Yucca Mountain Perspectives

When is the repository scheduled for construction?

Will the repository affect public safety?

What does the Nuclear Regulatory Commission do?

How will nuclear waste be shipped?

Why is Clark County involved?

For more information log on to www.accessclarkcounty/Comprehensive_planning/NuclearWaste.htm

Yucca Mountain Perspectives

Clark County Perspective

By Irene Navis, AICP
Planning Manager,
Comprehensive Planning,
Nuclear Waste Division

WHAT EVERY RESIDENT NEEDS TO KNOW ABOUT YUCCA MOUNTAIN

Clark County represents the largest population segment of the State of Nevada We continue to perform research on issues that involve Yucca Mountain, the proposed high-level nuclear waste repository, because we believe it is our duty to protect the public's health and safety, and to notify you of issues surrounding this historic process. I say "proposed" because until the license application is prepared by the Department of Energy (DOE) and approved by the Nuclear Regulatory Commission, construction cannot begin.

The Board of County Commissioners is proud of the work our staff has accomplished in compiling data, conducting innovative research, monitoring the DOE and informing the public. This publication is simply another vehicle to continue that effort.

Several key issues have resulted from our studies. The DOE's proposed transportation program is of a magnitude never experienced before in this country. While some have suggested the shipping campaign routes would likely avoid travel through Clark County, no official routes have been designated and no assurances have been made. You can read about transportation issues on Pages 6 and 7.

Clark County covers 8,000 square miles, to the borders of Utah, Arizona and California. Even if high-level nuclear waste shipments did not travel through our county (which is unlikely), public safety agencies in Clark County and the City of Las Vegas are the largest, best trained, and most sophisticated public safety agencies within the state of Nevada. If an accident were to occur anywhere within the state, or even in the neighboring jurisdictions such as St. George, Utah where Clark County has a mutual aid agreement, Clark County public safety and emergency management agencies will respond.

This means that if the repository is constructed, Clark County public safety agencies will need to be prepared. You can read about public safety impacts, including financial estimates, on Page 3.

These and other topics are presented to you as a public service, along with information and perspectives also provided by the Nuclear Regulatory Commission, Page 4.
We hope you find this information useful.

The Nuclear Waste Policy Act Amendment of 1987 created the ability for "affected units of local government" to receive resources to determine the impacts from the Yucca Mountain Repository Program. The following year, the Department of Energy (DOE) recognized that Clark County and its citizens could be impacted by the project. The Department of Comprehensive Planning was directed to define potential impacts. This is a summary of some if its recent findings.

The documents published here were written by members of the Department of Comprehensive Planning, Nuclear Waste Division, with assistance from its consultants, Aztec Communication and Urban Environmental Research, LLC. Additionally, the Nuclear Regulatory Commission provided an article. Some graphics and photos were obtained from DOE public documents.

Clark County is designated by the Department of Energy as an "affected unit of government," which provides for certain responsibilities, such as monitoring the repository development process on behalf of Clark County residents. Federal dollars are set aside for this purpose, and accomplished by Clark County's Comprehensive Planning, Nuclear Waste Division, under the guidance and supervision of Irene Navis, Planning Manager.

In addition to its detailed and thorough Impact Assessment Report, several studies have been undertaken. This special publication highlights the results of some of these studies. Complete results may be obtained from the Comprehensive Planning Department, or visit online: www.accessclarkcounty.com.
Publication by Clark County Comprehensive Planning. August 2003

COMING EVENTS

Fall Board Meeting of U.S. Nuclear Waste Technical Review Board in Armagosa Valley, NV on Sept. 16 - 17 (www.nwtrb.gov)

The NRC/DOE "Technical Exchange on Aircraft Hazard & Example System" scheduled in Las Vegas on Sept. 30 and Oct. 1

The state of Nevada's Yucca Mountain lawsuits are scheduled to go to court in Oct. 2003 in the U.S. Court of Appeals, Washington, D.C.

The NRC Advisory Committee on Nuclear Waste public meeting in Las Vegas on Nov. 18 - 20.

HAZMAT Explo 7 will be held at the Orleans Hotel & Casino in Las Vegas, NV on Nov. 17 - 21.

U.S. Nuclear Waste Technical Review Board winter meeting will be in Las Vegas, NV on Jan. 21 - 22, 2004. (www.nwtrb.gov)

U.S. Nuclear Waste Technical Review Board spring meeting will be in Washington, D.C. on May 18 - 19, 2004. (www.nwtrb.gov)

To sign up for notification via e-mail from Clark County on major events and opportunities for public involvement, contact: Erik Muller at emuller@co.clark.nv.us

Clark County Perspective

PUBLIC SAFETY AND EMERGENCY RESOURCES

President George W. Bush signed a resolution on July 23, 2002, ratified by Congress, to allow the Department of Energy to proceed in its license application to the Nuclear Regulatory Commission to build the nation's first high-level nuclear repository. Shipments are scheduled to begin as early as 2010.

If a high-level nuclear waste repository at Yucca Mountain becomes a reality, local public safety officials speculate that existing emergency response facilities and professionals may not be prepared to adequately cope with the demands of a nuclear transportation accident. Clark County emergency response managers are currently investigating what may be needed in as few as seven years.

The Department of Energy estimates at least 60 accidents over the course of the shipping campaign. The additional equipment, personnel and specialized training needed to provide for the inevitable nuclear accident could strain Clark County's emergency resources. Nevada's ability to be prepared in time and the need for increased resources was the object of a study commissioned by Clark County in 2001."Although high-level nuclear waste transportation preparedness is manageable, we need to be aware of the potential impacts to our public safety resources and future costs," said Irene Navis, planning manager of Clark County's Comprehensive Planning Department, Nuclear Waste Division.

Local emergency managers got together earlier this year to discuss emergency preparedness. The meeting included rescue, law enforcement, bomb squads, hospital staff, risk management, security and other emergency management entities.

According to Richard Brenner, fire protection engineer with the Clark County Fire Department, preparation must happen on several levels. Specialized equipment must be purchased, calibrated, maintained and inventoried. In addition, training emergency personnel must include functional as well a table-top exercises.

A representative of the North Las Vegas Police Department, Lt. Mike Kincaid, discussed the role of law enforcement in response to a transportation incident. He pointed out that while local police are not responsible for overseeing an accident involving nuclear radiation, they are often the first on the scene of any emergency and should be aware of the proper ways to offer support.

The national, regional, and local impacts associated with the management and transportation of high-level nuclear waste to Yucca Mountain comes with a price tag. Projected costs to prepare for and adequately handle a nuclear incident were extensively studied by Clark County in 2001. Results from that study indicate a projected fiscal impact of $274 million for Clark County agencies to prepare for a shipment campaign.

Nuclear Regulatory Commission Perspective

THE NRC'S ROLE IN THE YUCCA MOUNTAIN PROJECT

Written specifically for "Yucca Mountain Perspectives" by the NRC to clarify its responsibilities and involvement in the proposed high-level nuclear waste repository.

The Nuclear Regulatory Commission (NRC) is an independent federal agency. It is responsible for regulating the civilian uses of nuclear materials in the United States in order to protect public health and safety, the environment and the common defense and security. It is also responsible for licensing the export and import of nuclear facilities, equipment and materials. The NRC is not connected in any way with nuclear weapons.

To accomplish its mission, the NRC conducts three basic regulatory functions: licensing, inspection and enforcement, and regulatory research. These functions are directed and performed by three NRC program offices: the Office of Nuclear Reactor Regulation, the Office of Research, and the Office of Nuclear Material Safety and Safeguards (NMSS). Among its licensing and regulatory responsibilities, NMSS is responsible for developing policies governing the safeguarding of nuclear facilities and nuclear materials, including the safe disposal of high-level radioactive waste. Oversight and certain licensing activities are also supported by four regional offices, located in Pennsylvania, Georgia, Illinois and Texas. The Office of the General Counsel, Office of Investigations, and Office of Enforcement also support the agency's mission.

The Commission is assisted by three independent advisory committees. The Advisory Committee on Reactor Safeguards makes recommendations to the Commission on all applications to construct and operate nuclear power reactors and on related nuclear safety matters. The Advisory Committee on Nuclear Waste provides the Commission with advice and recommendations concerning radioactive waste management for which the NRC has responsibility. The Advisory Committee on the Medical Uses of Isotopes considers medical questions and provides expert opinions to the NRC.

Federal regulations and the NRC regulatory program are important in assuring protection of the public and the environment. NRC licensees have the primary responsibility for the safe use of licensed nuclear materials in accordance with Commission requirements.

NRC's role in the licensing of the proposed repository

The U.S. government policies governing the permanent disposal of high-level radioactive waste are defined by the Nuclear Waste Policy Act of 1982, as amended in 1987, and the Energy Policy Act of 1992. These Acts specify that high-level radioactive waste will be disposed of underground, in a deep geologic repository and that Yucca Mountain, Nevada, will be the single candidate site for characterization as a potential geologic repository.

The NRC is one of four federal agencies with a role in the disposal and/or transport of spent nuclear fuel and other high-level radioactive waste. The other agencies are the U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), and the U.S. Department of Transportation (DOT).

The DOE is responsible for developing permanent disposal capacity for spent fuel and other high-level radioactive waste. Specifically, the DOE is responsible for characterizing, designing and, if authorized to do so by the NRC, constructing and operating a repository. The DOE is in the process of preparing a license application to be submitted to the NRC in December 2004. EPA is responsible for establishing general standards for the proposed underground geologic repository at Yucca Mountain, which were issued on June 13, 2001. As part of its review of an application, NRC will have to determine whether DOE has demonstrated that it will satisfy EPA standards. The DOT is responsible for ensuring that waste carriers comply with national regulations governing the shippers and carriers of radioactive material. These regulations also cover conditions of transport, routing, vehicle suitability, driver qualification, handling, and storage in transit.

The NRC is responsible for developing and implementing regulations for the proposed repository, and for making a determination whether to issue the DOE an authorization to construct, and a license to operate, and in time, a license to close the proposed repository. The NRC will issue such authorization and licenses to the DOE one step at a time and only if the DOE demonstrates that it can construct and operate a repository safely and in compliance with the applicable regulations and standards.

The NRC is also responsible for licensing the design, construction, use, and maintenance of any shipping casks that may be used to move commercial waste by truck or rail to Yucca Mountain.

The NRC is assisted in its efforts by the Center for Nuclear Waste Regulatory Analyses, located in San Antonio, Texas. The Center was established in 1987 as a federally funded research and development center sponsored by NRC to assist the staff in resolving technical and regulatory issues related to a proposed geologic repository for high-level radioactive waste.

The NRC's regulatory program for high-level waste disposal is currently focused on pre-licensing activities, and on planning for a review of a potential license application for a high-level waste repository at Yucca Mountain by DOE.

In fulfillment of these responsibilities, NRC has made progress on a number of important activities to the high-level waste program. These include, for example:

-Development of regulations and regulatory guides.

-Interaction with the DOE on a regular and public basis to exchange technical information concerning the Yucca Mountain site characterization, as well as pertinent regulatory issues.

-Interaction with the stakeholders, including representatives of the state of Nevada, and affected local governments in Nevada and California, and affected Indian tribes, and the local residents through public meetings that are held in Nevada and California.

-Establishment of an NRC on-site representatives office in Summerlin, in Northwest Las Vegas.

Public information

Information on public involvement is available from the NRC Office of Public Affairs by telephone at 301–415–8200, via e-mail at OPA@NRC.GOV, on the Internet at www.nrc.gov, or by U.S. Mail at U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001.

Yucca Mountain Perspectives

Clark County Perspective

FROM GEOLOGY TO ENGINEERING

In the mid 1950s, the National Academy of Sciences first considered deep geologic disposal of highly radioactive nuclear waste. While the original concept considered a variety of rock formations, the ultimate goal remains the same. That goal: to find a permanent and safe means of isolating highly radioactive materials so that no harm is done to present or future generations of people, or to the surrounding environment.

What do we mean by a geologic barrier and how does it differ from one that is engineered? Generally, the geology includes all of the rock formations that can help keep radioactive material in the waste from moving to a place where it can do harm to humans.

For Yucca Mountain, the underground repository, according to preliminary design, would consist of tunnels carved in solid rock about 660 - 1600 feet beneath the surface of the mountain, and on average, about 1,000 feet above the water table.

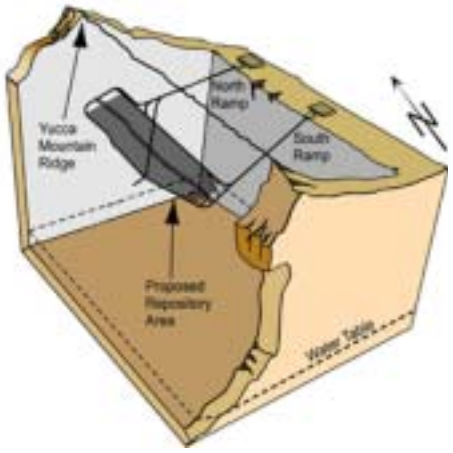
The engineered system would consist of structures or systems that are also designed to keep the waste from reaching any place where it can do harm. The casks that would hold the waste and shields over these casks are the primary engineered barriers being considered for Yucca Mountain. Federal regulations require that the performance of the barriers (engineered and natural) must be adequate to meet the safety standards set by the Environmental Protection Agency for 10,000 years.

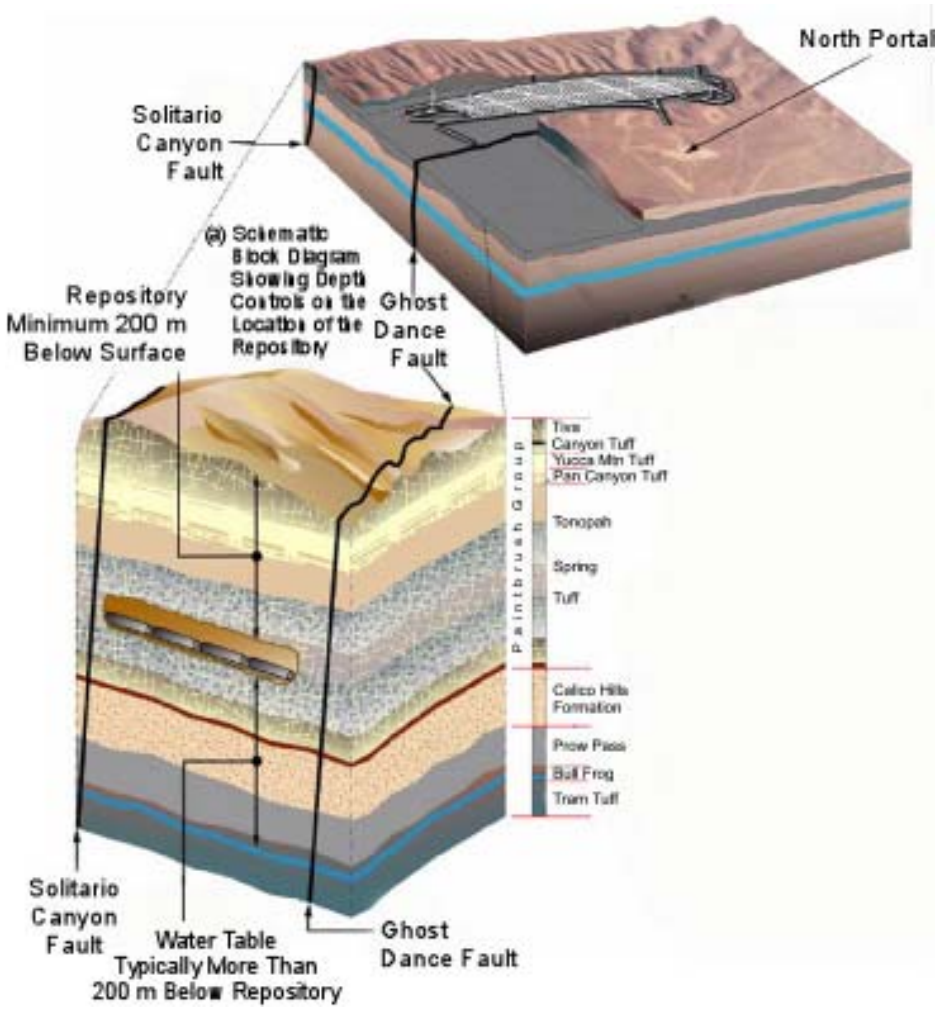
Engineered barriers are only part of the total performance package and some experts argue that it must not be relied on to make up for a lack of understanding or shortcomings in the geology. It is easier to understand engineered systems, because like a bridge, they are built to exacting specifications. Predicting the performance of this designed system for a period of 10,000 years is an entirely different matter. In the geologic system, which has been around for millions of years, predicting performance, even for geologically short periods, is still a very difficult task.

The single most important thing to understand to make reasonable predictions about the performance of both the engineered and the geologic barriers is the movement of moisture (liquid water and water vapor) in the rock and its interaction with the rocks and the engineered system. It is water that degrades the engineered barriers and moves the waste. Scientists differ in their opinions about how fast water actually travels through the rocks at Yucca Mountain. Estimates range from decades to more than a thousand years.

For Yucca Mountain, current designs call for keeping canisters and the rock very hot (above the boiling point of water) for long periods of time. (The radioactive waste gives off heat when it is first placed in the repository.) This makes understanding the effects of water on both the engineered and the geologic system that much more difficult to predict. It also is difficult to estimate long-term performance of the repository.

For these reasons, the current approach places most of the performance on the engineered systems. Due to the uncertainty of how the geology will protect the environment, the choice was made to allocate most of the performance to the engineered system.





Transportation of High-Level Nuclear Waste

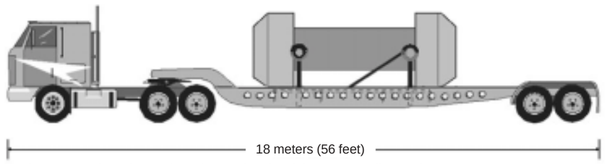
Even before President George W. Bush recommended, and Congress approved, Yucca Mountain as the nation's high-level nuclear repository, transportation was the public's primary issue.

There is no rail access to Yucca Mountain. It is uncertain that such rail access is feasible. Therefore, the most likely transportation scenario is to move the waste by truck. The agency responsible for the repository's operation and transportation system is the U.S. Department of Energy. Between 2010 and 2034 it plans to ship 77,000 tons of spent nuclear fuel and high-level nuclear waste. However, because Yucca Mountain cannot hold all of the nation's nuclear waste, another 54,000 tons will require disposal by 2050, assuming no new nuclear power plants are built. There are two national transportation scenarios: truck or rail transportation.

Road shipments

Transportation of spent nuclear fuel and high-level radioactive waste would require about 53,000 legal-weight truck shipments over the first 24 years of Yucca Mountain's operation, and nearly 109,000 legal-weight truck shipments over 38 years.

Congress identified the interstate highway system as the default routes for shipping waste. States have the ability to designate alternate routes provided they satisfy certain criteria. The DOE has not yet identified specific routes across America to Yucca Mountain.



Artist's conception of a truck cask on a legal-weight tractor-trailer truck.

Fred Dilger, principal transportation planner for Clark County's Nuclear Waste Division, is in charge of coordinating and monitoring DOE's transportation plans for the county. He has more than 14 years experience in the field of transportation planning and geographic information systems.

Dilger says that DOE faces several difficulties in transporting the waste to Yucca Mountain. "The absence of rail access to Yucca Mountain means that the DOE will either have to construct and operate a new rail line at enormous expense, or that there will be 10 times as many truck shipments of waste."

For Clark County, this means between 6 and 11 trucks a day for between 24 and 38 years. This has potential impacts on communities along transportation routes.

Where is Yucca Mountain?

Yucca Mountain is about 100 miles northwest of Las Vegas. It is located in a desert landscape on public lands. Yucca Mountain is actually a ridge of volcanic rock. It was the only site designated by Congress in 1987 to be studied for the permanent disposal of radioactive waste.

High-level radioactive waste is produced at commercial nuclear power plants and nuclear weapons production facilities. Nuclear fuel is made of pellets of enriched uranium, sealed in fuel rods and bundled together into a nuclear fuel assembly. The fuel assembly powers the reactor until it is no longer efficient in generating electricity. The "spent" fuel, which is still highly radioactive, is the primary form of high-level nuclear waste.

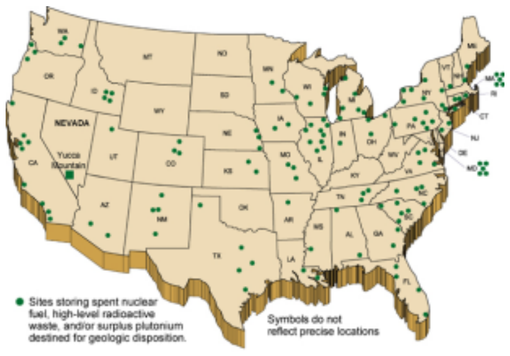
Under current law, 77,000 metric tons of waste would be allowed to be stored at Yucca Mountain.

Rail Shipments

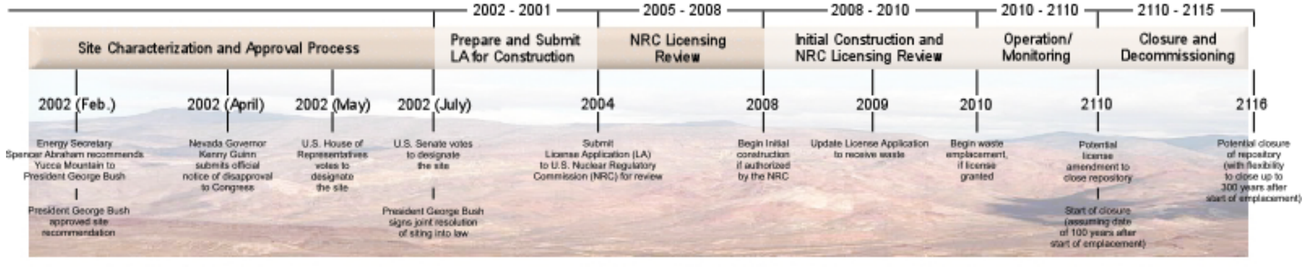
The Department of Energy (DOE) identified five potential rail access corridors, ranging in length from 99 miles to 323 miles.

Environmental approvals, right-of-way acquisition, and procedural and legal challenges could delay rail construction, according to Dilger. "The permits and approvals needed may take up to five years," he said. "Currently, one-third of the nation's existing reactor sites cannot ship directly by rail. We expect that large numbers of truck shipments are unavoidable."

Proposed Routes have not yet been designated. This map represents potential shipping routes across America.



Yucca Mountain Timeline



Educational Perspective

PUBLIC OUTREACH EFFORTS BY CLARK COUNTY

Clark County created the INFORM Program (Informing Nevadans–Facts on Radioactive Waste Management) in 2001 to convey information about the Yucca Mountain project. The program was designed to inform all residents of potential impacts the repository may cause as well as provide a means for public involvement. Public meetings, presentations, printed material, Web site, and media assistance are some of the ways Clark County reaches out to the public. In addition, The Nuclear Waste Division of Clark County monitors the activities of the Nuclear Regulatory Commission and Department of Energy (DOE) to keep Clark County residents abreast of the progress and activities of these agencies.

Erik Muller is the public information officer for Clark County's Comprehensive Planning, Nuclear Waste Division. A former broadcast journalist with a degree in business communications, Muller oversees the INFORM Program. "The health and safety of Clark County residents is our primary concern and responsibility," says Muller. "It is our job to provide the citizens of Clark County with the results of impact assessment reports and other studies conducted by our department. Our goal is to provide awareness on new developments that pertain to the repository."

According to Muller, the Nuclear Waste Division conducts presentations to various organizations that include civic and social groups. "Our public outreach includes participating in community events, such as El Dia de los Ninos (Children's Day), and creating displays in which we provide the public a variety of fact sheets that explain the socioeconomic and adverse impacts all residents face, especially those that live close to the transportation routes," explains Muller. "I have discussed Yucca Mountain issues with curious teens at various community centers, and attend senior fairs and other special events on a regular basis."

Fact sheets and other publications for schools, civic groups and individuals are available in both English and Spanish.

The Nuclear Waste Division also provides monthly updates on cable TV Channel 4 which is the County's public television station. Information is also available on the county Web site under the Comprehensive Planning-Nuclear Waste Division link. Residents are also encouraged to call the Yucca Mountain hotline @ 455-5820. Questions and responses will be placed in the Q&A section of the Web site.

For more information log on to www.accessclarkcounty.com

Nuclear Regulatory Commission Perspective

To represent all ethnic groups within Clark County, the Nuclear Waste Division reaches out to Native American tribes in Southern Nevada. For example, two studies, "Tribal Concerns about the Yucca Mountain Repository" and "Moapa Band of Paiute Indians, Governmental and Fiscal Impact Report Related to the Shipment of High-Level Nuclear Waste," were conducted to assess the attitudes and unique interests of local tribes. These reports present information gathered from the Southern Paiute and Western Shoshone tribes. The following information is based on those two studies.

Tribal Lands

Native Americans view the natural environment differently than from mainstream America. Tribal culture is based on the land.

The proposed Yucca Mountain site is in the Southern Great Basin, approximately 100 miles northwest of Las Vegas, located within an area of prehistoric and historic joint use by both Southern Paiute and Western Shoshone people who have strong cultural ties to the region.

Many tribal leaders believe the U.S. government is not authorized to build the repository on the Nevada Test Site. "According to the Ruby Valley Treaty of 1863, the land that the DOE calls the Nevada Test Site, and Yucca Mountain is actually a part of the Western Shoshone Nation's ancestral land, Newe Sogobia. Newe Sogobia encompasses a large part of Southern California, more than a third of Nevada, and parts of Utah and Idaho," says Kalynda Tilges, executive director of the Shundahai Network.

According to Tilges, this land area is clearly defined in the Ruby Valley Treaty. "This treaty was one of only two treaties signed with the U.S. that did not cede land to the government, it was simply a treaty of peace and friendship that gave each party certain explicit rights," she said. "The Western Shoshone Nation has never allowed the DOE to use their land for the testing and production of nuclear weapons, and the DOE is, therefore, trespassing in Newe Sogobia."

A high-level nuclear repository at Yucca Mountain is seen as willful contamination of the land by tribal members. There already exists a heightened awareness on the part of tribal members concerned about past release of radiation from the Nevada Nuclear Test Site and existing contamination. The proposal to store high-level nuclear waste at Yucca Mountain is viewed as an additional burden.

The prospect of high-level nuclear waste storage at Yucca Mountain is seen as a threat to future generations of Southern Paiute. In their respective perspectives, the future existence of the tribe is seen in its relation with the land. A repository at Yucca Mountain is viewed to have significant impact on both the Moapa Band of Paiutes and the Las Vegas Paiute Tribe.

Government to Government

Generally, the U.S. has not approached Native American tribes on a government-to-government basis concerning Yucca Mountain.

The Western Shoshone National Council is the traditional government of the Western Shoshone Nation and maintains it is the legitimate successor to the rights, duties and obligations contracted by the 1863 Treaty of Ruby Valley. Federal agencies, however, disagree as to the legitimacy of the Council to act as a formal nation.

In 2000, two concerned Western Shoshone communities prepared petitions to the Secretary of the Interior. Both the Duckwater Shoshone Tribe and the Timbisha Shoshone Tribe sought "affected Indian tribe" designation. No response to either tribe's petition has been made.

Department of Energy consultants contacted 20 tribes for cultural resource consultation in the 1980s. The Western Shoshone National Council was not included in the DOE cultural resource study. The Pahrump Paiute Tribe and the Las Vegas Indian Center were identified by the DOE as historic Indian tribes without federal recognition. This means that unlike the state and counties adjacent to Yucca Mountain, no tribal entities are formally recognized as "affected units of government" under the Nuclear Waste Policy Act. Tribes, therefore, are not provided with funding or resources to conduct independent oversight of the Yucca Mountain Project. Because of this, Clark County has entered into agreements with the Moapa and Las Vegas Paiutes to assist them in their oversight and impact assessment efforts.

While many tribes are intensely interested in the issues surrounding the Yucca Mountain Project, they lack the institutional capacity and financial resources to become more fully involved.

Moapa Band of Paiutes

A small Native American community, the Moapa Band of Paiutes is part of the Southern Paiute Nation and reside in an area located 55 miles northeast of Las Vegas. The original reservation in 1873 had a total of two million acres. Two years later it was reduced to 1,000 acres of land by the federal government. In 1981 the U.S. restored 70,565 acres to the tribe. Some of the land is leased for open cattle grazing. The tribe also operates its own farming and agricultural enterprises.

The tribe also is dependent on a gaming center/store located on I-15 for approximately 90 percent of its revenues. If I-15 were to become a shipment route, development along the shipment route may cause a loss of property value and revenues due to a reluctance to travel and stop at these locations. An incident along I-15 near the Moapa exit could lead to adverse impacts to tribal agricultural production and sales, as well.

continued on page 10.

Wildlife Perspective

THE PLANTS AND ANIMALS OF YUCCA MOUNTAIN

Information from "Reading the Stones: the Archaeology of Yucca Mountain," published by the Desert Research Institute, based on research prepared for the Department of Energy.

Climate and the availability of water determines the type and volume of plant and animal life in any given area. In the Yucca Mountain region, the creosote bush, bur sage, Mormon tea, shadscale and desert globemallow are common plants in the Yucca Mountain area. Cool-season grasses such as Indian rice grass grow in the sandier soils near Yucca Mountain.

A diverse variety of animals populate Yucca Mountain. Insects, such as ants, grasshoppers, crickets and cicadas, as well as caterpillars are abundant. Lizards, especially the chuckwalla, were hunted by early Native American Indian tribes. Also abundant in the area are desert tortoise, rodents, rabbits, and hares.

Larger mammals such as mule deer, bighorn sheep and pronghorn antelope have lived in the area, as well as coyote, kit fox, badger, bobcat, mountain lion and long-tailed weasel. Birds include Gambel's quail and mourning dove as well as various migratory birds, eagles and other raptors.

Tribal Perspective

continued from page 9.

Spiritual and social value impacts in the case of an incident are impossible to measure. On the practical side, the tribe's emergency medical capacity would be insufficient to handle a serious accident involving nuclear transportation.

The Moapa Tribe does not own or operate an ambulance. Fire and rescue operations are based on the Clark County's volunteer fire department and there is insufficient experience, equipment and training related to hazardous materials or radiological exposure. There is a fire station located in the town of Moapa, several miles from the reservation. But without more equipment and training, it too would not be up to the task of handling a serious nuclear waste accident.

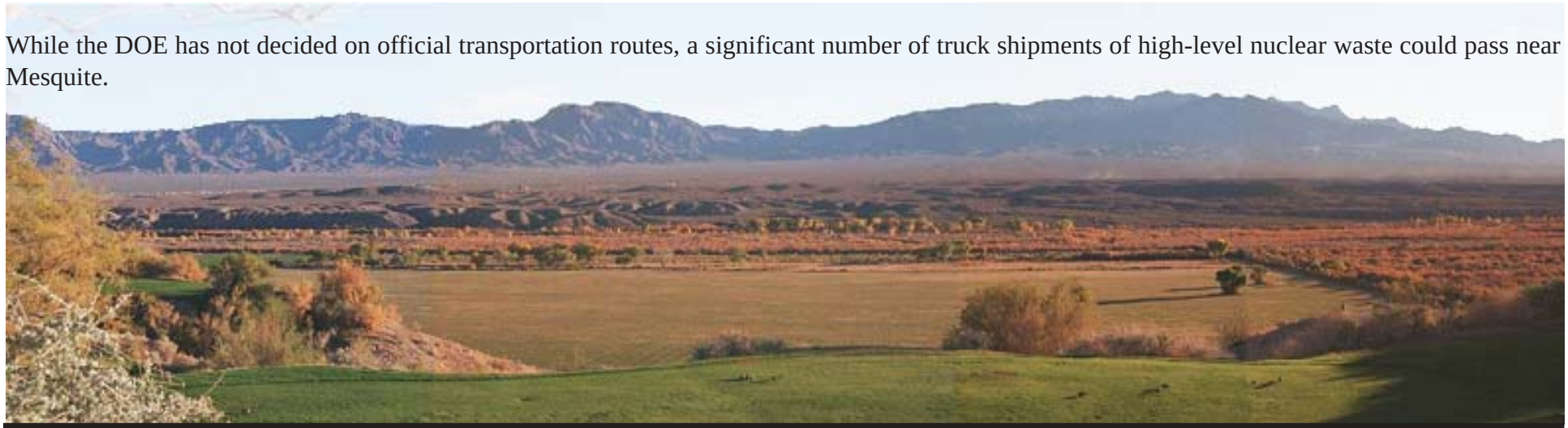
Educational Perspective

ONE TOWN'S EFFORT TO EDUCATE

Mesquite lies on the main highway between Utah and Southern Nevada along Interstate 15. Residents and elected officials there have been concerned about Yucca Mountain for many years. Mesquite's former mayor, Chuck Horne, organized a series of eight educational seminars. The public workshops were designed to inform residents about the nature of radiation and its potential effects. "We know the proposed high-level nuclear waste repository at Yucca Mountain is a major interest," said Horne. "These seminars gave residents an opportunity to learn and ask questions directly to the experts."

Sessions about radioactive materials were developed by Anthony E. Hechanova, Ph.D., a research scientist in nuclear engineering for the Harry Reid Center for Environmental Studies at the University of Nevada, Las Vegas. The first session was held in January and covered the biological effects of radiation. Other subjects were presented by various speakers, and included waste management, transmutation, reprocessing, and how a nuclear power plant works. The final session was conducted June 18 about the Yucca Mountain repository by Max Powell, an employee of Bechtel/SAIC, a contractor for the Department of Energy.

While the DOE has not decided on official transportation routes, a significant number of truck shipments of high-level nuclear waste could pass near Mesquite.



Historical Perspective

1954 The Atomic Energy Act is passed by Congress directing the federal government to promote the peaceful use of atomic energy, with the understanding that disposal of the highly radioactive waste produced would be the responsibility of the federal government.

1956 The National Academy of Sciences recommends deep geologic disposal of the long-lived, highly radioactive wastes from nuclear reactors.

1980 Deep geologic disposal is selected by the Department of Energy as the preferred alternative for permanent disposal of commercial high-level nuclear waste.

1982 Congress passes Nuclear Waste Policy Act of 1982 (NWPA) which establishes a repository site screening process; requires two repositories to assure regional equity; sets a schedule leading to federal waste acceptance for disposal beginning in 1998; starts the Nuclear Waste Fund to pay for the waste program with fees collected on the generation of electricity from nuclear power plants; and requires that the repositories be licensed by the Nuclear Regulatory Commission (NRC).

1983 The DOE names nine previously screened potential repository sites in six states: seven in salt deposits and two on western federal nuclear facility sites (including the Nevada Test Site) in volcanic rock deposits.

1986 The DOE issues final Environmental Assessments and nominates five candidate repository sites from the original nine, and then selects three western sites in Nevada, Texas, and Washington for detailed investigation, from which one is to be selected for repository licensing.

1987 Congress amends the NWPA, designating Yucca Mountain, Nevada as the sole repository site to be characterized.

1991 Surface studies begin at the Yucca Mountain site.

1993 DOE begins grading work at the proposed repository site and formulates a program approach that sets waste acceptance to begin in 2010.

1994 Portal entrance to the Exploratory Studies Facility is constructed and tunneling into Yucca Mountain begins.

1998 DOE does not meet its January deadline for waste acceptance. Lawsuits are filed by states and the nuclear industry.

2000 President Clinton vetoes nuclear waste legislation passed by Congress.

2001 Environmental Protection Agency announces proposed radiation standards for Yucca Mountain.

2002 Energy Secretary Spencer Abraham recommends Yucca Mountain as a suitable site to President George W. Bush, who approves the recommendation. Nevada Governor Kenny Guinn exercises his right to veto the Yucca Mountain Project. The project moves to Congress, where a simple majority in both houses is needed to overturn Guinn's veto. Yucca Mountain is debated and passed in the House of Representatives and in the Senate. President Bush signs the joint resolution into law on July 23, officially designating Yucca Mountain as the nation's nuclear waste repository site. DOE begins work on its application for a license to build and run the repository. The NRC identifies 293 technical issues DOE must solve before submitting the license application. The state of Nevada files lawsuits against DOE, NRC, President Bush, and Secretary Abraham.

2003 DOE continues work on its license application to the NRC. State of Nevada lawsuits against the Yucca Mountain repository are set for oral arguments in front of the D.C. Court of Appeals in September. DOE is scheduled to release a nuclear waste transportation plan sometime this fall.

HOW TO GET MORE INFORMATION ABOUT YUCCA MOUNTAIN

Visit Clark County online:
www.accessclarkcounty/Comprehensive_planning/NuclearWaste.htm

Check out this site to find out:
- Should we negotiate for benefits?
- What are the six transportation-related issues for Clark County?
- How could a repository affect our economy?
- and much more...

Other Web sites:

Citizen Alert ..... www.igc.org/citizenalert
EPA Yucca Mountain Homepage ..... www.epa.gov/radiation/yucca
Eureka County Nuclear Waste page ..... www.yuccamountain.org
NRC/Sandia Labs Modal Study Page ..... ttd.sandia.gov/nrc/modal.htm
Nuclear Energy Institute ..... www.nei.org
Nuclear Information Resource Service ..... www.nirs.org
Nuclear Regulatory Commission ..... www.nrc.gov
Office of Civilian Radioactive Waste Management ..... www.ocrwm.doe.gov
Public Citizen's Critical Mass Energy and Environment Program ..... www.citizen.org/cmep
Shundahai Network ..... www.shundahai.org
State of Nevada Nuclear Waste Project Office ..... www.state.nv.us/nucwaste/index.htm
Yucca Mountain Project Office, Department of Energy ..... www.ymp.gov

Tours of Yucca Mountain

Free tours are conducted by the Department of Energy. Call 702-295-5555 for information and dates.

TV Channel 4

Tune into Clark County's Cable TV Station, Channel 4 for updates in English and Spanish about the Yucca Mountain Project.

Printed Information

Fact sheets and other publications are available in both English and Spanish, covering topics such as"Earthquake Potential at Yucca Mountain," "Yucca Mountain Questions & Answers," and "Yucca Mountain Facts." To request a fact sheet, contact Erik Muller, 455-5185.

Speakers Bureau

Knowledgeable representatives of the Comprehensive Planning, Nuclear Waste Division are available to speak to your group or organization. Contact Erik Muller, 455-5185.

Community Events

Clark County welcomes opportunities to provide displays and people who will give one-on-one information at community events, trade shows, school gatherings, anywhere residents congregate. Contact Erik Muller, 455-5185.

Yucca Mountain Hotline:

455-5820. Call to ask questions or express your concerns.