CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES
Washington Office

TRIP REPORT
November 15, 1990

SUBJECT: Nuclear Waste Technical Review Board Meeting of the Environment and Public Health Panel: Public Hearing in Reno, Nevada.
20-3702-072

DATE AND PLACE: October 15-16, 1990, Peppermill Hotel, Reno, Nevada

AUTHOR: P. LaPlante

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PERSONS PRESENT:

NWTRB	DOE	Clark County
M. Carter	C. Gertz	J. Duke
J. Cantlon	M. Dussman	
W. North		
J. Parry		
W. Barnard		

Lincoln County	Nye County	CNWRA
G. Stanton	S. Bradhurst	P. LaPlante

Shoshone Tribe	YMPO	SAIC
W. Rosse	E. Lundgard	J. Carlson
I. Zabarte		

Others

J. Wilkinson -- Citizen Alert
R. Belsie -- Physicians for Social Responsibility
V. Popov -- Physicians for Social Responsibility
M. Sill -- Sierra Club
G. Prenderville -- Public
B. Tobin -- Public

BACKGROUND AND PURPOSE:

The Environment and Public Health Panel of the NWTRB met previously on April 24, 1990 to discuss the DOE environmental monitoring program. The purpose of the present meeting was a public hearing to discuss issues related to the proposed repository. A second meeting to discuss socioeconomic studies with the DOE and local governments was scheduled for the following day.

SUMMARY OF PERTINENT POINTS:

Public Hearing (October 15):

1. G. Stanton from Lincoln county presented information from a local survey in which 30% of those polled did not think the Federal Government would tell the truth about the safety of the site, and 36% thought the repository would be hazardous. When asked about the key concerns relating to trust, Ms. Stanton claimed the Federal Government lied about the health hazards from A-bomb testing.

2. G. Prenderville, a retired university professor who has a Ph.D in Geology, claimed that in the last 100 years there have been 15 earthquakes of magnitude 6.5 and above in Nevada. He also stated Nevada was one of the most active earthquake regions in the U.S. He likened the consequence of a release incident at the proposed repository to a "super Chernobyl," but when asked by the NWTRB how such a release could occur, he said he did not know. He claimed a repository would scare off new business interest in the area and thought characterizing only one site was unfair. W. North asked if credible, independently validated studies indicating the repository could withstand the largest foreseeable earthquake would help to alleviate public fears. G. Prenderville stated he and the people he represents (retired professors) do not believe current technology can provide the desired level of assurance.

3. W. Rosse, Chairman of the Shoshone Tribe Environmental Council, emphasized the Shoshone land claim based on the Treaty of Ruby Valley, 1863. He mentioned the current significance of the site as an ancestral burial site which his people use for traditional medicinal practices. The Shoshone are unwilling to disclose the specific location of the sacred sites for fear artifacts would be taken by collectors. The tribe does not trust the DOE since they (DOE) allowed bomb testing when prevailing winds blew the fallout toward Shoshone settlements. Bomb testing was curtailed as a safety precaution when winds blew toward Las Vegas, but not when winds blew toward Shoshone lands. J. Cantlon asked about the apparent willingness of the Shoshone to allow mining development - implying a double standard. W. Rosse said the Shoshone have opposed open pit mining because of its destructive effects but have allowed shaft mine construction provided land is reclaimed upon termination.

4. J. R. Wilkinson, Assistant Administrator for the interest group Citizen Alert, spoke against further efforts to site a repository in Nevada claiming the selection of one site for characterization is unfair. He used many well worn examples of past DOE mistakes to make the point that DOE cannot be trusted with such a project.

5. R. Belsie from the Physicians for Social Responsibility, made a plea to go back and review the other available options for disposal and not let the schedule drive the program to hasty decisions. Again, a comment about DOE credibility was mentioned.

6. V. Popov, Russian Member of Physicians for Social Responsibility, discussed the health implications of nuclear disasters in Russia. One particularly dramatic accident occurred in 1957 when a chemical reaction

(Potassium Nitrate and Acetate) within a high-level waste tank caused it to explode. Over 60 tons of waste composed of Sr, Yi, Rb, was dispersed over a square kilometer of land, while fallout eventually contaminated 30 to 40 sqare kilometers of land. A recent study of the region by the Soviet government has indicated that 40% of the exposed population have tumor producing disorders, and there are 3 times as many mental disorders than expected in children of the area.

7. W. Tobin (public) spoke in favor of the repository; claiming society is turning away from solving the important problems of our generation and Nevada should do its part. He saw opportunities for Nevada to benefit from the repository program.

8. M. Sill discussed the Sierra Club's concern with the program. She claimed the characterization of a single site biased the licensing decision. She inquired about the feasibility of using on-site dry storage for possibly the next 100 years so more information on geologic disposal could be obtained. The NWTRB told her that option is technically feasible. She said people have long since given up on attending public hearings because of frustrations with past experiences. She claimed it was intimidating to get up in front of an experienced group under such formal conditions.

Socioeconomic Studies Meeting (October 16):

1. E. Lundgard of the YMPO discussed DOE socioeconomic studies. He referred to a 1983 court decision which concluded that psychological factors (i.e., perception of risk) are not covered by NEPA. Currently DOE has no plans to include perception of risk in their socioeconomic studies. Both W. North and M. Carter expressed concern that this important factor was not being considered. They mentioned examples of testimony from the public hearing which indicated that perception of risk was a major factor in public opposition to the program. E. Lundgard said the Nevada Project Office has a good program on perceived risk and DOE will have to respond to their studies and thus address some of the issues. J. Cantlon stressed that socioeconomic studies on such perceptions could be very beneficial for increasing communication between DOE and the public.

2. The DOE socioeconomic monitoring and mitigation plan is focused primarily on impacts of the repository program on population growth and economic structure. Mitigation strategy will focus on alteration of site characterization activities.

3. W. North indicated his concern with the specified monitoring approach. Citing his experience with the U.S. government's synthetic fuels program, W. North said the "bean counting" approach is limited and can miss important factors. By "bean counting" he means focussing on the study of readily quantifiable goods and services to the exclusion of more abstract factors such as social climate. From his experience, the general public is very interested in preserving the cultural/social climate of their towns . To address such concerns, the DOE would have to answer such questions as, "will the influx of project workers change the character of the city?"

4. E. Lundgard mentioned the 14 areas of impact the study will consider. These are: Education, Public Health, Law Enforcement, Fire Protection, Medical Services, Cultural, Recreational, Distribution of Public Lands, Vocation and Employment Sources, Social Services, Transportation, Emergency Management, Availability of Energy, and Tourism. The planned format is to set up county steering or impact alleviation committees which will conduct quarterly meetings. W. North asked whether DOE was consulting with the local governments for information. E. Lundgard said DOE was tapping all available information sources including the local public.

5. M. Carter asked if DOE had an appeal process for the public should they disagree with the studies. E. Lundgard said an appeal process had not been formalized.

6. W. North suggested the DOE needs to study the socioeconomic impacts of the repository in a broader context (e.g. comparative risk, effect of changes at the test site, and the "large federal project situation"). E. Lundgard mentioned the EIS with the scoping process will help address those issues. W. North stated such activities will occur in 1997, which is far too late in the process. He suggested the issues be addressed within the next year. C. Gertz added that priorities must be set with limited funds available -- implying the DOE cannot study everything.

7. J. Carlson of SAIC discussed technical issues of the DOE's socioeconomic activities. Clark County has good population and demographic statistics, however, the other counties have very limited data. Information presented included the following statistics: Clark County is 95% federally owned and composes 62% of the states population, while Nye County represents 18%. Clark County's economy (340,000 job total) is 46% services (national average is 26%) and 3% manufacturing. In Nye county (11,000 job total) 43% of the jobs are at the Nevada Test Site and 75% of their workers live in Clark County and commute. The Lincoln County (2,000 job total) economy is primarily services and retail (70%). The uncommon nature of these economies creates difficulties in using standard forecasting models which are based on national averages.

8. J. Cantlon asked where the stigma effect (i.e. undesirable Nevada image effect) could be fit into the analyses, mentioning that critics have claimed the stigma effect is already happening. J. Carlson said this was out of his area of expertise to comment on such a condition.

9. W. Dixon agreed with the NWTRB assessment that the current program is in the "bean counting" mode. She claimed they were now using the 175 report (a report on the section of the NWPA that deals with socioeconomic studies) to expand the program and include the important issues the Board has raised. The DOE plans to focus on including the public in the process.

10. S. Bradhurst, Nye County, Nuclear Waste Repository Program, said Nye is the only county with "situs" status - which is analogous to "most directly affected." Policy for the Nye program is created by the County Commissioners and is implemented by the S. Bradhurst. Areas of interest include public involvement, impact assessment, geotechnical, and

procurement activities. The county will rely on data collected by the DOE and will analyze it independently.

Currently, Nye County has a claim for three years of taxes based on the value of the site. There is disagreement on this: the state defines the law narrowly as only applicable to work on Yucca Mountain, however, the County interprets the law to include all repository related activity. Nye County has proposed that if the DOE disagrees with their proposal they (the DOE) can bring in an independent third party to analyze the case and make the final determination.

11. J. Williams, Planning Information Corporation, discussed technical aspects of Nye County socioeconomic studies. He emphasized the lack of socioeconomic data, but stressed the public knows the area well and is a good source of information. Modeling will include major local economic entities such as the Test Site, Bonn gold mine, and Death Valley National Park. Economic and demographic projections will be compared against the proposed county and state revenue projections to arrive at a Baseline Cumulative Impact. J. Cantlon asked if Nye County had a QA program for these studies or if there was any dialogue between Nye County and DOE on QA. J. Williams said a program was being developed in the absence of communication with DOE, however, "a place exists for such communication in the dialogue process." J. Cantlon asked if there was any integration between Nye County and DOE to ensure that there was no duplication of effort. S. Bradhurst said that there was no integration, but his position was Nye County should be responsible for providing local information to DOE. M. Carter mentioned that if Nye County wants their data to be utilized by DOE, they will need an acceptable QA program in place (C. Gertz agreed).

12. I. Zabarte, Western Shoshone Council, claimed DOE studies were self serving, and questioned their validity. He said the DOE hired consultants who were not from the area and who did not talk with the local people while conducting studies. The remainder of the presentation focussed on a pending land claim based on the treaty of Ruby Valley, 1863. He stated that no mechanism exists for dialogue with the DOE since the Shoshone do not want to appear willing to compromise their fundamental beliefs. J. Cantlon asked why the Shoshone are opposed to discussions with DOE since they have talked with initiators of other developments in the region. I. Zabarte said he thought the elders would not allow any disturbance on the land. In the end, I. Zabarte told the Board that the Shoshone will see what the outcome of their land claim is before they formulate a formal position on the repository.

IMPRESSIONS/CONCLUSIONS:

Despite the low level of attendance (approximately 30 people including presenters), a range of views were aired at the hearing. These include: a general mistrust and lack of confidence in the ability of the DOE to ensure safety; a feeling of unfairness in the site selection process emanating from the Congressional decision to characterize only one site; and, a perception that the decision has already been made that Yucca Mountain will be the site and the pre-licensing activities are just formalities. Nye County claimed to be satisfied with the DOE so far, despite a few disagreements. Nye seems to be the only

county in the state which appears willing to work with the DOE. The Shoshone tribe appears to be primarily interested in settling their land claim with the state. At present, there is no room for mediation with the Shoshone since they are not willing to discuss their position with the DOE. After the public presentations, J. Cantlon concluded that, given the extent of public mistrust of the Federal Government, technical presentation of studies alone will likely do little to alleviate the public objections. While the public has many technical misconceptions about the project, the fundamental problem appears to be one of trust and participation rather than public ignorance.

At the socioeconomic meeting, the NWTRB questioned the DOE on issues raised by the public in the previous day's hearing. Lack of communication with local people and the DOE's unwillingness to study public perceptions of risk were important topics of discussion. DOE studies were also criticized as too limited in scope, (i.e. bean counting) . The DOE claim they are in the process of expanding the studies to include a broader scope. At this time, however, they have had little communication with the locals, nor have they been addressing some of the broader socioeconomic issues the NWTRB believes are important. Conducting limited studies, without participation or inclusion of the local public, sets the stage for more public skepticism about the quality and intent of DOE's work.

SIGNATURE:

Pat LaPlante

CONCURRENCE:

Allen Whiting
Director WSE&I

Enclosures

Clark County

Department of
Comprehensive Planning

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225 BRIDGER AVENUE, SEVENTH FLOOR
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TESTIMONY OF

THE CLARK COUNTY NUCLEAR WASTE REPOSITORY PROGRAM

BEFORE THE

UNITED STATES

NUCLEAR WASTE TECHNICAL REVIEW BOARD

RENO, NEVADA

OCTOBER 15, 1990

TESTIMONY OF THE CLARK COUNTY NUCLEAR WASTE REPOSITORY PROGRAM

CLARK COUNTY, NEVADA

BEFORE THE

UNITED STATES

NUCLEAR WASTE TECHNICAL REVIEW BOARD

RENO, NEVADA

OCTOBER 15, 1990

My name is Jerry Duke. I am a Principal Planner for the Nuclear Waste Repository Program (NWRP) for Clark County, Nevada. On behalf of the NWRP, I would like to welcome you to Nevada and thank you for providing the opportunity to voice our concerns.

I am here today to hear a presentation by the United States Department of Energy (DOE) on its Socioeconomic Plan, provide comments to that plan and present you with some of Clark County's concerns on the potential socioeconomic impacts of siting a permanent repository at the proposed Yucca Mountain siting in Nye County, Nevada. I will also include a summary of the NWRP so that the panel can better understand the ongoing efforts in Clark County to identify potential repository impacts. I hope also to convey to the Board a description of Clark County's proposed Socioeconomic Program. I have, therefore, invited Mr. John Petterson of Impact Assessment Inc., Clark County's Socioeconomic consultant to briefly discuss Clark County's program.

BACKGROUND

In its attempt to adequately address the problem of permanent and safe storage for high-level nuclear waste, Congress enacted the Nuclear Waste Repository Act of 1982. In 1987, Congress enacted Public Law 100-203, the Nuclear Waste Policy Amendments Act. As you are aware, the Texas and

Washington sites were eliminated from consideration, and the Department of Energy was authorized to only study the site in Nye County, Nevada, known as Yucca Mountain. Until 1987, Clark County was funded entirely by the State of Nevada's Yucca Mountain program. The amendments, however, provided an opportunity for affected local governments to independently assess impacts to their communities. Clark County requested and received affected status in April 1988, and along with Nye and Lincoln County, comprise the three affected governments. The County still coordinates its efforts with the State; to maximize the available funding, however, the three affected counties are concentrating efforts on local concerns, while the State is placing emphasis on regional issues.

Current Planning Environment

Before providing specific comments on the Department of Energy's plan and presentation of the Clark County Nuclear Waste Repository Program, I would like to provide you with a few brief economic, demographic and transportation facts that will help to demonstrate some of the unique characteristics and challenges facing Clark County, Nevada.

- The population in Clark County nearly doubled between 1980 - 1990.
- Four to six thousand people move into Clark County each month.
- Nevada is one of the fastest growing states in the Country, with most of the growth occurring in Clark County.
- Due mainly to rugged geographic features in southern Nevada, there is a limited highway network in Clark County.
- Eighteen million people visited Las Vegas in 1989 - a 5% increase from 1988 and a trend that has continued over the past decade. The visitor revenue contribution from 1989 was $11.5 billion.
- Seven hundred eleven (711) conventions were hosted in Las Vegas in 1989. These conventions attracted over 1.5 million people - revenue exceeding $1.1 billion.

These observations help to capture some of the elements which reflect the current setting in Clark County. Independent of the potential risks and concerns of siting the repository at Yucca Mountain, the County government is currently trying to resolve some very difficult growth related issues. The introduction of a repository further complicates planning matters and could possibly, depending on the severity of the impacts, detract from the County's current excellent quality of life. The following summarizes our concerns against the backdrop of the current economic and demographic changes in Clark County.

Clark County Repository concerns:

1. The Clark County service system which would include as examples, schools, fire protection, transportation networks, sanitation and water, is becoming stressed to the limits. The current growth dictates constant revision and reallocation of resources in order to keep pace with service demands. For example, it is estimated that needed transportation projects in Clark County now exceed 2 billion dollars. Although the number of support and construction personnel expected to move into the County would not, in and of itself, represent an overwhelming growth increase, it could have significant implications on an already deficient infrastructure and service delivery system. It could, in other words, require County government to provide services well in advance of current requirements. The numbers, therefore, may be disproportionate in their intended impacts.
2. The population growth in Clark County represents an ever increasing planning challenge and responsibility in order to enable government to maintain the high quality of life that citizens have become accustomed and to ensure public health and safety. As the absolute number of residents increase, the health and safety risks accompanying the siting, construction and operation of the proposed Yucca Mountain high-level waste repository increase proportionately.

3. Current Department of Transportation regulations route high-level nuclear waste shipments on I-15 and U.S. 95 which traverse the most densely populated area in Clark County (The Las Vegas Metropolitan area). Further, because we do not have a system of limited access highways bypassing the city's center, we are concerned about waste shipments and the potential risks to the public.

4. The mode of transportation of the high-level nuclear waste to the proposed site is currently unknown. The use of rail is an option which the Department of Energy is currently exploring. While shipment by rail could reduce the overall number of shipments, this also poses risks to the citizens of Clark County because the only southern mainline rail route goes through downtown Las Vegas. Since the existing alignment of mainline track servicing southern Nevada does not link with Yucca Mountain, several of the proposed spurs would also pass through Clark County. This raises another series of issues that would have to be addressed including emergency response, impact on the environment and a host of other potential elements.

5. The growth of development in Clark County has occurred in all sections of the Las Vegas valley. As population increases and transportation corridors become more constrained, more Clark County residents could be impacted by transport through the valley.

6. The Nevada Test Site (NTS) is located approximately 65 miles north of Las Vegas. The availability of amenities has resulted in approximately 90% NTS workers residing in Clark County. It is probable that Yucca Mountain employees would also largely choose to reside in the Las Vegas valley.

7. The average monthly non-resident population (1.5 million) in Clark County further complicates the provision of service and is a planning concern that used to be addressed in conjunction with long-range repository related issues.

8. Tourism accounts for a major percentage of Clark County's total business. The transport of nuclear waste through Las Vegas by DOT's so-called "preferred routing" scheme could negatively affect tourism. If visitors and convention planners choose other vacation destinations, the Clark County economy could suffer dramatically.

As these statements indicate, the potential repository-related effects to Clark County on the economic vitality, health, safety and quality of life for Clark County residents is currently unknown. Clark County is, therefore, committed to utilize every aspect of Public Law 100-203 of the Nuclear Waste Policy Amendments Act (1988) to ensure that a comprehensive and an appropriate impact assessment system is in place to identify, define and mitigate potential repository related impacts.

Our effort is divided, therefore, into two main components - input into the Department of Energy's repository planning process (this includes all components of the program) and development of a Nuclear Waste Repository Program that develops a system to address impact.

As such, we regard the Socioeconomic Plan as one of the most important components in the Department of Energy's mission to investigate Yucca Mountain as the nation's first high-level nuclear waste repository. This document should provide a framework for long-term monitoring of potential socioeconomic impacts in the State of Nevada, and affected local governments. The key to a successful plan, of course, is that a comprehensive baseline of information be available and a monitoring system be in place so that repository related impacts can be identified and quantified. We are hopeful that the Department of Energy will work with the affected local governments and the State of Nevada to achieve these objectives.

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To date Clark County has provided detailed comments on the DOE's draft socioeconomic plan. We have submitted more detailed comments for your review. Today, I will reiterate these concerns in summary form. They are as follows:

CLARK COUNTY'S COMMENTS ON THE DOE'S DRAFT SOCIOECONOMIC PLAN

- THE CURRENT PLAN IS LACKING SPECIFIC DETAILS REGARDING THE PLAN OF ACTION.
- THE PLAN DOES NOT INCORPORATE A METHODOLOGY TO ESTABLISH OR REFLECT AN ACCURATE BASELINE.
- THE PLAN ASSUMES THAT IMPACTS WILL BE CONFINED TO AN ARBITRARILY DEFINED DISTANCE FROM THE YUCCA MOUNTAIN SITES.
- THE PLAN DOES NOT IDENTIFY A METHODOLOGY FOR ASSESSING ECONOMIC IMPACT ISSUES OTHER THAN TO COMMIT TO EVALUATE IT THROUGH THE STATE OF NEVADA"S PAST WORK ON PERCEIVED RISK. NOT CONSIDERING THE POTENTIAL IMPACT TO TOURISM OBVIOUSLY PRESENTS AN INCOMPLETE ANALYSIS OF POTENTIAL PROBLEMS.
- THE PLAN DOES NOT ESTABLISH A SYSTEM FOR DATA COLLECTION, MANAGEMENT, AND DISSEMINATION. OUR SPECIFIC CONCERN IS:
    - THAT DOE SHOULD RECOGNIZE THAT INFORMATION REGARDING IMPACTED COMMUNITIES WOULD BE COLLECTED MORE EFFICIENTLY BY LOCAL GOVERNMENTS.
- ALTHOUGH IT IDENTIFIES THE NEED FOR COOPERATION AND CONSULTATION, THE PLAN DOES NOT DEFINE HOW DATA COLLECTION AND OTHER EFFORTS WILL BE INTEGRATED INTO THE ONGOING SOCIOECONOMIC MONITORING PROCESS, ALTHOUGH IT IDENTIFIES THE NEED FOR COOPERATION AND CONSULTATION.
- THE DEVELOPMENT OF THE PLAN REQUIRES MORE RIGOROUS INTERACTION WITH THE STATE AND LOCAL COMMUNITIES.
- THIS PLAN RELIES TOO MUCH ON THE SECTION 175 REPORT WHICH IS INADEQUATE IN DEFINING THE POTENTIAL IMPACTS FROM THE PROGRAM.

ITORY PROGRAM

y Act Amendment, Clark
ortant issues and formal-
development of an accu-
epository related impacts
rogram effectively fills
draft Socioeconomic Plan.
rate the Department of
nty's concerns into the
main components:

committee which is com-
, a member from the
ba Paiutes, the University
A representative from the
officio members. This
t, including grant and
ection and generally pro-

First to give you a perspective of participants in our program. Clark County has contracted with Impact Assessment Incorporated to undertake a multi-year socioeconomic work effort. This study, will provide a basis for all future efforts, will evaluate current conditions in the County and develop a representative socioeconomic system ca[illegible]f accurate repository related impact assessment. The fiscal stu[illegible]so part of this program, will be conducted by Planning Information Corporation, a subconsultant. John Petterson of Impact Assessment Inc. is here today to provide you with some details on the program, and will speak to you at the conclusion of my remarks.

Transportation Study Development is generated through the Nuclear Waste Repository Program, but studies are administered by the Regional Transportation Commission (RTC) - the designated planning organization in Clark County. RTC ensures that all nuclear waste studies are properly coordinated as per their legal mandate of a comprehensive, coordinated and continuing planning process.

The data base management system, a central component of the Nuclear Waste Repository Program for Clark County, is being developed by Environmental Systems Research Institute, Inc., in coordination with Impact Assessment Inc.

I hope my comments have provided a perspective of Clark County's Yucca Mountain Program and a feeling of the context of the area in which we are developing our program. Unless there are questions, I would like to introduce John Petterson to provide more detail on our program.

rpt370.7

PROGRAM OVERVIEW

Of the

Clark County

Socioeconomic Impact Assessment of the Proposed High-Level Nuclear Waste Repository at Yucca Mountain, Nevada

Prepared for the

U.S. Nuclear Waste Review Board

Environment and Public Health Panel

Prepared by

IMPACT ASSESSMENT, INC.
2160 AVENIDA DE LA PLAYA, SUITE A
LA JOLLA, CALIFORNIA 92037

October 16, 1990

FUNDAMENTAL THEMES

Credibility

Study integration

Products of immediate and enduring value

Measure consistent set of variables

Address entire Clark County study program
(all tasks; all phases)

Major simplification of complex concerns

Flexibility/adaptability

Inter-study integration/coordination

Monitoring program

Transfer

Not a "standard" socioeconomic impact assessment

Unprecedented duration

Radiological concerns

Irreversability

Political consequences

Non-standard economic context

Figure 1
COORDINATION PLAN

SOCIOECONOMIC IMPACT ASSESSMENT PROGRAM
TECHNICAL DIRECTION

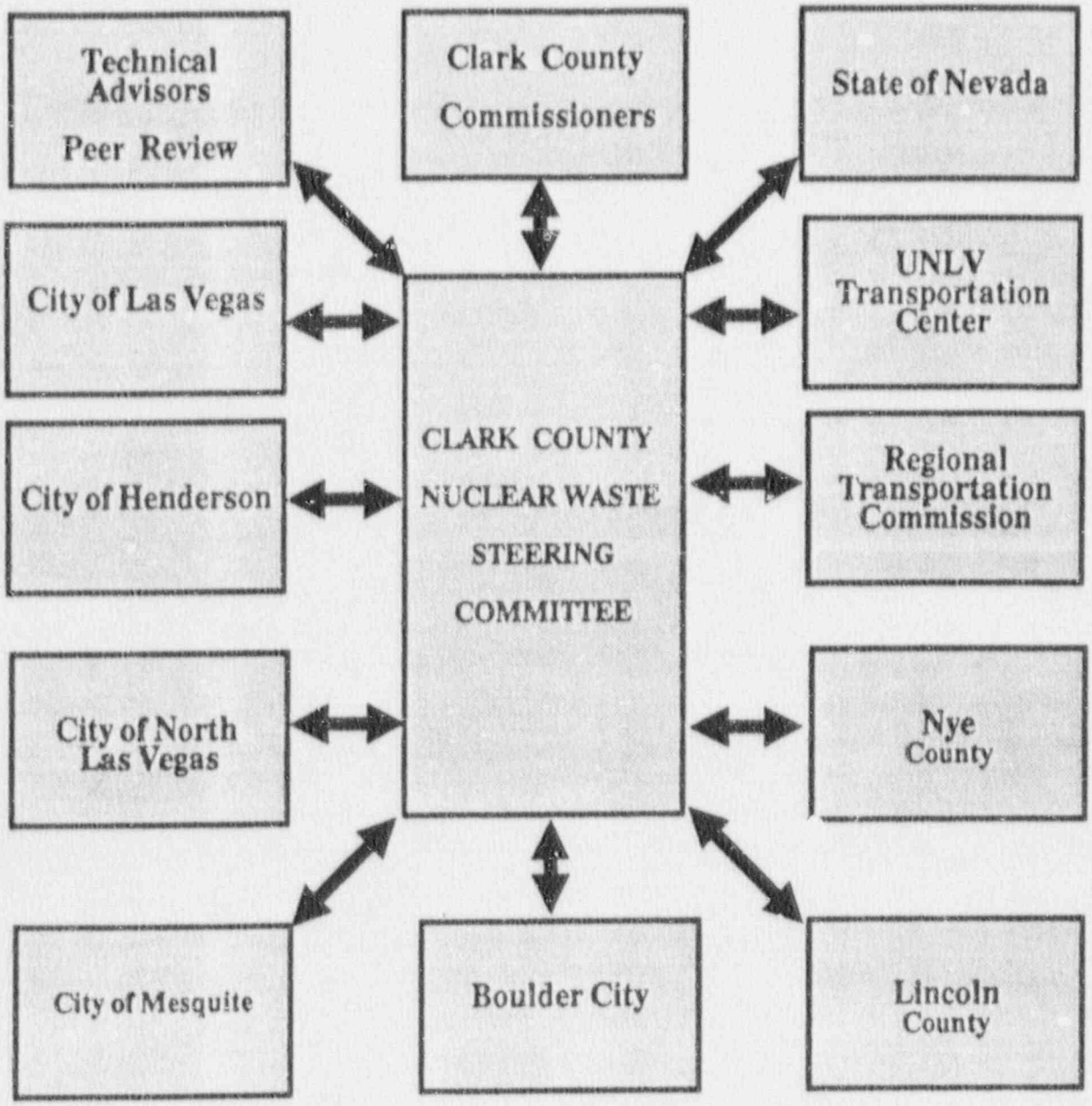


Figure 2

COORDINATION PLAN

SOCIOECONOMIC IMPACT ASSESSMENT PROGRAM

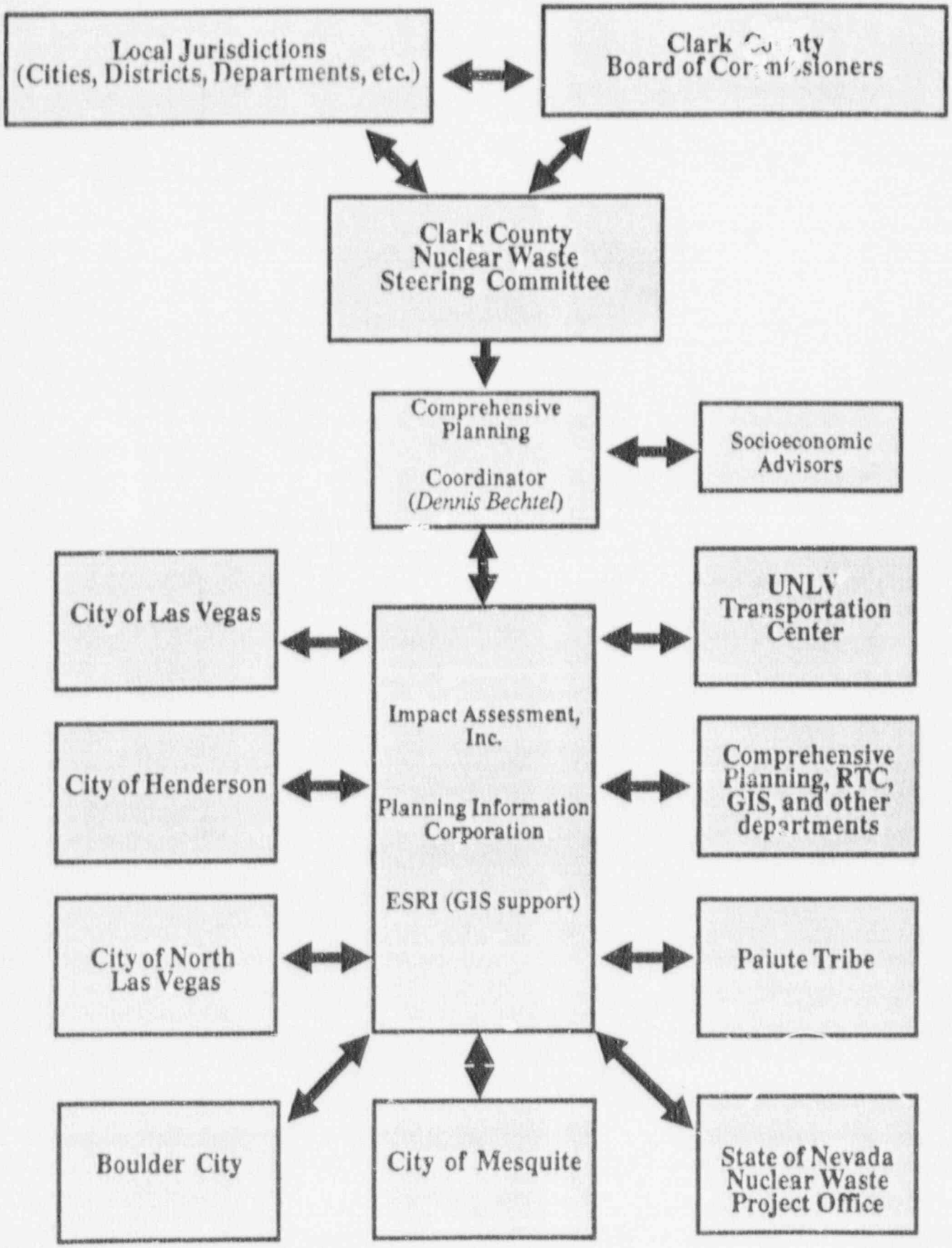


Figure 3
COORDINATION PLAN

SOCIOECONOMIC IMPACT ASSESSMENT PROGRAM
TECHNICAL REVIEW

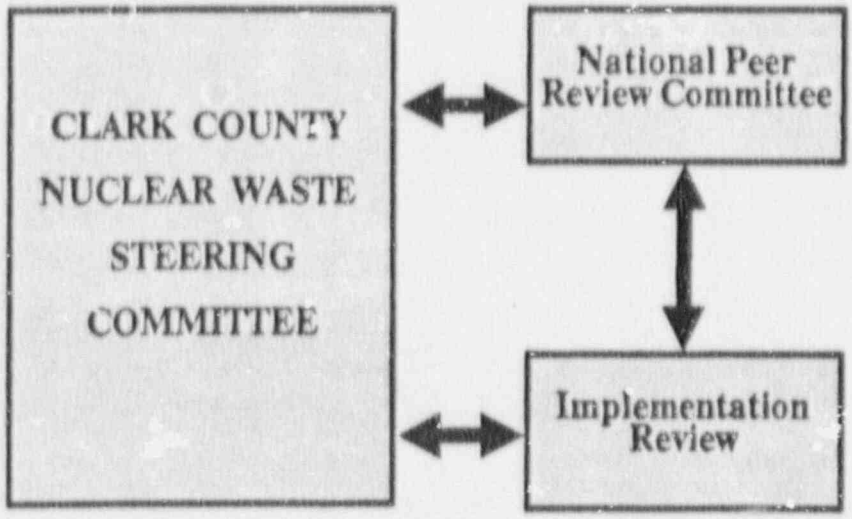


FIGURE 4
SCHEDULE OF DELIVERABLES

ITEM #	TITLE OR DESCRIPTION	PRODUCT SUBMITTED	ESTIMATED CALENDAR DUE DATE
	PHASE I		
	Contract Start-Up	Contract	Aug. 30, 1990
I-2	Draft Research Design	30 Copies	Dec. 2, 1990
I-3	Final Research Design	30 Copies	Feb. 4, 1991
I-4	Interim Base Case Analysis	30 Copies	Jun 3, 1991
I-5	Draft Base Case Analysis	30 Copies	Jul. 18, 1991
I-6	Draft Interim Site-Char. Monitoring Report	30 Copies	Aug. 1, 1991
I-7	Final Base Case Analysis	30 Copies	Sep. 2, 1991
I-8	Final Interim Site-Char. Monitoring Report	30 Copies	Sep. 15, 1991
	PHASE II		
II-1	Draft Baseline Scenarios Report	30 Copies	Nov. 21, 1991
II-2	Final Baseline Scenarios Report	30 Copies	Jan. 7, 1992
II-3	Draft Repository-Related Plans Report	30 Copies	Feb. 3, 1992
II-4	Final Repository-Related Plans Report	30 Copies	Apr. 6, 1992
II-5	Draft Interim Site-Char. Monitoring Report	30 Copies	Jul. 3, 1992
II-6	Final Interim Site-Char. Monitoring Report	30 Copies	Sep. 1, 1992
	PHASE III		
III-1	Draft Construction & Operation Report	30 Copies	Nov. 9, 1992
III-2	Final Construction & Operation Report	30 Copies	Jan. 11, 1993
III-3	Draft Closure & Post-Closure Report	30 Copies	Mar. 15, 1993
III-4	Final Closure & Post-Closure Report	30 Copies	May. 17, 1993
III-5	Draft Impact Avoidance & Mitigation Plan	30 Copies	Jul. 10, 1993
III-6	Draft Interim Site-Char. Monitoring Report	30 Copies	Aug. 3, 1993
III-7	Final Impact Avoidance & Mitigation Plan	30 Copies	Sep. 1, 1993
III-8	Final Interim Site-Char. Monitoring Report	30 Copies	Sep. 15, 1993
	PHASE IV		
IV-1	Draft Monitoring Program Plan	30 Copies	Dec. 6, 1993
IV-2	Final Monitoring Program Plan	30 Copies	Feb. 14, 1994
IV-3	Draft Final Monitoring Report #1	30 Copies	May 9, 1994
IV-4	Final Monitoring Report #1	30 Copies	Jul. 18, 1994

Figure 5: RESEARCH PRODUCTS

RESEARCH DESIGN

Methodology
Study Rationale
Technical Approach
Plan of Work
Data Collection Plan

1

BASE CASE

Current Facilities
Infrastructure
Equipment
Tracking System
Coordination
Response Plans

2

BASELINE SCENARIOS

Future Facilities
Infrastructure
Equipment
Tracking Systems
Coordination

3

REPOSITORY PLANS

Plans or Actions
Necessary [illegible] ress
Requirements Im[illegible]osed
by Repository

4

IMPACT ASSESSMENTS

Impacts of Meeting
Repository-Related
Planning Requirements
for Each of Three
Scenarios, &
Each of Three
Repository Phases

5

IMPACT AVOIDANCE & MITIGATION PLANS

Impact Avoidance Plan
Mitigation Plan

6

MONITORING PROGRAM & TRANSFER PLAN

Monitoring Approach,
Monitoring Variables
Plan to Transfer Control
to Planning Office

MONITORING REPORT #1

Cooperative
Implementation
of Monitoring Program
Final Research Product

Study Framework

(1) Precisely what are the current conditions? (i.e., the base case analysis);

(2) How are these conditions expected to change over the foreseeable future, assuming no repository development? (i.e., the baseline scenarios);

(3) What additional incremental changes are likely to result from the development of the repository and what plans must be formulated by County agencies to adequately respond to these changes? (i.e., the repository plans report);

(4) What are the costs and consequences of changes required to respond to the repository (i.e., impact assessments for each stage of development; site characterization, construction, operation, and post-closure);

(5) How can these impacts be avoided, mitigated, or compensated? (i.e., the impact avoidance, mitigation and compensation plan); and

(6) Finally, how can this monitoring and mitigation program be transfered to Clark County for routine implementation?

Mr. Chairman and members of the panel, my name is Geri Ann Stanton and I am here today representing Lincoln County, the City of Caliente, and their Joint City/County Impact Alleviation Committee. The County, City and their committee appreciate the opportunity to address the panel concerning environmental and public health issues regarding the proposed repository at Yucca Mountain.

As one of three units of local government designated by the Secretary of Energy as potentially affected by the proposed repository, Lincoln County has sought to understand the negative and positive implications of the project upon local area residents. Although Lincoln County is geographically dislocated from the repository site, the county is characterized by a long history of interrelationships with federal nuclear activities at the Nevada Test Site.

Many of the existing residents of the county have personally witnessed the above-ground weapons tests conducted at Yucca Flats. Because area residents do not feel they were properly warned of the exposure risks associated with such tests, distrust of the federal government runs high in Lincoln County. Recent surveys of City of Caliente residents sponsored by the Nevada Nuclear Waste Projects Office found that thirty

percent of those surveyed were not at all confident that the federal agencies would provide honest and accurate information concerning the Yucca Mountain Project. Thirty-six percent of survey respondents were extremely concerned that the repository might have harmful effects on health and safety.

It is with this measure of skepticism about the federal government that area residents and decision-makers tend to view the repository program. The DOE and other federal agencies involved with the repository program must go to extreme ends in order to re-establish an element of trust by local residents in the proposed repository program. Such trust is a prerequisite to local acceptability of the need for and purported safety of such a facility.

DOE is presently considering the use of the Union Pacific mainline through Lincoln County as a mode to transport radioactive waste to Yucca Mountain. In addition to the mainline, a circuitous rail spur through the county, which would by-pass the metropolitan Las Vegas area, is also being considered. Beyond technical and economic feasibility, Lincoln County believes that DOE should consider both the environmental and public health aspects of such a routing. There would seem to be obvious real and

perceived risk management benefits to keeping radioactive wastes out of the heavily populated Las Vegas Valley. While the costs of such a route may be high, so too may be the institutional benefits.

Lincoln County then encourages the Nuclear Waste Technical Review Board to help ensure that the repository program and related systems such as transportation, are as safe as is reasonably possible. The County recognizes the value of, and encourages full use of, engineered barriers to achieve maximum measures of safety and protection of the environment.

Lincoln County has recently learned that DOE has apparently exempted weapons tests from self-imposed radiological exposure limits for department facilities. The County is concerned that such specific exemptions unnecessarily place area residents at excessive risk. Further, such exemptions cast doubt regarding DOE's stated intent to protect the health and welfare of Nevada residents. The issue of agency credibility may very much be related to actions by DOE such as the noted exemptions to exposure limits.

It is important to obtain needed scientific information so as to allow a broad consensus of the suitability of Yucca Mountain as a repository. Timely completion of

such studies would serve to reduce much of the uncertainty and speculation about the site.

Further, the repository has resulted in political divisiveness which might be reduced if decisions about the suitability of the site were promulgated. In striving to obtain necessary site characterization data, DOE should not attempt to sidestep or have reduced any regulatory requirements governing protection of public health and environment. An obvious exception, are those requirements around which a broad scientific consensus for change develops.

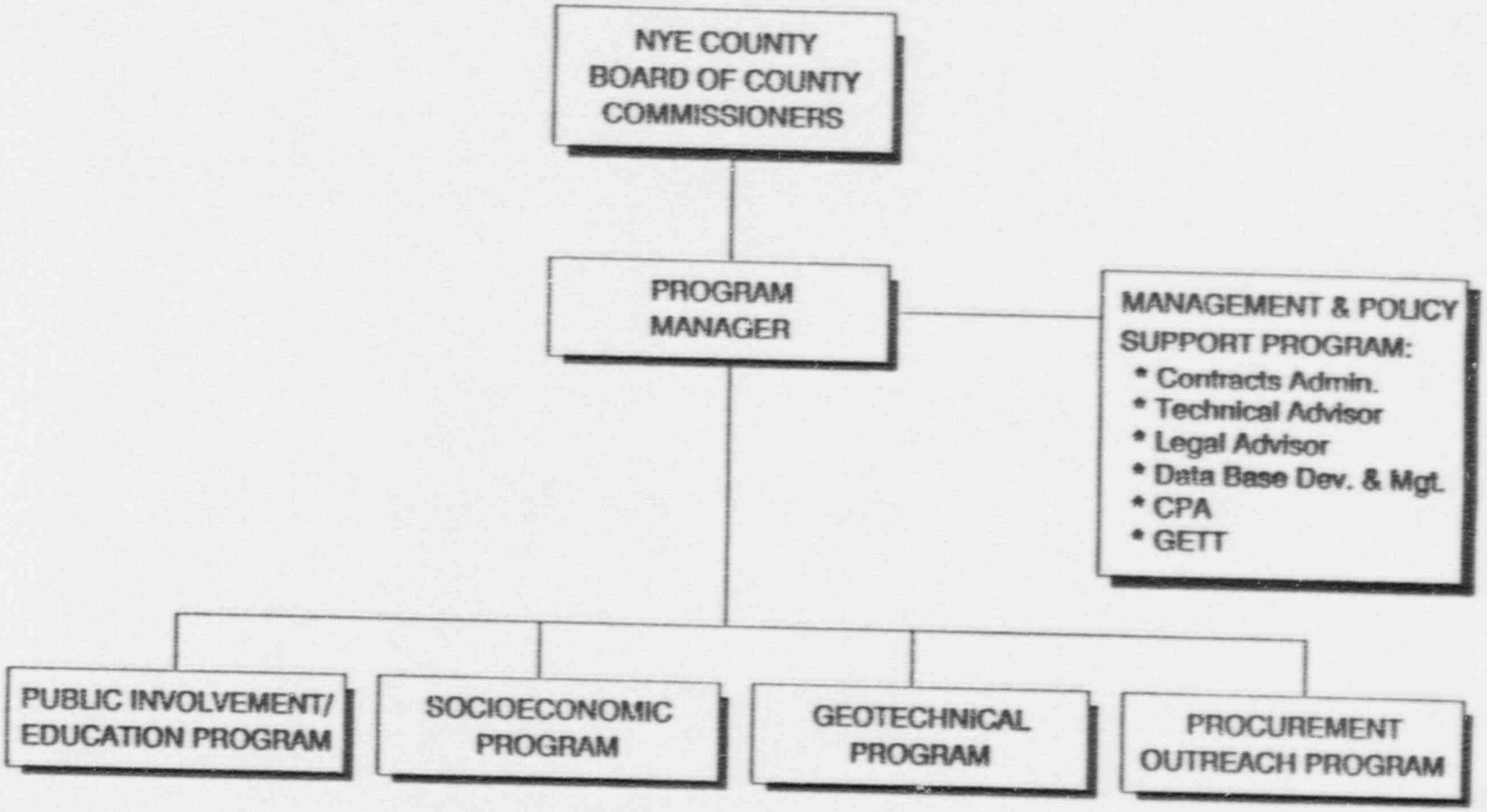
Finally, Lincoln County would request that off-site meteorological studies and monitoring be established by DOE in order to establish the basis for predicting exposure pathways and exposure characteristics which might result from a transportation or repository accident. Such information would be helpful to emergency management planning activities concerning low probability-high consequence events such as volcanic eruption or a rail car fire involving a breached shipping container. A good historical record may be needed to accurately predict plume travel under alternate climatological conditions.

As I close my comments, allow me to note that I am not

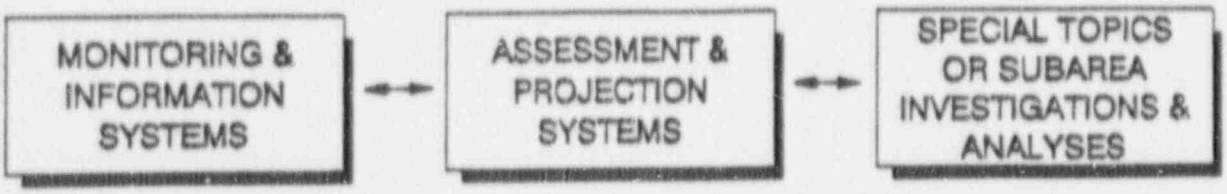
a technical person. I would be happy to try and respond to questions, but may choose to defer some for written response from the County.

Thank you very much for the opportunity to present these comments.

NYE COUNTY NUCLEAR WASTE REPOSITORY PROGRAM



NYE COUNTY NUCLEAR WASTE REPOSITORY SOCIOECONOMIC PROGRAM



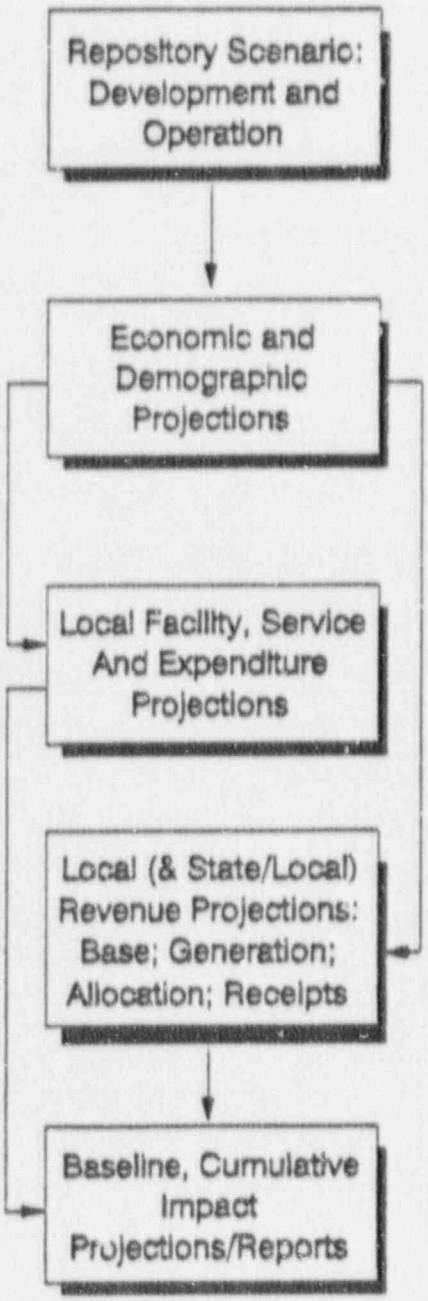
Reliable information on current characteristics: at county and sub-county level

Socioeconomic projections (baseline, cumulative, impact) at county and sub-county level

Insights re particular communities or policies; assessment of prospects and options

NYE COUNTY NUCLEAR WASTE REPOSITORY SOCIOECONOMIC PROGRAM

ASSESSMENT & PROJECTION SYSTEMS



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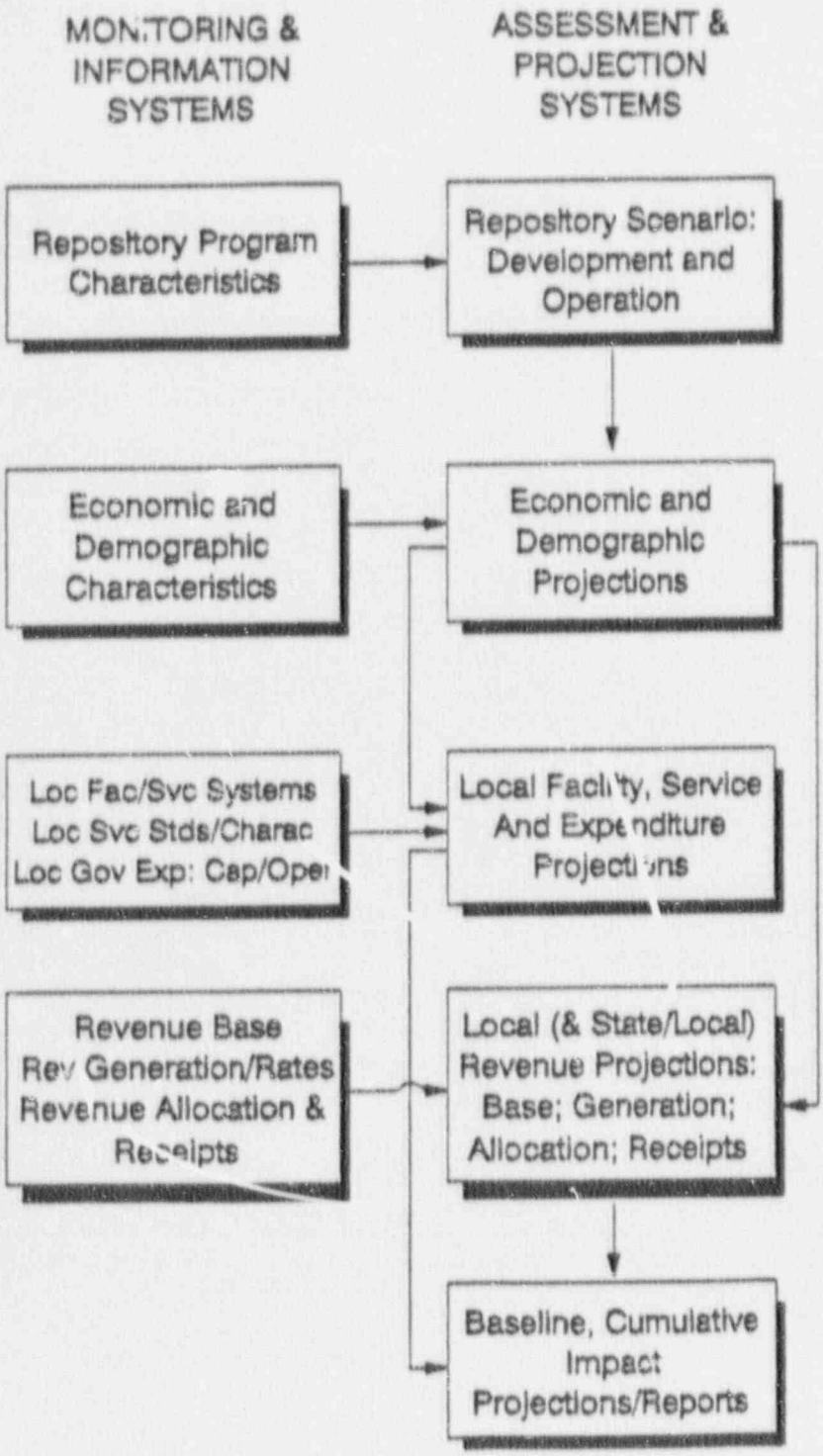

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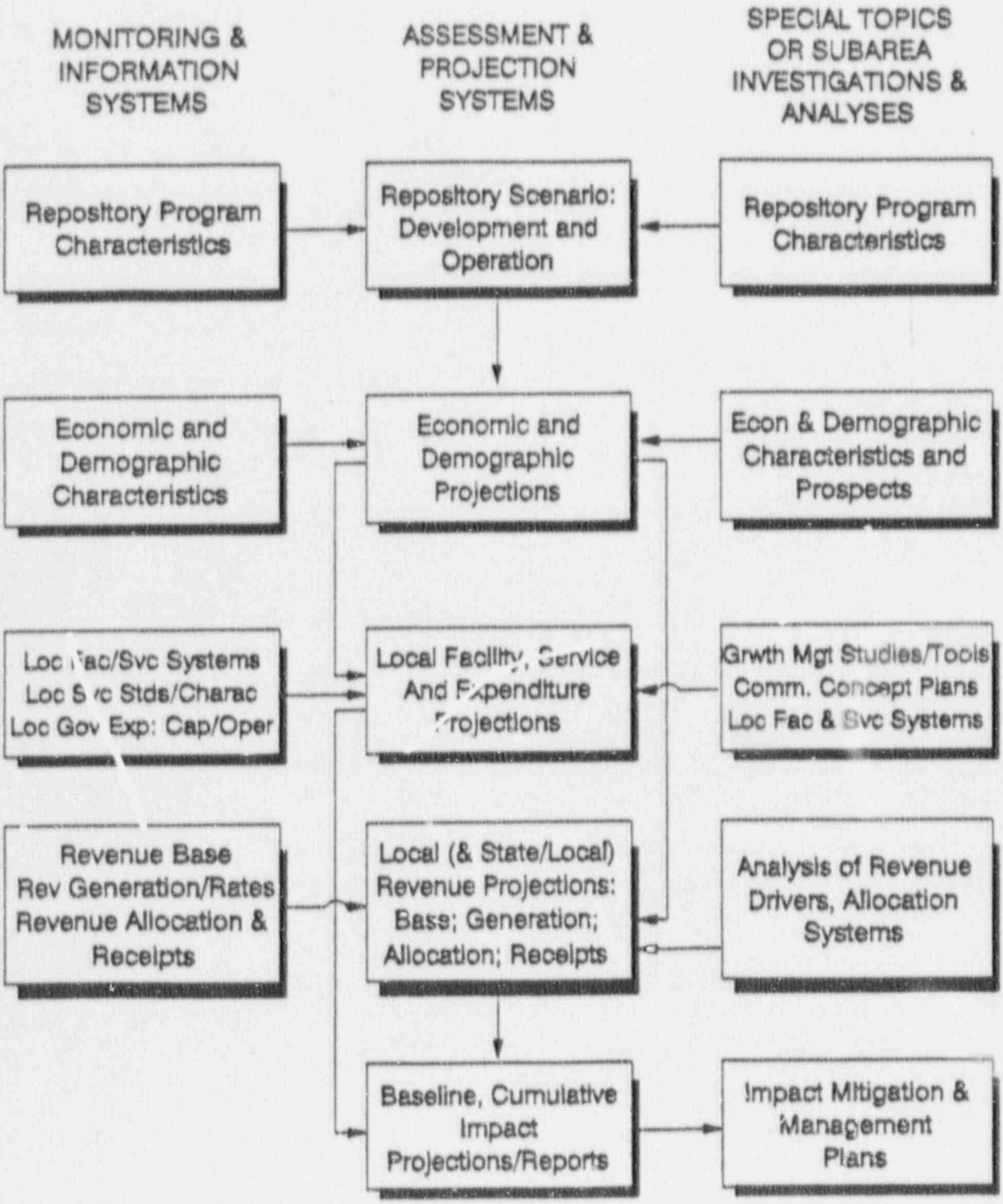

NYE COUNTY NUCLEAR WASTE REPOSITORY SOCIOECONOMIC PROGRAM

	MONITORING & INFORMATION SYSTEMS	ASSESSMENT & PROJECTION SYSTEMS	SPECIAL TOPICS OR SUBAREA INVESTIGATIONS & ANALYSES
REPOSITORY PROJECT DESCRIPTION	Repos Program Monitoring	Repos Dvlpmnt Scenarios	Repos Emplmnt Residency Repos Local Hiring Caliente Rail Con-Soc Impacts Jean Rail Con-Econ Impacts
LOCAL ECONOMY & DEMOGRAPHY	Annual Pop. Est: 1985-89 '90 Cens Data Base (N.Nye) 1990 Post Census Review Household Indices (S.Nye) Hsg & Pop Mntrg (S.Nye) Hsg & Pop Mntrg (N.Nye) Current Hshld Characteristics Econ Charact & Trends (Co) Ec Charact & Trends (Subco)	Nye E-D Proj Syst (P) Nye E-D Syst Calibration (P) E-D Projections (County) E-D Projections (Subcounty)	Tonopah Area Econ Poten NE Nye Economic Potentials TTR Impact Evaluation Death Valley Loop Poten Amargosa Valley Ec Dev Potntls Beatty Area Econ Potentials Pahrump Econ Potentials
LOCAL FACIL & SVC SYSTEMS AND EXPEND	Fiscal Conditions Summary Facil & Svc Mntrng System Svc Stndrds & Cost Mntrng	Nye Exp Model (Cap/Oper) Nye Fiscal Projections	Capital Improvement Progr CIP Workshop/Traintng Pahrump Growth Mgt Opts Altern Svc Stds & Costs CIP Update Co Roads Inventory (S.Nye) Beatty Growth Mgt Options N.Nye Resource Mgt/Devel
LOCAL & STATE/LOCAL REVENUES	Revenue Base Monitoring Revenue Receipts Monitoring	Nye Revenues Model	GETT/PETT Rev Base Local Revenue Base State/Local Revnue Base Fed/Local Revenue Base
GENERAL	Nye Co Statue Rep (1990)		Study Design/Review Nye/DOE Socioec Prg Coord

NYE COUNTY NUCLEAR WASTE REPOSITORY SOCIOECONOMIC PROGRAM

Map Resources Project

	South Nye County				North Nye County				
	Pahrump	Amargosa V	Beatty	Remainder	Tonopah	Smoky Valley	Northeast	Gabbs	Remainder
State Plane Coordinates	*	*	*	*					
Township/Range/Sections	*	*	*	*					
County Boundaries	*	*	*	*					
Town Boundaries	*	*	*	*					
Roads: Center Lines	*	*	*	*					
Paved/Unpaved	*								
Admin.Responsibility	*								
Census BNA/Blocks	*	*	*	*					
Public Land Status	*								
Flood Prone Areas	*								
Restrictive Covenant Areas	*								
Subdivisions	*								
Utility Service Areas	*								
Housing Locations/Types	*	*	*	*					
Commercial Locations	*	*	*	*					
Lot Size Areas	*								
Mineral Resource Areas									
County Facility Locations									
Soils Types	*								
Mineral Resource Areas							*		
Rail Study Corridors							*		
Topography							*		
Key Physical Features							*		
Geothermal Resource Areas							*		
Assessor Tax Districts									
Utility Rights of Way									

NYE COUNTY NUCLEAR WASTE REPOSITORY SOCIOECONOMIC PROGRAM

Roles & Responsibilities vis a vis DOE

Examples of Possible Information Collection & Assembly

	DOE	NYE COUNTY
REPOSITORY CHARACTERISTICS:		
• Direct characteristics monitoring	Primary source	Active review & response/request
• Indirect characteristics monitoring	Primary source	Active review & response/request
• Direct characteristics projection	Provide reference info & analysis	Cons uncertainties, dev consist scens
• Indirect characteristics projection	Conduct appropriate analyses Support policies & implications	Conduct appropriate analyses Suggest policies & implications
• Project management policies	Primary source, consult/coord	Review re local implications
ECONOMIC & DEMOGRAPHIC		
• 50-mile radius	Rad. Monitor. Program & coordinate	Review, develop, incorp, feed back
• Economic & demographic monitoring	Active review & response/request	Primary source
• Economic & demographic projections:		
- County level	Apply REMI model, consult/coord	Apply Nye model, consult/coord
- Community level	Active review & response/request	Primary source
- Small area (e.g., rad. rings, radil)	Active review & response/request	Prim srce, with consult re DOE needs
LOCAL SYSTEMS AND FINANCE		
• Facility & service systems monitoring	Active review & response/request	Primary source
• Service standards & cost:		
- Monitoring	Active review & response/request	Primary source
- Alternative	Active review & response/request	Primary source
• Facil/svc fiscal projections		
- County level	Apply DOE model &/or active review	Apply Nye model, consult/coord
- Community level	Active review & response/request	Primary source
BASELINE SOCIOECONOMIC PROJECTIONS		
• County level, E-D, fiscal	Apply DOE system, consult/coord	Apply Nye models, consult/coord
• Community level	Active review & response/request	Apply Nye models
SOCIOECONOMIC IMPACT PROJECTIONS		
• County level: E-D, fiscal	Apply DOE system, consult/coord	Apply Nye models, consult/coord
• Community level	Active review & response/request	Apply Nye models
IMPACT MITIGATION AND MANAGEMENT	Review plan & negotiate/respons	Develop plan & propose