

JAMES H. BILBRAY
1ST DISTRICT, NEVADA

COMMITTEE ON
FOREIGN AFFAIRS

COMMITTEE ON
SMALL BUSINESS

SELECT COMMITTEE
ON AGING



Congress of the United States
House of Representatives

Washington, DC 20515

May 17, 1988

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Office of Resource Mgt.
Nuclear Reg. Comm.
1050 E. Flamingo Rd., # 319
Las Vegas, Nevada 89109

Dear Friend:

Thousands of trains and trucks carrying tons of radioactivity will travel through sections of Southern Nevada, yet to be determined by the Department of Transportation.

I believe that all states must have the right to help determine the best roadways to be used for the shipment of nuclear waste. Because of this belief I have cosponsored H.R. 3836, the Nuclear Waste Transportation Act of 1987.

We have all watched with horror as the Nuclear Waste Policy Act of 1982 has been all but torn up, while Nevada is targeted for a proposed nuclear waste repository.

Though I believe we have not exhausted all legislative and legal tools to fight the dump, we cannot ignore the potential danger transporting nuclear waste poses.

H.R. 3836 will give each state and local unit of government, that a shipment of nuclear waste travels through, a proper level of participation in the transportation process. Moreover, this bill requires strict standards to be imposed on the Department of Energy before any waste can be transported.

I have enclosed my testimony which I gave before the House Interior Subcommittee on Energy and the Environment. Should you have any questions on this issue or H.R. 3836, please contact me.

Sincerely,

James H. Bilbray
Member of Congress

JHB:smc

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PDR WASTE
WM-11 PDR

Testimony of the Honorable James H. Bilbray
Before the Interior and Insular Affairs Subcommittee
On Energy and the Environment on
May 12, 1988.

Mr. Chairman, thank you for the opportunity to come before you today to speak about the 3 bills you are considering at this hearing.

Though all three bills have merit I find Mr. Owens bill, H.R. 3836, which will amend the Hazardous Materials Transportation Act to prescribe procedures for the transportation of nuclear materials, to be of special importance.

Though some might argue that H.R. 3836 gets too specific, I believe this is necessary to avoid the costly and cumbersome procedure of continually calling an Executive branch agency before a Congressional committee or subcommittee to explain the intent of Congress.

The Department of Energy has played foot loose and fancy free with the Nuclear Waste Policy Act of 1982, and on more than one occasion has permitted political considerations to override safety and health concerns.

If their behavior proves anything to us in Congress, it is that we must be specific in our intent for any legislation concerning the transportation of nuclear waste.

With H.R. 3836, Mr Owens addresses many of my concerns by creating fair and equitable procedures and guidelines for the transportation of nuclear waste in a comprehensive and concise manner.

I especially find the application section of Mr. Owen's bill to be responsible, reasonable, and necessary to alleviate any concerns a state or Indian tribe might have regarding the transportation of nuclear waste.

This section requires a license application to include:

- (1) An emergency response and mitigation plan,
- (2) A hazard and risk assessment of the route assessing the physical impacts that affect the risk of transporting in that route,
- (3) An environmental impact report, if required by the Secretary of Transportation,
- (4) An analysis of alternate routes including a comparison of risks and hazards,

(5) Evidence that a notice of application has been sent to route States and affected Indian tribes and that such States and Indian tribes have been consulted on route selection,

(6) Sufficient information to determine the need for the shipment of waste or spent fuel, and

(7) Proof of financial responsibility.

Mr. Chairman, the transportation of nuclear waste, unlike the siting of a proposed nuclear waste repository, cannot be placed in someone else's backyard.

In one of two letters I have received from the Department of Energy concerning the transportation of nuclear waste, they stated that theoretically only 1 accident should occur in 40 million miles of travel.

If 40 million miles of travel sounds like a great deal - it shouldn't. The Department of Transportation estimates that 40 million miles of travel by truck would be required to transport all the spent fuel presently stored at reactors to a repository.

These figures do not take into account the tons of nuclear waste that will continue to be generated by nuclear power plants before the first trucks leave the gate.

Because of the uncertainties of transportation by trucks and trains strict laws and regulations must be in place, before any trucks or trains roll carrying nuclear waste, to assure the people of all states and Indian tribes that every precaution will be taken to prevent any chance of an accident from occurring.

However, these same laws and regulations must take into account the possibility of an accident and prepare emergency response personnel in all affected states and Indian tribes.

H.R. 3836 is a good first step in Congress's attempt to develop the needed legislation to govern the transportation of nuclear waste.

As a first step, I believe H.R. 3836 encompasses these needs and could offer the various states and Indian tribes as high a degree of involvement, safety, and piece of mind that is possible from a law.

RICHARD H. BRYAN
Governor

STATE OF NEVADA



COMMISSION ON NUCLEAR PROJECTS

Capitol Complex
Carson City, Nevada 89710
(702) 885-3744

GRANT SAWYER
Chairman

Commissioners:

Frank Caine
James Cashman III
Thalia Dondero
Ron Lurie
Michon Mackedon
Anne Peirce

Robert R. Loux
Secretary

AGENDA
NEVADA COMMISSION ON NUCLEAR PROJECTS
MEETING

FRIDAY, MAY 27, 1988
MC CARRAN INTERNATIONAL AIRPORT
TRAINING ROOM C
LAS VEGAS, NEVADA

1:00 p.m.

Welcome and Call to Order

Chairman Sawyer

Approval of Minutes

- a) July Meeting
- b) September Meeting
- c) December Meeting

Commissioners

Staff Reports

- a) Executive Director
- b) Technical Division Report
- c) Planning Division Report
- d) Legal Division Report

Staff

Discussion and Consideration of
Proposed Resolution

Chairman Sawyer
and
Commissioners

Discussion of Commission Report
to Governor and Legislature

Commissioners

New Business

Commissioners

Public Comment

Public

**Schedule Next Meeting and
Adjourn**

Chairman Sawyer

RRL/sjc

May 27, 1988

RESOLUTION

WHEREAS, The U.S. Congress, on December 22, 1987, passed the Nuclear Waste Policy Amendments Act of 1987 (NWPAA) redirecting the nuclear waste program and selecting Yucca Mountain in southern Nevada as the only site to be characterized and evaluated as a high-level nuclear waste repository; and

WHEREAS, The Nuclear Waste Policy Act of 1987 (NWA) provides for State oversight and monitoring of the DOE program, and the NWPAA reinforces and expands that role in order to assure the technical suitability and safety of a potential repository location; and

WHEREAS, The NWPAA mandates a local government partnership with the State in the development and monitoring of the DOE program, provides an opportunity for direct participation by "affected units of local government" to address local perspectives and concerns, and provides an opportunity for affected units of local government to actively participate in and conduct investigations on social, public health and safety, environmental, demographic and socioeconomic conditions with regard to potential impacts to local communities; and

WHEREAS, Neither the NWA nor the NWPAA intended that the U.S. Government locate a repository for high-level wastes in an unsuitable location; and

WHEREAS, the U.S. Department of Energy (DOE) and nuclear industry groups appear to have been attempting to thwart the intent of Congress and compromise the safety of the waste disposal program by maintaining that Yucca Mountain has already been selected as the only repository site despite technical problems present at the site; and

WHEREAS, It is premature to assume that a high-level nuclear waste repository will be built at Yucca Mountain until site characterization is completed; and

WHEREAS, The impression that Nevadans are powerless to stop the federal government from locating the repository at Yucca Mountain is one that is being cultivated by the nuclear industry, DOE, and people in the State who believe they stand to benefit financially from the project; now, therefore, be it

RESOLVED, That the Commission urges the Nevada Legislature to formally advise DOE by proper resolution that the 1989 Legislature will not approve the withdrawal from public use of any land at or near Yucca Mountain for the purpose of characterizing, building or operating a repository and that a ~~roll call~~ vote on such resolution be taken in each house of the 1989 Legislature; and be it further

Wording removed by Commission during this meeting

RESOLVED, That the Commission recommends that the Attorney General vigorously pursue litigation which will confirm Nevada's right to approve or disapprove land withdrawals for a repository at Yucca Mountain and that the Legislature make available necessary funds for such litigation; and be it further

RESOLVED, That the Agency for Nuclear Projects and affected units of local government expeditiously pursue various programs of technical and socioeconomic impact studies in order that health and safety issues relative to the Yucca Mountain site can be quickly and adequately examined and the real economic and other consequences of a repository can be understood; and be it further

RESOLVED, That the Commission commends Governor Bryan, Attorney General McKay, the Nevada Congressional delegation and the council of Las Vegas and the Clark County Commission for their steadfast stand in opposition to DOE's repository siting project; and be it further

RESOLVED, That the Commission urges that elected officials and others throughout the State maintain a consistent posture of opposition to a repository at Yucca Mountain until such time as it can be shown that such a facility will be benign in its effects upon the health and safety of present and future generations of Nevada.

STATE OF NEVADA
LEGISLATIVE COUNSEL BUREAU

LEGISLATIVE BUILDING
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Donald A. Rhodes, Director, Secretary

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MEETING NOTICE AND AGENDA

Name of Organization: Nevada Legislature's Committee on
High-Level Radioactive Waste
(NRS 459.0085)

Place of Meeting: Thomas and Mack Center, Board Room
University of Nevada-Las Vegas
4505 S. Maryland Parkway
Las Vegas, Nevada

Date & Time of Meeting: Wednesday, May 11, 1988
9 a.m.

A G E N D A

- I. Welcome and Introduction
Senator Thomas J. Hickey, Chairman

Approval of Minutes from October 20, 1987

- II. Review and Update of the Nation's High-Level
Radioactive Waste Repository Siting Program-A
United States Department of Energy Perspective

Carl Gertz, Director of Waste Management
Project Office, Nevada Operations Office,
U.S. Department of Energy

- III. Review and Update of Nevada's Program

Robert R. Loux, Director, Nevada's Agency
for Nuclear Projects

Lunch

- IV. Review of Possible Legislation or Other Action to
Ensure A Maximum Receipt of Federal Funds by
the State Pursuant to the Grants-Equal-to-Taxes
Provisions of the Nuclear Waste Policy Act.

Staff Overview

Presentation By Consultants of Nevada's Agency
for Nuclear Projects

Presentation By Local Government
Representatives

- V. Public Testimony

- VI. Committee Discussion

- VII. Adjournment

MINUTES OF THE MEETING OF THE
NEVADA LEGISLATURE'S COMMITTEE ON HIGH-LEVEL
RADIOACTIVE WASTE
City of Reno Council Chambers
Reno, Nevada
October 20, 1987

The first meeting of the Nevada Legislature's Committee on High-Level Radioactive Waste (Nevada Revised Statutes 459.0085) for the 1987-1988 interim was held on October 20, 1987, in the City of Reno Council Chambers, Reno, Nevada, at 9 a.m.

COMMITTEE MEMBERS PRESENT:

Senator Thomas J. Hickey, Chairman
Assemblyman James W. Schofield, Vice Chairman
Assemblyman John E. Jeffrey
Assemblyman Gaylyn J. Spriggs

LEGISLATIVE COUNSEL BUREAU STAFF PRESENT:

Robert E. Erickson, Research Director
Barbara Kightlinger, Research Secretary

OTHER LEGISLATORS PRESENT:

Senator Sue Wagner, Reno, Nevada

OTHERS PRESENT:

Carl Gertz, Director of the Nevada Project Office
United States Department of Energy (DOE)
Robert R. Loux, Executive Director, Nevada's Agency of
Nuclear Projects
Joseph C. Strolin, Administrator of Planning, Nevada's
Agency for Nuclear Projects
Russell di Bartolo, Planner/Researcher, Nevada's Agency
for Nuclear Projects
Carl Johnson, Administrator of Technical Programs
Nevada's Agency for Nuclear Projects

Senator Hickey introduced the committee members and read a prepared text which addressed the purpose of the meeting (see Exhibit A).

Robert Fulkerson, executive director of Citizen Alert requested time during the meeting for public testimony and input. He inquired if the public would be part of the process for gathering technical information.

Senator Hickey informed Mr. Fulkerson that the committee's function is to serve as an oversight committee for the Nevada legislature.

Senator Hickey described the role of the legislature and this committee as it pertains to the Nation's effort to select a site for a deep geologic repository for high-level radioactive waste (HLRW).

The Chairman called on Mr. Gertz to begin his presentation.

Mr. Gertz provided the committee with a brief description of his work experience and educational background and discussed the nature of the issues and subject matter he would cover. He provided each committee member with a handout entitled "Nevada Nuclear Waste Storage Investigations Project - Status of the NNWSI Project" (see Exhibit B).

Mr. Gertz explained that in July 1987 the United States Secretary of Energy appointed Nick Aquilina, Manager of the Nevada Operations Office for DOE to replace Mr. Thomas Clark, who retired. According to Mr. Gertz, Mr. Aquilina reorganized the office into two major divisions giving them "equal stature": (1) nuclear weapons testing; and (2) the Repository Siting Program.

Mr. Gertz explained that he was asked by Mr. Aquilina to become project manager of the repository program, a position which he accepted. He described the function and makeup of his division. He noted also the changes in personnel which have been announced at DOE headquarters in Washington, D.C., following Mr. Ben Rusche's recent resignation.

Mr. Gertz went on to describe the role of major private contractors in the overall repository siting effort. He noted various issues which are being considered by the U.S. Congress relating to the "Federal Nuclear Waste Policy Act of 1982," explaining that 40 HLRW related bills have been introduced this year. He noted the two key measures attracting the most attention are the McClure/Johnson bill and the Udall bill. According to Mr. Gertz, budget bills are also being reviewed which affect the program.

Mr. Gertz provided details of the "Udal and McClure/Johnson" measures, and noted a companion bill, called the "Breaux-Simpson" bill, which contains many of the changes described in the McClure/Johnson legislation placing, however, a greater emphasis on a more descriptive process sensitive to the Nuclear Regulatory Commission's (NRC) concerns. Mr. Gertz went on to explain where each bill is currently in the process.

Mr. Gertz next explained how a multilayered isolation system may work at the Yucca Mountain, Nevada, site and described, in detail, how such a facility is proposed to be designed and operated to ensure the maximum amount of safety and protection.

Mr. Gertz also described how site characterization of the Yucca Mountain site would be conducted (and over what period of time), including development of the Site Characterization Plan (SCP) and the implementation of a final plan.

Mr. Gertz described the status of litigation, which effects the project, detailing the lawsuit pertaining to the United States Department of Environmental Protection Agency's (EPA) radiation standards for drinking water and Nevada's lawsuit pertaining to the use of grant funds for litigation. He concluded his presentation by describing how funding by Congress may affect the repository siting program.

Senator Hickey asked Mr. Gertz to explain how the \$360 million appropriation provided in the McClure/Johnson bill would be allocated.

Mr. Gertz explained the money would be used for all three sites which are currently being considered for site characterization (Nevada, Texas and Washington). He also explained how Nevada may receive its fair share of the funds.

Senator Hickey discussed his concern over maintaining continuity of funding to ensure that the state's program can be effectively conducted.

Mr. Gertz noted that he is concerned because it affects his program as well.

Senator Hickey asked about a repository design that can assure adequate protection for 10,000 years.

Mr. Gertz indicated the DOE is developing models to test this aspect of the program.

Senator Hickey expressed concern over the loss of ability to litigate with use of grant funds. He asked Mr. Gertz to comment on the EPA's safe drinking water standards lawsuit and the implication it may have for Nevada, Texas and Washington.

Mr. Gertz stated many people in the country believe the absence of water at Yucca Mountain would make it a leading candidate among the three sites. He noted that movement of water is one method of transporting radionuclides. A repository built in a geologic formation without water, would be an advantage, he noted. Mr. Gertz stated many people viewed the EPA court case as a signal Nevada would be more feasible and viable.

Senator Hickey inquired if Mr. Gertz felt the exploratory shaft would have to be excavated in order to make an exact determination of the facts pertaining to tectonic activity and water transmitting problems relating to movement of radionuclides.

Mr. Gertz stated he felt the exploratory shaft is necessary since it would add a considerable amount of confirmatory information.

Assemblyman Schofield inquired, as it relates to site characterization, if the DOE's structure is along the same lines in Texas and Washington as the structure in Nevada.

Mr. Gertz indicated the structure was relatively the same except the Texas and Washington project office's have a few more federal people.

Assemblyman Schofield asked Mr. Gertz if, in his opinion, legislation which is currently proposed in Congress is passed to characterize only one site, whether this would enhance the nuclear waste repository research and development effort relative to the geological and technical aspects of the program.

Mr. Gertz stated it would probably make it possible to have the ability to conduct the tests his office feels are necessary. In addition, if only one site were chosen, full funding would more likely be available for all scientific activities which are necessary.

He stated that about \$2 billion is available in the nuclear waste fund and the DOE will continue characterizing all three sites until told to do otherwise, according to the Nuclear Waste Policy Act (NWPA).

Assemblyman Jeffrey inquired if any work was being done on exploring the reprocessing of nuclear waste in the United States.

Mr. Gertz stated that at the present time, reprocessing is almost a dead issue in the United States without a government program to support the effort.

Assemblyman Spriggs asked if it would be possible to use the defense spent fuel reprocessing facility to reprocess civilian waste.

Mr. Gertz that noted because of the difference in characteristics of the type of fuel, it would not be possible.

Senator Hickey asked about the status of the plan for a workshop to discuss site characterization in early 1988.

Mr. Gertz expressed a willingness to involve the state in all technical programs.

Mr. Gertz closed by responding to Assemblyman Schofield's question on grant funding for the state's program, stating he would do everything possible to assure grant funds for the state program will be provided.

Senator Hickey called next on Mr. Loux to begin his testimony.

Mr. Loux distributed a number of public information documents which were prepared by his staff. He then went on to explain that Nevada's agency for nuclear projects has been in existence since about 1983. This agency carries out oversight and evaluation of the Federal Government's program. Funding for the program is accomplished through a grant from DOE. The agency has a staff of approximately 17 persons and a budget of \$8 to \$10 million. Mr. Loux noted the agency's involvement in scientific evaluation, socioeconomic studies, transportation planning, public information dissemination and legal evaluation.

Mr. Loux then discussed the issues he would cover in his presentation. He explained that all of the technical study money for which Nevada had applied in May 1984, has been received. These studies are already underway or about to begin. In addition, he noted his office has received verbal approval from Mr. Gertz to: (1) embark on Nevada's own environmental program to establish an environmental base line at Yucca Mountain and (2) develop a monitoring program to determine if SCP activities and related study efforts have impacts on the environment across the board.

Mr. Loux explained the nature and results of the legislative audit and noted that he is currently implementing all the changes in procedure recommended in the audit.

Mr. Loux went on to explain the commission on nuclear projects visited the Waste Isolation Pilot Plant (WIPP) facilities in New Mexico and was of the opinion that salt deposits in New Mexico are a more viable alternative than "tuff" found in Nevada as a medium for the disposal of HLRW. He described the commission's trip to Washington, D.C., to visit key congressional and industry persons concerning Nevada's position on the issue of a repository in the state.

Mr. Loux then discussed Senate Joint Resolution No. 5 of the 1987 legislative session which urges the Federal Government to mitigate adverse effects of a facility for disposal of high-level radioactive waste.

Mr. Loux stated his office has been interacting with DOE on moving towards rule making on financial assistance guidelines. He explained that these are guidelines utilized by DOE to govern how states, and others, apply for and receive grant money to carry out oversight programs. He noted the state is working with DOE in the development of grants equal to taxes (GETT) guidelines and rules.

Mr. Loux also discussed the issue of the funding (\$79 million) Congress withheld from DOE's program pending its demonstrating it had made a good faith effort to consult and cooperate with the states and tribes on various aspects of the program called for by the NWPA.

Senator Hickey inquired if there had been a strained relationship with the Nuclear Regulatory Commission (NRC) and Nevada.

Mr. Loux stated in some sense there has been to a degree. He noted that there is the view that the current makeup of the NRC is probably less amiable to the concerns states and tribes have been raising, regarding not only the procedural aspects of the program, but also the technical. He described the state's role as it pertains to the NRC's Advisory Committee on Reactor Safeguards.

Mr. Loux noted that his agency is very pleased with the cooperation it has experienced in working with Mr. Gertz and the DOE project office, especially as it relates to the state's interest in securing adequate grant funding.

Mr. Loux went on to describe litigation and stated there are two problems. The first involves the First Circuit Court of Appeals' invalidation of portions of the EPA's standards. The problems he noted are procedural, whereby the EPA did not engage in a proper administrative procedures process with promulgation of that standard. Part of the standards were never submitted for public comment and review. A second issue deals with the inconsistency between the high-level waste and other standards the agency has, such as the "Safe Drinking Water Act." The court remanded the agency to go back and either repropose the standard or explain why it should be different. He understood the agency is going to repropose that standard. He noted there has been quite a bit of concern in some quarters that if the EPA is held to a 4 millirem standard, as opposed to the 25 millirem, the entire notion of geologic disposal will no longer be a viable economic solution to the Nation's waste program. Monitored Retrievable Storage (MRS) or some surface storage may be the only feasible alternative.

Mr. Loux, in response to a question by Senator Hickey, indicated the Nevada's office of the attorney general has filed an appeal with the Ninth Circuit Court of Appeals regarding the decision on litigation. He further explained the state's position regarding the appeal.

Senator Hickey requested Mr. Loux to keep the committee informed of any future suits which may be filed.

Mr. Loux apprised the committee of an injunction filed by the attorney general pertaining to EPA standards as previously discussed. Mr. Loux stated, in addition, there have been two court actions filed by the National Association of Utility Regulatory Commissioners (NAURC) as well as the Edison Electric Institute (EEI), challenging the recently promulgated standards by the DOE for the way in which amounts are calculated for defense programs and how much is paid by the United States Department of Defense into the overall repository program. He indicated the NAURC and the EEI feel the defense program should contribute between 30 to 33 percent of the overall cost of the program.

Mr. Loux went on to describe Nevada's involvement in an NRC negotiated rulemaking process pertaining to a licensing support system. He stated the NWPA mandated the NRC conclude its licensing activities within 3 years, with an additional year as a cushion (5 to 7 years is now the norm for power plant licensing). The NRC is attempting to find a computerized, mechanized system in which parties would agree to a negotiated process leading to a rule on how that process would go forward during licensing. The aim is to minimize the length of time of the licensing process. He stated Harry W. Swainston, deputy attorney general, and

Jim Davenport and Mal Murphy, special deputy attorneys general, are involved in this process. He indicated they are having monthly meetings and are attempting to set up a process which would allow participation and input from interested parties. In conclusion, Mr. Loux discussed Nevada's participation in the hearings before Congress and the nature and status of the various bills.

Senator Hickey requested Mr. Loux to keep Mr. Bayer apprised of the bills in Congress and their progress.

Senator Hickey requested local government representatives to give their reports.

Dennis Bechtel, coordinator for environmental programs for Clark County's Department of Comprehensive Planning, stated that two waste related studies are being conducted. First involves a socio-economic analysis which will provide a comprehensive evaluation of what impacts would be if a repository were selected for Yucca Mountain.

Mr. Bechtel stated transportation is the key issue in Clark County and in communities in that area noting that an independent transportation study is also underway. The first step is to define what the important issues are to the area, he said.

Mr. Bechtel stated initial concerns are in the area of emergency management, risk and routing. It is his understanding the DOE will be following the United State's Department of Transportation's regulations which identify Interstate 15 (I-15) and Hoover Dam as possible transport routes. He said he felt both routes would be inappropriate because the waste would travel through an urban area and over Hoover Dam.

Mr. Bechtel then encouraged endorsing the grants equal to taxes provision of the NWPA and noted that a formula for reallocation of the revenues should be adopted as a way to maximize revenue for all impacted areas of the state.

Mr. Bechtel stated the Clark County Commission, in early 1986 opposed the presence of the repository in Nevada. He encouraged the state to continue its efforts in making Congress realize the NWPA is a carefully crafted act, one which provides a logical progression of studies to be done before a repository is selected.

As it relates to transportation, Senator Hickey indicated he was concerned about a memorandum developed between DOE and the United States Department of Transportation (DOT) which dealt with transportation of high radioactive waste and problems which could develop in Nevada. He asked the study committee to review the memorandum.

Larry Bender, Department of Economic Development and staff representative for the City of Las Vegas' nuclear waste issue appeared next. Mr. Bender explained how the City of Las Vegas has been involved with the state on all matters pertaining to the program for siting a repository. He stated the City of Las Vegas has presented verbal and written testimony available to every committee or subcommittee in Congress considering nuclear waste legislation. He noted the city has taken a strong stand favoring the Udall legislation aimed at rectifying the disarray the DOE has perpetrated in the nuclear waste program. He explained that because of the complexity and intensity of the program, the city has decided to hire a consultant to follow the nuclear waste issue full-time. The consultant has been directed to report to Las Vegas' Department of

Economic and Urban Development, its city manager and its city council. His duties are confined to nuclear waste issues to ensure all items of importance are reported to the city council and all important meetings are attended.

Assemblyman Spriggs inquired if the City of Las Vegas has proposed any alternative routes for shipment of transuranic waste to the WIPP site in New Mexico.

Mr. Bender stated he understood only the state can designate routes, but the city has been involved in the issue and is concerned about the suggested routes.

Senator Hickey observed that the State Emergency Management Plan and Local Emergency Management Plan should be designed to include high-level radioactive waste. He requested a report on the involvement of both state and local governments in the development of the emergency management plan.

Mike Baughman, representing Lincoln County and the City of Caliente, Nevada, spoke next. He described the structure of Lincoln County which was established to deal with the issue of HLRW. Mr. Baughman stated the main issues of concern to both the county and city are the transportation of HLRW, environmental risks and increasing local government participation in the program. Mr. Baughman proceeded to describe, in detail, matters relating to each of the issues of concern which the county and city identified as having potentially significant impacts on the citizens of Lincoln County and the City of Caliente. He said he felt local governments, at the national level, have been virtually left out on policy decisions. He indicated the NRC announced in the Federal Register it was going to set up a committee to specifically take input to help facilitate negotiated rule making. When this committee was formed, local governments, he noted, were specifically excluded from the first tier.

Senator Hickey asked Mr. Baughman if local governments have been involved in negotiated rule making as discussed by Mr. Loux earlier.

Mr. Baughman indicated that they are indirectly involved.

Steve Bradhurst, representing the Nye County Board of County Commissioners, was the next speaker. He stated Nye County will continue to speak out in order to protect the county's residents and natural resources. He indicated they were concerned with the close proximity of Armagosa Valley and Beatty to Yucca Mountain and the fact Armagosa Valley relies on groundwater and is downstream, hydrologically speaking, from Yucca Mountain. He referred to Exhibit C for Nye County's work program, which he distributed to the committee, regarding the repository program at Yucca Mountain. He identified for the committee the work program goals and objectives and noted they have remained constant since October 1983. He described, in detail, each of the goals and objectives as outlined in the work program.

Mr. Bradhurst indicated as part of the state's socioeconomic study, baseline data has been collected in regards to the history of Armagosa Valley and Beatty, which has never been done before. He felt that the historical information will be extremely important in establishing baseline data.

Mr. Bradhurst referred to page 2 of Exhibit D for testimony before the United States Senate Committee on Energy and Natural Resources regarding Nye County's position on a repository at Yucca Mountain.

Mr. Bradhurst indicated another concern of Nye County is the creation of Bullfrog County, Nevada. He noted the county requested that the governor call a special session of the legislature in order to repeal the law creating Bullfrog County (Senate Bill No. 595, Statutes of Nevada, 1987) before it caused major law enforcement problems and excessive litigation expenditures. The governor did not comply and the issue is now in court.

Philip Dunleavy, district attorney of Nye County, speaking on the issue of Bullfrog County, stated he has filed a lawsuit and is appearing before this committee to voice citizen concerns regarding the existence of Bullfrog County.

Mr. Strolin provided the committee with an overview of Nevada's socioeconomic study. He described the nature and extent of the program and explained how it progressed during its 2 year existence. He indicated in the first year, most of the baseline data information has been completed for Esmeralda and Nye counties. He noted that data for Clark and Lincoln counties is expected to be completed during the second year.

Mr. Strolin stated a third area of the study involves the risk studies component, which deals first with evaluating the adequacy of the DOE's risk assessment work to date. He mentioned that the study involves how the perception of risks may influence the behavior of people in and outside Nevada. He referred to Exhibit E for a schedule of activities by his office relating to the completion date for information collection. In response to a question from Senator Hickey, Mr. Strolin explained that a year end report has been delivered by the consultant which consists of 13 volumes. The 2,000 page document, has not yet been made public since much of the information is preliminary. He went on to explain the term "real risk" and how it evolved. He also stated a series of mini-studies will be made regarding how visitors, convention planners, retirees and new business decisionmakers are likely to react and perceive the risks of a nuclear repository and how these would influence their behaviors.

Mr. Strolin indicated he anticipates completing the impact assessment work by June 30, 1989. He advised the committee that monitoring of the program will be ongoing to maintain the data base and to keep the entire system current.

Assemblyman Schofield inquired as to the possibility of duplication of effort by local governments.

Mr. Strolin stated the reports were not at all duplicative. He explained the local government staff involved with local government programs are part of a steering committee which conducts the study. He went on to explain how local government efforts actually enhance the state's program.

Responding to Senator Hickey, Mr. Strolin stated that to date, Nevada's program has not been affected by the changes in DOE's administration.

Senator Hickey called on Mr. di Bartolo to begin his presentation.

Mr. di Bartolo referred to overhead transparencies which outlined the scope of what is occurring in planning for the transportation of nuclear waste. He pointed out that the figures shown were based on discussions with the DOE and from environmental assessments. He indicated 70 percent of the volume of HLRW would be shipped by railroads and 30 percent by highway.

Mr. di Bartolo stated six highway routes are being considered in southern Nevada. He stated Utah may have almost as many shipments of radioactive waste as Nevada if certain highway routes are selected. The figures, he notes, are speculative since actual routes are not yet known. Mr. di Bartolo explained the DOE is preparing an overflight study regarding potential highway and railway transportation routes.

Mr. di Bartolo stated his office is mandated by the legislature to prepare a transportation plan. In this effort, his office is now in the process of establishing transportation focus teams with representatives from various state and local agencies. Some of its members would be from state community services; division of emergency management in the department of the military; the public service commission of Nevada; the radiological health section of Nevada's health division in the department of human resources; the state fire marshal division in the department of commerce; the division of state lands in the state department of conservation and natural resources; and Nevada's department of transportation. He noted he would like also to coordinate with the emergency response commission and have its participation on the focus teams. He stated there is overlap between Assembly Bill 352, (chapter 725, Statutes of Nevada, 1987) which makes various changes in provisions governing the transportation of hazardous materials and Assembly Bill 47, which requires Nevada's department of transportation to develop plans for routing shipments of certain radioactive wastes.

Mr. di Bartolo explained the state and local government planning group and his office have prioritized transportation issues. A routing analysis for WIPP is the first in priority. Waste Isolation Pilot Plant shipments could possibly start from the Nevada Test Site in 1990. According to Mr. di Bartolo, there have been no decisions made for routing WIPP shipments to date. The second priority item, he noted, has to do with highway and railway routes for NWA shipments and the risks to the population, infrastructure of the routes, and accident rates. Mr. di Bartolo explained that a regulatory review is currently underway of federal, state and local statutes and ordinances to determine if there are inconsistencies. He explained that by the end of December 1987, a preliminary analysis of that information should be completed. He indicated a very high priority item is the development of a transportation management information system to establish a baseline data base. In response to a question from Senator Hickey, Mr. di Bartolo noted a report relating to the status of the planning effort could be presented to the 1989 legislative session. He also noted that affected Indian tribes are expected to become involved in the planning process.

Assemblyman Schofield asked how the agency for nuclear projects interfaced with the DOE's Nevada Project Office.

Mr. di Bartolo explained in detail how the agency interfaced.

Mr. Gertz added to Mr. di Bartolo's discussion by explaining that under current DOE policy, states are asked to designate alternate routes. The DOT rules call for using interstate routes unless previously designated state routes are set. He stated if Nevada is chosen as the designated repository site, he would encourage developing bypasses around populated areas so shipments can be moved safely and in an expeditious manner.

Assemblyman Schofield noted that even if Nevada is not selected for the repository site, the same criteria for transportation should be used for any other site which may be chosen.

Senator Hickey stated he was concerned with transportation regulations and rules, (especially interstate) since these will not be negotiated between DOT and the state. The DOT assumes the position of the regulator rather than an arbitrator. According to the act, there should be cooperation between DOE and the state in the development of a total plan dealing with high-level radioactive waste.

Mr. Gertz advised the committee he is concerned about the situation since DOE is viewed as being regulated by DOT.

The Chairman called next on Carl Johnson.

Mr. Johnson stated the focus of the state's technical program is to assure the State of Nevada, from a scientific perspective, that Yucca Mountain will safely contain and isolate radioactive waste. He advised his office is constantly reviewing the state of knowledge in the various geotechnical areas. He noted there is some question in the scientific community as to whether or not there are enough technological tools in place for a reasonable characterization of water movement in a fractured rock environment similar to Yucca Mountain. He noted a great number of papers have been presented by various scientific experts at conferences, not only in the United States but throughout the world, which attempt to focus on the problem of trying to model and develop tools to establish the perimeters needed to measure water movement in the unsaturated zone. In response to a question from Senator Hickey, Mr. Johnson stated he is of the opinion that a sufficient number of drill holes at Yucca Mountain were made which can safely characterize that fractured hard rock is present.

Mr. Johnson discussed the relationship between the Yucca Mountain aquifer and the regional aquifer since the regional aquifer ends in Death Valley National Monument in California. Concern has been expressed because of legislation pending in Congress which would make Death Valley a national park.

Mr. Johnson went on to explain the potential of active faulting and earthquakes in and around the repository site. He noted these as important concerns as well as the potential volcanic hazard because of fairly young cinder cones found within 3 or 4 miles of the proposed repository site. A final concern is the possible existence of mineral and hydrocarbon resources and the possibility of subsequent exploratory ventures in this area.

Mr. Johnson indicated next the review area of the program, which addresses reviewing technical documents of the DOE and its contractors. He pointed out the monitoring activity is mainly carried out by the desert research institute (DRI) since it has an office close to the site. The DRI, he said, is able to monitor the site on a regular basis in order to determine the type of field activities and procedures being used.

Mr. Johnson concluded his presentation by explaining the status of the independent scientific funding.

Assemblyman Spriggs inquired about the geologic age of the cinder cones in the area.

Mr. Johnson stated the original timeframe of the Lathrup Wells cone, (located west of Lathrup Wells and Armagosa Valley), was dated at 300,000 years. Earlier this year, researchers revisited that cone because other researchers questioned the age frame. Upon resurveying the area, a preliminary age date was established

at something less than 20,000 years. He indicated additional studies will be conducted to establish a more concrete age date, but it suggests the possibility of an eruption within the same timeframe as the repository itself (roughly 10,000 years).

In response to Assemblyman Spriggs' question, Mr. Johnson indicated he felt any of the concerns discussed could disqualify the site at Yucca Mountain if data follows along the same line as the information which has been developed thus far. Further study is needed to prove conclusively that any one of the conditions exists, he said.

Assemblyman Spriggs inquired as to Mr. Johnson's opinion regarding the salt domes being studied in Europe versus tuff and fractured rock being studied in the United States.

Mr. Johnson stated the comparison was somewhat like comparing "apples and oranges." He noted the elasticity of salt appears to lend itself better to a repository site. He noted that salt has the ability to compress itself around a canister of waste material. He explained that the presence of salt indicates there is no active groundwater moving through the system, which is a major concern for transporting radionuclides from the repository to the environment.

Assemblyman Schofield inquired if the budget for the state's studies had been upgraded to cover their technical study concerns.

Mr. Johnson stated it had.

Assemblyman Schofield asked if any technical studies have been completed which analyze the migration of water in the fractures of the host material in and around Yucca Mountain.

Mr. Johnson answered that none have been completed. He did note, however, that there has been a number of analyses done of the Climax Spent Fuel Test Facility. The Climax Spent Fuel Test Facility is a granite facility with very few faults and fractures in comparison to the tuff repository. According to Mr. Johnson, ongoing studies have been conducted by DOE and the DRI regarding the fault and fracture system at Rainer/Mesa, which is the site for DOE's tunnel testing program. He explained, in order to evaluate the movement of water through various faults and fractures, exploratory shafts and tunnels must be developed to verify the geologic conditions at Yucca Mountain.

Assemblyman Schofield inquired if there is the same amount of data available on each of the proposed repository sites.

Mr. Gertz stated all the information and volumes will be available on January 8, 1988. He stated Texas has not yet completed its report.

Mr. Johnson stated copies of the SCP have been requested from the other sites.

Senator Hickey noted that most of the arguments up to now have been procedural with DOE. He asked if there is adequate data at this time to disqualify Yucca Mountain with the technical concerns which Mr. Johnson mentioned.

Mr. Johnson stated he believes there is sufficient data available to lead to a possible conclusion of disqualification, but the type of documented evidence the scientific community would require has not been obtained.

Senator Hickey inquired if excavating a hole would provide that scientific data or if adequate data could be developed from the above-ground SCP.

Mr. Johnson indicated he felt most of the six concerns could probably be resolved with surface based studies. He felt the movement of moisture through the unsaturated zone would require an exploratory shaft. Present drill hole data could be utilized to obtain natural resource potential. He indicated he believes surface based programs could be utilized to prove or disprove the suitability of a site.

Senator Hickey indicated Nevada's legislators felt the qualifications of the site would have to be proven scientifically, one way or the other.

Mr. Johnson indicated the state has four contractors working for it. The DRI is handling hydrogeology; Mifflin and Associates, a private consulting firm in Las Vegas, deals with geochemistry and past and future climates; the University of Nevada-Reno is dealing with geology and seismology; and volcanism is being addressed by the geo-science department of the University of Nevada-Las Vegas.

Mr. Johnson stated his office is proposing an 18-month, comprehensive environmental survey beginning in the spring of 1988. The survey will cover air quality, archeological, biological, esthetics, noise, soils and water quality of Yucca Mountain.

Mr. Johnson then went on to explain the quality assurance program. He stated in 1986, his office selected Sargent and Lundy Engineers of Chicago, Illinois, to develop a quality assurance program for Nevada's agency for nuclear projects as it pertains to all technical activities relating to nuclear programs. Once a manual for quality assurance has been finalized, it will be implemented within his office and will apply to activities of their contractors. A copy will also be sent to the NRC for its formal approval.

Senator Hickey opened the hearing for public testimony.

Alice Williams, a Shoshone-Paiute Indian, gave testimony on the erosion of the environment caused by mankind stating no one can predict what will happen in the future with regard to the environment. She stated she opposed the nuclear repository being located in Nevada.

Glenn Wasson, traditional Shoshone, gave an historical account of the Tribe's history in Washoe County. He stated the Shoshone Tribe is the legal owner of the land at Yucca Mountain and is opposed to any nuclear activity because of the damage to the Earth.

Gloria Dundaro, representing the North American Conference on Christianity and Ecology, stated human beings will be impacted by the result of the HLRW program.

Mr. Fulkerson, identified earlier, stated Citizen Alert was founded in 1975 in response to a federal proposal for high-level radioactive waste storage at the Nevada Test Site. Mr. Fulkerson provided the committee with a handout, (see Exhibit F) which he noted contains Citizen Alert's perception of the problem and suggestions to ameliorate the problem.

Mr. Fulkerson suggested the committee begin a process to obtain data on the issue to bring it "up to speed" on information being

collected. He further suggested that at the conclusion of this process, the committee should make a recommendation to the 1989 legislature as to what its recommendations are on the radioactive waste repository.

Senator Hickey and Assemblyman Jeffrey briefly discussed the legislative process with Mr. Fulkerson.

There was considerable discussion between Mr. Fulkerson and the committee members regarding public testimony. Mr. Fulkerson requested that he be placed on the agenda for the next meeting.

Senator Hickey stated Mr. Fulkerson would be invited to the next meeting.

There being no further business, the meeting was adjourned.

Respectfully submitted

Barbara Kightlinger
Barbara Kightlinger,
Research Secretary

APPROVED BY:

Thomas J. Hickey

Senator Thomas J. Hickey, Chairman

DATE: 5/12/88

U.S. DEPARTMENT OF ENERGY

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NNWSI
Nevada
Nuclear
Waste
Storage
Investigations
PROJECT

**VI
MOUNTAIN**

Nevada Nuclear Waste Storage Investigations Project

STATUS OF THE NNWSI PROJECT

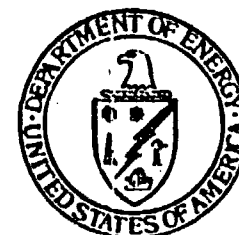
PRESENTED TO

**NEVADA LEGISLATURE'S COMMITTEE
ON HIGH-LEVEL RADIOACTIVE WASTE**

**Carl Gertz
PROJECT MANAGER**

MAY 11, 1988

**United States Department of Energy
Nevada Operations Office/Waste Management Project Office**



U.S. DEPARTMENT OF ENERGY

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Nevada
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Investigations
PROJECT

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Nevada Nuclear Waste Storage Investigations Project

STATUS OF THE NNWSI PROJECT

PRESENTED TO

**NEVADA LEGISLATURE'S COMMITTEE
ON HIGH-LEVEL RADIOACTIVE WASTE**

**Carl Gertz
PROJECT MANAGER**

MAY 11, 1988

**United States Department of Energy
Nevada Operations Office/Waste Management Project Office**



AGENDA

- **LEGISLATION**
- **ORGANIZATION/FUNDING**
- **PROGRAM SCHEDULE**
- **MAJOR PROJECT PRIORITIES FOR FY 1988**
- **SITE CHARACTERIZATION**
- **NRC REVIEW OF SCP/CD**
- **SOCIOECONOMIC PROGRAM**
- **ALTERNATE GEOHYDROLOGICAL MODELS**
- **LAND ACCESS**
- **PUBLIC INTERACTIONS**

NUCLEAR WASTE POLICY AMENDMENTS ACT OF 1987 WAS SIGNED BY THE PRESIDENT DECEMBER 22, 1987

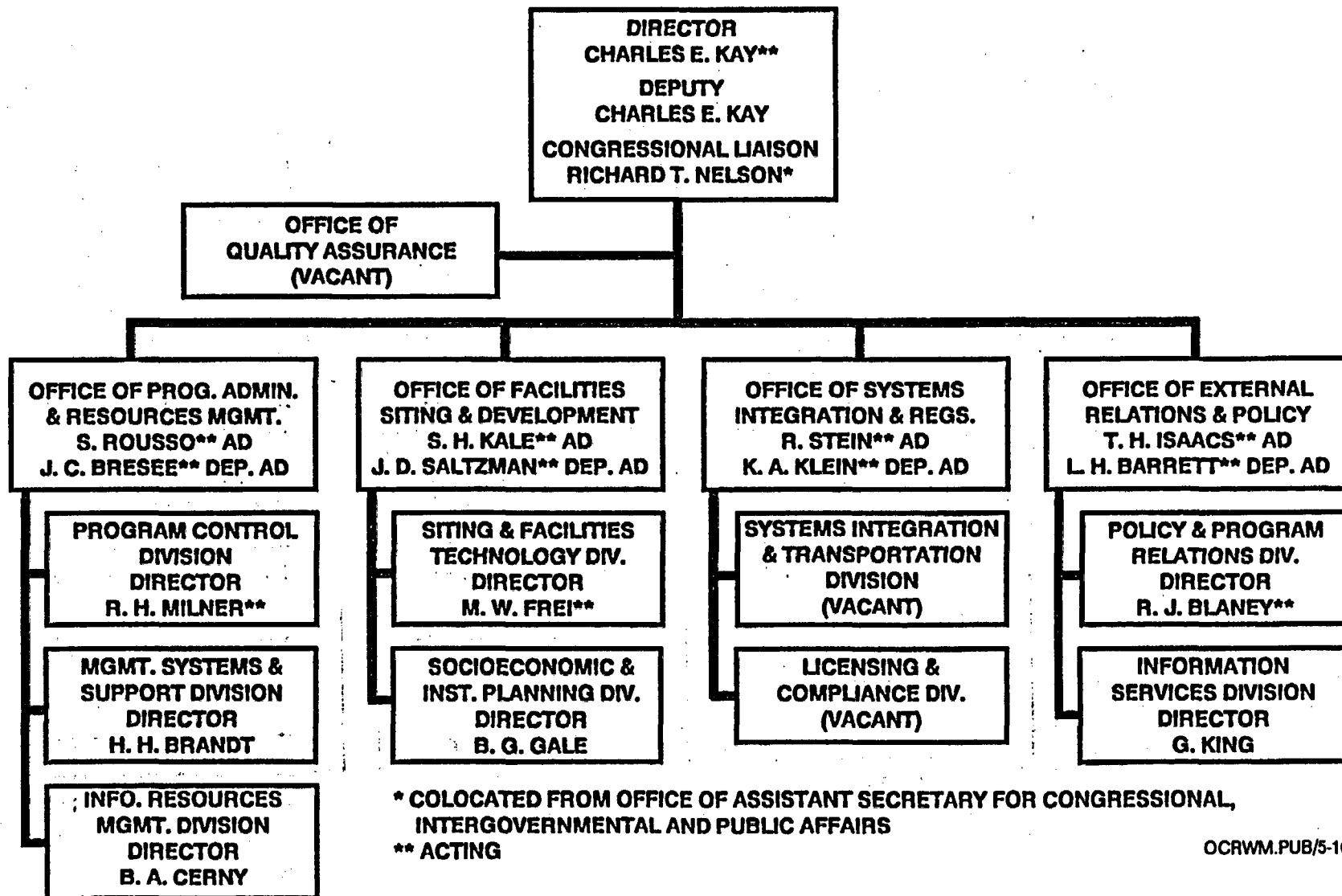
- **DIRECTED DOE TO CONDUCT SITE CHARACTERIZATION ACTIVITIES AT YUCCA MOUNTAIN**
- **TERMINATED ALL WORK IN WASHINGTON AND TEXAS WITHIN 90 DAYS (EXCEPT RECLAMATION)**
- **MRS AUTHORIZED BASED ON FOLLOWING CONDITIONS:**
 - **NO MRS SITE SELECTED UNTIL SITE CHARACTERIZATION COMPLETE**
 - **NO CONSTRUCTION OF MRS UNTIL NRC ISSUES LICENSE TO CONSTRUCT REPOSITORY**
- **AUTHORIZED NEGOTIATOR TO WORK WITH STATES FOR BOTH REPOSITORY AND MRS SITES**

NUCLEAR WASTE POLICY AMENDMENTS ACT OF 1987

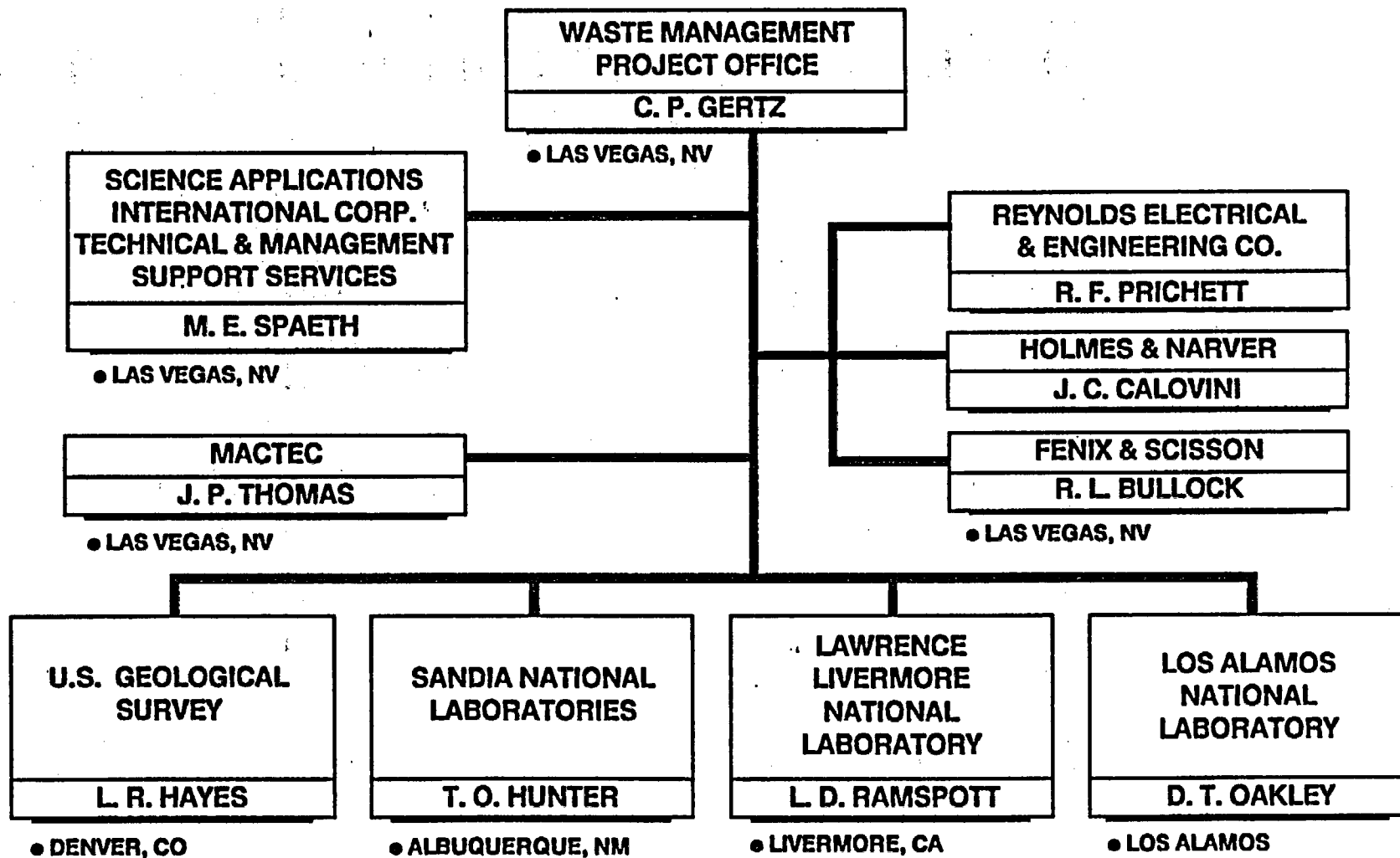
(CONTINUED)

- **NO SECOND REPOSITORY**
- **TRANSPORTATION: NRC CERTIFIED CASKS, ADVANCE NOTIFICATION**
- **AUTHORIZED SUBSEABED STUDY, IMPACT ON NEVADA AND DRY CASK STORAGE STUDY**
- **ESTABLISHED NUCLEAR WASTE TECHNICAL REVIEW BOARD NOMINATED BY NATIONAL ACADEMY OF SCIENCES**
- **SPECIAL CONSIDERATION FOR NEVADA FOR SITING FEDERAL RESEARCH PROJECTS**
- **AFFECTED LOCAL GOVERNMENTS ARE ELIGIBLE TO RECEIVE GRANTS FOR TECHNICAL STUDIES; TO SHARE IN BENEFIT PAYMENTS; AND BE CONSULTED IN DEVELOPING ANY BENEFIT AGREEMENT**

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT



DOE/NV ORGANIZATION



— PROJECT DIRECTION

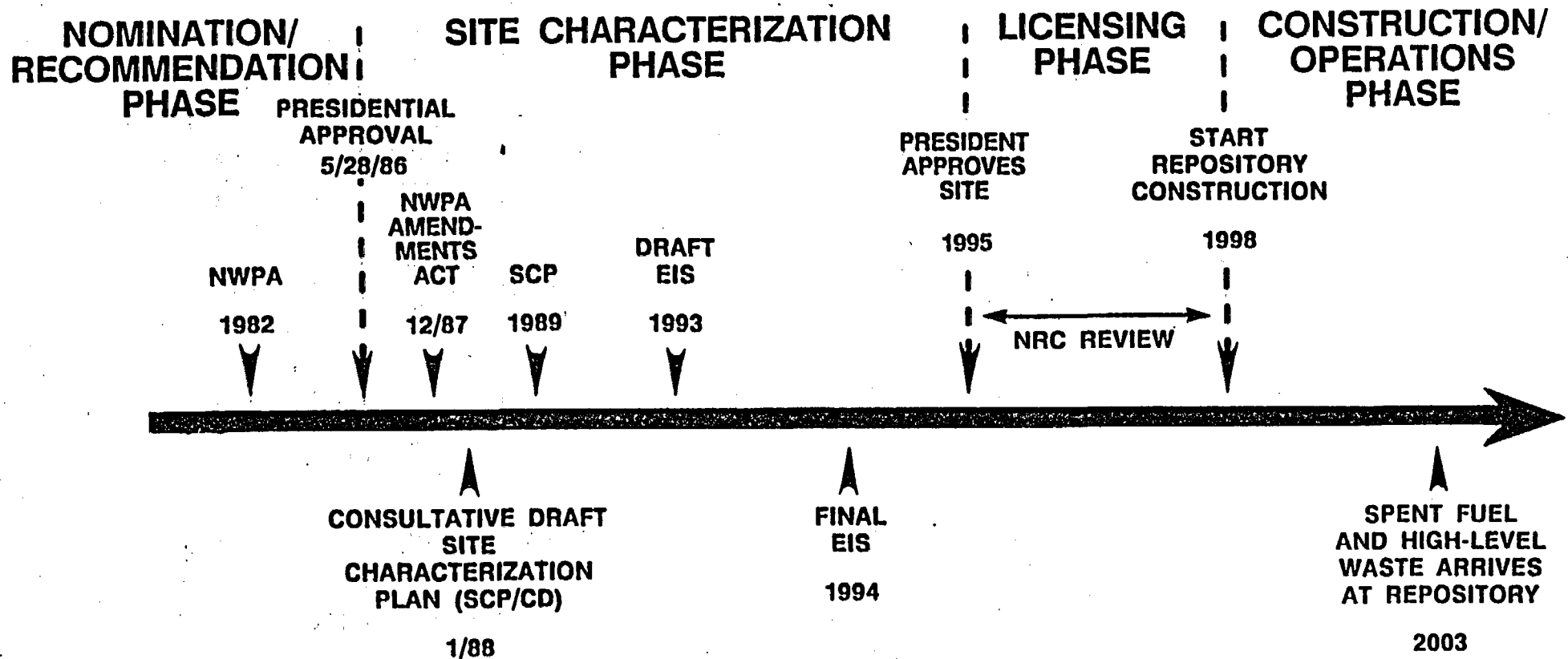
**NNWSI PROJECT FY 88-91 FUNDING
(FY 89 CONGRESSIONAL BUDGET SUBMITTAL)**

<u>PERIOD</u>	<u>AMOUNT</u>	<u>STATUS</u>
FY 1988	\$156 M	APPROVED
FY 1989	\$225 M	PROPOSED
FY 1990	\$300 M	PROPOSED
FY 1991	\$325 M	PROPOSED

STATE OF NEVADA GRANTS FOR INDEPENDENT STUDIES AND PARTICIPATION IN SITING PROCESS

<u>PERIOD</u>	<u>AMOUNT</u>	<u>STATUS</u>
3/87 - 6/88	\$14.1 M	APPROVED
7/88 - 6/89	\$23.1 M	PROPOSED
7/89 - 6/90	\$26.7 M	PROPOSED
7/90 - 6/91	\$31.4 M	PROPOSED

PROGRAM SCHEDULE



MAJOR PROJECT PRIORITIES FOR FY 1988

- **CONTINUE ONGOING FIELD, LABORATORY, AND MONITORING ACTIVITIES**
- **CONTINUE WORK ON SITE CHARACTERIZATION PLAN INCLUDING STUDY PLANS**
- **CONDUCT WASTE PACKAGE AND REPOSITORY DESIGN ACTIVITIES**
- **COMPLETE MAJOR EXPLORATORY SHAFT FACILITY DESIGN**
- **COMPLETE NWPAA SECTION 175 SOCIOECONOMIC STUDIES**
- **OBTAIN NECESSARY ENVIRONMENTAL PERMITS, ISSUE DRAFT MMPs, AND PREPARE ENVIRONMENTAL PROGRAM PLAN**
- **RESUME PROTOTYPE TESTING IN G-TUNNEL**

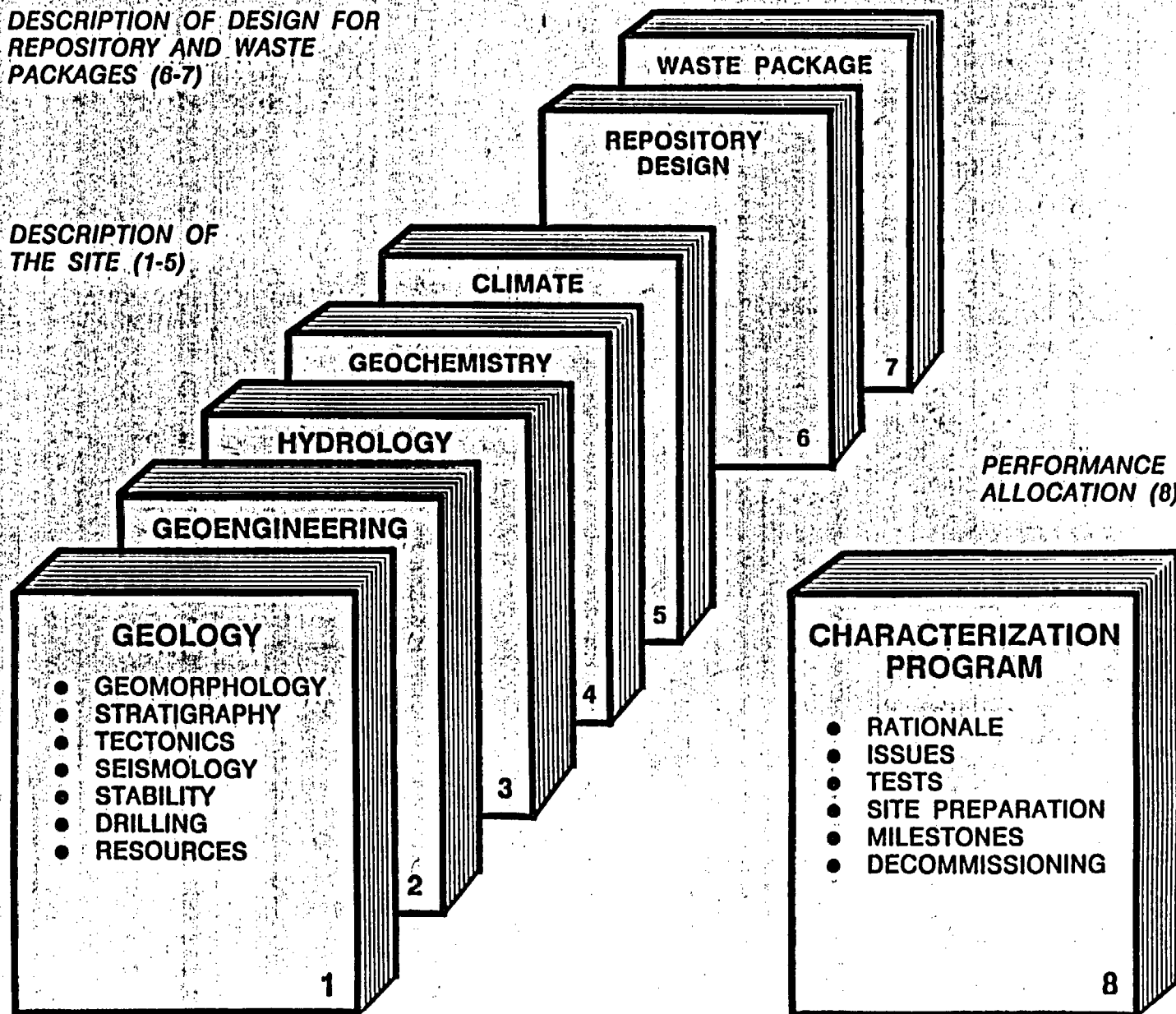
**THE SCP CONSULTATION DRAFT WAS ISSUED
IN JANUARY 1988 AS BASIS FOR DISCUSSION
WITH STATE OF NEVADA/NRC. THE SCP WILL
BE FINALIZED AND RELEASED FOR PUBLIC,
STATE, NRC COMMENT IN 1989**

- **IT WILL SUMMARIZE WHAT IS KNOWN ABOUT THE NATURAL CHARACTERISTICS OF THE SITE**
- **IT WILL SUMMARIZE CONCEPTUAL DESIGNS FOR THE REPOSITORY AND THE WASTE PACKAGES**
- **IT WILL IDENTIFY DOE'S POSITION ON MAJOR ISSUES TO BE RESOLVED DURING LICENSING (DERIVED FROM REGULATIONS)**
- **IT WILL PRESENT STRATEGIES TO RESOLVE THE ISSUES**
- **IT WILL IDENTIFY PLANNED TESTS, ANALYSES, AND STUDIES**

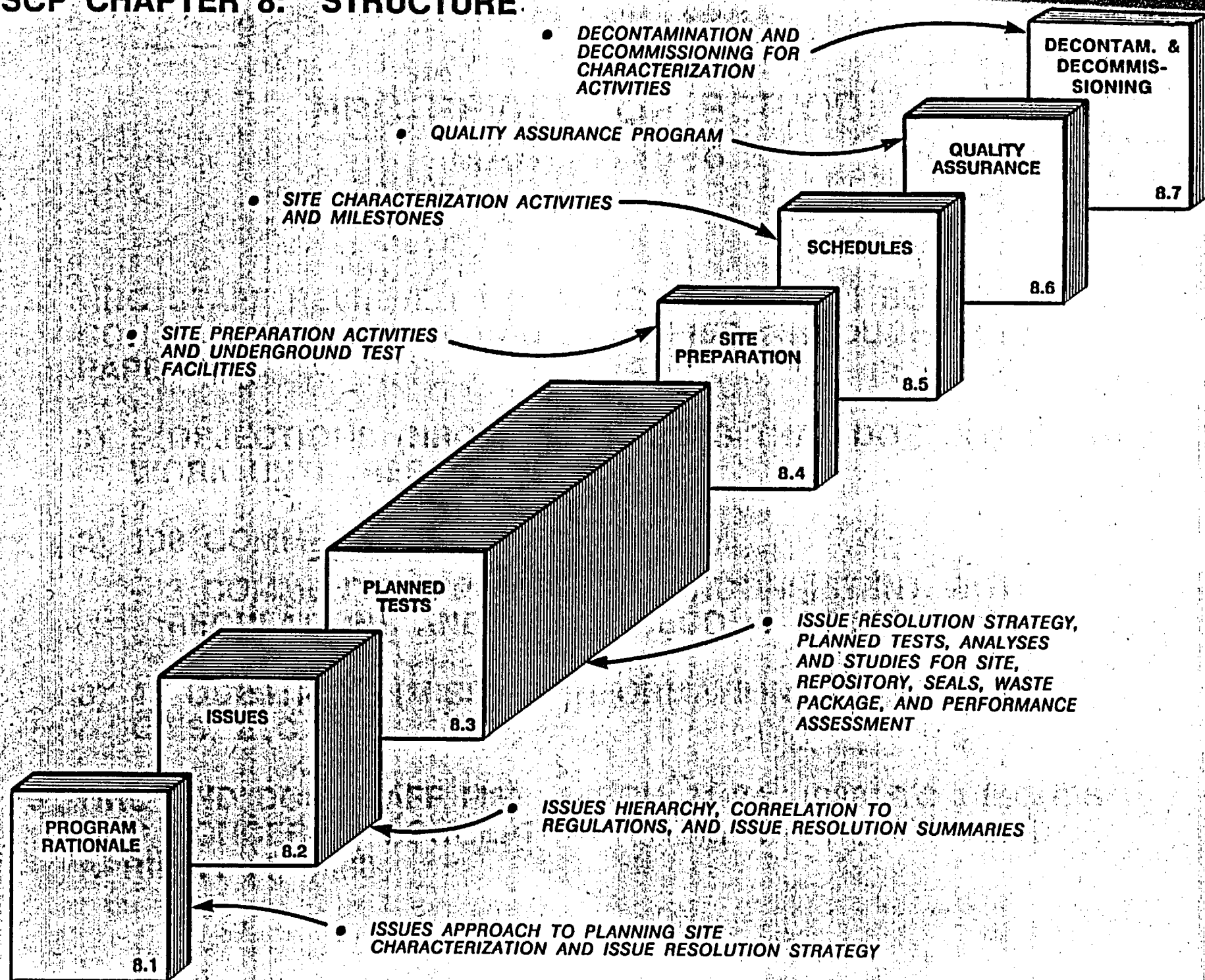
DESCRIPTION OF SITE CHARACTERIZATION ACTIVITIES AND TESTS FOUND IN NNWSI PROJECT SITE CHARACTERIZATION PLAN (SCP)

DESCRIPTION OF DESIGN FOR
REPOSITORY AND WASTE
PACKAGES (6-7)

DESCRIPTION OF
THE SITE (1-5)



SCP CHAPTER 8: STRUCTURE



NRC REVIEW OF SCP/CD MARCH 1988

- **NRC STAFF REVIEWED THE YUCCA MOUNTAIN SCP CONSULTATION DRAFT AND IDENTIFIED, THROUGH POINT PAPERS:**
 - 1) **5 OBJECTIONS (NRC RECOMMENDS THAT DOE NOT START WORK UNTIL RESOLVED)**
 - 2) **108 COMMENTS (NEED ATTENTION)**
 - **3 COMMENTS APPEAR TO BE INCONSISTENT WITH REGULATIONS AND COULD BECOME OBJECTIONS**
 - 3) **48 QUESTIONS (MISSING INFORMATION, INCONSISTENCIES, ETC.)**
- **NRC AND DOE STAFF MET MARCH 21-24, 1988, TO DISCUSS NRC CONCERNS; CONCEPTUAL MODEL WORKSHOP HELD APRIL 11-14, 1988**

NRC REVIEW OF SCP/CD

MARCH 1988

(CONTINUED)

OBJECTION 1

THE SCP/CD DOES NOT IDENTIFY THE FULL RANGE OF ALTERNATIVE CONCEPTUAL MODELS THAT IS CONSISTENT WITH THE EXISTING DATA FOR THE SITE: THUS, ALL INVESTIGATIONS NEEDED TO DISTINGUISH AMONG THE VARIOUS MODELS MAY NOT HAVE BEEN IDENTIFIED

RESPONSE

- SELECTING A PREFERRED MODEL IS CONSISTENT WITH SYSTEMS APPROACH (PERFORMANCE ALLOCATION)
- THE FULL RANGE OF CREDIBLE CONCEPTUAL MODELS WILL BE IDENTIFIED IN THE SCP, INCLUDING RATIONALE WHY SPECIFIC MODELS WERE SELECTED AS PREFERRED
- TESTING PROGRAM WILL BE ANALYZED TO ENSURE IT ADDRESSES CREDIBLE MODELS
- A MEETING WITH THE NRC TO DISCUSS ALTERNATIVE CONCEPTUAL MODELS WAS HELD APRIL 11-14, 1988

NRC REVIEW OF SCP/CD

MARCH 1988

(CONTINUED)

OBJECTIONS 2, 3 AND 4

THE SCP/CD RAISES CONCERNS WITH THE EXPLORATORY SHAFT FACILITY:

- **THE PROPOSED SHAFT PENETRATION INTO THE CALICO HILLS UNIT AND THE HORIZONTAL DRIFTING, IF IT WERE TO OCCUR, MAY HAVE SIGNIFICANT NEGATIVE IMPACTS ON THE WASTE ISOLATION CAPABILITY OF THE SITE**
- **THE SCP/CD DOES NOT INCLUDE THE CONCEPTUAL DESIGN INFORMATION NEEDED TO ALLOW EVALUATION OF THE POTENTIAL INTERFERENCE OF PROPOSED INVESTIGATIONS**
- **THE SCP/CD DOES NOT ADEQUATELY CONSIDER THE POTENTIALLY ADVERSE IMPACTS THAT COULD RESULT FROM THE PROPOSED LOCATIONS OF THE EXPLORATORY SHAFTS IN AREAS THAT MIGHT BE SUBJECT TO EROSION AND FLOODING**

NRC REVIEW OF SCP/CD

MARCH 1988

(CONTINUED)

RESPONSE TO QUESTIONS 2, 3 AND 4

- THE SCP/CD WAS PUBLISHED BEFORE COMPLETION OF THE PERFORMANCE ANALYSIS AND TITLE II DESIGN OF THE EXPLORATORY SHAFT. THIS FACT WAS DISCUSSED WITH NRC MANAGEMENT
- THE SCP WILL INCLUDE A PERFORMANCE ANALYSIS THAT WILL ADDRESS THE CONCERNS ABOUT SHAFT LOCATIONS AND POTENTIALLY ADVERSE IMPACTS
- THE SCP WILL BE ACCOMPANIED BY THE TITLE I ESF DESIGN AND ELEMENTS OF TITLE II DESIGN THAT ARE IMPORTANT TO HEALTH AND SAFETY, OR TO WASTE ISOLATION
- ESF DESIGN HAS BEEN A TOPIC OF INTERACTIONS WITH THE NRC AND WILL BE PROPOSED AS A POTENTIAL TOPIC FOR CONTINUED INTERACTION WITH THE NRC

NRC REVIEW OF SCP/CD

MARCH 1988

(CONTINUED)

OBJECTION 5

THE SCP/CD REFERENCES QA PLANS AND PROCEDURES FOR DOE AND ITS CONTRACTORS THAT ARE CURRENTLY UNDERGOING REVISION, HAVE NOT ADDRESSED OUTSTANDING NRC COMMENTS, OR HAVE NOT UNDERGONE NRC STAFF REVIEW. THUS, DATA COLLECTED UNDER THESE EXISTING PROGRAMS MAY NOT BE USABLE IN LICENSING

RESPONSE

- THE DOE FULLY INTENDS TO HAVE APPROVED QA PLANS IN PLACE BEFORE COMPLETION OF THE SCP
- THE NNWSI QA PLAN HAS RECENTLY BEEN REVISED IN RESPONSE TO NRC COMMENTS. OTHER PROJECT PARTICIPANT QA PLANS HAVE BEEN, OR WILL BE, SUBMITTED TO THE NRC

SOCIOECONOMIC PROGRAM

- **IMPLEMENT SOCIOECONOMIC MONITORING & MITIGATION PLAN (SMMP) AND ISSUE REPORTS**
- **SECTION 175 REPORT FOR SUBMISSION TO CONGRESS (ADDRESSES POTENTIAL IMPACTS OF LOCATING A REPOSITORY AT YUCCA MOUNTAIN)**
- **DATA COLLECTION FOR PAYMENTS EQUAL-TO-TAXES (PETT) PROGRAM**

PAYMENTS EQUAL TO TAXES (PETT)

- **REQUIRED BY SECTION 116(C)(3) OF NWPA**
- **APPLIES TO ALL PHASES OF REPOSITORY PROGRAM STARTING MAY 28, 1986**
- **DOE TO MAKE TAX-LIKE PAYMENTS EQUAL TO THOSE A PRIVATE FIRM WOULD PAY IN ACTUAL TAXES WHILE UNDERTAKING REPOSITORY SITING, CONSTRUCTION AND OPERATION**
- **HQ PLANS TO RESTART RULEMAKING**
 - **PUBLICATION OF DRAFT PETT RULE IN FEDERAL REGISTER** **JUNE**
 - **HQ ISSUES FINAL RULE** **AUGUST**
 - **WMPO PREPARES FINAL PETT ESTIMATE FOR HQ CONCURRENCE** **SEPTEMBER**
 - **PETT PAYMENT TO ELIGIBLE JURISDICTION** **FALL**

STATUS OF PETT PROGRAM

- **CURRENT DEFINITION OF SITE STILL IN DRAFT**
 - **5 km IN ALL DIRECTIONS FROM OUTER BOUNDARY OF PLANNED UNDERGROUND FACILITY**
 - **SLIGHTLY EXCEEDS 100 SQUARE km LIMIT FOR CONTROLLED AREA**
- **HQ PLANS TO RE-START RULE-MAKING**
- **NNWSI PROJECT FORMED BUSINESS STRATEGY GROUP**
- **PRELIMINARY PETT ESTIMATE UNDER DEVELOPMENT FOR REVIEW BY HQ**
- **SUBCONTRACTOR BEING SOUGHT TO ADVISE ON NEVADA TAX PROCEDURES AND PROPERTY APPRAISAL**

NUCLEAR WASTE POLICY AMENDMENTS ACT OF 1987 SECTION 175

- **REQUIRES SUBMITTAL OF A REPORT TO CONGRESS THAT ADDRESSES POTENTIAL IMPACTS OF LOCATING A REPOSITORY AT YUCCA MOUNTAIN**
 - **INCORPORATED LANGUAGE OF THE 1987 SESSION NEVADA SENATE JOINT RESOLUTION NUMBER 5 IDENTIFYING 14 AREAS OF POTENTIAL IMPACTS**
- **REQUIRES ANALYSIS OF RESPONSIBILITIES FOR DEALING WITH FEDERAL IMPACTS**
 - **FEDERAL**
 - **STATE**
 - **JOINT**
- **REQUIRES ANALYSIS OF AUTHORITIES AVAILABLE TO MITIGATE IMPACTS AND APPROPRIATE SOURCES OF MITIGATION FUNDING**
- **QUALITATIVE ANALYSIS APPROACH**

SCOPE OF SECTION 175 REPORT

- **SPANS APPROXIMATELY 70 YEARS**
 - **SITE CHARACTERIZATION**
 - **REPOSITORY CONSTRUCTION**
 - **OPERATION**
 - **DECOMMISSIONING/CLOSURE**
- **FOUR COUNTIES AND ASSOCIATED COMMUNITIES**
 - **NYE**
 - **CLARK**
 - **LINCOLN**
 - **ESMERALDA**

SECTION 175 REPORT

14 AREAS OF POTENTIAL IMPACTS

- **EDUCATION**
- **PUBLIC HEALTH**
- **LAW ENFORCEMENT**
- **FIRE PROTECTION**
- **MEDICAL CARE**
- **CULTURAL & RECREATIONAL NEEDS**
- **DISTRIBUTION OF PUBLIC LANDS**
- **VOCATIONAL TRAINING & EMPLOYMENT SERVICES**
- **SOCIAL SERVICES**
- **TRANSPORTATION**
- **EMERGENCY MANAGEMENT**
- **AVAILABILITY OF ENERGY**
- **TOURISM & ECONOMIC DEVELOPMENT**
- **OTHER NEEDS OF STATE/ LOCAL GOVERNMENTS**

BACKGROUND OF CONCERNS ON ALTERNATE GEOHYDROLOGICAL MODELS

- **SZYMANSKI DISCUSSED HIS CONCERNS WITH PROJECT PERSONNEL BEGINNING IN 1984**
- **SZYMANSKI COMMENTED EXTENSIVELY ON THE SCP AS A PART OF HIS PROJECT RESPONSIBILITIES (1986-1987)**
 - **THERE WERE DIFFERING STAFF OPINIONS ON A COMPLEX HYPOTHESIS ABOUT NATURAL PROCESSES AT YUCCA MOUNTAIN**
- **SZYMANSKI WAS REQUESTED BY MEMO ON NOVEMBER 2, 1987, TO PROVIDE DRAFT REPORT TO DOE MANAGEMENT**

SZYMANSKI PROPOSES THAT UNDER CERTAIN GEOLOGIC CONDITIONS, THE WATER TABLE AT YUCCA MOUNTAIN COULD RISE SIGNIFICANTLY

- **DOE'S CONCEPTUAL MODEL HYPOTHESIZES THAT THE DEPOSITS FOUND AT YUCCA MOUNTAIN CAME FROM WATER FILTERING DOWN FROM THE SURFACE**
- **SZYMANSKI SUGGESTS THAT DEPOSITS FOUND AT YUCCA MOUNTAIN WERE FORCED UP FROM DEEP IN THE EARTH'S CRUST BY VOLCANIC AND TECTONIC ACTIVITY AND THAT THIS GEOLOGIC ACTIVITY COULD RESUME DURING THE NEXT 10,000 YEARS**

SUMMARY OF MEMO SENT TO SZYMANSKI NOVEMBER 2, 1987, FROM HIS SUPERVISOR ASKING FOR DRAFT REPORT TO REVIEW

- **MEMO STATES DOE ENCOURAGES DIFFERING SCIENTIFIC VIEWS**
- **MEMO ASKS SZYMANSKI FOR HIS REPORT SO THAT DOE COULD BETTER UNDERSTAND HIS CONCERNS**
- **MEMO STATES DOE WOULD "SOLICIT A GEOTECHNICAL ANALYSIS FROM WITHIN THE PROJECT USING A MULTI-DISCIPLINED TEAM OF EXPERTS"**
- **MEMO ALSO SUGGESTED THAT IF THERE WERE CONTROVERSIAL TOPICS OR UNRESOLVED QUESTIONS, A PEER REVIEW WOULD BE PERFORMED BY ENGINEERS AND SCIENTISTS WITH NATIONAL REPUTATIONS BUT INDEPENDENT OF THE PROJECT**

SUMMARY OF EVENTS

- NOV/DEC 1987** - PLANNING FOR REPORT REVIEW INITIATED
- SZYMANSKI DRAFTS REPORT
- DEC 22, 1987** - SZYMANSKI DELIVERS REPORT IN ITS DRAFT
FORM TO PROJECT MANAGER
- JAN 1987** - REVIEW PROCESS INITIATED
- FEB 1987** - REVIEW UNDERWAY
- MAR 1987** - NATIONAL ACADEMY OF SCIENCES
PRESENTATION
- APR 11-15, 1987** - WORKSHOP WITH NRC TO DISCUSS
ALTERNATE CONCEPTUAL MODELS
- MAY 1987** - INTERACTIONS BETWEEN SZYMANSKI
AND PEER REVIEWERS SCHEDULED
- MAY/JUNE 1987** - PROJECT DRAFT PEER REVIEW REPORT
AVAILABLE

THE PROJECT PEER REVIEW TEAM CONSISTS OF A CROSS-SECTION OF TECHNICAL PERSONNEL WITH EXPERTISE IN THE DISCIPLINES COVERED IN THE DOCUMENT

● THESE AREAS INCLUDE

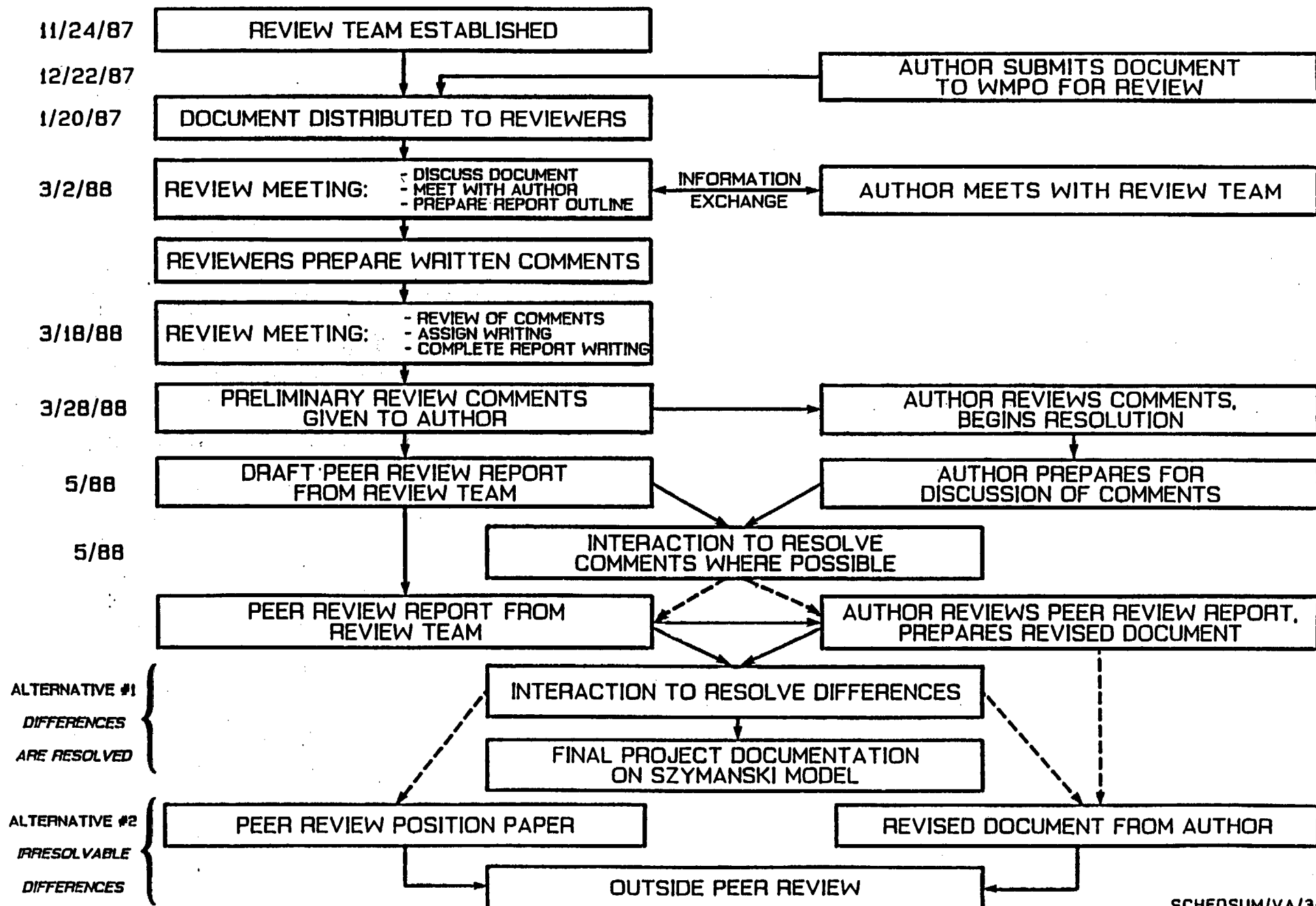
- HYDROLOGY
- TECTONICS
- ROCK MECHANICS
- GEOCHEMISTRY
- MODELING
- PERFORMANCE ASSESSMENT

● REPRESENTATIVES OF THE PROJECT PARTICIPANTS ARE INVOLVED IN THE REVIEW:

- | | |
|--|---------------|
| - UNITED STATES GEOLOGICAL SURVEY | - 7 REVIEWERS |
| - LOS ALAMOS NATIONAL LABORATORY | - 5 REVIEWERS |
| - SANDIA NATIONAL LABORATORIES | - 7 REVIEWERS |
| - SCIENCE APPLICATIONS INTERNATIONAL CORPORATION | - 5 REVIEWERS |

● REFERENCE VERIFICATION BEING CONDUCTED BY GEOTECH- NICAL STAFF FROM SAIC TO CHECK THE ACCURACY OF THE REFERENCET LIST, AND VERIFY THE VALIDITY OF REFERENCE CITATIONS IN THE DOCUMENT

SUMMARY OF SCHEDULE



DOE APPROACH TO LAND ACCESS

- **EARLY CONSULTATION WITH BLM DETERMINED "RIGHT-OF-WAY" RESERVATION WOULD SATISFY SITE CHARACTERIZATION REQUIREMENTS**
- **EXPLORATORY SHAFTS SITE ON LAND ALREADY WITHDRAWN BY U.S. AIR FORCE**
- **PERFORMANCE OF SITE CHARACTERIZATION DOES NOT NECESSITATE A CLOSURE OF PUBLIC LANDS FROM ALL OTHER USES, AND IT CAN CO-EXIST WITH OTHER USES OF THOSE LANDS**

STATE OF NEVADA vs BURFORD
LAWSUIT AGAINST BLM OVER ROW INSURANCE
- FILED MARCH 5, 1988 -
- GOVERNMENT (DOJ) ANSWER DUE MAY 25 -

THE LAWSUIT CONTAINS FOUR CAUSES OF ACTION (SEPARATE ALLEGATIONS OF ILLEGAL ACTIONS BY BLM):

- **A RIGHT-OF-WAY (ROW) IS A LEGALLY DEFECTIVE INSTRUMENT FOR AUTHORIZATION OF SITE CHARACTERIZATION**
- **BLM HAS UNLAWFULLY REFUSED TO GRANT A ROW TO A STATE CONTRACTOR (MIFFLIN)**
- **BLM'S ISSUING A ROW IN THIS CASE VIOLATES THE STATE'S "EQUAL FOOTING" WITH OTHER STATES AS GUARANTEED BY THE 10TH AMENDMENT**
- **BLM ACTIONS IN GRANTING THE ROW ARE ILLEGAL AS AN INFRINGEMENT UPON AN UNCONSENTING STATE'S SOVEREIGNTY**

RECENT PUBLIC INTERACTIONS

- **OVER 35 PRESENTATIONS MADE TO VARIOUS GROUPS THIS YEAR**
- **YUCCA MOUNTAIN INFORMATION OFFICE OPENED IN BEATTY IN MARCH**
- **WASTE MANAGEMENT EXHIBIT WAS DISPLAYED AT THE CLARK COUNTY COMMUNITY COLLEGE FAIR, BOULEVARD MALL, AND THE CLARK COUNTY COMMUNITY COLLEGE CAREER DAY**
- **THE PUBLIC WAS INVITED AS OBSERVERS TO THE NRC WORKSHOPS IN WASHINGTON, D.C. IN MARCH, AND THE CONCEPTUAL MODELS WORKSHOP IN LAS VEGAS IN APRIL**

UPCOMING PUBLIC INTERACTIONS

- **YUCCA MOUNTAIN UPDATE MEETINGS ARE SCHEDULED FOR THE PUBLIC JUNE 6, 7, AND 9 IN AMARGOSA VALLEY, LAS VEGAS, AND RENO. STATE OF NEVADA HAS AGREED TO PARTICIPATE. FORMAT INCLUDES:**
 - **OPENING REMARKS BY GERTZ AND LOUX**
 - **DISCUSSIONS ON TRANSPORTATION, EARTH SCIENCE, AND SOCIOECONOMICS**
 - **TIME FOR PUBLIC Q&A's AFTER EACH PRESENTATION, AND ONE-ON-ONE AFTER THE MEETING**

MAY 4, 1988
PM/TP0 MEETING

- **OVERVIEW OF NRC ALTERNATE CONCEPTUAL MODELS WORKSHOP**
- **STATUS OF SCP COMPLETION ACTIVITIES**
- **STATUS OF STUDY PLAN PREPARATION & REVIEW**

STATUS OF SCP COMPLETION ACTIVITIES (CONTINUED)

WORKING GROUP STATUS & OBJECTIVES

- PHASE I QUESTIONNAIRES FOR ASSESSMENT OF THE "IMPORTANCE" OF EACH SITE, PERFORMANCE, AND DESIGN ACTIVITY WERE COMPLETED.
- PHASE II ACTIVITY-LEVEL LOGIC DIAGRAMS HAVE BEEN PREPARED FOR ALL SITE PROGRAMS BY WORKING GROUPS 1-4, AND ARE UNDER PREPARATION BY WORKING GROUPS 5&6 FOR PERFORMANCE AND DESIGN ACTIVITIES INCLUDED IN THE SCP.
- PHASE II OBJECTIVES INCLUDE:
 - ESTABLISH REALISTIC DURATIONS FOR ALL SCP ACTIVITIES
 - USE REALISTIC ACTIVITY DURATIONS TO DEVELOP REALISTIC SITE CHARACTERIZATION SCHEDULE
 - VERIFY IMPORTANT LINKAGES AMONG SITE PROGRAMS AND FROM SITE PROGRAMS TO PERFORMANCE & DESIGN ISSUES
 - ESTABLISH REALISTIC COST ESTIMATES FOR SCP ACTIVITIES

STATUS OF SCP COMPLETION ACTIVITIES (CONTINUED)

INTEGRATION GROUP STATUS & OBJECTIVES

- THE INTEGRATION GROUP HAS PREPARED IMPORTANCE SUMMARIES (ROLL-UPS) FOR ALL SITE ACTIVITIES; ROLL-UPS FOR PERFORMANCE & DESIGN ACTIVITIES ARE UNDER PREPARATION
- A JOINT IG/PROGRAM REVIEW GROUP (PRG) MEETING WAS HELD ON APRIL 28, 1988, TO REVIEW THE STATUS OF SCP COMPLETION ACTIVITIES
- THE IG IS PREPARING GUIDANCE TO WORKING GROUPS TO BE FOLLOWED DURING PHASE II TO DEVELOP REALISTIC COST ESTIMATES FOR THE SCP/CD ACTIVITIES
- THE IG IS DEVELOPING A PLAN (INCLUDING SCOPE AND SCHEDULES) FOR REVISING THE SCP/CD IN RESPONSE TO COMMENTS FROM THE NRC IN THEIR POINT PAPERS AND AT THE ALTERNATE CONCEPTUAL MODELS WORKSHOP, AND IN RESPONSE TO COMMENTS RECEIVED FROM THE USGS
- A NEW WORKING GROUP (#7) WAS FORMED TO ADDRESS:
 1. 8.4 REVISIONS -- IMPACTS OF PENETRATION OF ROCK UNITS BELOW THE REPOSITORY HORIZON
 2. REVISIONS TO SCENARIOS CONSIDERED IN THE TOTAL SYSTEM ISSUE AND TO CALCULATION OF THE CCDF
 3. INTEGRATION AND EXPANSION OF DISCUSSIONS IN THE SCP ABOUT VALIDATION OF MODELS
 4. EXPANSION OF DISCUSSIONS ABOUT THE ISSUE CLOSURE PROCESS

STATUS OF SCP COMPLETION ACTIVITIES (CONTINUED)

PROGRAM REVIEW GROUP (PRG) STATUS AND OBJECTIVES

- FIRST OFFICIAL MEETING WAS HELD IN LAS VEGAS, NV ON APRIL 28, 1988
 - THE PRG GAVE THE IG AN ACTION ITEM TO REEXAMINE THE NEED FOR COMPREHENSIVE GEOLOGIC MAPPING IN ES-2
 - THE PRG ALSO RECOMMENDED THAT THE DOE SHOULD NOT PLAN TO PENETRATE ROCK UNITS BELOW THE REPOSITORY UNTIL COMPLETION OF A THOROUGH ANALYSIS OF THE IMPACTS
- ANALYSIS OF NRC POINT PAPERS BY WESTON IS DUE TO THE PRG ON MAY 4, 1988. PRG WILL REVIEW AND APPROVE RECOMMENDATIONS FOR COMMENT DISPOSITION & PROVIDE GUIDANCE TO INTEGRATION AND WORKING GROUPS
- ANALYSIS OF USGS COMMENTS BY WESTON IS DUE TO THE PRG ON MAY 18, 1988. PRG WILL REVIEW AND APPROVE RECOMMENDATIONS FOR COMMENT DISPOSITION & PROVIDE GUIDANCE TO INTEGRATION AND WORKING GROUPS
- ANALYSIS OF TRANSCRIPT FROM NRC ALTERNATE CONCEPTUAL MODELS BY WESTON IS DUE TO THE PRG ON MAY 30, 1988. PRG WILL REVIEW AND APPROVE THE RECOMMENDATIONS FOR COMMENT DISPOSITION & PROVIDE GUIDANCE TO THE INTEGRATION AND WORKING GROUPS

NRC WORKSHOP ON ALTERNATE CONCEPTUAL MODELS: OVERVIEW

- THE COMPLETE TRANSCRIPT OF THE WORKSHOP IS EXPECTED TO BE AVAILABLE THE SECOND WEEK OF MAY (TRANSCRIPT FOR DAY 1 ARRIVED 5/2/88)
 - PLANS FOR SCOPING CHANGES TO THE SCP
- WESTON TECHNICAL STAFF WILL ANALYZE THE TRANSCRIPT AND MAKE GENERAL RECOMMENDATIONS ABOUT REQUIRED CHANGES TO THE PRG BY MAY 30, 1988
- THE PRG WILL THEN DIRECT THE IG AND WGS TO BEGIN THE COMMENT RESPONSE PROCESS
- THE IG IS CURRENTLY ANALYZING THE APPROACH TO BE TAKEN FOR INCORPORATING TABLES INTO SITE PROGRAM SECTIONS WHICH INCLUDE THE FOLLOWING ENTRIES:

CURRENT REPRESENTATION OF MODEL	UNCERTAINTY IN CURRENT UNDERSTANDING	ALTERNATIVE HYPOTHESES	PLANNED TESTING TO REDUCE UNCERTAINTY & TEST HYPOTHESES
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--ADDITIONAL TEXT CHANGES MAY BE NECESSARY TO BETTER INTEGRATE THE PERFORMANCE AND DESIGN REQUIREMENTS TO THE SITE ACTIVITIES PROVIDING THE DATA