

THE CONFLICT BETWEEN PUBLIC PERCEPTIONS AND TECHNICAL PROCESSES IN SITE SELECTION

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ABSTRACT

U.S. Nuclear Regulatory Commission regulations and guidance on site selection are based on sound technical reasoning. Geology, hydrology, flora and fauna, transportation, demographics, and sociopolitical concerns, to name a few, have been factored into the process. Regardless of the technical objectivity of a site selection process, local opposition groups will challenge technical decisions using technical, nontechnical, and emotional arguments. This paper explores the many conflicts between public perceptions, technical requirements designed to protect the general public, and common arguments against site selection. Ways to deal with opposition are also discussed with emphasis placed on developing effective community relations.

INTRODUCTION

Technical issues are difficult for the non-technical public to understand. Even scientists and engineers often have disagreements on technical philosophies. No matter how fine a line separates technical principles, consultants with differing views can always be found to serve their clients. Because there is disagreement among engineers and scientists, it is easy to understand why the public is confused.

Local groups often submit arguments relating to stigma, land values, economics, politics, etc. These issues are difficult because they are intangible and cannot be assessed accurately. However, they must be addressed because they are often the concerns most important to the public.

This paper discusses the conflict between public perception and the technical process of selecting a low-level radioactive waste disposal facility. An overview of the Texas Low-Level Radioactive Waste Disposal Authority's site selection process is also presented along with a report on the response and behavior of the public. Public information approaches, public participation programs, public behavior, responses to public opposition, and the role of siting officials are explored.

SITE SELECTION PROCESS

Regardless of who is performing the site selection, a hierarchical approach is used to systematically identify the most promising sites within a region. Specific technical criteria are developed and then applied to the region of interest either to exclude unwanted areas or to include preferred areas. Because regions of interest will have widely varying characteristics, large areas can be eliminated. Progressively smaller areas which have a high probability of containing suitable sites are identified. Ultimately, the process leads to a convergence on a small number of the best available sites.

The Authority began site selection for a low-level radioactive waste disposal facility early in 1983. Twenty-four site selection criteria addressing federal regulations and Authority requirements were applied during the siting stages. First, all 254 counties of the state were screened using geologic,

hydrologic, demographic, mineral resource, and environmental criteria. Fifteen potential siting areas covering over 35,000 square miles in 105 counties were identified. Next, these potential siting areas were further scrutinized, and eight preferred areas were chosen. These contained 70 counties located mostly in central, southwest, and west Texas. Next, over 200 tracts of land were identified in the most preferred areas using topographic, geologic, hydrologic, and soil maps. Each tract was evaluated using aerial reconnaissance, and 50 sites were identified for further study.

The 24 basic site selection criteria were arranged into 17 categories reflecting environmental and engineering/economic issues. Specific details were developed for each of the 50 sites, which were then ranked using a computer model.

Because the Authority does not have eminent domain powers, property in the vicinity of the 50 most preferred sites was sought for on-site evaluation. Five sites were ultimately identified, and the Authority conducted on-site pre-characterization of each. Two sites were ultimately selected by the Authority as preferred sites.

PUBLIC NOTICE

There is general agreement that early and frequent notification of progress helps build credibility for the site proponent. Although there is a temptation to withhold announcement of progress because of the fear of losing future cooperation of landowners, the long-term risk is much greater when you portray a secretive image to the public. Invariably, the impression is that you have something to hide. The only exception is that sensitive land negotiation information should not be released until written agreements have been reached.

From the beginning of the site selection process, the Authority kept the public well informed as major thresholds were crossed. For instance, when the statewide screening stage identified 105 counties, a press release to the major state news organizations and wire services was released. Also, state legislators and regional governmental bodies were notified if part of their area was included. As the site selection process narrowed to specific sites, press releases were

issued when access to the site had been secured from the landowners, and after local officials had been notified. It is essential that local public officials be notified prior to the issuance of a press release. If public officials are left out, the ability to work with them in the future will be greatly hindered.

Formal and informal meetings with local officials and the general public can be productive. The Authority set up meetings with local officials and the general public when a particular area was announced, and has held at least 20 public meetings attended by anywhere from several hundred to a few thousand persons.

In addition to press releases and information meetings, the Authority has prepared a number of general pamphlets on low-level radioactive waste, disposal, siting, transportation, and public participation. Also, special purpose newsletters have been used to respond to specific questions. This can be effective in countering one-sided and misleading information, which is often distributed by opponents of the proposed site.

PUBLIC PARTICIPATION

Although public information is important, it is only a part of successful public relations. No one appreciates being "talked down to"; however, the public is generally ill-equipped to make objective decisions on the validity of technical matters. The public views the technical process with a wary eye because they believe they have no control over technical evaluations. If the job is to be done right, then technical issues are the prime considerations, and public sentiment must be placed into perspective. Because of this, the public often feels helpless and resorts to emotionalism in an attempt to discredit technical decisions.

Public participation helps the public understand technical issues and gain confidence in the decision. The only way for the public to perceive the process as fair is to have a direct line of communication to the decision makers. This does not infer that the public should have veto power--they should not!

Public participation also helps build a consensus. Regardless of the quality of public information and quantity of public participation, intense local opposition will develop. If you assume that a project is for the common good of the people, then the people should be included in public participation. This is where important consensus and constituency building will occur--not at the local level. By including a large cross-section of society in the debate, more objective perspectives prevail. If a broader scale of society is not included, broad scale sympathy for the local community may be generated, and overall political opposition could coalesce.

Public participation must target all interested and affected groups, including proponents and opponents. Structured participation is also important. For example, statewide trade and professional organizations, environmental groups, regulators, and politicians should be involved at the broad regional scale. However, respected local individuals should predominantly be involved at the local level. Bringing in an "expert" from outside the local area to participate in a local committee is likely to alienate the community.

The Authority has involved the public through a number of statewide and regional efforts. Periodic

meetings with low-level waste generators and regulators have been held to report on siting status, regulatory initiatives, and legislative activities.

Early in the Authority's process, a Citizens Advisory Panel was appointed to review and comment on all agency activities. This panel is composed of wide geographic and disciplinary interests, including a farmer from northwest Texas, a radiologist from east Texas, an environmentalist from north Texas, a geologist from central Texas, a university president from west Texas, and a former city mayor from south Texas. The panel has reviewed and commented on technical reports, public information, public participation programs, and general activities of the Authority. The panel was especially helpful in setting weighting factors for the 17 site ranking criteria discussed earlier. It was interesting to note that the panel's priorities agreed closely with those of the Authority's technical staff on most issues.

Local feedback has been provided through both formal and informal channels. In two counties of the state, formal committees were supported by the Authority to study the facts and make recommendations. The process, established by the Keystone Center in Keystone, Colorado, calls for a committee composed of people from the local community who have not taken a strong pro or con position on the proposed site. The committee is selected by local officials; however, these officials do not serve on the committee. The Keystone process can be very effective in fostering two-way communications and reducing uninformed rhetoric. At the siting stage, the Keystone process should not be viewed as mediation because there will be contention between Keystone committees from the different siting areas. When one site has been identified, the committee can then move into a mediation and negotiation role. Often, many issues can be resolved; those which cannot be resolved are at least identified.

Informally, local officials and individuals frequently present good-faith information which they feel affects site selection. It is important to follow up on these data and advise the individual of your determination. The Authority has received a great deal of information in this matter, some of which has proven to be very valuable.

PUBLIC BEHAVIOR

Authority activities such as the waste characterization, economic analysis, conceptual design, etc. elicited very little public attention. Even at the statewide level, there was very little interest. However, as the siting process began to narrow the areas of interest, the public predictably began to respond with the classic "NIMBY" mentality. At the regional scale, when over 105 counties remained under consideration, local politicians, special interest groups, and individuals began to respond with petitions, letters, phone calls, and newspaper editorials. And as the siting process converged on specific areas, public response became more heated and emotional.

Stages of Opposition

Public reaction to our progress has been very consistent, generally categorized by the following seven progressive stages:

1. Individual contacts and letters appear when the general public first learns that their area is under consideration.

2. The second stage is formal petitions and resolutions opposing the activity.

3. The third stage is the formation of special interest groups, e.g., South Texans Against Nuclear Dumping. Also, outside groups who are sympathetic to the local cause may join in the opposition.

4. The fourth stage is an attempt to halt siting progress by legal action--injunctions, restraining orders, law suits, etc.

5. The fifth stage is political intimidation or formal political action. For example, political threats may be made against the future of the operating entity, or more formal political actions such as executive orders or legislative actions may be taken.

6. The sixth stage is formal intervention in the licensing process.

7. The final stage is public disobedience.

Tactics

Predictable and recurring tactics of individuals, groups, politicians, attorneys, and the press have been observed in each siting region.

There is generally someone in a community who has the time, resources, and ability to mobilize the community in opposition to the project. It has been the Authority's experience that most local organizers are intelligent, determined opponents with an ability to attract media and political attention. Unfortunately, local organizers generally do not have a technical background, which leads to a tendency to exaggerate hazards and oversimplify alternatives to the project.

Local organizers usually are instrumental in founding local opposition groups. These groups are usually noisy and attract more attention than they deserve in terms of public support; however, they should not be underestimated.

Politicians tend to stay out of the fray until the last moment because they perceive the issue of low-level radioactive waste disposal as a no-win situation. However, once pressure is brought to bear, they must publicly oppose the siting effort regardless of their personal feelings. Politicians can influence the process through letters of opposition, legislative action, and political intimidation.

Attorneys' tactics involve threats to impede the process or to sue for damages. The Authority has experienced a number of threats from lawyers, but to date, there has been no lightning despite all the thunder.

The press ranges from supportive to confrontational depending on the circulation proximity to the site. Unfortunately, the press tends to exacerbate public opposition by providing a forum for local organizers and politicians. Most press members strive to provide what they feel is objective reporting. In fairness, it is difficult for the press to differentiate between rhetoric and facts because they usually do not have a technical background and do not have access to technical consultants.

Public Perception

The Authority's experience has been that public perceptions regarding low-level waste disposal are virtually the same from area to area. They are:

- Radiation-induced health effects
- Groundwater pollution
- Surface water pollution
- Air pollution
- Transportation accidents
- Choice of their area because of politics
- Local area does not use radioactive materials, so why should they get the site
- Stigma associated with facility
- Negative impact on land values
- Local produce and products would contain radioactive contamination
- Negative impact on industrial development
- Negative impact on flora and fauna
- Explosion resulting from aggregation of the waste
- Lack of confidence in disposal technology
- Lack of confidence in continuity of good management
- Changes in policy to allow receipt of high-level waste
- Long-term integrity of the site

RESPONSE TO PUBLIC OPPOSITION

Siting organizations must respond to public opposition in a diplomatic, but aggressive, manner. Public information and public participation programs are helpful in fostering two-way communications and mediation. However, this is not nearly enough to counter well-planned attacks by local organizations. It is important to fight fire with fire within legal, ethical, and professional constraints. When a local organization issues a fact sheet, issue a rebuttal fact sheet. When a local organization stages a media event, ask for equal time. When a local organizer speaks before civic groups, ask for an opportunity to present your side of the issue. When the press prints an unfair editorial or article, ask for equal space.

It is very important to respond to technical half-truths with the complete set of facts. For example, the local organizer leading the opposition to the McMullen County site in Texas has stated that water in a river over twelve miles from the site will be contaminated; that there will be health effects such as cancer, birth defects, mutations, and abortions; that high-level waste will be disposed of at the site; that a majority of the operating sites have serious operational problems; that over eight billion cubic feet of waste will be disposed of at the Texas facility; and on and on ad nauseam. All of the above is frightening to the public and makes attractive material for the press. It is very important to correct and follow up on each and every point raised by the opposition.

In essence, a mix of diplomacy and cooperation through public information and public participation programs and confrontation on technical issues is the reality of dealing with opposition. If the siting entity only used diplomatic approaches with no aggressive rebuttal, the entity will be viewed as an impotent bureaucracy who is unable to fight back technically, procedurally, legally, or politically. On the other hand, if the siting entity adopts an approach which is too confrontational, there will never be an opportunity for negotiation and good public relations if a site is located in the area.

CONCLUSION

Technical siting processes are complex and lengthy. It is difficult for the general public to understand or appreciate the technical requirements and processes necessary to satisfactorily select a low-level radioactive waste disposal facility. The public simply does not want a disposal facility in

their area, and they are frustrated because the need for siting the best technical site outweighs their objections. This leads to mistrust and confrontation, which are difficult factors with which to deal.

Verbal and personal abuse from the public is equally frustrating for the scientists and engineers working on a siting project. Siting officials must develop thick skins in order to maintain their objectivity. Persistence and patience in dealing with the public are essential for a successful siting process.