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SOCIOECONOMIC ASSESSMENT: ISSUES, STATUS, AND PLANS

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Numerous public meetings and hearings have been held in Texas, Mississippi, Louisiana and Utah on the issue of siting a nuclear waste repository in salt. 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. In developing a socioeconomic program, these issues and others have been an integral part of Battelle's socioeconomic studies. The three elements of Battelle's socioeconomic program are discussed below. In addition, our approach to assessing socioeconomic impacts for the environmental assessment (EA) required by the Nuclear Waste Policy Act of 1982 (NWPA)¹ are described. Since the EA analysis will address many of the issues raised in the site areas, these concerns will be elaborated on. Finally, various techniques for managing socioeconomic impacts will be presented.

Battelle's socioeconomic program 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 and defining ways of managing them.

There are many different types of socioeconomic affects that communities can experience from a large development project. The magnitude of project effects 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 will appear in Socioeconomic Data Base Reports.² A data base report has been prepared for each site area. They will serve as the basis for analyzing site

characterization and repository-related impacts.

A relatively small workforce (approximately 200 workers) will be required during detailed site characterization. Estimates of in-migration, the amount of local hiring, and changes in economic activity related to these activities are based on workforce size. A general discussion of where new residents will locate is also presented. Community service and fiscal impacts are related to the location of new residents. In analyzing service and fiscal affects, existing capacity in each community is considered.

A nuclear waste repository will require approximately 1400 workers during peak construction and 1500 workers during operations. However, the workforce will vary from site to site. Repository costs and workforce size are substantially greater than exploratory shaft requirements. Thus, the approach to evaluating it's socioeconomic affects will be more detailed. A computer model has been developed to estimate the number of people who will relocate to an area as a result of repository construction and operation. The immigration model is a linear program that calculates peak

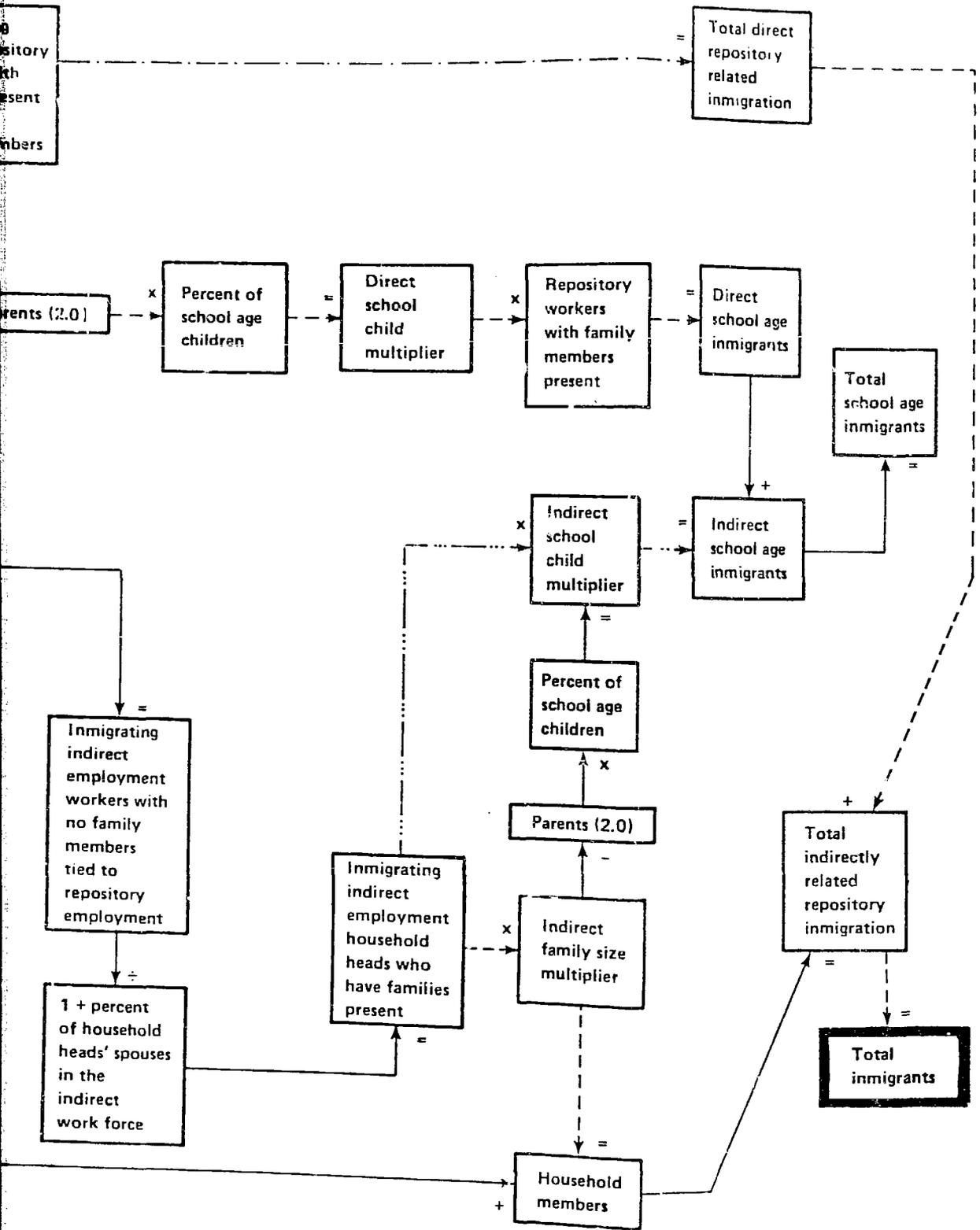
- direct and indirect immigration
- direct and indirect school-age children
- direct and indirect household heads
- single worker immigration
- total direct and indirect immigrating employment

Direct immigrants are considered to be repository workers and their families. Indirect immigrants are considered to be repository/consumer-related service workers and their families. Figure 1 is a logic diagram of the immigration model. It illustrates the inputs, multipliers, and outputs of the model. The model documentation will be available when the draft environmental assessments are provided to the states. Two scenarios were used to establish a range of impacts expected at each site. For the first case (Case A), policies such as local hiring/job training programs and other measures that reduce immigration were assumed to exist. Case A represents our best case scenario. For Case B, no mitigation measures were

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IMMIGRATION MODEL, LOGIC OF CALCULATIONS

included. These assumptions are incorporated into the model by adjusting variables such as the percentage of local hires.

Once immigration and employment is estimated, new project-related residents are allocated to communities. A gravity model and community amenity indicators are used to distribute new residents to communities. The gravity model allocates immigrants in direct proportion to a community's existing population and in inverse proportion to its distance from the site.³ 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.

The increased demand for community services is not a part of the immigration model. However, additional 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 addressed similarly. Additional sources of revenue, particularly funds identified in NWSA, are discussed. Effects on the local social structure are also addressed. While these impacts are difficult to quantify, the type of effects are identified.

Major socioeconomic issues raised during the April-May public hearings in Texas, Mississippi, Louisiana and Utah have been summarized in a report prepared by the Office of Nuclear Waste Isolation (ONWI-505).⁴ While each state raised issues that were specific to their proposed locations, there were also many common issues. The major socioeconomic issues in Utah and Texas focused on a repository's affect on the region's economy. In Utah, there is a concern over the affect on tourism related to the national park. In Texas, there is a concern over a repository's affect on agriculture. Both Mississippi and Louisiana exhibited concern over population density near their respective salt domes. These specific issues were raised repeatedly in the state identified; because of their importance, a detailed discussion of these issues will appear in the appropriate environmental assessment.

Socioeconomic issues which surfaced most frequently in all the states were:

- impact on economic base
- availability of local jobs
- increase in community service needs

- compensation for property losses and relocation assistance

Many other socioeconomic issues were raised during the public hearings. These issues, however, were raised more frequently and seemed to be of major concern to many local residents. The socio-concerns that were raised in the states will be addressed in one of several ways in the environmental assessments. Where data is available, issues can be treated in a fairly definitive way. For example, relocation assistance and compensation for losses is addressed by the Federal Relocation Assistance Act.⁵ Information on local jobs and public service needs is more variable and a range of data is provided. Finally, in some instances more detailed information will be gathered during site characterization. Impacts on social structure will be discussed in a qualitative way. Additional research on community lifestyle and attitudes is planned.

Techniques for managing socioeconomic impacts will also be identified in the environmental assessments. Measures such as local hiring and job training programs are woven into the best case immigration scenario. These techniques will lower the level of immigration and increase economic benefits such as jobs for local residents.⁶ The Nuclear Waste Policy Act of 1982 outlines several important mitigation measures which will also be discussed. The grants-in-lieu-of tax provision (Sec. 116) and the impact assistance provision (Sec. 116) will be very important to the community's ability to manage impacts. The latter provision includes funds for both technical and financial assistance necessary for community development and capital improvements.

Socioeconomic issues raised during the public hearings have been integrated into the overall socioeconomic program. The impact assessment phase is our current focus. However, mitigation measures are being developed in response to the impacts identified. The environmental assessments will provide a focus for concerns raised by local residents. The major concerns identified for each state will be treated in these documents. While information on impacts will appear, further data collection and analysis will be conducted for the EIS.

REFERENCES

1. Nuclear Waste Policy Act of 1982, 42 USC 10101.
2. Bechtel Group, Inc., Draft Socioeconomic Data Base Report for Paradox Basin, Utah (ONWI-471) prepared for Office of Nuclear Waste Isolation, Battelle Memorial Institute, Columbus, Ohio, Feb. 1983.
3. Bechtel Group, Inc., Draft Socioeconomic Data Base Report for Mississippi (ONWI-499) prepared for Office of Nuclear Waste Isolation, Battelle Memorial Institute, Columbus, Ohio, Sept. 1983.

NUS Corporation, Draft Socioeconomic Data Base Report for the Permian Basin, Texas (ONWI-461) prepared for Office of Nuclear Waste Isolation, Battelle Memorial Institute, Columbus, Ohio, Dec. 1982.

3. Murdock, Steve H., and Leistriz, Larry F., Methods for Assessing the Socioeconomic Impacts of Large-Scale Resource Developments: Implications for Nuclear Repository Siting (ONWI-266) prepared for Office of Nuclear Waste Isolation, Battelle Memorial Institute, Columbus, Ohio, March 1983.
4. Battelle Columbus Division, Summary of Issues and Concerns Expressed During the April-May 1983 U.S. Department of Energy Public Hearings on Proposed Nomination of Sites for Site Characterization and Recommendations of Issues for Environmental Assessments and Site Characterization Plans (ONWI-505) prepared for Office of Nuclear Waste Isolation, Battelle Memorial Institute, Columbus, Ohio, Sept. 1983.
5. Uniform Relocation Assistance and Real Property Acquisitions Act of 1970, 42 USCS 601.
6. Office of Nuclear Waste Isolation, Draft Framework for Community Planning Associated with Nuclear Waste Repository Siting (ONWI-254) Oct. 1983.

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