

# DEVELOPING A LLW DISPOSAL FACILITY IN CALIFORNIA: AN UPDATE

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## ABSTRACT

US Ecology has been designated by the State of California to site and operate a low-level radioactive waste disposal facility. The firm identified three sites for detailed characterization work in February, 1987. Ecological and archaeological studies and related environmental assessments were undertaken to obtain land use permits from the Bureau of Land Management, which holds title to the sites. Geophysics investigations, exploratory borings, well drilling and weather station installation followed. Local Committees were established for each site to assist US Ecology in evaluating socio-economic impacts, and Native Americans were consulted regarding cultural resources. The project's Citizens Advisory Committee assisted in evaluating the three candidate sites.

By November, 1987, US Ecology narrowed its efforts to two candidate sites. Strong local community support exists for both sites. US Ecology anticipates selecting a proposed site for licensing in early 1988 and anticipates receiving waste in late 1990 or early 1991.

US Ecology systematically integrated citizen involvement into the technical studies leading to selection of the two site finalists. This approach furthered two objectives. Community leaders and the public received accurate information on the nature of low-level radioactive waste and the environmental conditions appropriate for its disposal. The extensive schedule of public outreach activities over time reinforced this educational objective and focused discussion on where, rather than if, the site would be built. Secondly, the public was actively involved in deciding how discretionary siting criteria were used to narrow down technically suitable areas to specific sites. The result, identification of two technically sound sites receiving strong local support, recommends this approach for future siting efforts.

## INTRODUCTION

California law requires that a low-level radioactive waste disposal facility be established within the State to meet California's responsibilities under the Low-Level Radioactive Waste Policy Amendments Acts. California's approach provides for selection of a private license designee to establish the disposal facility, subject to regulatory approval by the State Department of Health Services (DHS). This enabling legislation and subsequent State studies essentially satisfied the federal Policy Act's January 1, 1988 milestone.

US Ecology, Inc. was selected to serve as the developer in December, 1985. After a year of technical studies and public involvement, US Ecology selected three candidate sites for detailed characterization studies. Site evaluations were developed by US Ecology based on field studies, and input from Local Citizens Committees established for each site and affected government agencies. Following comparison of the sites by the company and the project's Citizens Advisory Committee, two sites were selected as finalists. It is anticipated that a proposed site will be named in 1988, and that a license application will be filed by US Ecology in early 1989. The second site will be retained as an alternate location. This would satisfy the 1990 siting milestone well ahead of the federally mandated schedule.

This paper describes the process undertaken by US Ecology, in cooperation with the DHS, other agencies and

the various citizens committees to evaluate the three candidate sites and to identify two final sites. Steps leading to proposed site selection and plans for local community involvement during the upcoming license application development phase are also described.

## OVERVIEW OF CANDIDATE SITE SELECTION

California Senate Bill 342 directed the DHS to conduct a regional screening study for potentially suitable siting area. DHS completed this study in 1984. US Ecology subsequently developed the concept of siting in topographically closed desert basins on the premise that sites in this geographic setting could be characterized and modeled with a greater degree of confidence than other locations. Eighteen desert basins in Inyo, Riverside and San Bernardino Counties became the focus of regional screening studies conducted during 1986.

Regional screening studies were conducted in coordination with an extensive public information and involvement process. Public input was obtained through public meetings and speaking engagements with service organizations in the desert communities, consultations with Native American groups, and recommendations from an independent Citizens Advisory Committee (CAC) supported by the League of Women Voters Southern California Regional Task Force.

The screening process was structured around six CAC meetings and three rounds of public meetings and workshops, culminating in a rating exercise of 16 candidate sites by public meeting attendees and later by CAC members. Based on the CAC's recommendations and citizen questionnaire results, US Ecology concentrated its attention on three siting areas and subsequently selected one square mile sites in the Ward, Silurian and Panamint Valleys for intensive study in February, 1987.

### CANDIDATE SITES EVALUATION

Evaluation of the three candidate sites required compilation of technical and socio-economic information for each site. Technical data collection was guided by a Site Characterization Plan which was distributed for review and later revised to reflect comments received from affected agencies, organizations and interested citizens. The plan is viewed as a dynamic document to be revised as field data is analyzed and technical questions are identified.

Initially, each candidate site received equal attention. Since all three sites are on Bureau of Land Management property, Land Use Permits were necessary prior to beginning surface disturbance activities. The Site Characterization Plan, archaeological and biological surveys and land use studies were required to obtain these permits. Following permit issuance, geotechnical studies began in earnest. Mineral resource assessments, well canvasses, electrical resistivity soundings, gravity and magnetics surveys, seismic refraction/reflection work and surface water flow studies were conducted.

Exploratory borings and groundwater table observation wells were also planned for each site. However, seismic profiles for the Panamint Valley site indicated the potential presence of earthquake faults underlying the site. Since depth to groundwater and bedrock could be reasonably well inferred from existing wells in the vicinity and on-site gravity and magnetics work, drilling was deferred at Panamint. Exploratory borings, wells and meteorological stations were developed at the Ward and Silurian sites, however.

At the same time field studies were underway, US Ecology worked with the League of Women Voters to establish a Local Citizens Committee for each candidate site. Recommendations on formation, composition and tasks of the local committees were provided by the existing Citizens Advisory Committee. The purpose of these committees was to serve as objective fact-finding bodies, to share local views with the company, and to help make information available to fellow community members.

It was decided that the Local Committees should be formed through nominations by community leaders. The committees varied in size depending on the size and diversity of the communities near each site. The League of

Women Voters agreed to schedule committee meetings, reimburse members' expenses, and provide a convener for the first meeting. Convener services would be offered for future meetings at the option of each committee. (All committees decided to retain the convener provided.) Local citizens were invited to attend the meetings and time was set aside for public questions and comments.

Each Local Committee met twice. The initial meetings, held in June 1987, focused on identifying local concerns about the project, describing technical studies underway at the sites, and discussing the Committees' role. Four public information meetings were held as an outgrowth of local committee recommendations. One meeting, held in connection with a barbecue, drew over 200 ranchers and their families.

Descriptions of the nearest candidate site were mailed to each Local Committee member prior to their second round of meetings in late August and early September. Committee members were only asked to review information on the site in their vicinity rather than all three sites. This was done to reduce potential bias in favor of, or opposing the closest site. The descriptions included available data from the field studies as well as information on demographics and land use; hospital, fire and emergency response service availability; and community economic profiles. The descriptions were then discussed and revised at the meetings.

Cultural resource evaluations of the candidate sites were obtained through the archaeological surveys noted above, and field visits by Native American representatives in April and May, 1987. The visits were coordinated where possible with biological work to obtain an ethnobotanical perspective. Information on the sites was also obtained from state, federal and local agencies attending an interagency meeting on the project sponsored by the Department of Health Services and the Governor's Office of Planning and Research in September 1987.

Updated descriptions of each candidate site were mailed to the Citizens Advisory Committee in preparation for their October, 1987 meeting. Committee members were asked to compare and contrast the three sites and indicate which site should be proposed for development; and which sites, if any, should be dropped from further consideration. The Committee unanimously recommended that the Panamint Valley site be removed from the list of candidates, and all but one member indicated that either the Ward or Silurian sites would be suitable for disposal site development. However, the group split its vote on the question of which of the two sites was preferred.

Questions regarding the nature and extent of potential desert tortoise impacts at the Ward Valley site were at the heart of the Committee's lack of consensus on a preferred

site. This was borne out in committee discussion at the October meeting. While some members felt tortoise impacts could be adequately mitigated through the environmental review process, others felt strongly that the issue could cause delays that might best be avoided by seeking the alternate site at Silurian. In light of the Committee's views, US Ecology elected to seek guidance from the State of California regarding desert tortoise impacts prior to reaching a decision.

The company's guidance request and accompanying information concluded that the Ward Valley site was the superior project location from geotechnical, socio-economic and transportation standpoints. The major factor favoring the Silurian site was the relative absence of desert tortoises in that area. US Ecology's decision on a proposed site, anticipated in early spring of 1988, will be based on the State of California's response regarding the importance of desert tortoise impacts to site selection.

Residents of the desert communities nearest the two remaining candidate sites have taken an active interest in the proposed site selection decision. Resolutions in support of the project were adopted by each respective Chamber of Commerce, and local citizens have written both US Ecology and the State seeking support for location of the disposal facility in their area. Meanwhile, no organized local community opposition to either site is evident.

Following selection of a proposed site, US Ecology will undertake those additional site characterization studies and engineering design activities required to support a license application. A Proponents Environmental Assessment will also be prepared. The Local Committee for the chosen site

will continue working with US Ecology to help ensure that local questions and concerns are addressed in the course of license application development. It is anticipated that US Ecology will submit its application to the State of California in early 1989, and that a license will be issued approximately fifteen months later. Assuming a six month construction phase, waste acceptance could begin in late 1990 or early 1991.

### CONCLUSION

US Ecology systematically integrated citizen involvement into the technical studies leading to selection of two disposal site locations. This approach furthered two objectives. Community leaders and the public received accurate information on the nature of low-level radioactive waste and the environmental conditions appropriate for its disposal. The extensive schedule of public outreach activities over time reinforced this educational objective and focused discussion on where, rather than if, the site would be built. Secondly, the public and a broadly representative Citizens Advisory Committee were actively involved in deciding how discretionary siting criteria were used to narrow down technically suitable areas to specific sites. After three candidate sites were identified, local committees were formed for each location to further incorporate public involvement into the company's decision process. Tours of the Beatty, Nevada disposal site and the opening of local information centers also furthered this second objective. The result, identification for two technically sound sites receiving strong local support and an apparent lack of organized opposition, recommends this approach for future siting efforts.