

## Winter 2002

### Publication of Churchill County Yucca Mountain Oversight Program

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*Top project students, Amy Griffith, Josh Grace and Alyssa Probst & Gerran Smith (not shown) demonstrate their radon project.*



### Judges Select CCHS Students Radon Project as the Top Project at Energy Night

Forty-three students participated in the finals round of competition vying for top project for Energy Night held in the Churchill County High School (CCHS) auditorium. Approximately 180 parents, students and teachers attended the event.

The Energy Project proposal used by the students directed the U.S. to build more nuclear power plants, more coal plants, use more hydroelectric power, and increase funding for research into solar energy and fuel cells.

The four finalist groups made Energy Proposal presentations using Microsoft Power Point. First place group consisted of Josh Grace, Alyssa Probst, Amy Grif-

fith and Gerran Smith all from Churchill County High School.

Other students from CCHS presented research information from projects to study the operation of fuel cells, evaluate radon levels in classrooms at CCHS, study the influence of temperature on solar panel efficiency, determine half-lives for several radioactive isotopes, a study of activity levels in naturally occurring minerals, a test of the influence of solar angle of incidence on solar cell efficiency, and a study of temperature distributions during combustion reactions.

The judges selected the Radon study at CCHS as the top project. The researchers were Amy Griffith, Alyssa Probst and Josh Grace. Congratulations and good job!



*Student, Josh Grace during demonstration at CCHS Energy Night*



*Students Amy Griffith and Alyssa Probst at CCHS Energy Night*

## General Accounting Office Challenges Plans for Storage of Nuclear Waste

The General Accounting Office (GAO) is urging the Bush administration to indefinitely postpone a decision on whether to build a huge permanent and centralized nuclear waste storage site in the Nevada desert and is raising serious questions about whether it could ever be built as currently conceived.

The remote site beneath Yucca Mountain, 90 miles northwest of Las Vegas, has been eyed by Congress and the Energy Department for the past 20 years as the only candidate for the storage of all nuclear waste generated in the United States. The newly reenergized nuclear power industry recently has been predicting that the site could be opened as soon as 2010.

But according to a GAO draft report obtained by the Washington Post, the energy Department "is

unlikely to achieve its goal of opening a repository at Yucca Mountain by 2010 and has no reliable estimate of when, and at what cost, such a repository could be opened." The report presents a challenge to the administration's aggressive schedule, which calls for energy Secretary Spencer Abraham to recommend to President Bush this winter whether to formally designate Yucca Mountain as the site for 78,000 tons of radioactive waste.

Abraham is certain to urge Bush to move ahead with the project, according to government officials and industry sources. But the GAO study has greatly complicated the administration's efforts, particularly because it reflects the views of Bechtel SAIC, the private contractor hired by the Energy Department to oversee the project.

The study said Bechtel SAIC recently told the DOE that it would take until January 2006 to complete the detailed research and cost estimates and to resolve hundreds of outstanding issues before the administration could responsibly designate the site and then begin the lengthy process of seeking a license from the Nuclear Regulatory Commission. "DOE is not ready to make a site recommendation because it does not yet have all of the technical information needed for a recommendation and a subsequent license application," the study said.

The GOA also warned that the plans for Yucca Mountain that officials have been showing to lawmakers and Nevada residents "may not describe the facilities that DOE would actually develop." Controversy over the pro-

posed underground storage site has persisted for nearly two decades as the nation gropes for a way to dispose of the radioactive waste from nuclear power plants and weapons facilities. Having no access to a centralized storage facility, plant owners are holding about 40,000 metric tons of spent fuel in temporary storage at plant sites in 36 states.

With so much uncertainty over the fate of the project, the report said, the administration is considering, as a fallback position, temporarily storing nuclear waste above ground at the site beginning in 2010.

The project is widely unpopular in Nevada and has drawn strong opposition from lawmakers and state officials, including Gov. Kenny Guinn, Senate Majority Whip Harry

*(Continued on page 3)*

## Energy Secretary Responds to Draft GAO Report on Yucca Mt.

In a letter to the GAO, Secretary of Energy Spencer Abraham wrote:

I was disturbed to see a news account of a draft General Accounting Office (GAO) report on the site characterization activities the Department of Energy (DOE) is conducting at Yucca Mountain as required by the Nuclear Waste Policy Act. While I have great respect for GAO, this kind of premature disclosure significantly, if not irreversibly, taints the work product of any inquiry by GAO or any other investigative body.

This is especially disturbing in that the draft report is fatally flawed. In the normal course of events, DOE would have had an opportunity to formally comment on its deficiencies, allowing GAO to correct its work product. Our interactions with your staff on this inquiry and the inappropriate, premature release of the draft report reinforce my concern that it was assembled to support a predetermined conclusion.

I well recognize how politically charged the Yucca Mountain project is, but it is a shame that someone or some persons have marred GAO's integrity and undermined the validity of this inquiry. I note that the requestors of this report have a long history of strong opposition to the Yucca Mountain project.

Congress has required that Yucca Mountain be studied in order to determine its suitability as a long-term repository for radioactive wastes. Congress established the statutory requirements that guide this work. I will continue to carry out those responsibilities faithfully and fairly.

## General Accounting Office—Continued from page 2

M. Reid, and Rep. Shelly Berkeley. The state is prepared to file a formal protest against the project if Bush decides to seek a license for Yucca Mountain – a dispute that eventually would have to be resolved by majorities in the House and the Senate.

With Reid and Senate Majority Leader Thomas A. Daschle (D – S.D) vowing to block the project in the Senate, the prospects for passage appear bleak as long as the Democrats are in control. However, with conflicting concerns about the need for increased sources of energy and the importance of tightening controls over nuclear waste, experts say it is impossible to predict how Congress will eventually resolve the controversy. Reid, who commissioned the GAO study, said that the findings will provide him and other opponents with powerful ammunition in the effort to defeat a project that has already cost the federal government \$8 billion.

“I think it’s the beginning of the end of Yucca Mountain,” he said. “This report is a damning indictment of a process Americans relied upon to protect their health and safety.”

But Energy Department officials indicated that they will not be deterred by the GAO study and that by law the administration is entitled to make a decision on the site long before it completes all the studies and research necessary to apply for a license.

“We’re perplexed how GAO could find any technical or legal basis to support their conclusion in their draft report,” said Joe Davis, a spokesman for the Department. As for Bechtel SAIC’s assertion that it will take years to complete the preliminary research necessary to decide whether to go forward, Davis said: “We don’t agree.”

The Bush Administration has embraced the project as vital to the President’s plan to address the nation’s long-term energy needs partly by expanding the use of nuclear power plants. In the wake of the Sept. 11 terrorist attacks, some industry officials have pleaded for fast action on the project to relieve them of responsibility for nuclear waste that could be targeted by terrorists. In June, the administration unveiled the final health and safety standards

for the proposed depository that officials had hoped would allow construction of the project to proceed. With the new standards regulating all potential sources of radiation exposure from ground water, air and soil, administration official said they hope they have overcome a difficult political obstacle. But the GAO report said the Energy Department is still gathering and analyzing technical information on nearly 300 separate issues. These include the expected lifetime of engineered barriers and waste containers, the physical properties of the site and the mathematical models used to evaluate the performance of the planned project. *Reprinted from the Washington Post, By Eric Pianin*



## Churchill County High School Hear State of Nevada Opposition to Yucca Mountain

In the wake of the recent announcement from Secretary of Energy recommending Yucca Mountain as America's permanent nuclear waste storage site, the State of Nevada Nuclear Waste Project office made a presentation at Churchill County High School.

Over 85 science students assembled to ask questions concerning the proposed site. Students watched a 15 minute video "What's the Deal with Yucca Mountain" which used high school students to pose and answer questions about the site.

Susan Linch, Geologist and Norma Conway, representative and presenter from the State answered questions and handed out information and copies of the video for the students to review with their parents.

Questions from the students revealed considerable knowledge of the proposed nuclear waste site and its probable impacts. Steve Johnson, science teacher at Churchill County High School has been accompanying his students on tours to the site for the past several years. This has given many of the students a more "hands-on" approach to understanding the issues and staying informed.



Questions and answers lasted nearly two hours with students sometime presenting an opposing opinion from that of the State. Their questions ranged from federal funding for Nevada if this state become the host for nuclear waste, to whether Yucca Mountain is a greater risk than any other site. One student, Kristen Haberthur commented "I feel as though Yucca Mountain would be an excellent choice to house the country's nuclear waste. Although there are some kinks to be worked out, I feel the site is safe and has the ability (with the help of science) to be an effective "dumping" site for all our radioactive garbage."



Although there are some kinks to be worked out, I feel the site is safe and has the ability (with the help of science) to be an effective "dumping" site for all our radioactive garbage."



## Yucca Mountain Science Center brings “Discovery Day” to E.C. Best Elementary

In an all day marathon, each student at E.C. Best Elementary had the opportunity to build a volcano made of papier mache, create a fossil from clay and design a structure that is considered to be safe under extreme conditions. The Yucca Mountain Science Center team, Claire Whetsel taught students about geology and engineered barriers. Nuclear waste is to be stored within engineered casks underground at Yucca Mountain, by using hands-on experiments the team could explain the geology of Yucca Mountain at an elementary level. Students were told how scientists use fossils and study volcanoes to learn more about the proposed site. Using a dixie cup, an egg, tape and bubble wrap students assembled an “engineered barrier” that when tossed from an 8-foot ladder could land without breaking the egg. Teachers commented on how they can use these experiments to discuss Yucca Mountain with their students.



*Students gather materials to create an engineered barrier*

*Students check to see if their egg survived the fall.*



*Students watch as the experimental volcano erupts*



## Yucca Mountain Science Center Team presents to Junior and Senior High School

After the marathon “Discovery Day” at E.C. Best Elementary DOE’s Yucca Mountain Science Center team returned the next day to speak to the Junior High student body and later with Steve Johnson’s science students at Churchill County High School. Students were given a chance to hear the DOE’s perspective of Yucca Mountain which focused on the scientific studies taking place there. Knowing that the site has been recommended to the President, students are curious as to what comes next.

The previous week the students heard from the State of Nevada’s Nuclear Wastes Projects Office presenters.

Students and faculty were very pleased with both presentation and the opportunity to talk about Yucca Mountain and hear the opposing views.

For the public, much of the same material handed out to the students is available at the Churchill County library.

## Nevada Congressman Disappointed in Expected Announcement From Energy Secretary

U.S. Congressman Jim Gibbons (R-Nev.) learned that Department of Energy (DOE) Secretary Spencer Abraham is expected to issue to Nevada Governor Kenny Guinn his intention to recommend the storage of 77,000 tons of high-level, nuclear waste at Yucca Mountain, Nevada. Gibbons, a member of the House Resources Committee, criticized the Secretary's announcement and urged Nevadans to continue to fight this misguided proposal.



"I am deeply disappointed with the announcement by Secretary Abraham - but not surprised," stated Gibbons. "It is unfortunate that Secretary Abraham would continue green-lighting a corruption and mismanagement since its has lacked the necessary, scientific consensus

### **Gibbons Declares Fight Against Yucca Mountain Will Continue**

"Nevada's fight is far from over," continued Gibbons. "The buck does not stop with Secretary Abraham. The public safety of every Nevada citizen, as well as those who reside and commute along the nuclear waste transportation routes, will soon lie in the hands of the President and Congress."

project that has been riddled with inception. From day one, this project that would ensure the public's safety."

Gibbons. "We all recognize that the responsibility of ensuring the safety of the millions of Americans who live along the nuclear waste transportation routes, will soon lie in the hands of the President and Congress."

"I am confident that Nevada will not only make a strong case to the White House against the Yucca Mountain proposal, but we will be able to offer President Bush legitimate and safe alternatives to the disposal of high-level nuclear waste."

Yucca Mountain is located in Congressman Jim Gibbons' congressional district, approximately 90 miles from Las Vegas, Nevada.

### **Gov. Guinn reacts to GAO report on Yucca Mountain Plans**

Reacting to the recent GAO report Governor Kenny Guinn wrote "It's becoming increasingly obvious that the Yucca Mountain project is doomed to failure," Gov. Kenny Guinn said today, reacting to the General Accounting Office report urging the Bush administration to indefinitely postpone its decision on whether to build a nuclear waste storage facility beneath Yucca Mountain.

"The conclusions of the GAO mirror those of nearly every external review that has been looking at the project, including the presidential appointed National Nuclear Waste Technical Review Board, the Nuclear Regulatory Commission and several national and international peer review groups.

"The question is, when will the DOE and the administration recognize that Yucca Mountain can never be found suitable and certainly is not licensable by the Nuclear Regulatory Commission. The time has come for DOE to face this reality and move to terminate the project."

## Spencer Abraham sends notification of pending recommendation to Governor Kenny Guinn

As required by law Secretary of Energy, Spencer Abraham, recently sent Governor Kenny Guinn notification of a pending recommendation to the President concerning the suitability of the Yucca Mountain site as a Nuclear repository. Spender Abraham wrote:

This letter is to notify you, in accordance with section 114(a)(1) of the Nuclear Waste Policy Act, of my intention to recommend to the President approval of the Yucca Mountain site for the development of a nuclear waste repository. In accordance with the requirements of the Act, I will be submitting my recommendation to the President no sooner than 30 days from this date. At that time, as the Act also requires, I will be submitting to the President a comprehensive statement of the basis for threat recommendation.

First, and most important, that recommendation will include the basis for and documentation supporting my belief that the science behind this project is sound and that the site is technically suitable for this purpose.

Second, there are compelling national interests that require us to complete the siting process and move forward with the development of a repository, as Congress mandated almost 20 years ago. In brief, the reasons are these.

- A repository is important to our national security. We must advance our non-proliferation goals by providing a secure

place to dispose of any spent fuel and other waste products that result from decommissioning unneeded nuclear weapons, and ensure the effective operations of our nuclear

***“There are compelling national interests that require us to complete the siting process and move forward with the development of a repository.”***

***Spencer Abraham***

nave by providing a secure place to dispose of its spent nuclear fuel.

- A repository is important to the secure disposal of nuclear waste.

Spent nuclear fuel, high level radioactive waste, and excess plutonium for which there is no complete disposal pathway without a repository are currently stored at over 131 sites in 39 States. We should consolidate the nuclear wastes to ensure protection against terrorist’s attacks by moving them to one underground location that is far from population centers.

- A repository is important to our energy security. We must ensure that nuclear power, which provides 20 % of the nation’s electric power, remains in important part of our domestic energy production
- And a repository is important to our efforts to protect the environment. We must clean up our defense waste sites permanently and safely dispose of other high level nuclear waste.

As I indicated earlier, pursuant to section 114(a) of the NWPA, I will be submitting my recommendation to the President no earlier than 30 days from today, together with the other documentation the statute requires. I will provide you with a copy of those materials at that time.



## Waste Transportation through Northern Nevada

Only one thing appears certain if Yucca Mountain ultimately becomes the nation's first nuclear waste repository. Waste shipments either by rail or truck will pass through Nevada communities in route to Yucca Mountain. DOE has not determined specific waste transportation routes or modes for Yucca Mountain. It is unlikely that the Department will identify specific modes and routes in the near future. Currently, truck shipments to Yucca Mountain must use the interstate system. Direct rail shipments are not possible to Yucca Mountain without the construction of a rail spur from either the northern or southern branch of the Union Pacific mainline.

In the past several years, DOE has largely abandoned work on routing and transportation issues recognizing, in part, that states and Congress will probably play an important role in the selection of any final modes and routes. DOE can hire commercial haulers to move waste from generator sites to the repository. Waste shipments would be treated much like shipments of other hazardous materials assuming that Congress does not attach special conditions to shipments bound for Yucca Mountain. States do have the right to designate alternate routes for highway shipments. Early in the 1990s the State of Nevada began a process to evaluate alternate truck routes. It is very likely that the State of Nevada may select one or more alternative highway routes in order to eliminate the potential of shipments through the Las Vegas area.

## Waste Shipments through Churchill County

U.S. Highway 95 provides direct access from Interstate 80 to Yucca Mountain. A combination of factors such as alternate route designations by states, particularly states with generator sites in the west and northwest, could result in waste shipments through Churchill County. However, a majority of generator sites are located in the east and would probably not use Interstate 80 and U.S. 95.

Rail shipments could pass through Churchill County on their way to Yucca Mountain. DOE has considered several rail spur options that would allow rail shipments directly to Yucca Mountain. One option is the Crescent Valley rail spur that if built would leave the northern Union Pacific mainline at Beowawe about 20 miles east of Battle Mountain. Currently, there is no direct rail access to Yucca Mountain.

Assuming that the Feather River branch line of the Union Pacific Railroad is not used, some rail shipments could pass through Churchill County. The Feather River branch line passes through northern Washoe County and Pershing County before entering the Humboldt River basin at Winnemucca. It was used for foreign reactor shipments to the Idaho National Engineering Laboratories a few years ago. The total number of waste shipments by rail through northern Nevada could be limited. Many of the western generator sites do not have rail access. As a result, they would probably use truck shipments to a repository.

Another threat of rail shipments could come from the private fuel storage facility planned for Skull Valley, Utah. This facility would hold waste on an interim basis until Yucca Mountain or another repository was opened. Spent nuclear fuel from reactor sites around the country could be shipped to Skull Valley for storage. Skull Valley is located about 70 miles east of West Wendover, Nevada.

The final transportation routes and modes to the proposed repository at Yucca Mountain remain largely undetermined. If and when Yucca Mountain comes closer to becoming the Nation's first repository, states will probably play a very active role in the selection of final modes and routes.

This newsletter is a publication of the Churchill County Repository Planning and Oversight Program. Churchill County is one of ten affected units of local government involved in the proposed Yucca Mountain Repository. Funding provided to Churchill County is paid by users of electricity generated by nuclear power plants. Under a general contract with nuclear generating utilities. The federal government collects a fee of one mill (one-tenth of a cent) per kilowatt-hour from utility companies for nuclear generated electricity. The money goes into the Nuclear Waste fund which is used to fund all program related activities.

For more information on Churchill County's program contact the County Manager's office (775) 423-4365. Additional information on the repository program can be obtained from the U.S. Department of Energy, Yucca Mountain, Site Characterization Project Office at (702) 794-1444 or contact them at [www.ymp.gov](http://www.ymp.gov), or the Nevada Agency for Nuclear Project, Nuclear Waste Project Office, Capital Complex, Carson City, Nevada 89570, (775) 687-3744 or visit them at their web site at [www.state.nv.us/nucwaste](http://www.state.nv.us/nucwaste).