city milling sites for possible inclusion in the Program. Out of the ten, one site was included in the Program and was cleaned up, while the other nine properties did not exceed standards and therefore no action was taken. Mill worker housing near the Tuba City milling site was the one property remediated. Although the windblown tailings contamination around the milling site was

cleaned up, the area was not deemed as a vicinity property as it would have been in other communities, since it did not fall on separate parcels of land.

Groundwater issues generally do not occur on vicinity properties because large volumes of water were not historically used and they do not have enough contamination to impact ground water quality.

Since the DOE currently lacks the regulatory authority to clean up the Tuba City property located north of the Tuba City disposal cell, reauthorization of the Act's surface remediation authority would be required to perform additional remediation of vicinity properties. If remediation is required, the material could possibly be accepted at the Grand Junction disposal cell, or sent to a commercial low-level waste disposal facility.

I would be happy to answer any questions you may have on our activities.

Chairman WAXMAN. Thank you very much, Mr. Geiser.

Dr. Miller.

STATEMENT OF CHARLES L. MILLER

Mr. MILLER. Mr. Chairman and members of the committee, it is a pleasure to be here before you today to discuss the U.S. Nuclear Regulatory Commission's regulatory role for uranium recovery facilities. I am also here to address any related concerns you may have regarding the health and environmental impact on the Navajo land from these NRC-regulated operations.

I have submitted my written testimony for the record. With my allotted time this morning, I will summarize the key points.

NRC regulates uranium recovery facilities but does not regulate uranium mining or abandoned uranium mine sites. There are only two primary uranium recovery process: conventional mills and in site leach facilities, which are referred to as ISLs. The conventional mill processes uranium ore, which is crushed and sent through an extraction operation to concentrate uranium and produce yellowcake. This process produces a waste product called mill tailings, which are a sandy ore residue.

The ISL uranium extraction process wells are drilled into rock formations containing uranium ore. Water with oxygen and sodium bicarbonate added is injected into the uranium ore body so that it dissolves and can be extracted. The recovered uranium-bearing water is pumped to a processing plant which separates out the uranium and concentrates it.

With the enactment of the Uranium Mill Tailings Radiation Control Act of 1978, referred to as UMTRCA, mill tailings became subject to NRC regulation. Title I of UMTRCA addresses uranium mill tailing sits that were abandoned as of 1978. Title II addresses uranium recovery facilities and mill tailing sites that were operating in 1978 and thereafter. The Title II sites are specifically licensed by NRC or an agreement State.

Under Title I, the NRC is required to evaluate the Department of Energy's design and implementation of remedial action for the abandoned uranium mill tailings sites, and after remediation, to concur that those sites meet the standards set by the Environmental Protection Agency. Title I also requires NRC to evaluate and concur in DOE's remediation design and implementation for vicinity properties. Vicinity properties are lands in the areas surrounding the Title I sites that DOE has determined were contaminated with residual radioactive materials from the mill sites.

UMTRCA requires that after remediation, Title I and Title II sites be under Government custodian care in perpetuity under NRC license. To implement this requirement for Title I, the NRC established in its regulations a general license authorizing DOE's custody and long-term care of the remediated sites. The general license becomes effective after NRC concurs with DOE that its site-specific remedial action has been completed, and after NRC accepts DOE's long-term surveillance plan for the site. After these actions, DOE is the perpetual custodian of the site under NRC's general license.

Once a long-term surveillance plan has been approved, the DOE has the primary responsibility to ensure public health and safety

at the site. However, NRC continues to have an oversight role. Four Title I sites are on Navajo lands, and have been articulated by my colleague from the Department of Energy. Title II of UMTRCA established the framework for NRC and agreement States to regulate mill tailings and other wastes at uranium and thorium mills licensed by the NRC at the time of UMTRCA's passage in 1978.

Under Title II of UMTRCA, NRC regulates this material during mill operation and ensures that the site is properly closed prior to terminating the license. After license termination, the site is managed by the DOE or a State under a general license which imposes conditions for custody and long-term care. Currently, there are no Title II sites on Navajo land. However, two Title II sites are adjacent to Navajo lands.

The UNC site is currently being remediated at Crown Point and is not operated. NRC staff has met with representatives of Navajo EPA and Navajo Dine Policy Institute about future uranium recovery activities and recently held a meeting in Gallup, NM, where the Navajo interpreter translated the NRC presentation to assist many participants from the Navajo Nation. NRC intends to consult and interact with the Navajo Nation on any applications that may have implications on the Navajo Nation.

Mr. Chairman and members of the committee, I hope that my testimony provides you with an understanding of the NRC's role with regard to these sites. I would be pleased to respond to any questions. Thank you.

[The prepared statement of Mr. Miller follows:]

WRITTEN TESTIMONY
FOR DR. CHARLES L. MILLER, DIRECTOR
OFFICE OF FEDERAL AND STATE MATERIALS AND ENVIRONMENTAL MANAGEMENT PROGRAMS
UNITED STATES NUCLEAR REGULATORY COMMISSION
TO THE
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
UNITED STATES HOUSE OF REPRESENTATIVES
CONCERNING
THE HEALTH AND ENVIRONMENTAL IMPACT OF URANIUM MINING ON THE NAVAJO NATION

OCTOBER 23, 2007

INTRODUCTION

Mr. Chairman and Members of the Committee, it is a pleasure to appear before you today to discuss the U.S. Nuclear Regulatory Commission's (NRC) regulatory role for uranium recovery facilities. I am also here to address any related concerns you may have regarding the health and environmental impact from these operations on Navajo land.

URANIUM RECOVERY

NRC regulates uranium recovery facilities but does not regulate uranium mining or abandoned uranium mine sites. These operations are the responsibility of State regulators. Mining involves the actual digging and excavating of uranium ore from the earth, whereas uranium recovery involves the processing of uranium following its removal from its original place in nature into a compound commonly referred to as "yellowcake."

There are two primary uranium recovery processes: conventional and in situ leach (ISL). A conventional mill processes uranium ore which has been removed from the earth by either open pit or underground mining. The ore is then crushed and sent through a mill, where extraction processes concentrate the uranium. Waste from this process is primarily mill tailings, a sandy ore residue that poses a potential hazard to public health and safety due to its radium and chemical content. Conventional milling produces a substantial amount of mill tailings. NRC regulates the safe storage of mill tailings.

In the ISL uranium extraction process, wells are drilled into rock formations containing uranium ore. Water, usually fortified with oxygen and sodium bicarbonate, is injected down the wells to leach out and mobilize the uranium in the rock so that it dissolves in the groundwater. The uranium-containing solution is controlled by pumping more water out of the formation than is pumped into it. Containment and water quality are assessed through a network of monitor wells. The uranium-containing solution is pumped to a processing plant, which separates the uranium and concentrates it. Although these ISL facilities are often referred to as "mines", the entire uranium extraction process, below and above ground, is considered as processing and is covered under NRC jurisdiction under the Atomic Energy Act. Waste from this process is specific in nature (i.e., filters, piping), is relatively small and can be disposed in a tailings pile at a conventional mill site

or at a licensed disposal facility. Tailings are not generated at ISL facilities. However, ISL facilities may have settling ponds where sediment containing uranium can accumulate and which must be remediated as part of decommissioning.

NRC'S ROLE UNDER UMTRCA

With the enactment of the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA), mill tailings became subject to NRC regulation. Title I of UMTRCA addresses mill tailings sites that were abandoned by 1978. Title II focuses on uranium recovery facilities and mill tailing sites that were operating in 1978; these sites are specifically licensed by NRC or an Agreement State[1].

Title I – Reclamation Work at Inactive Uranium Tailings Sites

Title I of UMTRCA covers 22 inactive uranium mill tailings sites. Title I established a U.S. Department of Energy (DOE) program to remediate uranium mill sites that were abandoned prior to the enactment of UMTRCA in 1978. Congress directed the U.S. Environmental Protection Agency (EPA) to promulgate the standards for remediation. These standards primarily address stabilization of the tailings pile and the cleanup of on and offsite contamination, including contaminated groundwater. Under Title I, the DOE is responsible for remediation of these abandoned sites. The NRC is required to evaluate the DOE's design and implementation of its remedial action, and, after remediation and NRC evaluation, concur that the sites meet the standards set by the EPA (40 CFR Part 192). The DOE's authority to perform remedial action at these sites expired in 1998, except for the authority to perform groundwater restoration activities.

Title I also requires DOE to remediate vicinity properties. Vicinity properties are land in the surrounding area of mill sites that DOE determined were contaminated with residual radioactive materials from the mill site. Here again, NRC's role is limited to evaluation and concurrence on DOE's remediation design and implementation. However because of the large number of vicinity properties, DOE prepared a document ("Vicinity Properties Management and Implementation Manual" or VPMIM) containing generic procedures for identifying and remediating vicinity properties. NRC concurred on the VPMIM and only separately evaluates and potentially concurs in vicinity property remediations that do not conform to this generic document.

10 CFR §40.27 – General License for DOE Established by Regulation

To implement Title I, the NRC promulgated regulations (10 CFR §40.27) to establish, in the regulation itself, a general license authorizing DOE's custody and long-term care of residual radioactive material disposal sites with conditions imposed by the regulation. These conditions include requirements for the monitoring, maintenance, and emergency measures necessary to protect public health and safety and other actions necessary to comply with the standards promulgated by the EPA (40 CFR Part 192). Although the DOE is not an NRC licensee during site cleanup, NRC must evaluate and potentially

[1] Section 274 of the Atomic Energy Act of 1954, as amended, provides for State assumption of NRC's regulatory authority to license and regulate byproduct materials (radioisotopes); source materials (uranium and thorium); and certain quantities of special nuclear materials. NRC periodically reviews these programs for adequacy and compatibility with NRC regulations.

concur with the DOE that its remedial action has been completed. The NRC general license authorizing the custody and long-term care of a specific site becomes effective after NRC concurs with DOE that its site-specific remedial action has been completed and when the Commission accepts DOE's Long-Term Surveillance Plan (LTSP) for the site that meets NRC requirements as specified in our regulations. After these actions, the DOE is the perpetual custodian of a site under NRC's General License established in this regulation.

An LTSP must include an executed waiver under which any person – including an Indian Tribe – holding any interest in the Title I disposal site, releases the United States from any liability or claim arising from the DOE's remedial action. A two-step process with respect to NRC concurrence was used at sites where groundwater contamination exists. At such sites, the NRC concurred on surface remediation; once the NRC accepted the LTSP, each site was then included in the general license in 10 CFR §40.27. NRC concurrence in groundwater remediation was addressed separately and, in some cases, has not yet occurred. Ongoing groundwater monitoring is addressed in the LTSP to assess performance of the tailings disposal units. When the NRC concurs that groundwater restoration has been completed, the LTSP may be modified as necessary to reflect completion.

Once an LTSP has been approved, the DOE has the primary responsibility to ensure public health and safety at the site. However, the NRC continues to have an oversight role. The NRC receives annual updates on the results of the DOE's Title I inspection program and under 10 CFR §40.27, the NRC maintains permanent right-of-entry to Title I Sites. NRC staff periodically accompany the DOE during Title I site inspections. If, for any reason, (e.g., DOE report, NRC inspection, allegation), the NRC determines the site is not safe, it can require DOE to correct the condition.

Title II – Licensed Uranium Recovery Facilities and Mill Tailings Sites

Title II of UMTRCA established the framework for NRC and Agreement States to regulate mill tailings and other wastes at uranium and thorium mills licensed by the NRC at the time of UMTRCA's passage in 1978. The statute created a second category of byproduct material, referred to as 11e.(2) byproduct material, defined as the tailings or wastes produced under any license by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content. Under Title II of UMTRCA, NRC regulates this byproduct material during mill operation and requires that the site be properly closed prior to terminating the license. The NRC standards for site closure, contained in Appendix A of 10 CFR Part 40, conform to standards promulgated by EPA (40 CFR Part 192) and are similar to EPA standards for the remediation of Title I sites. After license termination, the site is governed by another general license, established in NRC regulations (10 CFR §40.28) which imposes conditions for custody and long-term care of uranium or thorium byproduct materials disposal sites. A State can become the perpetual custodian. However if a State chooses not to do so, DOE must assume custody. To date, no State has become a perpetual custodian.

NRC'S ROLE WITH SITES ON OR NEAR NAVAJO LAND

Four Title I sites are on Navajo lands: Mexican Hat, Utah; Monument Valley, Arizona; Shiprock, New Mexico; and Tuba City, Arizona. For these sites, the NRC has concurred

on DOE's completed surface remediation of residual radioactive material. Currently, groundwater cleanup is ongoing at the Shiprock and Tuba City sites. NRC has not yet received the final groundwater cleanup plan at Monument Valley. Following several years of monitoring and in consultation with the Navajo Nation, groundwater monitoring has been discontinued at the Mexican Hat site. The LTSPs have been approved by NRC for the Mexican Hat, Shiprock, and Tuba City sites; therefore, the NRC now oversees the DOE's custody and long-term care of these two sites under the General License established by 10 CFR §40.27. An LTSP for Monument Valley, Arizona is pending from the DOE.

UMTRCA authorized DOE to enter into a Cooperative Agreement with the Navajo Nation. The purpose of the agreement was to perform remedial actions at the four Title I sites identified above. The agreement contained a waiver releasing the U.S. Government of any liability or claim by the Navajo arising from the remedial action and holds the U.S. Government harmless against any claim arising out of the performance of the remedial action. The NRC required such an agreement prior to bringing the sites under the general license in 10 CFR §40.27.

Currently, there are no Title II sites on Navajo land. However, two Title II sites are adjacent to Navajo lands: Crown Point, New Mexico (Hydro Resources Inc. is the licensee) and Churchrock, New Mexico (United Nuclear Corporation is the licensee). NRC issued a license to Hydro Resources in 1998 for an ISL uranium recovery facility at Crown Point. However, the construction has not been initiated. United Nuclear Corporation is conducting groundwater cleanup from a conventional uranium milling site at Churchrock. Under a Memorandum of Understanding with EPA, the NRC has responsibility to regulate the onsite groundwater cleanup. EPA also has regulatory responsibility for this site because Churchrock is a Superfund site.

With regard to future license applications for uranium recovery facilities, the NRC is preparing a Generic Environmental Impact Statement (GEIS) to assist in evaluating the potential environmental impacts of site-specific facility operations. Recently, the NRC held several public meetings to solicit comments from the public on the scope of the GEIS. The last of these meetings was in Gallup, New Mexico, on September 27, 2007. The draft GEIS will be issued for public comment, scheduled for Spring 2008. NRC staff have also met with representatives of the Navajo EPA and the Navajo Dine Policy Institute about future uranium recovery activities. The GEIS does not end opportunities for public involvement. Public participation will be part of the process for each proposed site. NRC intends to consult and interact with the Navajo Nation on any applications that may have implications for the Navajo. We would also encourage the Navajo EPA and Dine Policy Institute to monitor the licensing process for the first new ISL license application that was recently filed by the Oklahoma-based Energy Metal Corporation to gain additional insights into the NRC licensing program.

CONCLUSION

Mr. Chairman and Members of the Committee, I hope my testimony provides you with an understanding of NRC's role with regard to these sites. I would be pleased to respond to your questions.

Chairman WAXMAN. Thank you, Dr. Miller.
Mr. McSwain.

STATEMENT OF ROBERT G. MCSWAIN

Mr. MCSWAIN. Thank you, Mr. Chairman and members of the committee.

Today I am pleased to have this opportunity to testify on what is known about health and the environmental impact of uranium mining on the Navajo Nation. I too was touched by the first panel, clearly, and as the people that Indian Health Service is extremely concerned about and serves.

The IHS responsibility is for the delivery of health service to an estimated 1.9 million federally recognized American Indian and Alaska Natives through a system of IHS, tribal and urban programs operated across and basically in a government-to-government relationship in acts of Congress. The mission of Indian Health Service is to raise the physical, mental, social and spiritual health of American Indians to the highest level in partnership with tribes. It is the partnership with tribes that is very, very important at this hearing.

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 that we rely on throughout work is the Snyder Act of 1921, the Indian Health Care Improvement Act, which we are looking forward to reauthorization, certainly, and of course the Indian Self-Determination and Education Assistance Acts, which enables tribes to assume management control of programs. In this particular instance, there are several programs on the Navajo that are in fact contracted with the Indian Health Service.

The IHS has 12 area offices throughout the continental United States and Alaska. One of those offices is located in Window Rock, where the capital of the Navajo Nation is located. The Navajo Area Indian Health Service is responsibility for the delivery of health services to the American Indians in the States, in basically the Four Corners area, approximately the size of West Virginia, with a population density which is one-tenth of the U.S. average of 85 people per square mile, an important distinction when we talk about population densities.

Comprehensive health care is provided by the Navajo Area Indian Health Service and the Navajo Nation through in-patient and out-patient contract community health and environmental health programs through 6 hospitals, 10 health centers, 13 health stations and community-based activities. In fiscal year 2007, 1.2 million out-patient visits and 56,000 in-patient days were provided by the 4,500 Indian Health Service and tribal staff on the Navajo Nation.

The IHS Sanitation Construction Program funded for the first time water and sewer service to 1,098 Navajo homes in fiscal year 2007. The Navajo Nation and local health corporations administer

approximately $89 million in the annual NIHS funding to deliver and support health services to the Navajo people.

Now a little bit about the health and the environmental impact. As you have heard by the experts, uranium is ubiquitous in the Earth's crust, but is especially concentrated in larger amounts in the southwest, in the Navajo Nation. An estimated 3,000 to 5,000 Navajos worked in the uranium mines and the Navajo Nation reports the presence of over 1,300 abandoned mines on reservation land alone.

In 2002, the Navajo Area Radiation Exposure Screening and Education Program [RESEP], began operations as one of the seven HHS RESEP grants in the United States. The Navajo Area Indian Health Service worked closely with the Navajo Nation Division of Health, Office of Navajo Uranium Workers, to implement the grant, which incidentally is funded through August 31, 2008. In 1990 to 1991, the Indian Health Service OEHE program did in fact work with EPA on a survey, a radon survey for a number of private homes. The conclusion drawn was that in spite of the 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.

Since the passage of Public Law 86–121 in 1959, IHS has been constructing community water systems in Indian Country in accordance with EPA standards for safe drinking water. In the case of Navajo area, we actually turned these systems over to the Navajo Tribal Utility Authority to operate and maintain. Compliance with the Safe Drinking Water Act on Navajo Reservation has been the responsibility of the Navajo Nation since 2001.

In conclusion, 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 preventive, curative, community and health care facilities and services throughout the country.

Thank you for the opportunity to present testimony before the committee. I will be pleased to answer any questions.

[The prepared statement of Mr. McSwain follows:]

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.

Chairman WAXMAN. Thank you, Mr. McSwain.

Mr. Gidner.

STATEMENT OF JERRY GIDNER

Mr. GIDNER. Mr. Chairman, members of the committee, thank you for having us here today to testify about this.

I am Jerry Gidner, I am the Director of the Bureau of Indian Affairs. I would like to talk very briefly about our role and the role of the Department of Interior in the uranium issues at Navajo.

Over the past several years, the Office of Surface Mining and the Department, in cooperation and with some assistance from the Bureau of Indian Affairs, under the authority of the Surface Mining Control and Reclamation Act, did close numerous abandoned mines on Navajo and remediated the physical safety hazards. BIA has been working for some time negotiating with the Navajo Nation, the Hopi Nation, EPA on what to do about the Tuba City landfill, which has been contaminated by radionucleides from the Tuba City site. What we understand is that over time, mine tailings were used in the Tuba City area, over time, some of them made their way into the Tuba City landfill. We are remediating that landfill at present.

So our role in this remediation effort has been really very limited, basically to what I just said. Although we lack specific expertise in cleaning up uranium mines or uranium mill tailings, we do stand in a position of being ready to cooperate with the other Federal agencies, with the Navajo Nation and with anybody else that we need to to advance this issue.

I would be happy to take your questions. Thank you.

[The prepared statement of Mr. Gidner follows:]

TESTIMONY
OF
JERRY GIDNER
DIRECTOR, BUREAU OF INDIAN AFFAIRS
U.S. DEPARTMENT OF THE INTERIOR
BEFORE THE
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM
U.S. HOUSE OF REPRESENTATIVES
AT THE
OVERSIGHT HEARING ON
HEALTH AND ENVIRONMENTAL IMPACTS
OF URANIUM MINING ON NAVAJO LANDS

October 23, 2007

Good morning, Mr. Chairman and Members of the Committee. My name is Jerry Gidner, and I am the Director for the Bureau of Indian Affairs (BIA) at the Department of the Interior. I am here today to testify about the United States' trust responsibility and the future involvement we may have with the uranium mine cleanup on Navajo lands.
The BIA manages approximately 56 million acres of land held in trust for individual Indians and Indian tribes in the lower 48 states and Alaska, including the lands of the Navajo Nation. The Navajo Nation, constituting approximately 27,000 square miles and stretching across the states of Arizona, Utah, and New Mexico, contains one of the largest uranium ore deposits in the world. For nearly 40 years – from the 1940s to the late 1970s – the United States Atomic Energy Commission contracted with private mining companies to produce uranium ore on Navajo Nation land in order to sustain the country's nuclear weapons development program.

The Environmental Protection Agency (EPA) has conducted a number of investigations and removal actions to address human health and environmental risks on Navajo lands. In doing so, the EPA works closely with the Navajo Nation and frequently with the BIA as a coordinating agency.

In addition, the Department of Energy (DOE) has statutory authority to assist with the remediation of uranium mill tailings pursuant to the Uranium Mill Tailings Radiation Control Act (UMTRCA). The DOE may assist in cleanup of mill tailing sites, including numerous "vicinity properties" contaminated by uranium mill tailings. The DOE has now completed its remediation of several uranium mills on the Navajo Nation and may only involve itself in associated groundwater concerns at this point. The Navajo Nation has also conducted site investigations and emergency response actions at uranium sites on Navajo Nation lands.

The Department of the Interior's Office of Surface Mining (OSM) has provided funding to address some hazards at abandoned uranium mining sites pursuant to the Surface Mining Control and Reclamation Act (SMCRA). Consistent with the trust responsibilities of the United States to the Navajo Nation, OSM and BIA have provided assistance to the Navajo Nation in sealing some mine openings and addressing physical safety hazards associated with abandoned uranium mines. The BIA is currently remediating the Tuba City, Arizona landfill, located on Navajo and Hopi lands; the landfill is contaminated with radionuclides derived from uranium mining/milling, among other things. As we have done, we will continue to offer our assistance and services to the Navajo Nation

This is a government-wide response to the United States' trust responsibility on the Navajo Nation's lands. That concludes my statement, I will be happy to answer any questions you may have.

Chairman WAXMAN. Thank you very much. I want to thank each of you for your testimony today.

Mr. Nastri, I would like to ask about the Northeast Churchrock Mine site. When it was active, it was the largest underground uranium mine in the country. U.S. EPA went out and took radiation tests at this site. At the mine area, the radium levels were as high as 875 picocuries per gram. The EPA standard for deciding whether to clean up a site is 3.34 picocuries per gram. So that is 270 times the EPA standard.

Even in the back yards of two residences which are farther away from the mine, the radium levels were up to 30 picocuries per gram, that is 9 times the EPA standard. Those radiation levels pose an exceptionally high cancer risk. In fact, exposure to the radium levels at the mine would create an excess risk of cancer of 1 in 100, for example, for every hundred people exposed to this level of radium for a lifetime, one person will develop cancer that otherwise would not.

In response to these exceptionally high levels of radiation, EPA removed the top 6 inches of soil from a few residential yards. Mr. Nastri, that didn't take care of the whole problem at the site, did it?

Mr. NASTRI. No, it did not.

Chairman WAXMAN. Even after EPA's preliminary work, the mine is still radioactive, there is much more contaminated soil and the groundwater is contaminated. Has EPA taken any action so far to remediate the groundwater?

Mr. NASTRI. We have not taken action to remediate the groundwater. We are working with Navajo Nation and EPA to address the surface extent of the contamination. As you pointed out, we removed roughly 6,500 cubic yards. There is roughly 140 acres or roughly 1.4 cubic yards that need to be addressed. Right now we are in the position of evaluating what are the alternatives. You heard earlier from the panel that they would like to see clean closure, they would like to see the material removed and stored in a separate facility. That is certainly one of the evaluations that we are looking at. We are looking at a whole range of evaluations. We will discuss these with Navajo Nation once the cost estimates have come together and hopefully, we will be able to address that situation.

Chairman WAXMAN. According to the Navajo living in the area, EPA isn't currently doing any cleanup work at the site. You indicated you are doing studies to evaluate the costs. But I really don't understand the delay. Why isn't there any activity at the sites to remediate these problems?

Mr. NASTRI. Well, the immediate problem was the homes and the residence, as Director Etsitty talked about. That is where we took immediate action. In fact, when you sort of look at historically where do we take action, it is where there is that immediate threat, that immediate risk. Unfortunately, when you look a the site, yes, if you are on the site and you are exposed to the site, there are problems associated with your own health and your own risk.

But if that area can be fenced off and if that area can then be assessed for how are we going to deal with it, if you look at nation-

wide, how do we address contaminated sites, there are a whole host of ways that we do that. One of the most common options is reduce the exposure, reduce the risk. People have talked earlier about, well, if you are going to have containment areas, you should have liners, you should have all these things that are necessary. I agree, and that is part of the evaluation that we are looking at. But you wouldn't necessarily put in a liner if you are going to simply excavate all that material and go away.

But there are a number of complex issues that you have to look at. For instance, if we are going to try to remove all this material in a clean closure, how is that material going to be transported, and transported in such a way that it doesn't impact the roads, that it doesn't pose a health threat to anybody else along the way? Those are part of the things that we have to look at and evaluate.

So to say that we are not doing anything, I would disagree with that. I would say that we are actively engaged in this area, that we are trying to find the right course of action, that we will continue to partner with them to do so.

Chairman WAXMAN. Tell us what EPA needs in order to clean up this site. U.S. EPA and the United Nuclear Corp. need to pick up this pace. Ms. Hood, who testified, she and her neighbors deserve better than to be surrounded by radioactive contamination. What do you need?

Mr. NASTRI. That is a good question. Part of the challenge that we need is, I think, time. I know there has been a lot of time that has already been focused on this. But we need time to complete the engineering evaluation. It should not take years; it should not draw on. But we do need to finish that evaluation.

The issue of resources within Navajo Nation and EPA, one of the things that we have really done in terms of working with them is to try to build their capacity. There was a request made earlier for, I believe, 20 FTE for Navajo Nation to address these issues. Certainly having the increased capacity at the State level I think would be very helpful. As you know, when we work throughout the Nation, we work with the States. The States have the capacity, part of what we have done is to try to build through the GAP program that capacity. The Navajo Nation also needs to implement in terms of authorization of their own Superfund, Navajo Nation Superfund program. That is an area that we have been working on.

With any agency, the more resources we have I think the more that we can do. At this point, though, the big issue with the Northeast Churchrock site is making sure that engineering evaluation cost analysis is done. After that, I would be in a better position to come back to you, Mr. Chairman, and say, this is the selection chosen, this is what would be needed to implement the remedy.

Chairman WAXMAN. When do you expect that will be done? What time can you give us?

Mr. NASTRI. One moment.

Mr. TAKATA. My name is Keith Takata. We actually completed the evaluation and we briefed the Navajo Nation last month. Then we are actually going to have a written report this fall. And we would like to make a decision on the long-term cleanup early next year.

Chairman WAXMAN. Thank you. My time is expired.

Ms. McCollum.

Ms. MCCOLLUM. Thank you.

What standard are you cleaning up to, industrial standards?

Mr. NASTRI. Typically we would clean up to a designated land-use standard. In this particular——

Ms. MCCOLLUM. I asked you what standard you were planning on cleaning up to?

Mr. NASTRI. I don't know the answer to that. My Superfund Division Director, Mr. Takata, may know.

Mr. TAKATA. We are using a residential number to compare the analysis. We are comparing the options to the residence——

Ms. MCCOLLUM. You are using residential for everything?

Mr. TAKATA. Yes.

Ms. MCCOLLUM. For everything?

Mr. TAKATA. Well, to compare—yes.

Ms. MCCOLLUM. In the Navajo Nation, we are aware that there isn't a lot of rain. So the drinking water for livestock and agriculture is going to come from wells and springs. The Navajo Nation's Abandoned Mine Lands program filled in most of the mines, and they couldn't protect against the groundwater contamination. They could only use the funds that they had to eliminate physical risks posed to open, abandoned mines.

Because high levels of uranium in drinking water can cause kidney failure, groundwater contamination is a real concern. Mr. Nastri, the U.S. EPA conducted water samplings in 1988 and 1999. You sampled 226 wells and springs. As I understand, the 1998–1999 sampling wasn't comprehensive. There weren't multiple samples taken from the same sites over time. The sampling was not done any more than a snapshot in time, is that correct?

Mr. NASTRI. The Army Corps actually conducted the sampling. We had authorized them to do so. But the nature and the way you described it is correct, yes.

Ms. MCCOLLUM. OK. Around 15 percent of the samples showed elevated levels of uranium. I know some of the uranium is naturally occurring. But some of these readings are very troubling. For example, samples were taken in the mountains above a school in Cove. One of those samples came back with a radium, 238 level of 414 picocuries per liter. That is over 20 times the EPA standard.

Now, the EPA standard, I am also going to assume, is the standard for a white, healthy male, not for children. That is what it usually is, correct? Am I correct?

Mr. NASTRI. I think risk looks across exposure at all ages and sex types, but I will stipulate to your assertion. Sure.

Ms. MCCOLLUM. That is my understanding, whenever I have done anything to find out about EPA standards.

There is a stream near a school that has a uranium, 238 at a reading of 71 picocuries per liter. That is over three times the EPA standard. Now, there are young children at the school every day. I want to know if the EPA has been back since 1999 to retest this area.

Mr. NASTRI. Not to my knowledge, no.

Ms. MCCOLLUM. Has the EPA done any groundwater remediation at any of the mine sites at the Navajo Nation?

Mr. NASTRI. Not to my knowledge.

Ms. MCCOLLUM. Well, this is troubling, because comprehensive groundwater testing is essential. The U.S. EPA needs to do a comprehensive groundwater sampling over time to ensure that the watersheds near the abandoned mines aren't contaminated or in a danger of becoming contaminated. Now, we are going to be monitoring the EPA's progress, because the Navajo, like anyone else in this country are entitled to clean drinking water for themselves and for their livestock. I believe the EPA needs to do more than just one round of spotty sampling.

The NRC is in the process of allowing a company, HRI, to start possibly looking at doing this water slurry type of extraction. This is very concerning and troubling to me. You don't even know currently what the status of the water is, and yet the NRC is looking at issuing mining licenses to even contaminate possibly more water. I point out to you that the U.S. Geological Survey does not share the same confidence that the NRC does in this type of mine extraction.

Thank you, Mr. Chair.

Chairman WAXMAN. Thank you, Ms. McCollum.

Mr. Cummings.

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

Mr. Nastri, I just have a few questions. I am really curious. To one of the chairman's questions, your answer was, we need time. I can understand that, but while time passes, Mr. Nastri, people get sick, people die, people develop kidney disease, children, babies are born with birth defects, bone cancer develops and gets worse, lung cancer, leukemia, while we wait.

Mr. Nastri, I would like to ask you about the Navajo homes built with radioactive materials. Earlier we hard that the Navajo Nation, EPA has a list of 80 to 90 homes they suspect may have elevated levels of radon. In other words, they believe these homes may be radioactive. They aren't sure how many of these homes are currently occupied.

Let me ask you, for the record, the Navajo Nation EPA says that it provided a list of these homes to U.S. EPA in 2001. Is that true, and has U.S. EPA had a list of these homes for the past 6 years?

Mr. NASTRI. I am not aware of the list that was encompassing 80 to 90 homes. I am aware of 2 lists, one encompassing 28 homes, 2 of which we took immediate action for the removal; another list that was developed by our Office of Radiation Indoor Assessment that was 33 homes. I understand there is some anecdotal information about other homes. But that information has never been provided to us in a written format list that I am aware of.

Mr. CUMMINGS. So you are saying you know of at least 50, if I got your numbers right, 50 some?

Mr. NASTRI. Correct.

Mr. CUMMINGS. You said 20 some and 30 some. And so what has been done with regard to those other homes? You said you did some removal for two. But what happened to the other 40 something?

Mr. NASTRI. Of the 2 lists, the 28 and the 2 were done in the early 1990's, I believe. The two that were destroyed were the ones that posed risk to the residents that was above acceptable limits. The 33, that was done separately by our Office of Radiation Indoor

Assessment. We actually are working with Navajo Nation to get that list so that we can address and identify what needs to be done.

So we just received that list within, I believe, the last year or so.

Mr. TAKATA. In 2006.

Mr. CUMMINGS. How many were on that list?

Mr. TAKATA. Thirty-three.

Mr. CUMMINGS. But you had a list, you got that list last year, and the other list, when did you get that? You talked about two lists?

Mr. TAKATA. In 2006. Would you like me to clarify those?

Mr. CUMMINGS. Yes, please.

Mr. TAKATA. OK, so there was one list——

Mr. CUMMINGS. Can you come to the mic and tell me who you are?

Mr. TAKATA. I am Keith Takata and I work for Mr. Nastri.

Mr. CUMMINGS. You play a major role here.

Mr. NASTRI. Mr. Takata is my Superfund Division Director and is responsible for a lot of the work that goes on in the Navajo Nation.

Mr. CUMMINGS. Wonderful. Welcome.

Mr. TAKATA. Sir, let me try to clarify the list. There was a list of 28, that was a list that EPA developed. Out of that list of 28, there were 2 homes that had high levels. And we destroyed those homes and provided new homes. So that——

Mr. CUMMINGS. So you all went out, when you looked at the 28, you examined all of them, is that right?

Mr. TAKATA. Yes.

Mr. CUMMINGS. And found that 26 of them did not have levels up to what you consider dangerous, is that right?

Mr. TAKATA. Right, and then the two did, and we destroyed those two.

Mr. CUMMINGS. OK.

Mr. TAKATA. Then there is a separate list of 33 that was done in a study. I am going to clarify the dates here. The study started in 2001 and ended in 2006. We got the report in 2006. That is the list of 33. Those are suspected homes with levels of contamination. But they haven't actually been—what we used was field monitoring equipment to assess them. So the next step is the Navajo Nation has agreed to go out and sample those homes and we have let them know that if any of those homes have high levels, that we will go out and clean them up.

Mr. CUMMINGS. Do we know whether people are living in those homes?

Mr. TAKATA. No, actually, that was one of the things that needs to be done when the Navajo Nation goes to each home, they need to figure out what it is being used, what the current use is, and what the levels are.

Mr. CUMMINGS. It is interesting, I was listening to the chairman talk about they went through so many changes in getting that little bit of dirt that they had here a little bit earlier, and everybody was all upset and all concerned, and the Capitol Police and what have you. I am just wondering, we are waiting for a study to be conducted, the study is taking from 2001 to 2006, I think you said. Hello?

Mr. NASTRI. Yes.

Mr. CUMMINGS. 2006. What happens to those folks, let's assume there are people living there. What happens to them during that time? I am just curious as to whether you would have your families in that environment for 5 or 6 years?

Mr. NASTRI. I think there are a number of challenges that we have to recognize. One of the things that we actually heard earlier was the tie to the land. People do not necessarily want to move out from their homes. So even though we have provided homes, that doesn't necessarily mean that we can get somebody to move out. That is why it is so important to work with Navajo Nation, so that we can try to get these actions taken.

Mr. CUMMINGS. But right now, as I close, Mr. Chairman, what you are telling me is you don't even know whether people even live in the houses?

Mr. NASTRI. That is correct.

Mr. CUMMINGS. What I am saying is that the diseases that I just stated, kidney, birth defects, bone cancer, lung cancer, leukemia, I mean, these people could be suffering from these ailments. But you don't even know whether they're in the houses. I mean, we do pay you, don't we?

Mr. NASTRI. You do pay us, and——

Mr. CUMMINGS. Yes, so in other words, you are paid by the U.S. Government?

Mr. NASTRI. Yes, I agree to that, we are paid by the U.S. Government. We are paid to work with Navajo Nation. That is what we are doing. We are giving them funding so they can build their capacity and infrastructure. We are trying to address the very concerns that you asked.

Mr. CUMMINGS. I see my time is up.

Chairman WAXMAN. Just on this question of time, in 1975, that is when I came to Congress, over 30 years ago, Joseph M. Hans, Jr., an EPA radiation expert, was sent to inspect an abandoned uranium processing plant in Cane Valley, on Navajo territory, near the Arizona-Utah line. To Hans' dismay, at least 17 of the 37 homes tested contained radioactive ore or tailings. But they didn't have enough money, they didn't ask for more time, they just didn't have enough money, so nothing was done.

I guess I am still a little perplexed about whether you really need time, and that is all you need. Because in 1975, over 30 years ago, EPA knew about the homes and didn't do anything about it.

Mr. NASTRI. Thank you, Mr. Chairman. When I said more time, I was thinking about the Northeast Churchrock site. Here is my concern, that if we move too quickly on the remediation of this site, it is possible that we don't do a good enough job. Either we haven't transported everything or we haven't built a proper containment. And for us to move forward, Mr. Takata talked about moving forward in the spring of 2008, I believe the correct time that we had looked for in an answer was March 2008, then have May 2008 to go final, having gone through the public participation process.

That was the time that I referred to, because I am very cognizant that if we move too fast, now that we have developed all this information, that we fail at the end. I just want to make sure that we do this right.

Chairman WAXMAN. So you are talking about only one specific area?

Mr. NASTRI. That is correct. I was only speaking of the Northeast Churchrock mill site.

Chairman WAXMAN. But in other areas, like this one I cited, it was 1975 when they found 17 of 37 homes that were radioactive and that were a problem. What happened there? Do you know?

Mr. NASTRI. I don't know what happened in 1975. But I do know, and Mr. Takata can reiterate, we have a standing offer to the Navajo Nation that if they are aware of activities or a situation that warrants immediate action, we can use our authorities, we can do it on a site by site, specific basis, assess that and take appropriate action. And we have done so and will continue to do so.

Chairman WAXMAN. Well, all I can say is, EPA has been aware for 32 years of this houses. This man named Hans was an EPA employee. He found the problem. And you are waiting for the Navajos to tell you what to do? That doesn't sound right to me.

Mr. NASTRI. I agree with your assertion. It doesn't sound right. We have identified those sites, we took action where we thought that there was risk. If there are other sites that we are not aware of where there is risk that the Navajo Nation is aware of, those are the sites that we will take action on.

Chairman WAXMAN. Well, Hans said he wrote to EPA headquarters in Washington, DC, recommending that the agency clean up the most contaminated homes or relocate the occupants. He said, "You have two risks, gamma radiation, and you have radon." It wasn't acceptable, he said. And his higher-ups said no. That is the response he got.

He went on to say, "I still felt uncomfortable," so he urged the Indian Health Service to act. And the response from the Indian Health Service was the same. "Finally, we got the message," said Hans, now retired and living in Las Vegas. "We didn't have the money to go decontaminating sites." And still he wanted to warn homeowners. Most spoke Navajo and were uncomfortable with English, so Hans went back with a translator. And all he could say is, you have a problem. He could offer no hope that the Government could fix it.

I am reading from the L.A. Times article by Ms. Pasternak. It is a superb series. But this is really shocking, when I hear, you need more time, and this was 32 years ago.

I am going to have Mr. Udall ask his questions, and we are going to have another round.

Mr. UDALL. Thank you, Mr. Chairman.

Directed to Mr. Gidner here, you are the head of the BIA, right?

Mr. GIDNER. Yes.

Mr. UDALL. You are very familiar with the trust responsibility that the Federal Government has to tribes, I am sure?

Mr. GIDNER. Yes, sir.

Mr. UDALL. As you know, the trust responsibility is something that has existed for a very, very long period of time. The BIA is at the front of that, of looking out for the tribes. The trust responsibility was built around the idea that there were language difficulties and cultural difficulties, and that the Federal Government was going to be out there looking out for the tribes.

When you sit here today and listen to this first panel and then hear this panel talk, how do you feel about the fulfillment of the trust responsibility? Do you think that you have fulfilled the trust responsibility, the Federal Government? How do you feel about that?

Mr. GIDNER. I think that is hard to say.

Mr. UDALL. Hard to say?

Mr. GIDNER. Well, sir, I think——

Mr. UDALL. I would hope you would be outraged. I would hope that you would stand up and say, we are supposed to be protecting these people. We are supposed to be out there on the line. Have you asked, have you asked any of these agencies to put money in their budget? Have you asked them to put money in their budget to remedy these contamination and cleanup problems, and radioactive homes, as the chairman has talked about? Have you asked them to do that?

Mr. GIDNER. No.

Mr. UDALL. You know what I can't believe here, tell me if this is really true. This just absolutely amazes me. The BIA staff told the committee staff, our staff here, that you have no responsibility with respect to any aspect of this issue. That is the position of your agency? This is the agency on the front line for trust responsibility. Is that the position of the BIA?

Mr. GIDNER. I would disagree with that broad of a statement. But I would say with regards to this issue, I think you need to travel back in time. This started happening during the development of the nuclear weapons program, continued through the cold war. I don't know what BIA's role or position——

Mr. UDALL. Wasn't there a trust responsibility back during the nuclear weapons program?

Mr. GIDNER. Yes——

Mr. UDALL. I thought the trust responsibility went back to the treaty era.

Mr. GIDNER. Oh, it certainly does.

Mr. UDALL. We heard Mr. Arthur say the treaty with the Navajo Nation was in 1868.

Mr. GIDNER. Absolutely.

Mr. UDALL. So we have had 150 years there where there is a trust responsibility.

Mr. GIDNER. And the trust——

Mr. UDALL. Have you all fulfilled it? Do you feel you have fulfilled the trust responsibility to the Navajo Tribe with what you have heard today?

Mr. GIDNER. I will return to my previous answer, and I would like to explain, if I could. I think it depends. Because the trust responsibility is not the responsibility only of the BIA, it is the responsibility of the entire Federal Government. And if you look at that——

Mr. UDALL. You folks are on the line, though.

Mr. GIDNER. Oh, absolutely.

Mr. UDALL. You have folks out there on the Navajo Reservation.

Mr. GIDNER. Absolutely.

Mr. UDALL. A lot of these agencies, they don't have people there on the ground.

Mr. GIDNER. That is true.

Mr. UDALL. So I interpret the trust responsibility to be your folks on the ground. They contact these—they say, people are living out here in radioactive homes. There is serious contamination. What is your agency doing about budget issues? What are you doing to aggressively take care of this?

Mr. GIDNER. Well——

Mr. UDALL. Where was the BIA?

Mr. GIDNER. I will get to that in just a second, if I could. When this began happening, we have to remember, the United States was gearing up its nuclear weapons program. I just think we should all wonder about that. What would have happened if BIA at that time had said, sorry, you can't mine uranium from the Navajo Nation. I think we would still be having this hearing today, with all due respect, Congressman. I don't think BIA raising the trust responsibility argument would have gotten us very far in that context.

Mr. UDALL. Well, you know what BIA could have done, sir? Do you know what the BIA could have done? My father has been involved in this issue for 35 years with a lawsuit, and eventually got a law passed by Congress, because those uranium miners were treated as guinea pigs. They were left, the Federal Government knew they were working in mines that were dangerous. They knew they were going to get cancer.

And guess what? The entire Federal Government is just like all of you, sitting there, oh, going along merrily. And they let this tragedy happen. And if the BIA had spoken up then and said, we have innocent people that are working in uranium mines and they are going, based on the scientific evidence and based on the European experience where there were specific causes of lung cancer, you are going to have people dying. If one agency had stood up and said that, maybe, maybe we would have prevented all of this tragedy, and all of these folks here who have lost loved ones and breadwinners and it has put them further into poverty. Maybe that would have been prevented.

But your version of the trust responsibility is what? I don't understand it. What is your version of the trust responsibility? Why haven't you been out there saying something about this?

Mr. GIDNER. Well, I think——

Mr. UDALL. I give up, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Udall.

Ms. McCollum.

Ms. MCCOLLUM. Thank you, Mr. Chair. I want to reflect my strong agreement with what Mr. Udall has just spoken to. He only gave up because he was out of time and the chairman generously offered to give him more. I know he hasn't given up.

I have to say, I wonder if this would have been New York City where they had found the uranium or St. Paul, MN, or Los Angeles, right in the heart of a vibrant community, where people can often more easily rise up against the powers that be, versus the nuclear weapons program, I don't think the outcome would have been the same as it was on the Navajo Reservation, where we frequently see people who are made to feel powerless against this Government.

And the Native American community certainly reflects communities, as well as other minority communities, which have been powerless when our Government or industry has decided, there is something there that they want or that there is a place there that would be a good place to bury waste, or to plant an incinerator. We often find minority groups not being able to have the resources available for them to fight back, and the Bureau of Indian Affairs certainly should have been one of those resources for them.

Mr. Geiser, in one of the five——

Chairman WAXMAN. Before you leave that point—I will give you extra time—I talked about this Mr. Hans, Joseph Hans from EPA, went out 32 years ago and found all these homes and couldn't get EPA to act. He was going to the Department of Energy, trying to get them to act. They just said, no, you have a problem there, but we don't have the resources.

But 200 miles away from the reservation, in Grand Junction, CO, residents faced the very same problem. And there, the Government moved with urgency to eliminate the health risks posed to homes, schools and churches from these same, the failings from the Climax Uranium Co. What happened was that the community got together, they went to the State, they demanded action. They happened to have a very powerful representative, Democrat Wayne Aspenall, who was chairman of the House Interior Committee. So they got a thorough cleanup, which ultimately cost more than $500 million. The Navajos have not had a community that is powerful, they haven't had a champion like Aspenall, positioned as he was, to get this money. And there are widely scattered settlements, people only have a vague idea of radiation problems.

That illustrates your point. It isn't just theoretical, it is very real. I thank you, and I will give you extra time.

Ms. MCCOLLUM. Thank you, Mr. Chair.

And to your point about time, the Churchrock spill which you were talking about earlier with our panel happened on July 16, 1979. And they are just getting around to cleaning it up in 2007. So to your point, Mr. Chair, I even think in this instance we should be just outraged at how long all this is taking.

Mr. Geiser, I want to go back. One of the five former uranium mills in the Navajo Nation is the Tuba City mill. Going back to cleaning these things up. Now, we have heard the surface cleanup at that site is completed and that the DOE's effort to clean up the contamination groundwater is ongoing. However, we also heard from the first panel that there are properties in the vicinity of the Tuba City mill site that are still contaminated. There is a dump site where radioactive material from the mill was apparently buried.

When DOE cleaned up the mill site, this material was not exposed. However, over time erosion has exposed this radioactive waste site as a dump site. So we have a problem there.

Earlier, the Navajo EPA brought in a sample of radioactive dirt and the sample came from the vicinity. From its gamma radiation readings, we know that this is very dangerous. It is right across the street, going to my whole point about how are we cleaning this up, residential or industrial, this site is right across the street from where Ray Manygoats lives.

So, Mr. Geiser, does the DOE agree that this radioactive material in this vicinity probably came from the Tuba City mill?

Mr. GEISER. From the information we have, yes, it probably did.

Ms. MCCOLLUM. OK. The DOE hasn't been able to clean up this property because your statutory authorization to conduct surface remediation expired in 1998. Have you asked Congress to extend this authority? And if you did, could the DOE clean up the site?

Mr. GEISER. The authority was extended several times to get to 1998. We have not asked since then to reauthorize it. We would have the capability to remediate that site. It is directly across from the Tuba City disposal cell. And actually, the one vicinity property that we did clean up was the quarters for the people who were doing the milling operation, which is actually between the site that we are talking about, the Rare Metals site and the disposal cell. I think you mentioned it was when we did the survey of that area, some time between 1978 and 1998, the radioactive material was not exposed at that point. So we believe, through weather action, that came to the surface.

Ms. MCCOLLUM. Can you tell me what that site was cleaned up to, residential?

Mr. GEISER. That site was, the Rare Metals site was not cleaned up, because at the time, we did not find any radioactive contamination.

Ms. MCCOLLUM. That is interesting. Now that you are aware of it, what are you going to do? I mean, when you go back to the office, don't you, you know, what do you think the DOE should do?

Mr. GEISER. Well, the Department is prepared to work with the Congress and should the Congress decide to reauthorize us to do this type of work, we would be prepared to do that.

Ms. MCCOLLUM. And the administration, you would suggest that the administration put forward a request in order to have the funding to do it? I mean, the authorization is great. But as Mr. Udall and I sit on the Appropriations Committee, we know the money to be able to do the work is just as important.

Mr. GEISER. If we had found the contamination, as described in the EPA report, back when the vicinity properties program was being conducted, we would have cleaned up that contamination.

Ms. MCCOLLUM. So now that you know about it, the contamination should be cleaned?

Mr. GEISER. Yes.

Ms. MCCOLLUM. We will be looking for it in the appropriations process. Thank you, Mr. Chair.

Chairman WAXMAN. Thank you, Ms. McCollum.

Mr. Davis.

Mr. DAVIS OF VIRGINIA. Who is responsible for the cleanup of the uranium mines and mills that were left behind?

Mr. GEISER. The uranium mill tailings, the four inactive sites, when UMTRCA was enacted, that was the Department of Energy's responsibility.

Mr. DAVIS OF VIRGINIA. How about the 1,200 mines?

Mr. GEISER. That was not the Department of Energy's responsibility.

Mr. DAVIS OF VIRGINIA. Who is responsible for that? Any idea? It is not Energy?

Mr. GEISER. Right. Currently, the——

Mr. DAVIS OF VIRGINIA. The Navajos didn't cause it, did they?

Mr. GEISER. Currently, the Environmental Protection Agency is working with the Navajo Nation on that.

Mr. DAVIS OF VIRGINIA. OK. This should be clear as possible and ensure the job is done quickly and efficiently, don't you think?

Mr. GEISER. Yes, sir.

Mr. DAVIS OF VIRGINIA. What kinds of health studies have been conducted on the Navajo Nation to determine the impact of uranium mines on the public health in the area?

Mr. GEISER. Sir, that is not my area of expertise. I would defer to the Indian Health Service or EPA.

Mr. DAVIS OF VIRGINIA. Well, let me ask Indian Health Service. Anybody?

Mr. MCSWAIN. There have certainly been a couple of studies done, but they're sort of grants that are looking at specific areas of radon, for example, with RECEP. There's currently another study going on that was referenced earlier, which is the Southeast Institute that is actually looking at kidney disease related to issues, but not in terms of any large-scale specific——

Mr. DAVIS OF VIRGINIA. Outside of the panel being assembled here today, do you all ever get around the table and talk about this and say, who does what and how might we resolve this? How many times have you all been together to discuss this, Mr. McSwain?

Mr. MCSWAIN. This is the first time. I can assure you, I have taken names and cards.

Mr. DAVIS OF VIRGINIA. Well, Henry, you have done something good today. [Laughter.]

Mr. Gidner, what specific role does the Bureau of Indian Affairs assume on a routine basis, and what have you done in this specific process?

Mr. GIDNER. On this specific process, the Bureau of Indian Affairs has worked with the Office of Surface Mining on sealing abandoned mines and is currently remediating the Tuba City landfill.

Mr. DAVIS OF VIRGINIA. I will tell you what I would like to see. This is something where everybody has a piece of it. But with a name like Bureau of Indian Affairs, putting everybody together, even if it is not maybe your specific jurisdiction, just bringing everybody to the table, to see if we can get some resolution of this, that would be my view. Do you think you might be able to do that?

Mr. GIDNER. We could do that. We will cooperate with the other agencies and Navajo Nation EPA.

Mr. DAVIS OF VIRGINIA. I have a feeling if you don't do it, you will be back here. Mr. Waxman will do it for you.

Thank you. Thank you very much.

Chairman WAXMAN. Thank you. Mr. Cummings.

Mr. CUMMINGS. Thank you very much, Mr. Chairman.

It is so easy to have a conspiracy of silence and do nothingness. Are any of you outraged by what you heard from the first panel? I am just curious. Anybody? You are?

Mr. GIDNER. Yes, sir, and I am outraged by the Tar Creek Superfund site and by 85 percent unemployment on the Oglala Sioux. Indian Country is hurting, sir.

Mr. CUMMINGS. Did you know about this before you came here today?

Mr. GIDNER. A little bit about it, yes.

Mr. CUMMINGS. And did you do anything about it? Did you scream? Did you say, there is something wrong with this picture?

Mr. GIDNER. Not about the uranium, specifically, no.

Mr. CUMMINGS. Anybody else outraged? Yes, sir?

Mr. NASTRI. Yes, I am outraged.

Mr. CUMMINGS. And did you learn something new today that outraged you, or were you outraged before you got here?

Mr. NASTRI. I think I had a fairly good sense of the challenges that we face. I certainly asked my staff a lot of very critical questions about where things were. In fact, I had a chance to speak with Navajo Nation EPA director, Steve Etsitty——

Mr. CUMMINGS. And where was that?

Mr. NASTRI. A week and a half or so ago.

Mr. CUMMINGS. Did that conversation outrage you?

Mr. NASTRI. No. It did not outrage you. The question that I asked the Navajo Nation EPA director was, I understand we are going to be testifying. Tell me, what are the things that we are doing, that we are not doing, where is there a problem from your perspective. I have been regional administrator for several years. No one from Navajo Nation has come to me and said, this is an issue that you need to take care of right away.

So when I asked the director, he said, Wayne, you know, in the past, we had an issue. We felt that the studies were taking too long, and it was very difficult for us to get action. But that has changed. Certainly in the last few years, we have had that type of action. But I think the frustration that passed out with the length of time, with the perception that perhaps we were being too research-oriented and not action-oriented.

So one of the things that we have said, and that is why I made the commitment today, sir, is that we have made a standing offer that we will use our removal authority, if there are issues that they raise to our attention that we can say, this is an issue that we can address under CERCLA, then we will do so.

Mr. CUMMINGS. Anybody else? Yes, sir?

Mr. MCSWAIN. You asked if we were outraged. Certainly when I got here, I wasn't as outraged as I was before. The reason for it is, I think Mr. Udall talked about feet on the ground. The fact is, we have a lot of health care providers out there on the ground who are attempting to provide the best possible health care possible. The fact is, people keep coming in and they are sick and they are ill.

Mr. CUMMINGS. And some of them are dying.

Mr. MCSWAIN. Yes. And we can't stop the reason. That is not our role. Clearly, we work diligently on the water side of it, within the scope of our authority. But again, not very successful, excepting the fact that we are doing a lot of dancing out there trying to get around these leavings.

Mr. CUMMINGS. I often say, this is the United States of America, we can do better. I see my time is running out, but I need to refer back to a November 19, 2006 L.A. Times article: "In 1981, 10 of the reservation's local governments called chapters asked the tribe to

inspect houses for signs of uranium contamination. But we had our old nemesis, money, TOE said. His appeals to the Federal agencies were met with a real lack of interest. The prevailing attitude was expressed in a December, 1986 memo by Charles Rue, an Indian Health Service official stationed in the Navajo region. Ticking off mining-related hazards, he wrote 'Radon in homes is another significant but resource-consuming endeavor.' The tribe had surveyed 96 homes and found 37 with radon levels above the EPA's safety threshold. He wrote to his superiors. Many areas near abandoned mines have yet to be tested, included Monument Valley, where the Hollidays live."

But this is the piece that got me, this is the piece. "But he recommended against getting involved because of the cost." The Health Service, he wrote, "should only monitor tribal efforts." In other words, he was saying, they should only monitor the results of the mess that is there, they should only monitor the lung disease. They should only monitor the leukemia. They should only monitor the bone cancer. They should only monitor the birth defects. They should only monitor the kidney disease.

These are human beings. They share this land with us. It is just not right. I would suggest that if we cannot have more empathy for our fellow human beings, maybe somebody needs to replace you guys and let us have some other people who are outraged by all of this. I can understand Mr. Udall's concern. At some point, somebody's got to say, just holler and say, no, this is not, we are not going to have it this way.

We can say time, let's wait, let's wait, let's wait, let's wait, and people will die. But if it were our families, if it were our children, we would go crazy.

Thank you, Mr. Chairman.

Chairman WAXMAN. Thank you, Mr. Cummings.

Mr. Udall.

Mr. UDALL. Thank you, Chairman Waxman.

When I said I give up, I was giving up on getting what I thought would be an answer, some kind of answer that would give me a little bit of solace, and the other members of this panel I think were showing some outrage. Mr. Gidner, do you, reflecting on this, the trust responsibility, do you have a sense that you want to come out of this and really get this situation changed and get some resources committed to this? Is something driving you to do that out of this hearing?

Mr. GIDNER. I am in this business, sir, to help Indian people. I am a Sioux St. Marie Chippewa myself. That is why I am here. We deal with these issues every single day. Yes, I am outraged. BIA has less than $10 million in its environmental budget. We do not have specific expertise in cleaning up uranium. We clearly cannot be the lead for money or technical expertise on this.

Now, as Congressman Davis suggested, could we convene the agencies and the Navajo Nation and work together? Absolutely. And I would be glad to do that.

Mr. UDALL. Good. I hope, and I hear the chairman saying he is going to continue to be involved in this, and I hope that we will be able to see some real progress.

Mr. Nastri, you said, when asked a question about doing something about it, you said, no one has come to you. That seemed to suggest to me that it was their fault, because they hadn't come to you, the EPA. It seems to me, when the EPA is in a relationship with a tribe, which is starting a very new environmental enterprise, trying to develop the technical expertise of your agency, which has been going now for 30 or more years, that you have a responsibility to try to monitor what they are doing and keep an eye on what is happening on the ground.

So I hope that the, that no one has come to me, that isn't suggesting there is some fault on the part of the Navajo Nation and its EPA and Mr. Etsitty that was here earlier from the Navajo EPA.

Mr. NASTRI. I absolutely agree with you, and I certainly didn't intend to convey that. As regional administrator, I deal with 147 tribes, I deal with four States, I deal with all the U.S. territories and the Pacific. By nature of the beast, so to speak, issues that are more critical, that are high significance, tend to rise to my level.

Now, when I do go out and visit tribes, when I go and visit the States, I am always asking the question, what are the issues that are outstanding, that we need to be aware of that perhaps I am not aware of? We always go in with a list of issues that we think are critical. Are there more things that we can be doing, are there things that we should be doing working with other agencies? Absolutely. We certainly deal with that.

Now, was I apprised of the situation? Sure. The question that I asked my staff and others that we work with, are we on the right track, is there something that we should be doing differently. And that is oftentimes, frankly, in the type of work that we do, is one of the biggest challenges that I have. Oftentimes, people want to try to address a solution at a lower level, and they sort of view it if they raise it, that perhaps that hasn't been reflective of success.

So oftentimes, we do try to draw out those issues and we try to seek those. If I don't hear those things, a lot of times I will make the assumption, OK, fine, things are going well. Because believe me, when things aren't going well, I hear it.

So when I learned of this hearing, my first question was, what is going on here? We have been to Navajo Nation twice, and I have certainly seen some of the lands, but I was always assured that, we are working on those issues. To hear the stories that we heard today, it absolutely has to pull at every one of us. We should all be highly motivated to do something. And I am glad to hear that BIA is going to move something, because if they weren't, we would have asked everybody. In fact, we all introduced ourselves as we met. So absolutely, we are going to move forward and do what needs to be done.

Mr. UDALL. Thank you. Thank you, Mr. Chairman.

Chairman WAXMAN. I just want to get one point nailed down. Mr. McSwain, we heard about this blending of drinking water.

Mr. MCSWAIN. Yes.

Chairman WAXMAN. That doesn't make sense to me. We have drinking water that is contaminated and is being blended with less contaminated water to Navajos living near Cove. Do you know how many Navajos drink this blended whatever every day? What was

the rationale for mixing less contaminated water with contaminated water for human consumption? Why not supply the community with less contaminated water? And is this well the only site in which IHS is blending contaminated well water with less contaminated water to provide drinking water for Navajos?

Mr. MCSWAIN. First of all, Mr. Chairman, we do a fair amount of blending, and the reason for it simply is, that as any contaminants are that are found in the water, we will go through a process. The process summarily is we will do filtering to reduce the contaminant level. If that is not possible, then we will find a good water source and mix it with the contaminated site to get the parts per billion down. We are guided by certainly EPA's guidelines on Safe Water Act rules.

If that is not successful, we completely replace the system.

Chairman WAXMAN. Why wouldn't you just replace the system? We are talking about contaminated water. Do you know all the studies and possibilities of health hazards from water that still is contaminated?

Mr. MCSWAIN. Part of it is the fact that, as you well know, Indian Country is not exactly near-in. They are in very isolated areas of the Nation. That is the process we have been using to in fact provide potable water.

Chairman WAXMAN. Well, it sounds nonsensical to me. We will pursue it further.

I want to go over some of the things that I think we need to have done before we end this hearing, before you leave. I think the Federal Government has a responsibility, but that is not just you, it is us, too. The Congress has a responsibility for oversight, and that is the purpose of the hearing today. But as part of our responsibility, we have to give your agencies the tools you need to carry out your job.

So I want to ask this question, and rather than have you respond here, I want you to think about it and come back to us. What authority and what funding do you need in order to clean up the uranium contamination of the Navajo Nation and to address the health problems resulting from that contamination?

I think that we need to have a number of things done simultaneously. The Federal Government needs to conduct a comprehensive health assessment of the risk posed to the health of the Navajo people by the contamination from uranium mining and milling. Second, the U.S. EPA should conduct detailed site assessments at the priority mine sites, at least basic assessments at every abandoned mine site. Rigorous sampling of groundwater at these sites is essential.

Third, where we have the data, we need to conduct cleanups. Work has to be initiated or accelerated. And in consultation with Navajo homeowners, U.S. EPA needs to remove occupied radioactive homes and provide replacement homes. Major surface and groundwater remediation efforts must begin at the Northeast Churchrock Mine site, and the Navajo people shouldn't have to wait 60 years for groundwater contamination from uranium mills to be cleaned up.

If the Department of Energy needs an extension of statutory authority to clean up the Tuba City site, it is our job to get you that

authorization, and we will do it. Going forward, the Federal agencies need to coordinate your actions and work in close cooperation with the Navajo Nation government. What I would suggest to all of you is to have a meeting, to proceed with trying to figure out how to deal with this problem. We are going to be in session on December 12th. I am going to ask you all to come back on December 12th, not for a hearing, but at least for a meeting, so that we can get a progress report, to find out where you are, what authorities you need, what help you need, how it is being coordinated.

I really don't want to hear EPA say it is DOE and DOE say it is the Indian Health program, and the Bureau of Indian Affairs to say it is not our job because we don't have the expertise or the budget. This is a Federal Government responsibility. All of us need to take it seriously. I know you have specific budgets and specific statutory responsibility. I want to remove this from the traditional way of not doing things with different bureaucracies stymied by the others.

Come in here in December 12th and tell us what you need to get the job done. Then we will see where we go from there.

So that is my request to all of you, specifically tell us what authority, what funding, what coordination must be done between your agencies and with the Navajo Nation.

Mr. CUMMINGS. Will the chairman yield?

Chairman WAXMAN. Yes.

Mr. CUMMINGS. Just very briefly, Mr. Chairman.

Mr. Chairman, I want to thank you for doing what you just did, to hold feet to fire so we can get something done. One of the things that I noticed is that agencies have a tendency to make promises, and then they wait, they know we are not going to get back to them for another 2 years. So then nothing gets done. But I really appreciate your doing what you just did.

Chairman WAXMAN. Thank you very much. It is not the fault of each individual agency or each individual witness. It is everybody's fault that we are not getting this done. We will jump in the pool with you and take our responsibility seriously. So let's figure out what to do.

We will see you all on December 12th. It won't be a public hearing, it will be a private meeting. Then we will decide whether we need more public hearings after that.

One other thing. I want to indicate to you that our staffs, on a bipartisan basis, are going to send you further questions to respond to in writing. We would expect you to answer those questions so we can have them for the record.

That concludes our business. The hearing is now adjourned.

[Whereupon, at 2:15 p.m., the committee proceeded to other business.]

[The prepared statement of Hon. Diane E. Watson follows:]

Opening Statement
Congresswoman Diane E. Watson
Oversight & Government Reform
Hearing: "The Health and Environmental Impacts of Uranium Contamination in the Navajo Nation"
Tuesday, October 23, 2007

Mr. Chairman, I want to take a moment to indulge you and the Members of the Committee on an issue of utmost importance. I raise the issue now because I note that one of the government witnesses present today is from the Bureau of Indian Affairs and because the jurisdiction of this Committee covers oversight of The Bureau of Indian Affairs.

I wish to briefly discuss the current condition of Cherokee Indians of African descent, known as Cherokee freedmen, and steps taken by Cherokee Nation of Oklahoma to expel Cherokee Freedmen citizens from the Nation.

Mr. Chairman, most Americans do not realize that some Native American tribes owned slaves of African descent. As an independently recognized nation of the 19th Century, the Cherokee Nation embraced and promoted African slavery, a position it maintained after removal to Indian Territory–now Oklahoma–in the 1830s.

During the Civil War, the Cherokee Nation fought on the side of the Confederacy in order to preserve its southern slaveholding tradition of trafficking in the ownership and sale of black slaves for both reasons of commerce and servitude. In fact, Stand Waite, the last Confederate General to surrender to the Union Army, was Cherokee.

The Cherokee Nation emancipated all its slaves in 1863. In 1866, the Cherokee Nation signed a treaty with the United States Government that formally ended the practice of slavery and made the former slaves citizens of the Cherokee nation. The Treaty of 1866 resulted in an amendment to the Cherokee constitution that same year, which read in part, and I quote: "All native born Cherokees, all Indians, and whites legally members of the nation by adoption, and all freedmen (the term used for freed slaves of African descendants of the Cherokee Nation) shall be taken and deemed to be citizens of the Cherokee Nation."

Toward the end of the 19th Century, a distinction arose–a product of the new Jim Crow South and later codified in practice by the U.S. Government–between

black Freedmen Cherokees and those who were categorized as Cherokee by blood. In March of this year, the Cherokee Nation of Oklahoma amended its constitution to exclude anyone who did not have a Cherokee ancestor listed on the "by blood" rolls it uses to determine citizenship–commonly referred to as the Dawes Rolls.

Since June of this year, the Cherokee Nation has not approved any new citizenship applications of Freedmen. It characterizes Freedmen in hostile terms as "non-Indians," despite the fact that Cherokees of African descent walked the Trail of Tears and tended to the needs of sick and dying Cherokee Nation members, many of whom, if the truth be told, were their mothers, fathers, brothers, and sisters. The obvious intent of the

Cherokee Nation is to rid itself of all Freedmen descendants.

In 2000, the Seminole Nation tried to expel its Freedmen. The Bureau of Indian Affairs shut down the operations of the Seminole Nation for two years, until such time that the Seminole Nation agreed to reinstate its Freedmen citizens. Amazingly, under nearly identical circumstances, the Bureau of Indian Affairs has chosen not to exercise its responsibility to uphold and protect the rights of Freedmen Cherokees.

Mr. Chairman, it is difficult to believe that in the 21st Century we are witness to such a blatant and transparent act targeting a group that, along with many

Native Americans, has been subjected to a long history of civil and human rights abuse and discrimination.

I realize that the First Session of Congress is quickly drawing to a close. It is my wish, Mr. Chairman, that this Committee begins to look into this issue in the Second Session of the 110th Congress, particularly the performance, or better yet non-performance, of the Bureau of Indian Affairs with respect to the Cherokee Freedmen.

Again, Mr. Chairman, I thank you for your indulgence.

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