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 NUCLEAR REGULATORY COMMISSION
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MEMORANDUM FOR: Robert E. Browning, Director
 Division of Waste Management

FROM: Tilak R. Verma, Senior On-Site
 Licensing Representative
 Salt Repository Project (SRP)

SUBJECT: SRP SITE REPORT FOR THE WEEK OF APRIL 30, 1984

1. ONWI has prepared and submitted the Performance Assessment Plan to SRPO. I have requested a copy of the Performance Assessment Plan and will make it available to the Repository Projects Branch as soon as I get it. We should review and evaluate the plan for the type, quality and quantity of data needs and assumptions.
2. On May 3, 1984, I visited the potential salt repository sites in the Davis and Lavender Canyons in the vicinity of the Canyonlands National Park in Southeastern Utah. I also visited the site of the only borehole (GD# 1) drilled and tested by DOE. The borehole is located about three miles northeast of the potential sites. I was escorted to the proposed site by Mr. Grant of Woodward-Clyde Consultants.
3. On May 4 and 5, 1984, I attended meetings in Salt Lake City, Utah. DOE and their contractors made presentations to the technical staff from the State of Utah and interested groups and citizens. The meetings were recessed at 10:30 a.m. on May 4, 1984, for a news conference by Governor Matheson. A copy of the Governor's letter to the Secretary of Energy and a copy of Governor Matheson's statement are attached.

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R. Browning
Page 2

Most of the questions from the technical staff and other interested groups were related to the impact of site characterization and repository development activities on the Canyonlands National Park. DOE and their contractors were not able to answer questions to the satisfaction of the participants in the meeting.


Tilak R. Verma
Senior On-Site
Licensing Representative
Salt Repository Project

TRV:2502B

Attachments

cc: M. Bell
J. Bunting
H. Miller
M. Knapp
J. Greeves
F. Cook
P. Prestholt
J. Linehan
R. Johnson
N. Numark



SCOTT M. MATHESON
GOVERNOR

STATE OF UTAH
OFFICE OF THE GOVERNOR
SALT LAKE CITY
84114

May 4, 1984

The Honorable Donald P. Hodel
Secretary of Energy
U.S. Department of Energy
Washington, D.C. 20585

Dear Secretary Hodel:

Thank you for your letter of March 9, 1984. I appreciate the efforts of you and your staff in responding to requests of the state of Utah set forth in my letters to you of August 5, and December 22, 1983.

My staff and I have carefully reviewed this correspondence and the status of the Department of Energy's nuclear waste repository site selection process. Following this review, and after much thought on this matter, I have concluded that the process remains unresponsive to the legitimate concerns repeatedly expressed by the state of Utah.

I am now convinced that DOE will not fulfill its responsibility to provide comprehensive review of the Canyonlands site prior to further decision making. For that reason, I now unqualifiedly oppose further consideration of the Canyonlands site for location of a nuclear waste repository. It is in the best interests of the state and the nation to avoid waste of taxpayer dollars in further consideration of an unsuitable site.

My principal substantive concern is that the Canyonlands site is inherently unsuitable for consideration of location as a nuclear waste repository. I have concluded that its proximity to Canyonlands National Park and Newspaper Rock State Park, proximity to the Colorado River, serious transportation constraints, and archeological resource conflicts are obvious adverse factors which should have barred DOE from initial consideration of the Canyonlands site. Those factors should now preclude DOE from further expenditure of taxpayers dollars on additional investigation of a site that never can be acceptable.

My principal procedural concern lies with the DOE's manipulation of the data collection issue. From the state perspective there are two problems: (1) factual information pertaining to the Canyonlands site is far too scarce to provide a legitimate basis for decision making, and (2) many of the activities DOE will have to undertake to build a factual basis for decision making will have serious environmental impact on pristine country sandwiched between Canyonlands National Park and Newspaper Rock State Park.

In order to assure that all decisions would be based on adequate data, I filed a petition for rulemaking, August 5, 1983, asking the DOE to set standards for determining necessary levels of information for decision making. A problem exists with respect to the gathering of such information, in that, in our opinion, federal law requires that any disruptive activity be accompanied by appropriate environmental review.

In order to avoid the obvious dilemma of seeking needed data while avoiding damage from disruptive data collection activities, the state proposed a process that would allow DOE to proceed in conformity with the Nuclear Waste Policy Act and other applicable laws. That proposal would have required that all requests to the state to conduct disruptive data collection activities be accompanied by full environmental review as required by law. DOE disregarded our proposal and continues to request approval for disruptive data collection activities without first assessing the environmental impacts.

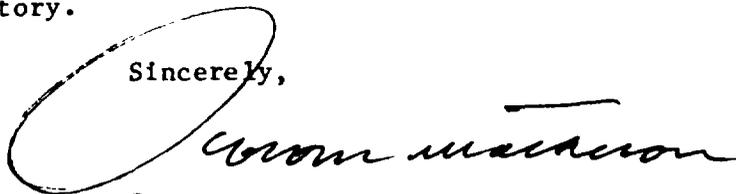
DOE's procedure remains unacceptable. Our policy will be, and I have instructed heads of state agencies and departments accordingly, that any disruptive data collection activity is to be opposed unless DOE agrees to our condition that there first be a full environmental review, with public participation, which demonstrates that the proposed activity will not impair values protected by law.

Further, with respect to any site review activity to be performed by DOE, consent of the state will be given and related permits issued only after (1) a review of whether the proposed activity is in the best interest of the state, (2) there has been full compliance with state permitting requirements, and (3) acceptance by DOE of stringent conditions which insure environmental protection.

I remain convinced that had DOE pursued the responsible siting process as required by the Act, and diligently addressed the sensitive environmental and park issues repeatedly raised by the citizens of Utah over the past three years, the results would have clearly demonstrated the inherent unsuitability of this site. In any event, I am now personally committed to assuring that the Canyonlands site is not selected for site characterization.

Enclosed is a copy of a statement which I am issuing to the people of Utah today, setting forth in detail the state's opposition to further consideration of the Canyonlands locations as a potential site for DOE's high level nuclear waste repository.

Sincerely,

A handwritten signature in cursive script, appearing to read "Cannon" or similar, enclosed within a large, loopy oval flourish.

Governor

SMM: jc

STATEMENT OF GOVERNOR SCOTT M. MATHESON

IN OPPOSITION TO PROPOSED HIGH LEVEL NUCLEAR WASTE REPOSITORY

May 4, 1984

I have today written Donald P. Hodel, Secretary of Energy, giving him notice of my decision as Governor of the state of Utah to strongly oppose further consideration of the Canyonlands location in San Juan County as a potential site for a high level nuclear waste repository.

Utah has repeatedly felt the impact of activities involving radioactive and toxic materials, and our experience has been tragic. Despite assurances from federal officials that such activities posed no risk, the federal government has repeatedly failed to take proper measures to protect the health and safety of our citizens. Even today, we suffer the aftermath of frighteningly real cases of nuclear contamination evidenced by illness and death of people and livestock.

The lesson of these experiences is that the state must not only expect, but must demand, the highest degree of thoroughness and care at all stages of any program that relates to the presence of such nuclear materials in our state. Accordingly, we have been zealous in demanding that the Department of Energy gather and evaluate pertinent technical data and conduct appropriate levels of environmental review at all stages of its site selection process so that the hazards of conducting nuclear waste storage activities in Utah can be known as early as possible.

We have also insisted, in view of the disruptive nature of certain necessary studies, that DOE first take responsibility for assessing the appropriateness of its proposed site.

The state has a legitimate and vital interest in protecting the quality of its air and water, in ensuring that archeological and historic features that relate to our heritage are protected, and in knowing and planning for requirements for water consumption and land use. Effects of the nuclear waste storage project upon transportation systems could be extensive and would affect virtually the entire state.

Moreover, a repository at the Canyonlands site, in the heart of the rugged canyon country of the Colorado Plateau, would be on the edge of the Colorado River system, raising concern over the potential for contamination of a major water source not only for Utah but for the entire Southwest.

We have, therefore, continued to demand that the direct and indirect adverse environmental impacts of all phases of the project be carefully assessed prior to the decisions that will commit millions of dollars of taxpayer money for site characterization studies required at the three "finalist" sites.

Recognizing the national problem that must be dealt with in disposing of nuclear waste and our responsibility to share some of the burden of helping

to resolve that problem, we have so far attempted to work within the process prescribed by the Nuclear Waste Policy Act of 1982. DOE's conduct to date has given us little reason for confidence in its process. Instead of conducting the kind of intensive data collection and analysis that would eliminate unsafe and unsuitable candidate sites at an early stage, DOE has chosen to base its initial site selection decisions on a superficial analysis and has collected virtually no data.

Over our strong objections, DOE has adopted guidelines for the selection of a site that permit DOE to rely on inadequate and fragmentary "existing data" in evaluating the Canyonlands location, and to paper over the immense gaps in this existing data through the use of hypothetical assumptions.

From the very earliest stages of DOE's site selection, our essential concern has been this: If proper advance consideration is not given to factors and criteria that should disqualify a site, then selection of the site for further study predisposes the federal government to disregard later disqualifying evidence. Unfortunately, such conduct is not unknown to the citizens of Utah in respect to past activities in our state. We will not let it happen again.

Moreover, the plans for intensive study of the suitability of the Canyonlands site reveal the prospect of substantial and enduring impacts on the land, environment and culture of the area, and will commit tremendous financial and human resources to the project. We have, therefore, considered it vital that DOE provide early and full analysis of data relating to the impacts of the intensive "site characterization" process that would be required at the finalist sites. The substantial damage that will be done, even by necessary studies of the Canyonlands site, reinforces our conclusion that now is the appropriate time for Utah to attempt to halt this process.

From the beginning, I have been concerned about the environmental damage that would be caused by the intensive study necessary to carry the Canyonlands site further in the site selection process. As early as the Fall of 1981, I requested that DOE prepare an environmental impact study of the impacts of the siting and construction of the nuclear waste repository.

It has always been my opinion that any site designated for location of a repository must be selected upon a basis of full technical data. But it has also been my opinion that, prior to the collection of such technical data, the DOE must assess the environmental impacts of collecting such data, and of the required investigations and studies, along with necessary strategies for mitigation of those impacts. These are critical first steps given the fragile desert environment, rugged canyon terrain, and vast wealth of archeological resources, and proximity to the national and state parks and the Colorado River.

When my prior requests for an EIS were ignored by DOE, the state instituted a moratorium on any permits for DOE studies in July of 1982. That EIS would have analyzed many of the concerns raised repeatedly by state officials and citizens. In the interest of assuring adequate data collection, the state reviewed the DOE permitting requests on a case by case basis to

determine the likelihood of environmental damage, and ultimately granted all permits requested by the DOE.

My request for an EIS was preempted by the passage of the Nuclear Waste Policy Act of 1983 which modifies the requirements of the National Environmental Policy Act and requires the preparation of a somewhat lesser level of environmental review, and environmental assessment, prior to the site characterization phase of the study. The Act does not, however, anticipate disruptive data gathering activities without appropriate environmental review.

Consequently, I have taken the position that the disruptive data gathering activities DOE now proposes, prior to site characterization, must be the subject of full environmental review. This obvious dilemma of seeking needed data while avoiding damage from disruptive data collection activities, can only be avoided by careful assessment of impacts and development of appropriate mitigation strategy.

Additionally, the requirements of the environmental assessment process required by the Act are stringent and must be based upon guidelines addressing a broad range of environmental factors outlined in the Act. As part of our effort to work within DOE's process, we formally requested that DOE incorporate suitable criteria in the guidelines it will use to select a site to ensure full investigation and consideration of subjects of particular concern to the state.

We also requested that the procedures being followed by DOE conform with legal requirements for the adoption of rules and regulations to ensure close scrutiny of the proposed federal activities and to allow full public participation and comments. Such requests were sent with my letters to Secretary Hodel on August 5, and December 22, 1983. Because DOE ignored our demands, particularly with respect to our concern over DOE's manipulation of the data collection issue, I implemented a policy of withholding cooperation by the state until evidence was given by DOE of attentiveness to the subjects that we raised.

Official responses to my requests were received in letters from Secretary Hodel dated March 9, 1984, and from Mr. Michael J. Lawrence, acting director of the Office of Civilian Radioactive Waste Management, dated March 14, 1984. These responses, have evaded or deferred resolution of the issues we have raised, and from the agency's conduct, it is apparent that DOE intends to ignore the issues which concern Utah and to proceed at full tilt with its siting program. Although DOE verbally expresses interest in the state's concerns, it appears not to take us seriously and continues with business as usual.

Our repeated efforts to work with DOE and to ensure that the agency's site selection program will be one in which the citizens of Utah can have confidence have been in vain. Instead, DOE has consistently ignored or evaded the serious concerns we have raised regarding the integrity of the site selection program. Overall, our experience has been one of continual frustration, as DOE has repeatedly cut corners in order to meet an unrealistic schedule for location of a repository site. The result is that instead of

engendering confidence, DOE has destroyed it. DOE's irresponsible shortcutting of its required tasks has forced me to conclude that the risks to the state and its inhabitants are intolerable. We cannot entrust the health and safety of our citizens to a process that we believe is inherently inadequate.

In addition to the procedural concerns, I have a substantive concern with the nature of the Canyonlands site itself. One of the unique characteristics of this state, and a resource of great value, is the magnificent red rock vistas in southeastern Utah. It is a part of our heritage, a source of state pride, and a vital component of our state's tourist industry. Several parts of the area have become permanent national reserves through the National Park System.

While the issues raised by the proposal to site the repository at the Canyonlands site are of national and statewide concern, the decision to oppose siting of the nuclear waste repository is especially difficult in light of current economic and employment difficulties of southeastern Utah. During the 1970's, energy and mineral exploration and development helped establish a decade of relative prosperity and a healthy rate of growth. But the back-to-back recessions of 1980 and 1981-82, coupled with the collapse of the uranium industry and other energy industry slow-downs, has caused unemployment rates in the area which persistently exceed state and national rates.

The state recognizes its responsibility to stimulate recovery, diversify the economic base and provide an increasing number of employment opportunities to the residents of southeastern Utah who have been displaced by the boom-bust phenomenon of resource development. Our commitment to community and family values and the economic welfare of southeastern Utahns must also be demonstrated by substantial public investments which will further long-term economic stability of this important area.

Over the past four years, the state has in fact expressed its commitment through substantial investment in development related projects. Over this period of time, the Department of Community and Economic Development has invested some \$8 million dollars in Community Impact Funds and Community Development Block Grants to help fortify and revitalize infrastructure, health and human services facilities and to provide other amenities which not only enhance the quality of life but also provide the kind of socioeconomic environment necessary for business development and the attraction of new industries.

The Water Pollution Control Board of the Department of Health, has invested another \$6 million in wastewater treatment facilities. The Water Resources Board of the Department of Natural Resources is constructing over \$16.5 million in water development projects which will prove crucial in helping to expand agricultural and other industrial developments. The Department of Agriculture is assisting farmers and ranchers with low and no interest loans to help them expand crop production which, in turn, may lead to food manufacturing. These potential new products will be an integral part of our efforts to market Utah products in international markets.

In addition to these initiatives, the state is concentrating its tourism promotion efforts on the National Parks of southeastern Utah. The state's local marketing efforts will also be enhanced by our recent investment of approximately \$1 million in the Lake Powell ferry boat, our support for the San Juan Center Science Building, and, hopefully with federal assistance, the paving of the Burr trail.

Although the state has invested over \$30 million in capital facilities during the past 4 years in southeastern Utah, there are tremendous economic development needs which remain to be addressed. I will convene a meeting of my Economic and Physical Development Cabinet to assess additional resources which we can use to continue our efforts to stimulate economic recovery and renewed prosperity. The state must remain committed to making public investments in southeastern Utah - especially those public investments which will stimulate private sector investments.

The issue of nuclear waste has helped bring into focus the tremendous importance of the state's natural and cultural resources. It has reminded all Utahns of the need to invest in these resources and to manage them in a way which will allow optimum long-term benefits to our people and communities.

The value judgment that must be made is far more complex than the simple question of jobs versus preservation. It is a matter of justifying conversion of the natural resources, economy and lifestyle of an entire area to the support of a massive industrial facility that will cause a pervasive and permanent change in the basic character of the region. Location of a nuclear waste facility at the Canyonlands site would transform an area of scenic grandeur into an immense burial ground for inherently dangerous waste materials from distant nuclear power generating facilities.

Throughout this process, I have been troubled with a feeling that these considerations make the Canyonlands site unsuitable for consideration as a prime candidate for the repository. Some guidance in resolving the issue comes from the sponsors of the Nuclear Waste Policy Act themselves. Representatives Seiberling and Udall stated for the record that sites in proximity to components of the national park system and other legislatively protected reserves must be considered only as "the last possible choice for development of a nuclear waste repository." They emphasized that so long as health and safety criteria can be met at any other available site, areas adjacent to legislatively protected reserves, such as the Canyonlands National Park, are not to be selected.

I have repeatedly urged DOE to conform to Congressional intent by adopting a standard in their siting guidelines consistent with a policy of nonimpairment of national park values. I have emphasized that the activities necessary to determine the suitability of the Canyonlands site will unavoidably cause severe disruption of national park and other values protected by law. These efforts have been futile because DOE continues to disregard the inevitably destructive impacts on park values that must result from intensive preliminary studies necessary to identify an acceptable site for radioactive waste. Had DOE done so, it would have faced the inescapable reality that the Canyonlands site is unsuitable for such a repository.

Instead, DOE has structured its program to evade the issue. Therefore, I can see no further benefit in relying on a process that DOE refuses to use in a responsible manner.

It is time to face up to the issue ourselves. It is my judgment that it is folly for DOE to continue evaluation of a site that is so obviously unsuitable for a repository. The Canyonlands site is manifestly unsuitable because of its location in an area of scenic grandeur and its close proximity to national and state parks created to preserve and protect those scenic values for the citizens of our state and the visitors to these areas from throughout the nation. It would be shameful if we were to enter the historical records as the group that was willing to sacrifice these values solely for reasons of illusory economic gain. I cannot in good conscience allow that to happen.

During the remainder of my term in office as Governor, I shall vigorously pursue all possible steps to secure the elimination of the Canyonlands location from consideration as a potential site for a nuclear waste repository, and I shall urge my successor to continue these efforts. Specifically, I will be initiating the following actions to secure the elimination of the Canyonlands location from consideration as a potential site for a nuclear waste repository, and I shall urge my successor to continue these efforts:

1. I will request the cooperation of Utah's Congressional delegation and the relevant committees in both Houses of Congress to initiate amendments to the Nuclear Waste Policy Act that will explicitly preclude location of a waste repository in proximity to a national park, such as the Canyonlands location, and to establish more realistic time frames in which a waste repository can be safely located elsewhere. I further will urge Congress to withhold approval of funds for DOE waste repository operations until such time as Congress can assure itself and the country that DOE will conduct its site selection process in a safe and sensible manner, in conformity with Congressional intent, and in conformity with the law.

2. In December 1983, in response to DOE's persistent refusal to address the state's concerns, I instituted a limited moratorium on DOE's repository site selection activities in the state of Utah. At that time, I informed DOE that Utah would not grant DOE approval for site selection activities that would disrupt the pristine environment of the Canyonlands area, except insofar as state officials approved such activities on a case-by-case basis.

I have now instructed the heads of all agencies and departments in Utah state government that any disruptive data collection activity is to be opposed unless DOE agrees to our condition that there first be a full environmental review, with public participation, which demonstrates that the proposed activity will not impair values protected by law. Further, with respect to any site review activity to be performed by DOE, consent of the state will be given and related permits issued only after (1) a review of whether the proposed activity is in the best interest of the state, (2) there has been full compliance with state permitting requirements, and (3)

acceptance by DOE of stringent conditions which ensure environmental protection.

3. I will ask the state's Attorney General to prepare for, and initiate or participate in, litigation challenging DOE's site selection process at all points where legitimate legal challenges can be presented.

4. I have directed my staff to continue their ongoing review of DOE's site selection process in an effort to ensure that DOE adheres to the policies and requirements of the Nuclear Waste Policy Act, to ensure that the interests of the state are protected during the performance by DOE of its site selection activities, and to assist the efforts of the Attorney General in challenging DOE's site selection process through legal action. Such participation by my staff will be consistent with our policy of seeking to eliminate the Canyonlands location from consideration as a potential site for a nuclear waste repository.

5. Finally, I have directed my staff to meet with citizens throughout the state to explain the basis of the decision I have set forth today and to encourage their assistance in resisting DOE's attempt to locate a nuclear waste repository at the Canyonlands location.

WORKSHOP SCHEDULE
May 3 and 4, 1984

Location: Room 428 State Capitol Building

Opening Remarks: Temp Reynolds
Director
Department of Natural Resources

The purpose of the workshop is to review DOE's treatment of the areas identified below in the forthcoming environmental assessments. The scope of that treatment will include application of the guidelines to the data for the Utah sites, and evaluation of impacts from all phases of repository related activities (e.g., site characterization through closure and long-term maintenance of the repository). The decision should include the issues the EA will address; the data developed or to be developed to address those issues, issues that will not be addressed in the EAs and data development planned or anticipated to address these unresolved issues.

Please refer to the attached discussion format for additional detail.

- I. Socioeconomics: Thursday, May 3 (8:30 - 4:30)
 1. Socio-Economic Conditions, Present and Future
 - a. How does DOE foresee the future of Southeast Utah: Prosperity, stagnation or decline?
 - b. How does DOE foresee the future of the driving forces of the economy of the area including uranium, oil and gas and tourism?
 - c. How do the present and future conditions of the area compare to other proposed repository sites?
 - d. Does DOE intend to deal with inter-industry conflict? Will the repository alter the future of the the tourist industry?
 2. Socio-Economic Impact Modeling
 - a. Describe the SEARS model and other models being proposed for use and explain how calibration of the model was accomplished.
 - b. What are critical assumptions used in the model for the Environmental Assessment (i.e. what is the assumed % of work force which will be hired locally, will a construction camp be built, what are the assumed commuting patterns, what are the assumed basic to service employment ratios, etc.)

- c. What are the work force estimates for operation and construction which DOE intends to use in the impact analysis for the E.A.?
- d. Will the SEARS model accurately assess a sparse rural economy such as Southeast Utah? Can the model accurately assess the bust cycle?

3. Community Intra-Structure Needs and Assessment

- a. Has all critical data on the area been gathered? What existing deficiencies in intra-structure are currently present?
- b. What "service requirements" or "standards of service" were used in determining assessment needs resulting from the repository?

Note: As Richard Walker noted, most of the reports deal w/ #'s and not w/ the question of quality of systems. An example of impact would be impacts on lifestyle particularly for minority groups. See item #6 below.

4. Fiscal Analysis

- a. Explain the fiscal component of the SEARS model and the critical assumptions which will be used.
- b. Will the E.A. include a fiscal analysis of the impacts? How well prepared are communities for bonded indebtedness, and are projections being made?
- c. Does the fiscal model account for the sparse tax base of the area?

5. Mitigation

- a. Does DOE plan to address mitigation in the E.A.?
- b. What kind of fiscal mitigation does DOE plan to provide? What portion of total fiscal impacts will be contributed by DOE?
- c. Will DOE meet the requirements of Utah's socio-economic impact mitigation legislation-S.B. 170, for both the exploratory shaft and the full repository?

6. Social/Cultural

- a. Does DOE intend to address the social impacts and the cultural impacts associated with the repository in the E.A.?
- b. Does DOE intend to address the problems associated with dislocations of residents and businesses due to the repository.?
- c. How will the repository impact the "quality of life" in Southeast Utah?

7. Additional Issues

a. Will DOE accurately compare the severity of impact, including the bust cycle, with other proposed waste sites? In other words, will socioeconomic impacts be considered in the site-selection process or is the socio-economic impact analysis at this point just an academic exercise?

b. What assurance do local residents have that any repository-related employment will be available? (i.e. will DOE adopt a local hiring policy?)

c. Does DOE intend to develop a monitoring system to monitor the impacts?.

State and local governments would see an advantage in developing a monitoring system now which would be updated semi-annually to keep everyone informed of what the socio-economic impacts are projected to be. If and when any construction begins, the monitoring system should contain actual observed information on impacts attributable to the project.

d. How does DOE intend on identifying and assessing the unique problems associated with the indians living in the impact area.

e. Does DOE plan on measuring the degree of public support for the project? Perhaps a public opinion poll needs to be conducted.

f. Has any Utah specific socio-economic impact information been used in the analysis?. Several large-scale projects underway in Utah have implemented excellent monitoring systems. The information collected from these monitoring systems should be utilized in the analysis for the EA.

g. How does DOE plan on dealing with interstate impacts? There are strong economic and social ties between some parts of Southeast Utah and Southwest Colorado and consequently there will be impacts in Colorado.

II. Water Resources: Friday, May 4 (8:30 - 4:30)

NOTE: The division of Environmental Health has requested that this section be begun by DOE presenting the status and workplan on the major issues of groundwater studies and salt disposal as requested in previous state correspondence. Questions on containment of produced salt and comparison of alternative disposal methods and locations were indicated in Calvin Suuweeks' memorandum of November 22, 1983 and January 4, 1984 that were given to DOE at the January workshop.

1. Surface water (specifically Indian Creek and Tributaries)

a. Location of sampling.

b. Parameters and methods of monitoring.

c. Frequency of sampling prior and during construction.

d. Methods of protection of surface waters.

- e. Flood and precipitation data, necessary diversion structures.
 - f. Water supply effects upon wildlife.
2. Wastewater Systems Design Basis
- a. Drilling fluids volume and final disposal.
 - b. Evaporation pond, sediment pond, size calculation, etc.
 - c. Volume of washdown from transportation facilities and disposal.
 - d. Sanitary wastewater disposal for site and work camp.
3. Groundwater
- a. Quantity and Quality
 - b. Monitoring Methods
 - 1. Baseline
 - 2. Operational and Reclamation
 - c. Protection during drilling and other phases of development and operation.
4. Geohydrologic issues and data development

NOTE: Originally, the topic of transportation was to be included in this workshop. Although DOE had earlier committed to sending representatives to address this issue, they are now unavailable due to time constraints posed by the development of the environmental assessments. DOE has proposed that we defer this discussion until June or July.

This particular topic has not been adequately treated in previous work by DOE. It is imperative to the state that this critical issue receive attention. Therefore, time will be allotted to cover the state's concerns. We understand that DOE will not participate in this discussion until another workshop in June or July.

Though the state recognizes that DOE is struggling to meet internal deadlines set for the release of the environmental assessments, timely discussions of supporting data including transportation issues is equally important to the state and should also have been incorporated into DOE's schedule of priority activities to be completed prior to issuance of the environmental assessments for public review.

A short amount of time will be devoted to the following concerns at the end of the workshop, on Friday afternoon. The public will be invited to ask the state questions regarding this issue at that time with the understanding that DOE will not respond. In addition, the state and DOE will plan on a workshop to cover this issue in June or July

Transportation

1. Traffic Analysis; Impacts of Additional Vehicles
 - a. Characterization
 - b. Construction Phase
 - c. Facility Operation Phase
 1. Local
 2. Regional
2. Transportation Risks of Radioactive Waste including Perceived Risks
 - a. Accidental Spills of Hazardous Materials
 - b. Ability of Containers to Survive Accidents
 - c. Secondary Allowable Emissions
3. Insurance of Carriers (rail or truck)/ Federal and State Regulations
4. Upgrading the roads and or rail system (geologic hazards near trans. routes)
 - a. Weights of loads and physical size, including a description of the waste load package.
 - b. Geologic hazards along the routes of transport.
5. Transportation Needs; Air and Ground
 - a. Required facilities for emergencies.
 - b. Alternative routes given failure of a transportation link.
 - i. examples include failed bridges
 - ii. impacts due to the unities



NUCLEAR WASTE INFORMATION EXCHANGE

Agenda

Saturday, May 5, 1984

10:00 a.m. to 6:00 p.m. at South High School
1575 South State Street, Salt Lake City

10:00-11:00 a.m.	Introduction and General Overview (40 minutes for questions and answers)	Ted Taylor U.S. Department of Energy (DOE)
11:00-12:00 noon	Environmental Topics	Tom Mongan Bechtel Group, Inc.
12:00-1:00 p.m.	Health and Safety Topics	Walter Belter NUS Corporation
1:00-2:00 p.m.	Geology and Hydrology Topics	Terry Grant Woodward-Clyde Consultants
2:00-3:00 p.m.	Transportation Topics	Marcella Madsen Sandia's Transportation Technology Center
3:00-4:00 p.m.	Water Topics	Bob Haag, Dan Swanson Battelle's Office of Nuclear Waste Isolation (ONWI)
4:00-5:00 p.m.	Socioeconomic Topics	Linda Ulland Bechtel Group, Inc.
5:00-6:00 p.m.	Repository Engineering	Bob Haag ONWI

Representatives from the state of Utah will also be available for questions and individual discussions.

Presentations: Each presentation will be a maximum of 20 minutes with the remainder of the hour for questions and discussion. On each topic, the speaker will provide an overview of past program studies, describe plans for future research, and discuss potential impacts of repository siting.

Table Displays: Each general topic will also be represented by a table display and printed handouts in the foyer area. Speakers will be at the tables and available for individual questions and discussions except during their scheduled presentation times. Other interested groups may also have tables and representatives available for questions.

Films: A number of films and other audiovisuals related to the topic of nuclear waste isolation will be shown throughout the day in a nearby room. The schedule will be posted outside the door and will be available in the foyer area.

Ted Taylor is chief of Socioeconomics, Environmental, and Institutional Relations, Salt Repository Project Office, U.S. Department of Energy. His responsibilities include management of consultation and cooperation activities with potential host states and affected Indian tribes, a public participation plan, socioeconomic impact assessment and community planning, and preparation of environmental documents. Previously, he was director of Energy Policy for the Texas Energy and Natural Resources Advisory Council, and was a professor of economics for many years. He holds a Ph.D. degree in economics from the University of Kansas.

Tom Mongan is project manager at Bechtel Group, Inc. He is responsible for managing environmental and regulatory activities in the Paradox Basin and the Gulf Interior region for the Office of Nuclear Waste Isolation (ONWI) project. He has been involved in environmental work in the U.S. and overseas for 15 years. He is a licensed civil engineer in California, and received Ph.D. and M.S. degrees in theoretical physics from the University of California. He received his B.S. in engineering from the same university.

Walter Belter is a senior executive consultant with NUS Corporation, a contractor to ONWI. He is responsible for assessment of environmental impacts from siting, constructing, and operating industrial and nuclear facilities. He has served as a consultant to ONWI for 6 years. For the past 25 years, he has been involved with research and development in radioactive waste management programs, specializing in health and safety aspects as well as engineering and environmental studies. He received M.S. and B.S. degrees in civil engineering from the University of Wisconsin and is a registered engineer in the state of Indiana.

Terry Grant is the project manager at Woodward-Clyde Consultants for the geologic studies in the Paradox Basin for the ONWI project. He has worked for Woodward-Clyde for 11 years and his experience includes nuclear facility siting and licensing studies. One of his areas of expertise is in stratigraphy/structural geology. He received an M.S. degree in geology from the University of Nevada and a B.S. degree in geology from the University of California at Los Angeles.

Marcella Madsen is task leader for Risk and Safety Assessment at Sandia National Laboratories' Transportation Technology Center. She is responsible for developing risk assessment methods and forming risk calculations for nuclear materials transportation. She has also been involved with international risk assessment activities for the International Atomic Energy Association. She received an M.S. degree in applied mathematics from the University of New Mexico and a B.S. degree in mathematics from the University of Minnesota.

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Dan Swanson is deputy general counsel for the Battelle Project Management Division (BPMD). He provides legal advice primarily to the ONWI project, assisting in the preparation of environmental and other technical documents. He also manages the BPMD legal office. His experience includes administrative licensing and enforcement litigation involving nuclear facilities, preparation of environmental impact statements, and safety evaluation reports. He received a J.D. degree from Vanderbilt University and a B.A. degree in economics from Denison University.

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