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Nuclear Waste May Be Disposed Of Near Mars Hill

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ing the development of nuclear power in the 1950s and 1960s. The U.S. has only recently attempted to deal with this problem. This has led to increased research into the properties of the waste.

The spent fuel burned in nuclear reactors may be stored in that form or reprocessed fuel is different in form and radioactive make-up from the spent fuel and thus pose different storage problems. The wastes from spent and reprocessed fuel have half-lives that range from a few days to thousands or millions of years. So whatever is done to store this waste, must be long-term.

At the end of 1980, about 6,700 metric tons of spent fuel had been generated and stored at various sites across the U.S. that may or may not be "safe". There is expected to be about 72,000 metric tons accumulated by the turn of the century. Most of this waste is from commercial nuclear power plants.

The waste can be mixed with a matrix material in granular form. The prime candidates for this matrix material are glass and ceramics. Of the two, the ceramics matrix material works better but there is continued research for better ways to contain the waste. The waste is then containerized and shipped to a temporary storage area.

GENERAL DESCRIPTION OF A REPOSITORY

The purpose of a repository is to provide long-term isolation of high-level nuclear wastes. Protection is ensured primarily by the "geologic and hydrologic characteristics of the site." Additional protection is from the design, construction, and operation of the repository; the handling

PROJECTED DATES FOR THE MILESTONES OF THE REPOSITORY	
Issue final area recommendation report	July 1986
Identify potentially acceptable sites	July 1986
Issue final area characterization plan	December 1986
Begin area phase field investigations	December 1986
Complete area phase field investigations	January 1990
Issue final environment assessments	September 1991
Nominate and recommend sites for characterization	October 1991
President approves site	December 1991
Issue initial site characterization plan	January 1993
Request congressional approval for construction	March 1993
President recommends second repository site to congress	March 1998
Submit license application to the nuclear regulatory commission	May 1998
Receive construction authorization from NRC and begin construction	August 2000
Begin waste emplacement	June 2006
(total elapsed time--20 years)	

and packaging of the waste; and backfilling of the site.

The surface facilities will occupy about 400 acres, and the underground facilities may occupy up to 2,200 acres. A controlled area will surround the facilities. This area will be marked by monuments and extend horizontally a maximum of 3 miles in any direction from the outer boundary of the underground facility. The size and shape will depend on the ground-water flow and other site characteristics.

CONCLUSION

The problem of nuclear waste storage is pressing. Something must be done now to protect the public from the dangers of the waste. However, scientists really do not know if the suggestions for disposal that are available today will work. Research is continuing but nothing can be promised.

The amount of waste that is around today and is expected to have accumulated by the turn of the century is enormous. Not all of it can be stored in one repository safely. The continuous accumulation of nuclear waste will call for the continuous construction of repositories until a better answer may be found. So this problem affects everyone.

Now is when you need to take action to ensure your safety. Once the waste is in place and the

repository is sealed, it stays there for thousands and millions of years. No one can predict the results of such action. Write newspapers and your congressmen, and attend meetings where you can voice your opinion. The opinions and comments of the public will be taken into consideration by the DOE before the decision is made.

Most local residents are against the proposal. Groups such as the Blue Ridge Environmental Defense League are citing specific reasons against a site selection in this area. Some of these reasons are:

1. dangerous roads, limited access
2. rivers and streams in this area reach to the Mississippi and the east coast; contamination of these waters would affect the entire southeast
3. there have been 4 minor earthquakes in 10 years--the land is not stable

Get involved!
This is your future too.

[The quotes and most of the research is from the DRAFT AREA RECOMMENDATION REPORT FOR THE CRYSTALLINE REPOSITORY PROJECT OVERVIEW released by the DOE in January of 1986; DOE/CH-15(0).]

Loud Heckling Greet Briefing On Repository

G. DALE NEAL
Contributing Writer

Western North Carolinians by the threat of underground nuclear waste storage in their backyards heckled U.S. Department of Energy officials and pummeled them with pointed questions Thursday at a briefing in the Asheville Civic Center.

More than 1,800 people crammed into Thomas Wolfe Auditorium to hear DOE officials describe plans to store the nation's nuclear waste in rock formations deep in the earth of Buncombe, Haywood and Madison counties for 10,000 years.

"We're still in a very early stage of the site selection for the repository," DOE geologist Robert Levich said over the widespread heckling from the crowd.

In the question-and-answer period after the presentation, residents vented their frustration and anger at the proposal. Some 20 police officers strolled along the aisles, but despite the loud heckling, there were no disturbances, according to the Maj. Jay Breedlove of the Asheville Police Department.

Asheville. After the comment period ends April 16, the department will prepare a response to each question raised, then issue a recommendation of study sites sometime this summer. State officials say they believe it is unlikely North Carolina will be scratched from the nuclear waste list at that time.

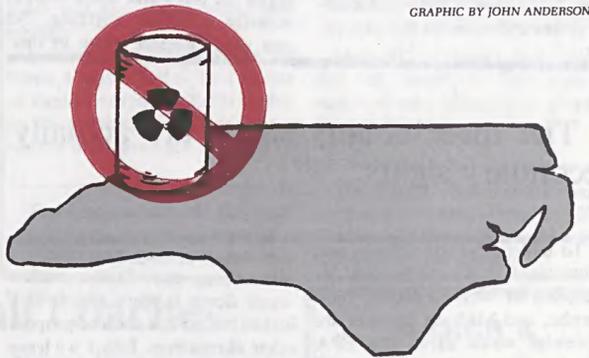
"We'll be very receptive to all persons who submit comments and information," said Ralph Stein, engineering director for the DOE Office of Civilian Radioactive Waste Management, in a press conference before the public briefing. "I can't emphasize more strongly that the department will respond to each and every comment. It's not likely that every comment will be agreed upon."

In the early phased of the search, DOE will consider each site solely on the local rock formation's suitability as a host for nuclear waste. The information so far has been compiled from existing technical literature such as geologic surveys, Stein said.

Field tests on the potential sites won't begin until 1987, followed by studies of the impact of a repository on local economies and the environment, Stein said.

"We do not plan to change the methodology we used," Levich

GRAPHIC BY JOHN ANDERSON



CHC Receives \$210,000 In Gifts

IN
P BELL
Advisor

Hill College has received during the last part of early 1986. The funds from four donors according to officials, three philanthropic foundations and one who wishes to remain

of the gifts, totaling are payments on pledges by the foundations to help meet its goal in the Challenge Gift. This gift, last fall by the college, \$350,000 from the Andrew Foundation of New York, the college must match two. The resulting \$1 million- by Mars Hill for and curriculum development. The schedule is for the foundation \$50,000 for each increment the college president, Dr. Fred, noted in announcing gifts that Mars Hill has \$150,000 by early 1986

and is rapidly approaching the half-way mark. The foundation has stipulated that funds must be raised during a three year period. Commenting that "Mars Hill College is fortunate to have friends such as these," Dr. Bentley noted that the first programs developed under the Mellon grant are expected to be instituted during the 1986-87 academic year.

"The final contribution was for \$150,000 from a giver who wishes to remain anonymous."

The new gifts received included \$25,000 from the Broyhill Foundation of Lenoir. Begun in 1945 by the well-known furniture manufacturer J. E. Broyhill and his family, the foundation's original purpose was to assist deserving underprivileged children in obtaining a college education.

The Honeywell Foundation contributed \$10,000. This is the first gift made to Mars Hill by the

Honeywell Fund, which was established in 1958 by Honeywell, Inc., to support higher education, cultural programs, and youth agencies in communities where the company operations. Micro-Switch, a switch manufacturing plant in Mars Hill, is a division of Honeywell.

The college also received its first gift from the J.M. Tull Founda-

The final contribution was for \$150,000 from a giver who wishes to remain anonymous. The gift will be used to replace the lighting controls and rigging in the college's Moore Auditorium. The 1,800 seat auditorium located in the Fine Arts Building, was completed in 1961 and has a large, professional-sized stage to accommodate large groups, a large orchestra pit, and an Aeolian-Skinner pipe organ. For many years the auditorium was home to the college's drama productions and continues to be used for concerts, lectures, visiting artists productions and the college's official functions such as chapel, honors day and graduation.

The lighting equipment in the auditorium was installed when the building was constructed 25 years ago. With the rapid change in electronics however, technicians are having problems finding replacement parts for the auditorium's controls. The new funds will be used to purchase a new lighting control board as well as some of the rigging used to "fly" or hang lights, backdrops, and curtains on the stage.

Insider

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"they have not yet built a canister that will hold...waste for...1,000 years."

Lent Sitnick of Asheville questioned whether a second repository is actually needed since no new nuclear power plants are going on line to generate more waste. Sitnick said it is unwise business to search 20 years for a facility that will be closed after 25 years after spending billions of dollars.

"This is theater. It gives people a chance to blow off steam and embarrass the DOE," said Paul Gallimore of the Longbranch Environmental Education Center in Sandy Mush. "It's at the April 4 public hearing that we'll have to be cerebral and ask the calm questions."

The Elk River rock complex underlying a 105-square mile section of the three WNC counties was cited in a Jan. 16 report as one of 12 potential locations for the nation's second nuclear repository. DOE also named an area east of Raleigh as a suitable site.

DOE envisions drilling shafts up to 3,000 feet deep in the granite rock, then storing spent fuel rods and high-level radioactive wastes from nuclear power plants and the defense industry underground for 10,000 years.

DOE officials conceded they have not yet built a canister that will hold radioactive waste for at least 1,000 years. Decaying radioactive material can heat the surface of a container up to 200 degrees.

DOE will take official comments at a public hearing April 4 in

said in the press conference. "We dealt with millions of pieces of information. If any were incorrect, we will relocate at the data base."

Stein said North Carolina's referendum on locating nuclear repositories in the state will have little effect at this phase of DOE's search for a dump site. "Without a doubt, it's an expression of the sense of the people. We have to be considerate of the sense of the people as we get further in the process."

Stein said a state nominated for the repository will have the opportunity to veto DOE's plan. That veto, however, can be overridden) by Congress.

DOE already has the go-ahead from Congress to build a nuclear waste repository in the Western United States in the early 1990's. The sites have been narrowed to the Hanford Nuclear Reservation in Washington, Yucca Mountain nuclear test site in Nevada and a salt formation in Deaf Smith County, Texas. The sites not chosen for the first repository could still be considered for a second repository.

Congress, however, will have to authorize construction of the nation's second storage facility when DOE cuts its list to three candidates in 1989.

The HILLTOP was given permission to reprint this article from February 21, 1986 issue of the Asheville Citizen Times.