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OCT 10 1984

MEMORANDUM FOR: Richard E. Cunningham, Director
Division of Fuel Cycle, NMSS

FROM: Robert E. Browning, Director
Division of Waste Management, NMSS

SUBJECT: ROLE, SCOPE, AND ISSUES IN ENVIRONMENTAL ASSESSMENT REVIEW

As you requested in your memorandum of August 30, 1984, on participating in the October 12 meeting on transportation in Colorado, this memorandum discusses the role and scope of the NRC review of DOE's Environmental Assessments (EA's) and issues for the candidate repositories. The discussion of the role and scope is from our EA Review Plan which has been developed over the last several months and is now undergoing management review. We will advise you of any changes that occur before the October 12 meeting.

ROLE

The information presented and referenced by the EA's will contain data, interpretations, and assessments available to date on each of the potential repository sites being considered by DOE for nomination. This information is important to NRC reviews for prelicensing (Site Characterization Plans (SCP's)), licensing (License Application for construction authorization (LA)), and adopting to the extent practicable the Environmental Impact Statement (EIS) prepared by DOE.

The NWPA does not require NRC review and comment on EA's or to otherwise participate in the nomination process beyond the Commission concurring on the siting guidelines. It is nevertheless the intention of the NRC to review and comment on the EA's (similar to other pertinent technical documents) in order to assess DOE's application of the siting guidelines. According to the siting guidelines, DOE will make findings in its EA's with respect to qualifying, disqualifying, favorable and adverse conditions that are presented in the guidelines. The NRC staff will review these findings and provide to DOE its views on the data, interpretations, and assessments that support DOE's findings. The staff will also comment on any potential licensing or EIS issue that DOE should consider in its nomination decision. Furthermore, in accordance with the NRC/DOE Procedural Agreement (Enclosure 1), comments on the EA's are a useful mechanism for the NRC staff to identify potential licensing and EIS issues that may be anticipated and that may need to be addressed in DOE's activities during site characterization.

Because the statute omits any reference to NRC in connection with the EA's or the nomination process, the NRC staff will not comment on DOE's judgment regarding the relative merits of one site against another; this responsibility lies with the DOE. The judgments DOE must make in comparing sites involve an intertwining of "technical judgments" (e.g., thermo-mechanical response of the host rock) and "value judgments" (e.g., trade-offs between potential effects on national parks as opposed to prime agricultural land use). Rendering value judgments on the relative merits of various sites is clearly the responsibility of the DOE during the screening process. This is not to say that the NRC staff would be silent on safety and substantive environmental concerns. However, in the absence of such concerns, the responsibility for weighing the relative merits of one site against another is DOE's.

The staff's decision not to comment on the relative merits of sites is consistent with the Commission's policy under the recently amended final rule, Licensing and Regulatory Policy and Procedures for Environmental Protection 10 CFR Part 51 (49FR9352, March 12, 1984). The statement of considerations in this final rule states, "As an independent regulatory agency, the NRC does not select sites or designs or participate with the applicant in selecting proposed sites or designs."

More specifically, NRC's review of the draft EA's has two general objectives which relate to NRC's responsibilities in prelicensing/licensing (i.e., safety evaluations) and adopting the EIS, namely:

(1) Prelicensing/licensing: The NRC staff will identify and review potential licensing issues and associated data, interpretations, and performance assessments which may be important during site characterization, that might result in licensing problems and which should be addressed by DOE in the EA's.

(2) Adopting the EIS: The NRC staff will identify and review potential EIS issues and associated data interpretations and assessments that might result in the NRC's being unable to adopt DOE's EIS and which should be addressed by DOE in the EA's.

The EA's, which follow the siting guidelines and NWPA requirements, will be somewhat complex in their structure; however, NRC's review responsibility and approach is simple. That is, for each draft EA submitted by DOE, NRC will review the findings and conclusions presented - to the extent they bear upon the foregoing responsibilities - and independently determine if they are substantiated. NRC will use this evaluation as a basis for identifying potential licensing issues for timely staff resolution.

OFFICE							
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SCOPE

The following criteria define how the data, interpretations, and assessments that DOE used in applying the siting guidelines to the EA items in Enclosure 2 will be reviewed by NRC.

(1) Adequate substantiation of assessments, interpretations, conclusions and findings.

(a) Adequate consideration of available data.

(b) Adequate consideration of alternative interpretations, assumptions, or performance assessments.

(c) Adequate consideration of uncertainties resulting from all sources including data collection, analyses, interpretations, and performance assessments.

(d) Internal consistency of information including data, interpretations, assumptions, and methods of analysis and evaluation.

(e) Adequate documentation in EA or references to support interpretations, assumptions, conclusions.

(2) Potential licensing and EIS issues identified and adequately considered.

As far as issues that are likely to arise at the October 12th meeting, our feeling is they will be related to transportation of waste and spent fuel similar to those discussed at the meeting in Columbus, Ohio on August 1, 1984. The waste transportation issues most commonly identified are safety, routing (especially weather and grades on I-70 in Colorado), routing models and methodology (use of site specific and corridor state specific data), emergency responses, institutional responsibilities, impact on tourism and traffic (Enclosure 3). The Policy and Program Control Branch is currently preparing a paper on transportation issues in high level waste which they will forward to you as soon as it is available. If my staff can be of further assistance contact Bill Lilley of my staff.

Original Signed by
Robert E. Browning

Robert E. Browning, Director
Division of Waste Management, NMSS

Enclosures:
1. NRC/DOE Procedural Agreement
2. NRC's EA Review
3. Rocky Mountain News

****SEE PREVIOUS CONCURRENCE*

OFFICE	WMRP*	WMRP*	WMRP:C	WMRP:C	WM:D		
SURNAME	BLilley/cj	RBoyle	HMiller	JOBunting	REBrowning		
DATE	10/ /84	10/ /84	10/3/84	10/9/84	10/10/84		

then sent to the IAEA Senior Advisory Group which reviews and modifies as necessary the drafts of all codes and guides prior to their being forwarded to the IAEA Secretariat and thence to the IAEA Member States for comments. Taking into account the comments received from the Member States, the Senior Advisory Group then modifies the draft as necessary to reach agreement before forwarding it to the IAEA Director General with a recommendation that it be accepted.

As part of this program, Safety Guide SG-011, "Operational Management of Radioactive Effluents and Wastes Arising in Nuclear Power Plants," has been developed. The working group consisting of Mr. E. Hladky from Czechoslovakia; Mr. A. Higashi from Japan; Mr. A. B. Fleishman from the United Kingdom; and Mr. L. C. Oyen (Sargent and Lundy Engineers) from the U.S.A., developed the initial draft of this guide from an IAEA collation. This draft was subsequently modified by the IAEA Technical Review Committee for Operation, and we are now soliciting public comment on a modified draft (Rev. 2, dated June 24, 1983). Comments received by the Director, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, by October 10, 1983, will be particularly useful to the U.S. representatives to the Technical Review Committee and the Senior Advisory Group in developing their positions on its adequacy prior to their next IAEA meetings.

Single copies of this draft Safety Guide may be obtained by a written request to the Director, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555.

(5 U.S.C. 522(a))

Dated at Washington, D.C. this 19th day of August 1983.

For the Nuclear Regulatory Commission.

Robert B. Minogue,

Director, Office of Nuclear Regulatory Research.

[FR Doc. 83-23375 Filed 8-24-83; 8:45 am]

BILLING CODE 7590-01-M

NRC/DOE Procedural Agreement

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of NRC/DOE Procedural Agreement.

SUMMARY: The Nuclear Regulatory Commission and the Department of Energy have signed a Procedural Agreement identifying guiding principles for interface during site investigation and site characterization of sites for a geologic repository under the Nuclear Waste Policy Act of 1982. The text of this agreement is published below.

FOR FURTHER INFORMATION CONTACT: Mr. Robert E. Browning, Acting Director, Division of Waste Management, Nuclear Regulatory Commission, Mail Stop 623-SS, Washington, DC 20555; (301) 427-4200.

Dated at Silver Spring, Maryland, this 16th day of August 1983.

For the Nuclear Regulatory Commission.

Joseph O. Bunting,

Chief, Licensing Process and Integration Branch, Division of Waste Management.

Procedural Agreement Between the U.S. Nuclear Regulatory Commission and the U.S. Department of Energy Identifying Guiding Principles for Interface During Site Investigation and Site Characterization

This Procedural Agreement outlines procedures for consultation and exchange of information which the Commission (NRC) and the Department (DOE) will observe in connection with the characterization of sites for a geologic repository under the Nuclear Waste Policy Act of 1982. The purpose of these procedures is to assure that an information flow is maintained between the two agencies which will facilitate the accomplishment by each agency of its responsibilites relative to site investigation and characterization under the National Waste Policy Act (NWPA). The agreement is to assure that NRC receives adquate information on a timely basis to enable NRC to review, evaluate, and comment on those DOE activities of regulatory interest in accordance with DOE's project decision schedule and thereby facilitate early identification of potential licensing issues for timely staff resolution. The agreement is to assure that DOE has prompt access to NRC for discussions and explanations relative to the intent, meaning and purpose of NRC comments and evaluations on DOE activities and so that DOE can be aware, on a current basis, of the status of NRC actions relative to DOE activities.

This Procedural Agreement shall be subject to the provisions of any project decision schedule that may hereafter be established by DOE, and any regulations that may hereafter be adopted by NRC, pursuant to law. In particular, nothing herein shall be construed to limit the authority of the Commission to require the submission of information as part of a general plan for site characterization activities to be conducted at a candidate site or the submission of reports on the nature and extent of site characterization activities at a candidate site and the information developed from such activities.

1. NRC On-Site Representatives

As early as practicable, following area phase field work, NRC on-site representatives will be stationed at each site undergoing investigation principally to serve as a point of prompt informational exchange and consultation and to preliminarily identify concerns about such investigations relating to potential licensing issues.

2. Meetings

From the time this agreement is entered into, and for so long as site characterization activities are being planned or are in progress, DOE and NRC will schedule and hold meetings periodically as provided in this section. A written report agreed to by both DOE and NRC will be prepared for each meeting including agreements reached.

a. Technical meetings will be held between DOE and NRC technical staff to: review and consult on interpretations of data; identify potential licensing issues; agree upon the sufficiency of available information and data; and agree upon methods and approaches for the acquisition of additional information and data as needed to facilitate NRC reviews and evaluations and for staff resolution of such potential licensing issues.

b. Periodic management meetings will be held at the site-specific project level whenever necessary, but at least quarterly, to review the summary results of the technical meetings; to review the status of outstanding concerns and issues; discuss plans for resolution of outstanding items and issues; to update the schedule of technical meetings and other actions needed for staff resolution of open items regarding site characterization programs; and to consult on what generic guidance is advisable and necessary for NRC to prepare. Unresolved management issues will be promptly elevated to upper management for resolution.

c. Early technical meetings will be scheduled to discuss written NRC comments on DOE documents such as Site Characterization Plans, DOE's semi-annual progress reports, and technical reports to foster a mutual understanding of comments and the information or activities needed for staff resolution of the comments.

d. In formulating plans for activities

which DOE will undertake to develop information needed for staff resolution of potential licensing issues. DOE will meet with NRC to provide an overview of the plans so that NRC can comment on their sufficiency. These discussions will be held sufficiently early so that any changes that NRC comments may entail can be duly considered by DOE in a manner not to delay DOE activities.

e. Schedules of activities pertaining to technical meetings will be made publicly available. Potential host States and affected Indian tribes will be notified and invited to attend technical meetings covered in this section (Section 2, Meetings). The notification will be given on a timely basis by the DOE. These technical meetings will be open meetings with members of the public being permitted to attend as observers.

3. Timely Release of Information

a. Data collected during site investigations will be made available to NRC on a current, continuing basis after the DOE (or DOE contractor) quality assurance checks that are inherent in determining that the data has been obtained and documented properly.

b. DOE's analyses and evaluations of data will be made available to NRC in a timely manner.

4. Site Specific Samples

Consistent with mutually agreed on procedures, DOE will provide NRC with site specific samples to be used by NRC independent analysis and evaluation.

5. Agency Use of Information

It is understood that information made available to either Agency under this agreement may be used at that Agency's option in carrying out its responsibilities.

6. Project Specific Agreements

Project specific agreements to implement the above principles will be negotiated within 120 days of the time this agreement is entered into. These project specific agreements will be tailored to the specific projects to reflect the differences in sites and project organizations.

7. Nothing in this agreement shall be construed as limiting forms of informal consultation not mentioned in this agreement (for example, telephone conversation or exchanges of reports). These other consultations will be documented in a timely manner.

Dated: June 27, 1983.

Robert L. Morgan,

Project Director, Nuclear Waste Policy Act Project Office, U.S. Department of Energy.

Dated: June 17, 1983.

John G. Davis,

Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission.

[FR Doc. 83-23376 Filed 8-24-83; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 50-309; CLI-83-21]

Maine Yankee Atomic Power Co. (Maine Yankee Atomic Power Station); Memorandum and Order

The Commission has considered and affirms the Director's Decision, DD-83-3, issued February 14, 1983 under 10 CFR 2.206.[1] The Decision denied the October 20, 1982 petition of Safe Power for Maine, Emil G. Garrett, John B. Green and John Jerabek (collectively "Safe Power") for action pursuant to 10 CFR 2.206. Safe Power sought an order to show cause why Maine Yankee Atomic Power Company ("Maine Yankee" or "licensee") should not be ordered to discontinue operation of its nuclear power plant at Wiscasset, Maine, in light of Safe Power's allegations of Maine Yankee's financial imcapability to operate the Wiscasset facility safely and dispose of spent fuel now stored there and to be generated during the remainder of the licensing period. The Commission has concluded that denial of this petition lay within the Director's discretion but notes that subsequent developments provide additional justification for the Director's decision. Accordingly, rather than simply declining to review the Director's decision the Commission is issuing the memorandum and order to enlarge the discussion of the issues raised by the petition.

In its petition for a show cause order Safe Power alleged a number of circumstances indicating "poor financial condition of Maine Yankee".[2] Safe Power requested that the Commission halt operation of Maine Yankee until the license "has demonstrated that it has adequate financial backing and adequate financial support . . . to raise capital requirement to continue operation, to make and changes or capital investments required by the NRC, and to provide for the funding of its shutdown and disposal of spent fuel at the end of its licensed term." Safe Power also asked that the Commission determine what amounts Maine Yankee should collect to provide for decommissioning and disposal of spent fuel and order the creation of a trust fund in which these monies would accumulate until needed.

In denying Safe Power's petition the Director correctly observed that the Commissions' concern with financial problems of a licensee is limited to the relation which those problems may have to the protection of public health and safety.[3] Allegations about financial difficulties at an operating facility are not be themselves a sufficient basis for action to restrict operations. In the Commission rulemaking, cited by the Director, which eliminated the financial qualification review for electric utilities, 47 F.R. 13750, the Commission noted the absence of evidence that financial problems are inevitably linked with corner-cutting on safety.[4] Thus, even had the Commission retained its financial qualifications review requirements, a showing the Maine Yankee was undergoing financial difficulties would not by itself require that the Commission halt operations at that plant.[5] On the other hand,

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[1] By successive orders of the Secretary pursuant to 10 CFR 2.772, the time in which the Commission may take review of the Director's Decision was extended to July 29, 1983.

[2] These asserted circumstances include: (1) Use of funds obtained through pledge of the company's stock of nuclear fuel for purposes other than purchase, remanufacturing and handling of nuclear fuel; (2) need to ask for early payment from Central Maine Power Company to meet Maine Yankee's daily cash requirement because its unsecured borrowing limit has been reached; (3) exhaustion of all of Maine Yankee's established sources of capital with the exception of infusion of additional common equity contributions by its sponsors; and (4) need for "sponsor guarantees" to continue the fuel financing.

[3] Recently in an opinion issued subsequent to the Director's decision the Supreme Court took note of this limitation on the Commission's concern with economics:

The Nuclear Regulatory Commission (NRC) * * * does not purport to exercise its authority based on economic considerations. 10 CFR 8.4, and has recently repealed its regulations concerning the financial qualifications and capabilities of a utility proposing to construct and operate a nuclear power plant. 47 F.R. 13751. In its notice of rule repeal, the NRC stated that utility financial qualifications are only of concern to the NRC if related to the public health and safety.

Pacific Gas & Electric Co. v. State Energy Resources Conservation and Development Commission. ——— U.S. ———, 75 L.Ed. 2d 752, 767 (1983).

[4] The Commission's rule is currently under review in the D.C. Circuit in *New England Coalition on Nuclear Pollution v. NRC*, No. 82-1581.

[5] Under Section 186 of the Atomic Energy Act the Commission may revoke a license when a condition exists that would have permitted the Commission to deny the license in the first instance, but it is not required to do so, especially where means short of license suspension are available to provide continued assurance of public health and safety.

ENCLOSURE 2

SCOPE OF NRC'S EA REVIEW

EA ITEMS IDENTIFIED IN SITING GUIDELINES	NRC REVIEW
1. Decision Process for Nomination	° None (addressed by Commission concurrence on siting guidelines)
2. Site Qualification/Disqualification	° DOE findings with respect to the guidelines ° Technical evaluation used to support findings ° Data, interpretations, performance assessments supporting technical evaluations
3. Geohydrologic Setting Determination	° Technical evaluations used to determine the geohydrologic settings ° Data, interpretations, performance assessments supporting technical evaluations
4. Comparative Evaluation of Sites Within Geohydrologic Setting	° None regarding conclusions or methodology ° Substantiation of conclusions
5. Suitability for Development of Repository	° Suitability conclusion ° DOE findings with respect to the appropriate guidelines ° Technical evaluations used to support findings ° Data, interpretations, performance assessments supporting technical evaluations

ENCLOSURE 2 (Cont'd)

SCOPE OF NRC'S EA REVIEW

EA ITEMS IDENTIFIED IN SITING GUIDELINES	NRC REVIEW
6. Suitability for Characterization	° Suitability conclusion ° DOE findings with respect to the appropriate guidelines ° Technical evaluations used to support findings ° Data, interpretations, performance assessments supporting technical evaluations
7. Comparative Evaluation of Site Against All Other Sites	° None regarding the relative merits of one site against another ° Substantiation of conclusions
8. Effects of Site Characterization	
° Public Health and Safety (Radiological)	° Proposed site characterization activities ° Potential effects on repository performance ° Data, interpretations supporting above
° Public Health and Safety (Non-Radiological)	° None
° Environment	° DOE findings with respect to the appropriate guidelines ° Technical evaluations used to support findings

ENCLOSURE 2 (Cont'd)

SCOPE OF NRC'S EA REVIEW

EA ITEMS IDENTIFIED IN SITING GUIDELINES	NRC REVIEW
9. Alternative Activities for Site Characterization to Avoid Effects in No. 8 above	° Alternative plans for site characterization activities
10. Regional and Local Impacts of Repository	° Proposed repository facilities and operations
	° Effects on repository performance, environment, transportation and socioeconomics
	° Data, interpretations supporting above
OTHER EA ITEMS	
11. Descriptions of the Site and Region	° Data, interpretations, performance assessments
12. Descriptions of the Repository Design	° Preliminary designs
	° Data, interpretations, performance assessments supporting preliminary designs

Enclosure 3

33

State a likely nuclear thoroughfare

By SUE LINDSAY
Rocky Mountain News Staff Writer

Thousands of trucks carrying deadly loads of spent nuclear fuel, each 10 times more radioactive than the bomb dropped on Hiroshima, may roll through Colorado by the end of the century posing a potential danger that has so far drawn a slow reaction from state officials.

The issue centers around whether the federal government will locate its high-level radioactive waste dump in the West. Many experts believe it is likely.

If one of three proposed Western sites is chosen, Colorado could become the hub of rail and highway traffic to the dump from the East, where most of the waste from nuclear reactors is produced.

According to some federal projections, the major transportation corridor would be Interstate 70, which passes through Denver and across the Rocky Mountains.

One federal study estimates that by 2000, a tractor-trailer truck carrying nearly a half-ton of highly radioactive waste would arrive at the dump every 90 minutes, 24 hours a day, every day, transforming many interstate highways into nuclear thoroughfares.

Earlier this month a truck carrying Navy torpedoes overturned at the interchange of I-70 and I-25 in Denver, closing both highways, causing the largest traffic jam in Denver's history and underscoring how vulnerable the city is to accidents involving hazardous materials.

High volumes of spent nuclear fuel, the most radioactive substance on Earth, probably won't be on the road before 2000. That's how long it will take to select and construct a dump.

But decisions about where to locate the dump, which could have a major impact on Colorado, are under active consideration.

"The decisions are being made now," said Fred Millar of the Environmental Policy Institute in Washington. "Colorado will lose its say if it doesn't get involved now."

"Once the site is selected, reversing the federally generated momentum will be practically impossible," Millar warned.

Until recently, the topic has attracted little concern from state and local officials.

"I don't think the state generally is aware of some of the planning that's going on at the federal level which could result in higher use of the I-70 corridor for transportation of spent nuclear fuel," said state Sen. Tom Glass, D-Frisco, whose mountainous district contains the most treacherous stretches of that route.

"This highway presents such unique hazards itself under normal conditions, from the Mousetrap at rush hour to the Eisenhower tunnel to a runaway truck in Vail Pass," said Glass. "This is a tough road by any standard."

Denver and Colorado officials contend that the state still has time to make its influence felt.

"It's early enough in the process that if we act soon, we can respond," said Tony Massaro, Denver's director of environmental affairs. "DOE will narrow the list down to three sites in February. If we wait much beyond that, we will have some serious problems."

Casks being used to ship the waste are designed to meet standards set 23 years ago. Their ability to withstand crashes under current highway conditions is being seriously questioned.

But the Department of Energy says people are becoming needlessly alarmed.

Denver, Colorado Rocky Mountain News

we know there has been a lot of activism in the area which seems to frighten people," said Roy Garrison, DOE's transportation chief. "But these shipments have been moved for 40 years without ever any death or injury. It is a fact there have been no problems other than conventional accidents."

Garrison said the increased volume of shipments won't threaten the public. he contends that the shipping casks are indestructible.

"Other hazardous materials don't have the kind of record we're talking about here," Garrison said. "Gasoline is considered an acceptable risk and it kills a lot of people every year."

But others say public concern is justified.

"This stuff isn't acid or gasoline, it's radioactive waste. And there isn't a high level nuclear disposal site that works anywhere in the world right now," said Steve Frishman, general counsel for high-level radioactive waste with the Texas governor's office.

So far, the nation's 76 nuclear reactors have generated 25,000 tons of waste. It's stored in pools of water at the reactor sites. But they are filling up.

Nine sites for nuclear waste dumps have been proposed.

The three in the West are near Moab, Utah, on the border of Canyonlands National Park; on the U.S. government's Hanford reservation near Richland, Wash.; and at the Nevada test site 65 miles northwest of Las Vegas.

It's also possible that a temporary site may be established at a federal installation in Idaho Falls, Idaho.

The Nuclear Waste Policy Act of 1982 requires that three possible sites be selected early next year. A final site is to be chosen by 1987 and opened in 1998. But the legislation is fraught with loopholes and contradictions which open the door for years of challenge.

Although most nuclear waste is in the East, Millar and others bet the site will be in the West, where populations nearest the proposed sites are lower, have less political influence and are more supportive of the nuclear industry.

"Whether it's the MX missile or nuclear waste disposal, the West is picked on for sites because there's a lot of room out here and we don't have the political clout we need to prohibit it," said Rep. Ray Kogovsek, D-Colo.

"In Utah, 86 percent of the land is owned by the federal government. If the government wants to deposit waste on land they own, sooner or later they are going to do it."

But Sen. Gary Hart, D-Colo., cautioned that the not-in-my-back yard philosophy won't solve the problem.

"Frankly, as an American and an elected official, I think it is irresponsible for people to say not in the West, or East or South or any particular state. This is a national problem.

"Technology, rather than politics, has to prevail," he said. "This stuff has to be put not in the place which has the least political muscle, but where it is the safest. And that decision will be made by the president of the United States."

Few waste shipments have traveled the nation's highways or railways in recent years because there is no national dump. From 1979 to 1981, an average of 96 commercial and experimental shipments of highly radioactive waste were transported annually.

The number of shipments would increase significantly once a site is built.

See NUCLEAR, page 24

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Continued from page 8

The Department of Energy estimates that from 350,000 to 450,000 truck shipments or 35,000 to 45,000 rail shipments would be necessary to transport the waste produced by the currently operating nuclear reactors over their 30-year lifetimes.

Up to 120 trucks would be on the road every day by the year 2000, according to a 1981 report by the National Academy of Science's National Research Council.

"Only one mess up could contaminate the Colorado River or close the economic connection between the Eastern and Western Slopes along I-70 for years," said geologist Roy Young, a consultant to the Sierra Club.

Truck accidents in general, including minor incidents, occur at the rate of one every 400,000 miles, according to DOT.

But the Nuclear Regulatory Commission says the probability of an accident severe enough to break a cask is similar to that of a cask being struck by a meteor — once in several million years.

The casks contain "spent fuel," a somewhat misleading term because it implies that the fuel has lost its power. In fact, it is millions of times more radioactive than fresh fuel.

Fuel that has been irradiated inside a nuclear reactor for several years is considered spent when the enriched uranium it contains no longer fissions properly.

When it is removed, it must be stored under water to cool it and contain the radiation.

Even after an unshielded fuel assembly has been out of a reactor for six months, its temperature exceeds 800 degrees Fahrenheit. Standing one yard away, a person would receive a lethal dose of radiation in 10 seconds.

In an accident, a damaged cask could release radioactive gases and particles into the air. They could be inhaled or settle on vegetation, soil or water and eventually be ingested. People near a radioactive spill would absorb radiation through the skin or by inhaling it.

Depending on the amount of exposure, the effects can be immediate or latent, such as increased cancers, birth defects or genetic mutations.

In 1980, the NRC estimated there would be nearly 2,500 immediate deaths and even more cancer victims should such a calamity occur at lunch hour in downtown Manhattan.

The prospects of an accident are also deadly for Coloradans. While fewer lives would be lost if an accident occurred on I-70 in the mountains, the impact on Colorado's ski and tourism industry would be devastating.

"Both I-70 and I-76 lead from the East to Denver where a million people are living," said Colorado Port of Entry director Dee Hartman. "Essentially, we have no control over the feds. If they want to bring it through Denver, they will."

Who should respond to such an accident is an open question. An NRC report estimated that a "model state system" would cost roughly $5.6 million. "States shouldn't have to foot that bill," contends Texas' Frishman.

But federal responsibility for emergency response offers little comfort to Denver.

"They may say you don't need to train local people because their people are always on call, but we saw how well that worked with the torpedo incident," said Rep. Patricia Schroeder, D-Colo., who was highly critical of the government's response to that accident.

Frishman is calling for a study of the risk along various routes. He and others complain that responsibility for safely transport-

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ing the waste is being lost in a bureaucratic shuffle.

DOE transportation chief Roy Garrison said his department's policy requires carriers to follow the regulations of the Department of Transportation.

DOT's regulation HM-164 directs nuclear shipments to be transported on interstate highways, taking bypass routes around cities where feasible and available.

DOT's enforcement of other hazardous materials shipping regulations, is not good. For example, the truck carrying torpedos that overturned in Denver should have bypassed the city, but didn't.

More than 200 local and state jurisdictions have banned or restricted the transport of radioactive waste through their communities.

DOT has moved to pre-empt several such ordinances. But resistance continues to build. Michigan passed a law prohibiting transport of nuclear waste in casks which hadn't been physicially tested. Since none used in the United States has undergone such tests, the Michigan law effectively bans nuclear shipments.

"The real issue," said Frishman,"is that states need information about transportation so they can respond properly and be involved in the process. Up to now DOE has been unwilling and unable to provide us sufficient information."

Colorado and Denver barely have begun considering restrictive laws aimed at nuclear transport and they have been slow to ask for such information.

"Clearly, Colorado should do what it can to pass strong laws on routing and safety precautions," said Schroeder. "When states have passed laws, the government has said it's been pre-empted. . . . They've used that to keep everybody out of it."

Hart said the Reagan administration had dodged its responsibility to implement the Nuclear Waste Policy Act. "There is plenty of latitude for the states to deal with it," he said. "If the federal agencies wanted this act to work, they would sit down with the states and make it work."

A number of states, including Utah, Nebraska, Wisconsin, Minnesota and Washington, have tried to get mapping information developed for DOE at Oak Ridge National Laboratories in Tennessee.

Up to now, DOE has resisted those efforts. DOE's transportation head Garrison said there is "some movement to accommodate the states' requests."

Colorado hasn't asked for the information. Denver intends to ask the state to make a formal request, said Denver's Massaro.

Leonard Slosky, aide to Gov. Richard D. Lamm said the state is "following the DOE planning process."

On the mapping question, Slosky said Colorado is "trying to track down that process.

"We need to see what they have and what it means. The current DOE plan says that routes would be selected by commercial shippers. Any model that predicts where shipments would go is of limited utility. We don't know yet if they would go by rail or highway."

Trucks carrying any hazardous products, including radioactive waste, are already prohibited from traveling through the Eisenhower Tunnel on I-70. Instead, they are routed over Loveland Pass, which, Port of Entry director Hartman notes, is treacherous even on a good day.

"So we're having these trucks go over a winding, curving road supposedly because it's safer," Hartman said. "Is that good? I don't really want nuclear waste going over Loveland Pass or the tunnel."

in high level waste which they will forward to you as soon as it is available. If my staff can be of further assistance contact Bill Lilley of my staff.

Robert E. Browning, Director
Division of Waste Management, NMSS

Enclosures:
1. NRC/DOE Procedural Agreement
2. NRC's EA Review
3. Rocky Mountain News

OFC	WMRP:bb	WMRP RB	WMRP	WMPC	DWM		
NAME	WLilley	RBoyle	HMiller	JOBunting	REBrowning		
DATE	9/27/84	9/27/84	9/ /84	9/ /84	9/ /84		

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Ticket for H. Miller — RC Bunting

August 30, 1984

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

FROM: Richard E. Cunningham, Director
Division of Fuel Cycle and Material Safety

SUBJECT: TRANSPORTATION SEMINAR - OCTOBER 12, 1984

On August 29, 1984 I received a call from Mary Whitman, Governor's Office, Colorado, (Telephone number: 303-866-2226) inviting me to participate in a seminar concerning transportation of high-level waste and spent fuel. The invitation stems from my participation in the recent DOE transportation meeting in Columbus, Ohio, which Ms. Whitman apparently attended. I tentatively accepted, subject to a written invitation. Le Santman from DOT will attend. I do not know about other federal agency participation.

Seminar participants will be mainly state and local officials from "corridor" states to the candidate repository sites. The purpose of the seminar is to better understand the roles of government agencies in transportation matters and to discuss issues confronting state and local authorities. Ms. Whitman characterized participants as "not anti nuclear" but ones confronted with issues.

One thing that needs to be pinned down very precisely prior to the meeting is the role and scope of the NRC review of the nine DOE environmental assessments for the candidate sites. This matter is currently being deliberated between the NMSS staff and ELD. I would also appreciate any insight your staff can give me about issues that are likely to surface at the seminar.

Richard E. Cunningham, Director
Division of Fuel Cycle and
Material Safety

cc: Mr. Davis
Mr. Mausshardt
Mr. Cook

FROM	DATE OF DOCUMENT	DATE RECEIVED	NO.
RECunningham	8/30/84	9/4/84	WM-84779

LTR	MEMO	REPORT	OTHER
	XX		

TO	ORIG.	CC.	OTHER
REBrowning	XX		

ACTION NECESSARY	CONCURRENCE	DATE ANSWERED
☒	☐	
NO ACTION NECESSARY ☐	COMMENT ☒	BY: 9/18

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FILE CODE: ~~00S~~

DESCRIPTION (Must Be Unclassified)
TRANSPORTATION SEMINAR - Oct 12, 1984

REFERRED TO	DATE	RECEIVED BY	DATE
HJMilder	9/4		
cc: JOBunting			

ENCLOSURES

REMARKS
Closed by memo to RCunningham 10/10/84

U S NUCLEAR REGULATORY COMMISSION

MAIL CONTROL FORM

FORM NRC-326 (1-75)