

YUCCA MOUNTAIN PUBLIC TOURS: CAN THEY IMPACT OPINION?

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ABSTRACT

This paper discusses public tours of the Yucca Mountain site in Nevada, which are offered by the U.S. Department of Energy (DOE). The tours are part of a program to educate the public on federal efforts to study the site to determine if it is suitable to host a high-level radioactive waste repository. Feedback from tour participants has indicated that when citizens actually visit the site and talk to the experts, their opinions can change.

OVERVIEW

In 1987, Congress told the DOE to study only Yucca Mountain to determine if it is a suitable site for a repository.

DOE is embarking on a multi-year site characterization program in order to answer the question: "Is Yucca Mountain a Safe Place for a High Level Radioactive Waste Repository?"

The Yucca Mountain site is located about 160.93 kilometers (100 miles) from Las Vegas in an unpopulated, dry desert environment. The rock type at Yucca Mountain is a volcanic tuff, which has characteristics beneficial to long-term waste isolation.

The design concept for the repository uses a multiple barrier approach, or what we call "defense in depth." The multiple barrier approach combines natural barriers, such as the host rock, with engineered barriers, such as the waste form and waste container. The Environmental Protection Agency and Nuclear Regulatory Commission (NRC) regulations require that studies demonstrate that the total repository would isolate waste from the environment for 10,000 years. In order to determine this, DOE will spend the next ten years characterizing Yucca Mountain.

The Yucca Mountain Site Characterization Project (YMP) has a long road ahead of it before a repository can become licensed, whether it is sited at Yucca Mountain or elsewhere. According to the YMP schedule, there are a number of major phases that must be completed, such as site characterization, license review by the NRC, and construction. However, earlier this year, DOE made a small but significant step toward its quest to determine the site's suitability. In July 1991, surface-based testing resumed. Surface-based test activities include the study of trenches and drillholes and other site characteristics to determine the site's ability to isolate radioactive waste for thousands of years.

This process did not come about without obstacles. The State of Nevada, whose officials are on record opposing the studies, delayed the issuance of permits needed to start new work at Yucca Mountain. DOE and the State of Nevada have been in the courts over this issue for the last couple of years.

During all this time, DOE has been committed to communicating factual information to the public about the issues surrounding Yucca Mountain. DOE hopes this information will help alleviate some of the public's fears, which may affect their perceptions, which may then have an impact on the political climate in Nevada.

It is important to note that there are several organizations besides the YMP, that are involved in communicating with the public in Nevada. There is a citizens' group, the Nuclear Waste Study Committee, that has over 9,000 members in

Nevada and receives some funding by the U.S. Council for Energy Awareness. There also is a new initiative underway in Nevada, sponsored by the utilities, and run by a Las Vegas advertising agency. Its initial campaign includes an extensive ad campaign using scientists to dispel myths about things nuclear. All of these organizations are committed to getting factual information to the Nevada citizens.

PUBLIC PERCEPTION

It is common knowledge that the potential repository has been a top political issue of the Governor and Congressional delegation. A day rarely goes by when the repository is not the subject of an article or two in any of the Nevada newspapers. For many citizens, this has been their only source of information on the Project.

The YMP Office maintains a data base of all newspaper articles discussing the Project. Recently, a word search was done on the number of articles within a four month period that used the word "dump." The search came up with 289 articles. Comparatively, a search over the same time period showed only 160 articles using the word "repository."

The word "dump" obviously conjures up a different mental image than the word "repository." DOE obviously has not been getting its message across.

But, overall, DOE recognizes that there is a much better source where people can get factual information regarding the program: that source is the site itself and the participating scientists.

YUCCA MOUNTAIN PUBLIC TOURS

DOE now is offering Nevada citizens the opportunity to form their own opinions by touring the Yucca Mountain site and interacting with DOE scientists and engineers.

The first public tour and "open house" at Yucca Mountain was held on March 2, 1991. They have since been held monthly, and sometimes twice monthly. The public is notified of this event by newspaper and radio advertisements, private mailings, and local organizations. One ad in the Sunday paper generated 1,000 phone calls in ten days. In addition to these public tours, special tours are arranged during the week, as requested, for schools and organizations.

As of this writing, eleven public tours, plus tours arranged for specific groups, have taken approximately 4,000 people to the site since March 1991.

Most of the people on the public tours have been residents of Nevada, primarily from the Las Vegas area and towns closer to Yucca Mountain, such as Pahrump, Amargosa Valley and Beatty. Some were from the Reno and more distant areas.

The tours start early in the morning at the Yucca Mountain Information Office in Las Vegas, where participants can view educational exhibits and a video about the project. Following the Information Office visit, tour participants then proceed in tour buses to vans which take them to the top of Yucca Mountain. There the visitors can see the proposed site for themselves and discuss its geology with DOE scientists.

Visitors are then taken to the site of future studies and get briefed by project scientists on the kinds of studies to be done, the methods for conducting the studies, and measures being used to protect the environment. They get a first-hand look at the equipment to be used at the site. They tour the Sample Management Facility and get to see how the core from drillholes are collected, cataloged, Quality Assurance checked, tested, and stored. They also tour the Hydrologic Research Facility. This sophisticated laboratory conducts studies to determine the geochemical characteristics of water and physical rock characteristics.

At all of the stops along the way, including the operations building where visitors have lunch, Project scientists and engineers are on-hand to discuss their efforts and answer questions.

Our experience thus far indicates that people are interested in learning about the Project. Some of their comments are indicated below:

- "I learned something I did not know"
- "Advertise the tour so more people are aware of it"
- "I have a much better idea of what is going on at Yucca Mountain"
- "DOE should encourage the younger generation to take this tour"
- "I can now read the articles about the Yucca Mountain Project in a much more informed, knowledgeable way"
- "Today's tour enhanced my knowledge and understanding of nuclear waste disposal and storage"
- "Wish our local and national politicians would come out and find out the facts"

"Can these public tours affect public opinion about the project? Our observations from comments made on the tours and from informal surveys, indicate that people have changed their opinions in a more positive way after they have seen the site for themselves and talked to those involved.

FEEDBACK FROM THE TOUR PARTICIPANTS

On the return trip, participants are asked to complete an optional informal questionnaire. More than 75 percent of the tour participants have completed the questionnaire.

Standard evaluation questions were included in the questionnaire, such as: What did you like most? What suggestions or comments do you have for improvement? Comments to these questions have helped shape each successive tour.

Two additional questions were included in the questionnaire in order to gauge the opinions of the tour participants before and after the tour. Visitors were asked:

1. Before the tour did you think DOE should study Yucca Mountain? Yes, No, Not Sure
2. Following the tour and briefings, do you think DOE should be allowed to study Yucca Mountain? Yes, No, Not Sure

To date, 89 percent of the respondents indicated that they believe Yucca Mountain should be studied. Seven percent still are undecided, and four percent are opposed. Eighty percent of those not sure or opposed prior to the site tour indicated a positive change in their opinions following the tour (See Fig. 1).

Informal Surveys Revealed 89% of Recent Public Tour Attendees Believe that DOE Should Study Yucca Mountain

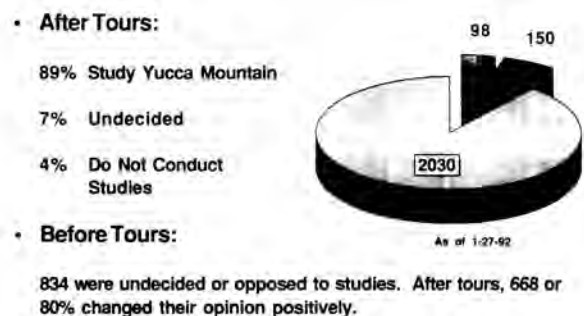


Fig. 1. Information survey results after Yucca Mountain tour.

While the optional questionnaires are an informal source of information, their responses indicate a surprising level of support for the study of Yucca Mountain as a potential repository site. It indicates the presence of a "silent majority" that is not apparent through media or state reports. It also appears public opinion can change after people see the site and talk to the scientists themselves.

The Project plans to continue these tours, which they believe are crucial to providing the citizens of Nevada with factual information on the YMP. In addition, Yucca Mountain Public Update Meetings are conducted regularly; the Speakers' Bureau provides presentations to schools, groups, and other organizations as requested, and other means of communicating with the public are provided. There also are special programs for boy and girl scouts, schools, and other special groups.

In conclusion, the YMP believes that the more citizens visit the site and talk to the Project participants, the more the concerns about the risk of geologic disposal will be understood. Hopefully, this may have some impact on the political climate in November.