

## IMPACT ANALYSIS AND COMMUNITY DEVELOPMENT NEEDS AT THE SALT SITE

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### ABSTRACT

The Office of Nuclear Waste Isolation (ONWI) has developed a socioeconomic program for a nuclear waste repository constructed in salt. The program is comprised of three elements: impact assessment, impact mitigation, and impact monitoring. The first element, impact assessment, is the focus of ONWI's current activities. Socioeconomic data has been collected for seven salt sites in Texas, Utah, Mississippi, and Louisiana. Demographic, economic, community service, governmental and social structure information has been assembled into data base reports for each site area. These socioeconomic reports will be the basis for analyzing community-related impacts.

Socioeconomic effects are currently being evaluated for the environmental assessment document required by the Nuclear Waste Policy Act. The approach to evaluating socioeconomic impacts for the environmental assessment impact includes developing the data base necessary for evaluation; assessing impacts of baseline population projected by the states; assessing project-related impacts through the use of an immigration model; and responding to socioeconomic issues raised in public meetings and hearings.

The siting, construction, and operation of nuclear repositories will involve an extended period of time and an increased workforce, which can result in some impacts similar to those of other large development projects. The communities affected by a repository site will face increased demands for housing, community services (transportation, sewer and water, schools, etc.) and land, as well as a desire to maintain the community's "character". The management of this expansion and other related community impacts should be structured to meet community needs and goals. The management process should include the formation of an impact management committee, a public participation program, and a technical assistance program. The community assistance program developed in conjunction with the Department of Energy should include programs to address local job training, worker housing, worker transportation, community service needs, and local business development. A timetable should be developed for these programs that takes into consideration the timely securing of materials, human resources, and technical assistance for reducing adverse impacts and commencing development when needed by the community.

### INTRODUCTION

The socioeconomic program for the Office of Nuclear Waste Isolation is comprised of three elements: 1) impact assessment, 2) impact mitigation and community development, and 3) impact monitoring. These elements will be accomplished during different phases of the nuclear waste repository siting effort. The current focus is on assessing impacts at seven sites and defining ways of managing them.

The seven sites being analyzed for site characterization include: Lavender and Davis Canyon in Utah; Richton and Cypress Creek Domes in Mississippi; Vacherie Dome in Louisiana; Swisher and Deaf Smith County sites in Texas. The socioeconomic program needs for impact assessment, impact mitigation, and impact monitoring have been further defined in the draft socioeconomic program goals. The approach to accomplish program needs is outlined in the goals, for state and local government officials and affected citizens to review.

### Draft Socioeconomic Program Goals

- A. Collect socioeconomic baseline data and project socioeconomic impacts at selected sites
- B. Develop a model to project socioeconomic impacts at selected sites
- C. Encourage public participation, provide data and technical assistance to state/tribal/local governments involved in the community development process
- D. Involve state/tribal/local governments in developing impact assessment projections; mitigation strategies, and monitoring activities
- E. Encourage policy measures which can anticipate and prevent adverse impacts
- F. Prepare public information materials that address local socioeconomic concerns
- G. Prepare community development handbooks for the selected salt site

- H. Provide a framework to minimize adverse community impacts and enhance quality of life for existing and future residents through community development planning
- I. Provide a framework to ensure that housing and other necessary services are provided to project-related workers, their families, and the existing population

#### THE ASSESSMENT OF IMPACTS

There are many different types of socioeconomic impacts that communities can experience from a large development project, such as a repository. The magnitude of project affects depends on a variety of factors: 1) size and duration of project workforce, 2) amount of project purchases made in local area, 3) size of population and labor force living near site area, 4) diversity of economic base in area. These factors will influence the number of new residents coming into an area for repository jobs as well as the number of local residents who can be hired at the repository. The magnitude of potential socioeconomic impacts is currently being evaluated for the environmental assessments. As a first step, information on the site area was collected. A description of the demography, economy, community services, government, and social structure of the site areas appears in socioeconomic data base reports. These reports will serve as the basis for analyzing site characterization and repository-related impacts.

In order to establish major issues and concerns, public hearings were conducted at each site. Citizens in these potential site areas have raised many questions about how this facility will affect their quality of life. Questions about population and economic changes have been of particular concern. Major socioeconomic issues raised during the public hearings have been summarized in a report prepared by the Office of Nuclear Waste Isolation (ONWI-505).<sup>2</sup> While each state raised issues that were specific to their proposed locations, there were also many common issues. The major socioeconomic issues raised in each state are listed below.

#### MAJOR SOCIOECONOMIC ISSUES

##### Utah Issues:

- impact on the economic base of the surrounding area:
  - industrial growth and tourism business
- social problems associated with a transient workforce
- availability of local jobs
- competition for water supply with local residents
- funding of increased community service needs

##### Texas Issues:

- impact on the economic base of the surrounding area:
  - particularly agriculture and prime farmland
- proximity of population centers
- availability of local jobs
- affects on public services
- existence of psychological impacts

##### Louisiana Issues:

- availability of local jobs and location of new residents
- increased service needs and funding
- affects on local government finances
- social changes in local communities
- compensation for losses and relocation

##### Mississippi Issues:

- proximity to population centers
- impact on the economic base of the surrounding area:
  - timber, tourism, fishing, other future development
- availability of local jobs
- increase in community service needs
- change in community lifestyles
- existence of psychological impacts
- compensation for losses and relocation

In order to assess the standard impacts associated with population growth due to the siting of a repository, a population immigration model is being developed. The model will calculate:

- direct and indirect population immigration
- direct and indirect school-age children
- direct and indirect household heads
- single worker immigration
- total direct and indirect immigrating workers

This information will be calculated based on a repository workforce of approximately 1400 workers during peak construction and 1500 workers during operation. However, the workforce will vary from site to site. Immigration and employment estimates are used to allocate new project-related residents to neighboring communities. A gravity model and community amenity indicators are used to distribute new residents to communities. While most people will relocate to nearby communities, some new residents will live in the rural area of the counties. Thus, a percentage of new residents are allocated to counties rather than communities. Additional community service needs are evaluated by applying national service ratios to the number of new residents allocated to each community. This allows us to estimate the amount of classroom space, the number of teachers, police and firefighters, the number and type of new housing units and other services needed to support the increase in population. Community service demands are evaluated for project-related immigration as well as for baseline changes that are expected for the region. Evaluating service demands that occur as a result of baseline population changes is necessary for providing a complete picture of community change. Impacts on local revenues and expenditures are related to service requirements. Additional sources of revenue, particularly funds identified in the Nuclear Waste Policy Act,<sup>3</sup> are discussed. Affects on the local social structure are also addressed. While these impacts are difficult to quantify, the type of affects are identified.

Extensive research has been completed by the Office of Nuclear Waste Isolation on socioeconomic assessment methods and potential socioeconomic impacts and community planning needs. This research is documented in two reports entitled Methods for Assessing Socioeconomic Impacts and the Framework for Community Planning.<sup>4</sup>

#### THE NEED FOR COMMUNITY PLANNING

The specific needs for community planning will be based on the socioeconomic impact assessment that will be completed as part of the environmental assessment and environmental impact statement process. The community planning needs will be generated by new residents relocating for repository related work. At the salt sites, the number of new regional residents may range from 1,000 to under 5,000 based on current workforce estimates, these figures include direct and indirect workers and their families. The number of new residents will vary from site to site depending on the size of the local population and the skills in the local labor force. Also, no community will receive all the new residents. The new residents will most likely relocate in the communities within commuting distance of the repository site or near the related businesses in which they are employed. The number of projected new residents indicates the need for community planning. In the communities adjacent to a repository site, growth demands will likely occur within 3 to 5 years instead of being spread over a 10 to 20 year time period.

According to immigration projections, the Utah sites could receive the largest number of new residents and will require the greatest expansion of existing community services. (A smaller population and employment base and a larger workforce requirement are factors which contribute to this projection.) However, an influx of new residents associated with the siting of a repository could be experienced at any of the sites being evaluated. The communities affected by a repository site will not only face increased demands for housing, schools, recreation, water and services, and fiscal planning, but will also be faced with a desire to maintain the community's "character". Every community will address these needs in a different manner based on each community's desires.

The Nuclear Waste Policy Act provides for impact mitigation and assistance to affected jurisdiction in Section 116(c):

- Grants shall be made to states to develop a request for impact assistance
- Grants shall be provided in lieu of taxes to each state and unit of general local government for site characterization, repository development and operation activities
- Technical and financial assistance to state and tribes to mitigate impacts at the authorized repository construction site

Techniques for managing socioeconomic impacts will also be identified in the environmental assessments. Measures such as local hiring and job training programs; use of temporary housing alternatives; preconstruction of infrastructure requirements;

additional zoning or subdivision regulations; provisions of worker transportation to site; and assistance in local business development.

There are four basic methods that have been used by communities in various parts of the U.S., for community impact planning. These methods are:

- use of existing community organizations
- use of impact analysis staff or consultants
- formation of an impact management committee
- formation of a special impact district

These methods are not mutually exclusive and at many projects more than one has been utilized by the local communities. The purpose of these methods is to establish a community group responsible for the planning effort, a means to provide public comment and contributions to the planning process, technical expertise to assist committee members, and a mechanism to implement community plans. When a community has determined how to organize their efforts for community planning, three major areas should be addressed. These areas are: preparation of the social and economic impact analysis, provisions for technical assistance and provisions for financial assistance.

#### (1) Preparation of the social and economic impact analysis

- What types of impacts are to be addressed?
- What are the methods of analysis?
- How will the impact results be coordinated with other communities and the state?

#### (2) Provisions for technical assistance

- Who will provide the assistance?
- How will the assistance be used by the community?

#### (3) Provisions for financial assistance

- What is the mechanism for funds to be distributed?
- What are the funding needs?
- Who will be responsible for monitoring the use of the funds?

It is important that these issues and the planning methods at the local levels of government are integrated with state and federal government efforts to analyze and mitigate socioeconomic impacts. The states are or will be receiving grants from the Department of Energy to conduct socioeconomic studies. The Nuclear Waste Policy Act of 1982 provides for these activities at the federal, state, and local level of government. The Department of Energy's socioeconomic program will include a comprehensive impact analysis, an impact mitigation plan and an impact monitoring program.

## REFERENCES

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