WARREN G. BISHOP
Chair

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STATE OF WASHINGTON
NUCLEAR WASTE BOARD
Mail Stop PV-11 • Olympia, Washington 98504 • (206) 459-6670

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NUCLEAR WASTE BOARD

Regular Meeting

January 16, 1987
1:30 p.m.
EFSEC Hearing Room
Rowesix, Building 1
4224 - 6th Ave. S.E.
Lacey, Washington

AGENDA

1.	Introductory Remarks	Warren Bishop
2.	Approval of November 20-21, 1986 Minutes	
3.	Correspondence	Terry Husseman
4.	Status of Governor Gardner's National Conflict Resolution Proposal	Curtis Eschels
5.	Follow-up on USDOE's Letter Concerning Ongoing and Planned Activities at Hanford	Terry Husseman Narda Pierce
6.	Discussion of February 4-5 States/Tribes/ USDOE Meeting in Spokane	Terry Husseman
7.	Discussion of Board Comments on USDOE Proposal for Calculating Nuclear Waste Fund Disposal Fees for Defense Wastes	Bill Brewer Joe Stohr
8.	Discussion of Possible Change in the Definition of High-Level Waste	Joe Stohr
9.	Committee Reports	Committee Chairs
10.	Litigation Status	Narda Pierce
11.	Federal Legislation	Charlie Roe
12.	Richland USDOE Report	Max Powell
13.	Washington Institute for Public Policy	Max Power
14.	Other Business	
15.	Public Comment	
16.	Adjourn	

The Nuclear Waste Board welcomes and encourages public participation during the monthly meetings. The Chairman will invite public comment at various points during the meeting. In addition, if there are specific agenda items which you wish to comment upon please sign the sheet on the back table and you will be invited to comment when the Board reaches that agenda item.

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ANDREA BEATTY RIDKER
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Mail Stop PV-11 • Olympia, Washington 98504-8711 • (206) 459-6000

NUCLEAR WASTE ADVISORY COUNCIL

Regular Meeting

January 16, 1987
9:00 a.m.
EFSEC Hearings Room
Rowesix, Building 1
4224 - 6th Ave. S.E.
Lacey, Washington

AGENDA

1.	Introductory Remarks	Warren Bishop
2.	Approval of November 20-21, 1986 Minutes	
3.	Significant Recent Developments	Terry Husseman
4.	Committee Reports	
5.	Public Involvement Report	Marta Wilder/Paul Korsmo
6.	Other Business	
7.	Public Comment	
8.	Adjourn	

The Nuclear Waste Advisory Council welcomes and encourages public participation during the monthly meetings. The Chairman will invite public comment at various points during the meeting. In addition, if there are specific agenda items which you wish to comment upon please sign the sheet on the back table and you will be invited to comment when the Council reaches that agenda item.

ANDREA BEATTY RINIKER
Director

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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CONTACT: Terry Husseman / Marta Wilder
Office of Nuclear Waste Management
(206) 459-6670

MEETING NOTICE

January 6, 1987

SUBJECT: Nuclear Waste Board and Nuclear Waste Advisory Council Regular Meetings

DATE: January 16, 1987

TIME: 9 a.m. - Advisory Council
1:30 p.m. - Nuclear Waste Board

PLACE: EFSEC Hearings Room
Rowesix, Building #1
4224 - 6th Avenue S.E.
Lacey, Washington

The Nuclear Waste Board and Nuclear Waste Advisory Council regular meetings are on January 16, 1987.

During the 1:30 p.m. meeting, the Board will receive a report by Curt Eschels, Governor's Special Assistant For Policy, on the National Conflict Resolution Proposal submitted to the U.S. Department of Energy in December. The proposal was prepared in response to USDOE's request that Washington State commence Consultation and Cooperation negotiations. The U.S. Nuclear Regulatory Commission's pending redefinition of high-level nuclear waste will also be addressed by the Board.

The Advisory Council will review recent activities and the status of several public involvement projects. The Council will also hold an informal meeting on January 15, 1987 at 6:30 p.m. at the Westwater Inn, Westwater Club Room, 2300 Evergreen Park Drive, Olympia, Washington.

For more information, contact the Office of Nuclear Waste Management.

# # #

ANDREA BEATTY RINIKER
Director

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DEPARTMENT OF ECOLOGY
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MINUTES OF THE JOINT NUCLEAR WASTE BOARD AND NUCLEAR WASTE ADVISORY COUNCIL MEETING

November 20, 1986

1:30 p.m.
EFSEC Hearings Room
Rowesix, Building #1
4224 Sixth Avenue S.E.
Lacey, Washington 98504

Board Members Present:

Warren A. Bishop, Chair
Allen Fiksdal, EFSEC Designee
Senator H.A. "Barney" Goltz
Representative Shirley Hankins
Ray Lasmanis, DNR Designee
Representative Louise Miller
Richard Watson, State Energy Office

Council Members Present:

Harry A. Batson
Pam Behring
Phyllis Clausen
Nancy Hovis
Russell Jim
Valoria Loveland
Sam Reed
Robert Rose
Commissioner W.H. Sebero
Betty Shreve

The meeting was called to order by Warren A. Bishop, Chair.

Mr. Bishop asked Richard Watson, Chair of the Transportation Committee to introduce the first presentation. Mr. Watson remarked that transportation is the activity related to the nuclear waste issue that spreads the impacts well beyond the immediately affected states and Indian Nations. It calls for a multi-state approach for dealing with the issues. The Western Interstate Energy Board, an organization of the thirteen Western states, has for the past several years had a program for examining the nuclear waste transportation issue. He introduced Lori Friel, staff attorney with the WIEB, to address the regulatory and legal framework for nuclear waste transportation. Mr. Watson said she would also discuss some of the options for state and local government approaches to nuclear waste transportation.

Lori Friel began her presentation by mentioning some of the constitutional principles that can affect the states' rights to regulate radioactive materials transportation and some of the federal laws that impact the states' rights.

Mr. Friel said there are three constitutional principles that relate most directly to radioactive materials transportation: the Supremacy Clause, the Commerce Clause and the Equal Protection Clause.

The Supremacy Clause states that the federal law is supreme in certain areas such as interstate commerce. State laws will be considered invalid if they are in direct conflict with federal law or are an obstacle to the federal goals in some way.

Under the Commerce Clause, the Constitution gives the federal government the right to regulate interstate commerce. This covers almost anything that involves two or more states and specifically involves transportation of wastes. In combining the Commerce Clause with the Supremacy Clause, certain Congressional acts can pre-empt the states from regulating interstate commerce. Even if Congress does not act and there is still room for the states to regulate, there is a general principle that states cannot unreasonably burden interstate commerce.

The Equal Protection Clause states that if two groups of activities or people are being regulated differently, there must be some rational reason for this unequal treatment. The classification scheme has to be related to some legitimate state goal. In the area of transportation of radioactive materials it would mean there has to be some rational reason for separating radioactive materials from other hazardous materials or commerce in general.

There are also a number of federal statutes that affect transportation of radioactive material. The most important is the Hazardous Materials Transportation Act. That Act grants regulatory authority to the Department of Transportation to regulate all hazardous materials transportation, including radioactive materials. An example of the regulations adopted by DOT are routing rules stating that spent fuels and highway route-controlled quantities of radioactive materials must either use the interstate highway system or a state-designated alternate route. DOT also has regulations on the placarding displayed on the trucks carrying spent fuel, driver qualification, age of drivers, medical qualifications, hours of work without a break, etc.

Under the HMTA, state laws which are inconsistent with the Act or with the regulations adopted by DOT under the Act are pre-empted. However, this pre-emption can be waived by DOT if it decides to allow a state to enforce an inconsistent law. The Nuclear Regulatory Commission also regulates transportation. Most of their regulations fall into two categories, either cask safety or safeguards. NRC has established the test standards against which the cask must be tested as well as the safeguards regulations, which mean protection from sabotage and theft. Under that category they

have regulations requiring prenotification to the states, advance approval from NRC of the routes proposed, some escort requirements in urban area, etc.

Implementation of Constitutional Principals and Federal Laws

Ms. Friel said the DOT rules only on the Hazardous Materials Transportation Act and whether a state law is consistent with that Act. All DOT opinions are advisory, with three different types of rulings: (1) the inconsistency ruling; (2) if inconsistent, states can apply for a waiver; (3) appeal within DOT of any of the decisions.

The courts have a broader rule in that they decide both on the HMTA and the constitutional principles. A challenge to state law can be started in the courts, or a DOT advisory opinion can be appealed. Ms. Friel reviewed in detail implementation by DOT and the courts. She noted the courts consider the DOT's opinion, as DOT does have certain expertise in the area of transportation, but the courts are not bound by DOT opinions. In general, the courts have been less restrictive on limiting states' rights to regulate than DOT has been. Court decisions are binding, but only on those within the courts' jurisdiction. Generally, the courts will find the state laws invalid if there is a direct conflict with federal law, or if there is an unnecessary duplication of rules. One of the goals of the HMTA is to simplify the transportation process. Also, as with DOT, they try to avoid unnecessary transportation delays, and will invariably invalidate any absolute ban on shipments. Any efforts to discriminate against out-of-state shipments will usually be invalidated unless there is clearly a good reason for distinguishing between out-of-state and intrastate shipments.

State/Local Regulation

Ms. Friel said there are basically three different approaches a state can take to regulate radioactive materials transportation: (1) the conservative; (2) the moderate; and (3) the activist.

Under the conservative approach the state would just follow the DOT inconsistency rulings, only adopting rules which the DOT has previously upheld in other states. A more moderate approach would be to adopt any rules desired that had already been approved by DOT, as well as any rules that have been approved in federal court cases. The activist approach would be to adopt regulations which are unlikely to be upheld, or to appeal to Congress or some federal agency for specific authority to adopt the desired regulation.

Ms. Friel said in terms of selecting the approach to take there are a number of factors to consider. One is the general political climate of the state. Another important factor is how serious a problem is a particular aspect of transportation. Also to be considered is how much time, money, and effort is a state willing to expend in defending its regulations.

Ms. Friel continued to describe in detail the aspects of the three approaches mentioned earlier. Under the conservative approach, concerning designation of alternative routes, she said that although DOT has made the determination that interstate highways are the preferred route, there is a mechanism for a state to select a different route. A risk analysis is needed to show that the alternate route is safer than the interstate highway. Consultation is necessary with local jurisdictions and neighboring states and continuity must be ensured.

Among the other elements in this approach, she said, the Price-Anderson Act establishes insurance requirements for certain shippers in the nuclear industry. It also establishes a pool of money to compensate people following an accident. Congress specifically considered and rejected the idea of a complete federal liability scheme. They said statutes of limitations, the burden of proof, types of damages to be collected, etc., would be left up to the states.

Among the items DOT looks unfavorably upon, she said, was the requirement of prenotification. The federal law already establishes certain prenotification requirements for spent fuel shipments and different requirements for highway route control quantities. DOT has said that the Nuclear Regulatory Commission's regulation on casks for spent fuel and Type B package for highway route control quantities are so pervasive they completely pre-empted that field. Another area where the federal regulatory system is deemed pervasive is defining the hazard classes. They do not like any additional personnel requirements or extra equipment beyond that required under the federal regulations. Under DOT's reasoning, the amount of insurance the shippers and carriers are required to have cannot be changed. Also disliked would be time-of-day restrictions for through shipments, as it makes it too difficult to plan a trip.

At this point, Mr. Husseman asked if there had been a court ruling on the stand of DOT on the prenotification requirement. Ms. Friel responded she should have that in her notes and would give an answer later.

In response to another question, Ms. Friel said the NRC and the USDOE have different prenotification requirements. NRC requirements only apply to its licensees. USDOE is not an NRC licensee. She said basically there are no prenotification requirements for the USDOE. This means, she said, that this field has not yet been filled.

In response to a question about dedicated drivers and dedicated trucks, Ms. Friel said she had seen nothing about a state requirement to use dedicated drivers. That might fall under the area of driver qualifications and the DOT has not done much in that area, so there may still be room to regulate in that area.

Another point Ms. Friel made was that DOT does not approve of permits that are based on safety concerns, although permits based on economic concerns are valid. She said the reasoning behind this is that DOT has said that the federal government has an elaborate regulatory scheme to ensure the safety of these shipments. Therefore, there is no need to have a permit system for safety reasons, which would be an unreasonable burden. They realize, however, that these shipments do impose some costs on the states for inspections, for emergency preparedness, etc., and the states do have a legitimate interest in protecting their treasuries and should be reimbursed for these expenses. Therefore, a permit system designed to secure money to pay for these expenses is not necessarily invalid. She remarked that all those rulings are advisory.

In taking the more moderate approach, she said, a state could adopt laws that the courts have either upheld already or that are similar to others they have upheld. One example, she said, was a city-wide time-of-day restriction. DOT does not approve, but the courts have. Others upheld by the courts were driver training requirements and certain record-keeping requirements called post-notification requirements. The courts have also upheld permit systems as long as the application process is easy, without too much detail or a long waiting time, and as long as the fee is reasonably related to the cost imposed on the state. She added the state did not have to have a dedicated fund for the money received, as long as the fees are reasonably related to the amount of money the state is spending on transportation.

Responding to another question asking if the time-of-day requirement could be aimed at spent fuel shipment or would it include a broader array of materials, Ms. Friel said that possibly, under the most conservative approach, radioactive materials could be singled out. During rush hours a tuck could be held up in traffic, and unlike other hazardous materials, it is constantly giving off low-level radiation.

Other things the courts have ruled on as being invalid include a permit system that unduly delays shipments and discrimination against out-of-state shipments. Russell Jim asked for an example of an out-of-state shipment. Ms. Friel answered that several states declared it was unlawful to transport wastes from another jurisdiction through their state, which was pretty blatant. Statewide transportation bans are considered to be an undue burden on interstate commerce.

The courts have also said that the federal regulation of placarding of the packages and the vehicles is completely regulated by DOT, and that any effort to change placards or marking would only confuse emergency responders. Therefore, it would be invalid. Mr. Jim asked if every hazardous type of material be required to be plainly marked. Ms. Friel said there are rules for the marking, depending upon the quantity. She said there are about eight different classes of hazardous materials that require making, with certain small quantities being exempt. However, spent fuel and high route-controlled quantities would require marking. Mr. Jim asked if a layman would be able to understand this while on the road, and Ms. Friel said probably not. A layman could see "radioactive materials", but it would not tell the layman whether it was spent fuel, fresh fuel, etc. She said this is a problem that some of the states have noticed with the regulations. This also presents an emergency response problem, she said.

Ms. Friel said other areas the courts believe the federal government has sewed up are container testing and written accident reports to the states. The courts do not wish to impose additional paperwork burdens on the carriers. Immediate accident notification required to respond to an incident is approved.

With regard to the activist approach, Ms. Friel said in addition to adopting any rules discussed that have been upheld by DOT or the courts, this approach would allow for adopting regulations that have not been considered by the courts, but are not likely to be upheld. This is just testing the outer limits of the law, she said. Another possibility is adopting regulations that have been invalidated in other jurisdictions. Appealing to Congress or some federal agency to be given the authorization to adopt a rule the state felt necessary, but which is currently not allowed under federal law, would be another course to take. A state law is legally enforceable, until it has been invalidated. Some states have taken this course, knowing the regulation would never withstand a court challenge, just to make a political statement, Ms. Friel said.

Some examples of approaches to consider include permits with high fees or a lengthy application process; statewide bans or time-of-day restrictions; additional placarding and/or container testing; additional insurance, prenotification and accident reports; and additional personnel, escorts or equipment requirements.

Some general considerations a state might want to investigate would be regulating radioactive materials in a comprehensive hazardous materials regulatory system. This might alleviate any concerns that the equal protection clause is being violated by singling out radioactive materials. Also, this might be more efficient. Another consideration would be multi-jurisdictional agreements, such as agreements with neighboring states or Indian tribes, and agreements between local governments to adopt a consistent regulatory system that involves more than one jurisdiction.

Two Case Studies

Ms. Friel cited two case studies.

The application of the state of Illinois for a permit fee system for spent fuel shipments has been upheld by the Department of Transportation, although it is currently on appeal. USDOE and the utilities have appealed the ruling. The initial ruling was made in the DOT in their hazardous materials system, and

the appeal is before the DOT's Research and Special Programs Administration. It could go through the courts from there.

The state of Vermont permit fee system for spent fuel shipments has been invalidated.

Key differences between these two systems included the Illinois system only requiring the payment of a fee, with no lengthy permit application. The Vermont system had a very detailed permit application, requiring information on emergency response procedures, proof of liability insurance as required under federal law, proof there was compliance with all sorts of federal laws, certification that federal law would never be violated, and further detail. The DOT maintained this much detail would delay shipments. Another difference was that Illinois did not deny access to non-paying carriers. Should a carrier not pay the fee in advance it was Illinois' policy to allow the shipments to proceed and send payment notices to the carrier, or if necessary sue the carrier. The Vermont law stated payment must be made before the shipment is allowed to go through the state.

The Illinois system applies only to spent fuel, whereas the Vermont system applied to other radioactive materials. A problem there is that spent fuel shipments are planned far in advance. With other radioactive materials, such as certain pharmaceuticals, they are handled more like general commerce, which does not require advance planning. Another problem with the Vermont law was that it did not apply to all radioactive materials. DOT and the courts have been very adamant about the fact that the federal government has the authority to make up the hazard class definitions.

Ms. Friel continued that the Illinois system pays for an integrated emergency response plan, integrated with the local governments and the federal government. The Vermont system was paying for a state emergency response system which completely duplicated the federal system. DOT maintained that just because the state of Vermont choose to ignore the federal government in all of its emergency response capabilities did not mean it was reasonable to require the carrier to pay for it.

DOT found that the Illinois rule did not cause shippers to re-route their shipments to avoid the state of Illinois, whereas the system in Vermont did. This relates specifically, she said, to the fact that Vermont is on the United States/Canadian border. The Vermont rule was challenged by a shipper attempting to ship from Canada to the U.S. Canada has no routing rules similar to the U.S. routing rules, so a shipper could wander all over Canada to avoid Vermont and come into the U.S. at some different point. Since Illinois is not a border state, any shipment complying with DOT's rules require it to use the shortest and the fastest route; thus it would be illegal for the carrier to drive around Illinois. She commented this would be a point for the state of Washington to consider, as it is a border state.

The Illinois system provided state escorts, rather than requiring the carrier to provide escorts, which DOT considered would be an unreasonable burden on the interstate commerce and would be unmanageable if the escort requirement were not consistent.

Dick Watson inquired if the fee levied paid for the cost of the escorts. Ms. Friel said that is one of the items the fee covers. The Illinois fee is $1,000 per cask, but they have said it does not cover the complete costs of their program.

Terry Husseman asked who is shipping spent fuel. Ms. Friel said the Vermont shipments were coming from Chalk River, Ontario, under an agreement whereby the spent fuel would be accepted by the United States when it was ready to be removed from the reactor. USDOE ships spent fuel for research purposes to Idaho Falls, and possibly to the Nevada Test Site or to Hanford, from

various reactors. Also, she said there are reactors that are running out of space in their storage pools that have to ship to other reactors owned by the same utility. The Morris facility in Illinois, she said, was built as a reprocessing plant and some contracts were signed agreeing to accept some spent fuel, reprocess it, and make new fuel from it. The reprocessing facility never materialized, but the contracts remained and there is some fuel going from Minnesota to Illinois. In the state of New York there is the West Valley Reprocessing Plant, operated for the state by a contractor until some time in the 1970s. At the time it closed, the court ordered that all the fuel there should be returned to the original utilities. There is also some fuel from foreign countries being shipped. Ms. Friel said almost all of it goes through Illinois. Some shipments from Virginia to Idaho which are overweight take different routes, she said.

In response to Mr. Husseman's inquiry as to how much the $1,000 per cask raises in Illinois, Ms. Friel estimated they get between 100 and 200 shipments per year.

Concerning the DOT's desire for the shortest and fastest route, without mentioning safest, Ms. Friel said DOT considers interstate highways, in general, as safer than other roads. They consider any interstate highway safe enough to be acceptable, and the biggest risk will be the normal exposure--the non-accident exposure--experienced by those living along the route. Therefore, the faster you arrive the fewer exposed.

Another question was raised as to delays enroute caused by interstate construction, and whether advance notice was given to the carriers to avoid long waiting in traffic lines. Ms. Friel said usually one week's advance notification is received by the carriers and there is room in the regulations for carriers to deviate from those routes under emergency situations. In these instances, the carriers must choose a route that avoids populated areas. She said some states have looked at designated parking areas should a change in the route cause the carrier to arrive in urban areas during restricted hours.

The question was asked as to the exposure limit and measurements for the truck. Ms. Friel believed it was 10 per hour at six feet from the accessible surface. Representative Hankins then asked what dose the driver was receiving. The response was less than 2 mr per hour. She added that the driver is protected through distance and the shielding on the cask. She thought there was no special shielding in the cab of the truck, and the driver does not wear protective clothing, although he might be wearing film badges to measure the exposure level. She thought this was one item of inspection when the states do a radiological survey of the truck. Ms. Friel said she also believed there were annual requirements to determine how much radiation exposure someone could receive in an occupation. Representative Hankins said it was 5 rems under the NRC regulations for commercial facilities, but that does not apply to the driver. She added a person would receive 10 mr from a chest X-ray, with the new equipment. Ms. Friel said there was no federal or state regulation which currently, routinely monitors the cumulative exposure of the truck drivers.

Further discussion centered on the shortest and fastest route, and Ms. Friel explained DOT does allow the carriers to take into consideration using the southern route or the northern route, as shipping campaigns use, depending on weather conditions. There is a certain amount of leeway allowed, she said.

Going back to the two case studies, Ms. Friel said the Illinois system enforces compliance with the federal rules, while the Vermont system imposed a different set of state rules. Some of them were inconsistent with federal law. Also, the Illinois fee was reasonably related to legitimate state goals. DOT and the courts have not required a detailed accounting of the expenditure of the fees, as long as it is reasonably related.

Phyllis Clausen asked if there were two-way communication between the cab driver and the dispatcher. Ms. Friel said she was not sure, but that the USDOE is developing a "real-time" tracking system in which there would be two-way communication between the driver and headquarters at all times. Even if the driver were incapacitated there would be a constant signal emitted from the truck to the control headquarters. They are planning to test this out in either February or July of 1987, depending upon satellite space available.

In response to Mr. Fiksdal's question, Ms. Friel said there was no limit on density of nuclear material on the highways.

In response to another question, Ms. Friel said most states have had some regulation of radioactive material transportation - at least half have done something, varying from a simple system to a more elaborate system such as Vermont. She said there has not been much testing in the Courts on the issues of the regulations for high-level wastes, and there are not very many cases on hazardous materials.

Mr. Watson asked if Illinois were funding local response capabilities from the collected fees. Ms. Friel said she was not sure.

Mr. Reed wondered if there were any kind of an integrating effort within the WIEB to bring together information, action, etc. among the states. Ms. Friel said the Board has a high-level waste committee formed from representatives of all their states. The Board meets about six times a year for two or three days at a time, with the states sharing information. Coordination and sharing of information is one of its major activities. Monitoring, she said, is minimal, but the National Conference of State Legislatures tracks all of the radioactive materials transportation legislation. They do not evaluate, and she knows of no one doing that.

An abstract of Ms. Friel's presentation is attached.

USDOE Review of Grout Disposal Program and Status of Final Environmental Impact Statement on Disposal of Hanford Defense Waste

Jerry White, director of Waste Management for USDOE at Hanford, noted he had responsibility for the defense waste management there, but he had no responsibility for the repository program. Mr. White introduced the members of the team who came over from Richland: Ron Prosser, Director of the Waste Management Program at Rockwell, who will discuss the second part of the presentation on the grout program; Kitty Rising, the Program Manager for the Environmental Impact Statement for USDOE; Elizabeth Bowers, Program Manager for the Grout Program in Mr. White's office. Mr. White said a number of Rockwell representatives who provide technical support for these programs were also present at the meeting.

Mr. White recalled that a Draft Environmental Impact Statement on Defense Waste was produced in February, 1986, with a 121-day comment period, closing on August 11. Since that time USDOE has been trying to develop its position to resolve the issues that arose during the comment period in order to move ahead with disposal of the waste. He said his office has three missions for the site: Waste generated by defense programs on site, as well as any other operations on site; safe storage of waste on site and disposal of that waste safely meeting all environmental requirements; response must be made to new requirements, including environmental requirements, the RCRA/CERCLA programs, to be sure disposal meets those requirements.

Mr. White displayed a slide showing the 570-square-mile site in Southeastern Washington, bordered on the North and the East by the Columbia River. Most of the production reactors which operated during the 1940's to mid-60's time period were located along the river. All the chemical processing areas of the site are located in the center part of the site, which is about five to seven miles from

the river and located on a plateau approximately 250 feet above the surrounding terrain, and about that distance from the water table.

Mr. White continued that wastes come from numerous facilities on site, with most of the radioactive wastes coming from fuel that is used in the production reactor facilities. After a period of cooling, that fuel is transferred to a chemical processing facility in the center of the site. At this time the Purex facility is the operating facility where the fuel is dissolved and the useful components, the plutonium, uranium and amerecium materials, are recovered and replaced in the system for reuse. The material left over becomes the waste that must be disposed, and is both chemical and radioactive.

Other facilities on site are the B-Plant facility, a waste management processing facility, an evaporator which reduces the liquid volumes to make them more manageable in size, and a number of other facilities on site that generate several kinds of waste. They generate transuranic waste, which is the long-lived material consisting of plutonium, amerecium, uranium and trace elements which are a part of the waste after processing is completed. This is the material that must be managed for thousands of years. He said all the transuranic material is now stored on site awaiting final disposal in the Waste Isolation Pilot Plant (WIPP) in New Mexico

There is also low-level solid waste that is essentially disposed of on site. Before 1970 there was some material that was low-level waste, but was contaminated with some of the transuranic material. That was disposed of on site until 1970 and part of the issue to be considered in the disposal program is what is to be done with that waste. There is liquid waste, basically cooling water that goes to ponds and cribs, that contains very low-level waste that is put into the ground. In the early days some of these cribs did receive small amounts of transuranic material that built up over time, and that is another issue that must be dealt with in disposal of the waste. In response to a question, Mr. White said in the past some of the streams that went to cribs had chemicals in them which would classify them as waste covered under the RCRA program. He said their intent is to make all those streams non-hazardous waste streams by January or the early part of 1987. He said there were two streams left that have hazardous components, but they intend to remove those components before putting them in the cribs. New requirements are being instituted to handle the hazardous and chemical parts, and the correction can be made by changing the processes.

Mr. White said other wastes they have to deal with are the high-level wastes which are in underground storage tanks. In the early days of the site 149 "single-wall" or single-shell tanks were built, made of carbon steel. There were some leaks in the late 1960's and early 1970's. Since then most of the liquids have been removed from the tanks, but they still have chemical wastes and some radioactive wastes, which will have to be dealt with in long-term disposal. All current liquid wastes are now stored in double-walled tanks. The single-wall tanks contained strontium and cesium, which was a good share of the high-level activity in those tanks. Much of this material was pulled out in the late 1970's and early 1980's, solidified, and placed in canisters which are now stored in water basins in the B-Plant facility. They need a long-term storage solution also.

Mr. White said in the 1980's emphasis was shifted from storage of the waste to disposal, and work was begun on the Environmental Impact Statement to evaluate the alternatives for disposal. In the Draft EIS six different types of wastes were mentioned, and he said at the conclusion of the process there will probably be six different decisions - one for each waste type. The key part of the DEIS is

to evaluate the disposal of the waste in order to do it in a safe, environmentally sound manner. Some basic alternatives were identified for evaluation in the DEIS:

1. Processing of 98% of all the waste for geologic disposal in a repository, wherever a repository was built.

2. Stabilization of all waste on site and storing it in place.

3. Processing the higher-hazard waste for disposal in a geologic repository, leaving the lower-hazard waste to be stabilized on the site.

Mr. White said no preferred alternatives were identified, as it was felt they did not have enough data to make that decision and should preference be indicated, the public and the states would believe USDOE had already made a decision.

During the public comment process 245 letters were received, as well as over 2,000 comments, and comments from key government agencies from the states of Washington and Oregon and the Citizens' Forum, USDOE received basically a consensus agreement on the way to move forward. They all felt it essential to move promptly on the disposal of the double-shell tank waste, the transuranic waste stored on site, and the cesium/strontium capsules. They felt there was not enough information to make final decisions on the single-shell tank waste, the transuranic waste buried before 1970, and the contaminated soil sites. They all felt priority should be placed on the technology and the characterization work needed before making that final decision.

Mr. White said a total of 36 issues, some minor, were identified. Seven key issues were pointed out that involved policy decisions or decisions important enough to need concurrence both by USDOE Richland and Headquarters, and discussion with the states.

The Current Preferred Alternative

Move ahead with double-shell tank waste: vitrify high-level portion of that waste and store on site until a repository is available; low-level fraction would be converted into a cement-like material called grout; dispose of it in shallow land burial with a barrier to prevent intrusion by humans, liquids, or animals; retrievably-stored and newly-generated TRU_1 waste to be shipped to WIPP in New Mexico; strontium and cesium capsules now stored in water basins may be used in the near future either for defense purposes or the cesium in commercial irradiators, with eventual return to Hanford to be disposed of in a geologic repository. - Defer Disposal decision on the following until development and evaluation are completed:

1. Single-shell tank waste
2. TRU-contaminated soil sites
3. Pre-1970 suspect TRU buried solid waste

At the end of the evaluation process another NEPA document would be produced, possibly another EIS, involving a public review.

Concerning the wastes left behind, the intent is to develop criteria in consultation with the states, the Citizens Forum, and with Headquarters to determine what waste will be left in place and what waste will be removed and placed in a repository.

Additional Environmental Documentation

For all of the alternatives for the various types of waste, environmental compliance documentation would be done before implementing any disposal action. These would be public documents once they are issued. In terms of single-shell tank wastes and transuranic wastes, separate environmental documentation would be produced, with public review of the documents.

Mr. Husseman asked, in considering the waste being discussed for grouting, if the environmental compliance analysis were different from applying for a state permit. Mr. White said this would be in addition to applying for a permit. Mr. Husseman asked, should the Secretary decide not to back off from the By-Product Rule, would USDOE not go through the state permit process. Mr. White said an environmental compliance document is what USDOE feels it needs to assure themselves that the waste disposal meets the regulations. That step would be taken regardless of any other requirements. In terms of permitting, he said, the By-Product rulemaking is just a nuisance to him. It is a legalistic issue that concerns jurisdiction; whether USDOE has its own jurisdiction over waste, whether EPA has it, the states, or whatever. He said USDOE was worried about getting on with the program and their intent is to meet the environmental regulations for all wastes, regardless of whether they are classified as By-Product or not. They will go through the steps, he said, that would be needed to resolve any issues with the state. He said if USDOE, or whoever makes these decisions, decides that some waste is By-Product and no permit is needed, he said he could not officially ask for a permit, but they would still do everything they need to do to make sure the states know what is being done. He added that he guessed USDOE would probably back off from the By-Product rulemaking and essentially all the waste would be permitted. As far as Richland is concerned, he said, they only want to comply with the requirements and be open and honest about it.

Treatment of Hazardous Chemicals

USDOE agreed with many of the comments that the treatment of hazardous chemicals in the document was too shallow. This was known, he said, when the document was published. USDOE simply did not have all the data they needed on hazardous chemicals. Many of the requirements of RCRA and CERCLA require some analyses which no laboratories could produce. There are laboratories that can handle non-radioactive hazardous chemicals, but most of them cannot accept mixed waste. USDOE had to develop its own capability on site to do a lot of that work, which takes time. The commitment is that USDOE will characterize, evaluate, and consider hazardous chemical components in the single-shell tank disposal decisions. They will treat the pre-1970 TRU contaminated sites, as meeting RCRA or CERCLA requirements, whichever one applies. They will meet the applicable repository criteria for any waste that is vitrified, and they will meet the RCRA requirements for grout. They will make sure this is clear in the document, although he said he was not certain they would have all the answers on chemical wastes when the Final EIS comes out next year. Proposed earlier, he said, was to have a follow-on document for issues relating to single-shell tanks and buried transuranic wastes. Any aspects of chemical wastes that are not answered in the current documents will be answered in that later document.

Cumulative Impacts for Different Activities at Hanford

Mr. White said in the new document they will try to give the cumulative impact portion for low-level waste disposed on site. He said they are not sure if they can have all the answers within the time frame of the document, but will do the best they can. Should it be necessary, they will publish a follow-on document dealing with low-level waste in order to give all the information.

In terms of the repository, he said they had no data on that. This is primarily due to the fact no one knows if Hanford will be the repository, and related details are unknown, should it come about. Their document will state that if the repository is selected, they will have to produce their own EIS and they will include all of the cumulative requirements of all activities at the Hanford site in that document. By that time there

will be a draft document on the decommissioning of the eight shutdown production reactors at Hanford, and the impacts of that will be discussed in their document, Mr. White said.

In response to a question, Mr. White said they do not propose another Draft EIS, but will be going to a final for the actions that will be implemented now. These do not coincide with the alternatives presented in the draft statement, although they do cover the spectrum of the original draft.

Compliance with State and Federal Regulations

Mr. White thought it was clear in the document that USDOE would meet the requirements. Since there were many comments on this question, he said it would be clarified in the final that they plan to meet the letter and spirit of any applicable state or Federal regulations. When questioned about the use of the word "applicable", Mr. White said it was necessary because there are so many regulations that do not apply at all. Concerning RCRA and CERCLA, Mr. White said he was hopeful that by the time the Final is published, that issue would be settled and it could then be stated clearly they will meet the requirements of those two. If they cannot say that, he said, they will still intend to meet those requirement, regardless of whether the state or EPA has the authority.

In response to another questions as to whether the adoption of an adequate C & C Agreement was the only mechanism for dealing with the issue of what is applicable, Mr. White said he was not sure whether or not the C & C Agreement could do that. That is an agreement related to the repository, and the state wants to expand that to cover defense waste. He said he had no problem with that, and although it might clarify it, he was not sure that would be the document to establish the legality of the question. He said there were many ways to spell out what is to be done. The document is one, and there are monthly meetings being held with the Office of Nuclear Waste Management, as well as representatives from the state of Oregon, that can help to resolve questions.

Effect of Repository Decision on Disposal of Defense Waste

This issue was raised by a number of people in the Draft, and Mr. White said they would state very clearly in the Final that the repository decisions will not have any effect on the defense waste decisions. He said before coming to this meeting all these issues were cleared with his management in Richland. They then went to USDOE Headquarters, including the repository program, and got their buy-off on all of the issues. He added that adequate interim storage is planned for vitrified waste, should delay of repository availability occur.

Questions were raised concerning the capacity of the first repository, which the Act requires to take only 70,000 metric tons. By including the defense waste and considering the universal belief that more than 70,000 tons of waste would be generated, Mr. Husseman thought there would not be room in the first repository unless the legislation is amended to raise the cap. Mr. White said the point he was trying to make was that, first, defense waste disposal decisions would be made independent of any repository decisions. Their decisions will be based on technical input, and on input from the states and others. The defense waste volume is a small part of either the first or second repository, and it was felt it could be fitted into the first repository. Whether it would go into the first or the second is an open question. Looking at all the commercial programs, the projections go beyond 70,000 metric tons.

Trust Fund/Surcharge on Production

Mr. White said this issue was raised by both the states and the Citizens' Forum, and their proposal to assure that there is enough money to dispose of the waste was to establish a surcharge on the production of defense materials. He said

this is a very valid issue, but the feeling of USDOE is that that kind of decision is a policy decision that probably should be made at the Congressional level, and possibly involving the Presidential side of the house. These concerns have been provided to both USDOE Headquarters and the Congressional staff. He suggested the state express this concern to Congress as well. USDOE believes that Congress will provide adequate money to dispose of the waste, but the time frame may be a different matter. USDOE could support the surcharge approach, he said, as long as they receive assurance that there would be more money, not less. Without proper care, Mr. White said, establishing a surcharge could result in less money.

Proposed Draft Schedule for Completion of HDW-EIS

Mr. White said, as seen now, the document will be in reasonably final form about May, 1987. The state and other government agencies will be briefed at that time. The actual issuance of the document is planned for November, 1987, with the first Record of Decision to be issued in December of 1987. Although this is a tight schedule, Mr. White said every effort will be made to hold to it.

Disposal of Double-Shell Tank Wastes

Mr. White said, as he had mentioned earlier, a part of the Preferred Alternative was to dispose of the low-level fraction of liquid waste currently stored in double-walled tanks on the site in a cement material called grout. He said this would probably be the first real action that could be taken in terms of disposing of defense waste, and there would be much benefit to this plan as it would eliminate the necessity to build more double-walled tanks.

Mr. White introduced Ron Prosser, Director of Waste Management for Rockwell-Hanford at Richland. Mr. Prosser said the approach being taken is consistent with whether a decision is made to ultimately retrieve all of the single-shell tanks, or to leave them in place. If retrieved, the processes are the same as he would describe in the grout program. Basically, he said, the facilities would have to run longer with, in some cases, additional capacity added. The principal effect would be on the vitrification facility. They would vitrify the high-level waste into a pyrex-type glass and place the low-level waste into a grout form. They would increase the throughput of the vitrification facility, which has been designed to have that capability, and the run period would increase from about ten years to approximately forty years to process all the waste. Some additional steps could be taken to reduce that time span, he said.

In response to a question Mr. Prosser said if they are able to move forward on the schedule they have, the tanks that are currently on the drawing table would be the last tanks that would have to be built. The next series of tanks would cost approximately $100 million, which could be diverted into environmental cleanup activities identified in the DEIS. The planned program would keep pace, plus work off the inventory of existing waste. The volume of waste that would be generated in the future, if operations were to continue, might be lessened, as there is more and more emphasis being placed on reducing the volume of waste being generated through more sophisticated processes.

Mr. Prosser displayed a flow sheet to show the location of the underground tanks and the processing facility where water is evaporated to reduce the volume of wastes. The wastes are sampled and if it is determined to be low-level waste, meeting NRC's definition of Class C or better low-level waste, it would qualify to go to grout. Mr. Husseman noted that there was some question of the definition of low-level waste, and Mr. Prosser said that NRC has published a definition of low-level waste, based on concentrations. Mr. Husseman said the Act has a definition of high-level waste that says it is the highly radioactive material that results from reprocessing, and everything in

those tanks fits that definition. He said this was commented on by the NRC, but Mr. Prosser said in their conversations with NRC they had verbally stated that as long as it fits their definition of low-level concentration, which has been rigorously reviewed, it is low-level waste.

Mr. Prosser continued. The low-level waste goes to a grout facility, and the high-level waste goes to waste treatment where the low-level fraction goes to grout and the high-level fraction goes to vitrification.

Grout Disposal

Mr. Prosser walked the members through the grout disposal program, pointing out that immobilizing low-level wastes in solid form is probably the largest step that can be taken to move away from storing waste in underground tanks. He pointed out that they had had a lot of experience in storing waste in underground tanks, with some bad experiences. They have attempted to de-activate the 149 single-shell tanks and they still have not accomplished this, as there are still damp solids in the bottoms of those tanks. Prior to November of 1980, in addition to those solids, they had many millions of gallons of very mobile, liquid radioactive waste. When he came to work, originally for Atlantic-Richfield, they had just gone through a major tank leak and launched a program to move away from the single-wall tanks. When Rockwell took over he continued to manage that program. He said they found some awesome things in attempting to do that and went to a double-wall tank and constructed a processing facility to reduce the volumes. There was a period of time while this was going on, he said, when they found about one single-wall tank a month was leaking. This called for moving liquid waste out of one single-wall tank into another, until there was capability to complete the construction and process the waste to put it in double-wall tanks. It was a nightmare, he said.

Prior to the initiation of that program, Mr. Prosser said some 500,000 gallons of liquid waste had seeped into the soils around Hanford. Although the new generation of tanks is a vast improvement over what was, those who worked on that program will always believe that storing hazardous, chemical wastes in a liquid form in underground tanks is not a good idea, radioactive or not. He said it would be clearly an advantage to the state of Washington, the Department of Energy, and Rockwell to move away from that practice. He said they want to meet all the regulations, but the driving force is to have a far better waste management practices by dealing with it in a solid form.

Mr. Prosser explained the waste in the double-shell tanks would be sent out to the grout facility where it is mixed in with cement, flyash and clays that have been tailored to this particular type of waste to ensure long-term capabilities, such as leaching, etc. It would be tested and sent out to the grout vaults. All of the engineering and scientific requirements of RCRA, EPA, and the state of Washington will be met. He said meetings are being held regularly with Dr. Brewer and others. Grout is being considered, he said, because it has a low leach rate and the constituents of that material can be tailored to react very well chemically with the waste, to bond without release over an extended period of time. It is resistant to radioactive degradation and compatible with Hanford liquid wastes, and it can be processed.

He displayed a layout of the grout process facilities, and said another tank farm had just been started at Hanford, saying it breaks his heart each time more tanks are built. One of those tanks will be a feed tank dedicated to feeding material to the grout facility, where it will be mixed and sent to the grout vault. The vault will be a concrete structure with a double leachate collection system, meeting RCRA requirements. RCRA requires a 30-mil membrane, he said; they are planning a 60-mil membrane. When

the material has set up there is a waiting period to allow the waste to finish any cracking process. It will then be covered with a cold, concrete cap, pressure grouted to fill the cracks. There is a concrete cover that will go over the top. EPA and Washington Department of Ecology require a cover with certain characteristics to minimize moisture infiltration over generations. These requirements have been increased to meet the applicable needs, considering there are materials to be kept safe for thousands of years.

Mr. Provost commented this concept was different from the one proposed in the DEIS. Mr. Prosser explained they went to this concept rather than the original concept because they wanted to make sure they met the letter of the law with a more rigorous vault to meet a long-term performance assessment. Regardless of who controls the jurisdiction, he said, they wanted to make sure they met the letter of the law for all hazardous chemical waste requirements. In walking through the RCRA requirements today with WDOE, he said they found three very minor areas in the whole review that were different, and WDOE agreed those were reasonable differences.

The question was asked where this concept originated, and if implemented, how long was it tested. Mr. Prosser said the concept of grouting waste is an old concept. Grouting of radioactive waste is done around the United States and around the world. It is usually grouted in 55-gallon drums, but his is unique in that about one million gallons are being considered in a structure such as proposed. The closest design preceding this design, he said is at Savannah River, where they are in a wet environment versus the arid environment at Hanford.

In response to a question as to whether the grout facility shown in one of the slides was experimental or fully developed, Mr. Prosser said all of the equipment is commercially available. He said he could show later a process test done where 22,000 gallons of grout was poured, using the commercial equipment available. Concerning the question of whether the variation of contents known to exist is consistent with this technology, Mr. Prosser said yes, it was. Mr. White added they had said previously that it was not known specifically what is in an individual tank in terms of concentrations, but they do know the types of materials in the tanks and storage areas. That can be checked out while gathering the data on the exact quantities in any given tank.

Mr. Prosser re-emphasized they wanted to meet all the technical and scientific requirements for the facilities, the disposal system design including the grout disposal vault design, and groundwater monitoring. They will characterize the waste to meet all the requirements before it is grouted and determine what sort of tests are needed to prove it is good or not. From an administrative point of view they will prepare all those documents that have to be submitted to the state if they were to get a permit, and when EPA and USDOE in Washington, D.C. decide who has jurisdiction, the plan will be well down the road.

Mr. Husseman remarked in the low-level program the effort is being made to establish a few more sites for low-level wastes. One of the problems has been mixed waste, which every region has. A concern raised by the states of Washington, South Carolina, and Nevada is that the new facilities will not meet deadlines for getting their siting plans developed, because of uncertainty about what the requirements will be for disposing of mixed waste. He wondered if the grout program would face the same problem until EPA and NRC have actual guidelines written, and if this may be a year or so from now. Mr. Husseman said the problem is that EPA is required to write some siting guidelines; they have not done this yet and anticipate it will be 1988 before they are ready. However, he said, they are trying to work out the problem because of the concern about getting the sites developed, so they have

been working closely with NRC. He thought the EPA timeline would affect the timeline for the grout program as well.

Wastes Proposed for Group Disposal

Mr. Prosser said the first waste being proposed to be placed in vaults is a non-hazardous waste in the designation procedure they have examined. It is a very low-level radioactive waste and they want to do this to prove that the system works, and to work out any flaws that might appear. The state of Washington would be involved while this is being done, to assess the results before beginning to dispose of wastes that might classify as "dangerous" wastes. The first of these, the double-shell tank wastes, could be in a dangerous waste category for reasons of EP Toxicity (Chromium), Corrosivity of a high pH, and Toxicity because of nitrites and fluorides. This is scheduled to start in Fiscal Year 1990. Should it look as though they will miss that date by a lot, they will have to build more double-shell tanks. Mr. Prosser said they would like to avoid that in order to use that money to clean up other environmental issues mentioned in the DEIS.

Mr. Provost inquired if all these wastes mentioned were covered under the Defense Waste EIS. He said the first was covered under a separate NEPA process from the Defense Waste EIS and it is completed, and will go out in the Federal Register. Mr. Provost asked if the state would have the opportunity for comment, and Mr. Prosser said they could give the state the Grout EA. Mr. Provost then asked if the same equipment to be used for the first waste type would be the same equipment to be used for the defense waste. Mr. Prosser said some would be and some would not, although the majority could be used for the second waste type. Mr. Provost thought this might put them at risk of "sequencing" under NEPA, which could delay the whole program. Mr. Prosser said legal counsel has looked at the issue, although Mr. Provost said the state's legal counsel had questioned this. Mr. Prosser said they were not proposing to move ahead with any other waste unless it goes through the EIS process, irrespective of availability of equipment. The cost of the equipment is not considered in the EIS. Mr. Provost inquired why this was not covered in the DEIS to protect themselves, and Mr. Prosser replied the waste is not- high-level and is not even low-level. It is a decontamination waste, although it is from defense operations and is in tanks. Mr. White added that the DEIS released last year was very specifically stated to cover transuranic and high-level waste. It was their position that low-level waste had been covered in previous NEPA documents. He said comments were made during the DEIS process that cumulative impact from low-level waste disposal should have been included, and they will try to do that.

Mr. Prosser continued by saying that the first step will be to characterize the waste in the feed tank. They have set aside a double-shell tank and are taking numerous samples, characterizing and analyzing them for radioactive materials as well as chemicals. Much of that analysis is complete, but they will continue to sample, to be sure the samples are representative of the contents. This will also be done with other tanks as they set them aside. Following characterization of the first tank, a synthetic waste form will be made up using those same chemicals without the radioactive materials. That formulation is done for Rockwell by Oak Ridge National Laboratories. They will work with different recipes of ingredients to tailor a substance that will last a long time and perform well over time. Following that, Battelle will actually take waste out of the tank, including the radioactive material, and they will mix it up based on the formula developed by Oak Ridge. This will be tested by them and compared and verified with the Oak Ridge information. This is the basic process, down to this step of how it will be done in general. Material in each tank will go through the same process. Before any specific tank is grouted, another verification process will be followed by

Rockwell. At that time, within the operating envelope Battelle has established, and the one Oak Ridge has established, that formulation work will be used to run that one tank of waste through the grout facility and into a grout vault. Each vault is designed to take one tank's worth of waste.

Mr. Reed asked how Rockwell would be able to extrapolate and project integrity over a long period of time. Mr. Prosser said leach rate testing is one of the key tests done to conform with American Nuclear Society standards, and RCRA standards for release under certain laboratory conditions per unit of time. Those are established procedures, he said, and they will meet those procedures, consistent with what WDOE will require for all hazardous chemical wastes.

Mr. Provost said the state made many comments in the DEIS on the chelating agents in the tanks and their effect on it, and in reading about grout he felt it was more of an art than it was a science. He understood from talking with people at Savannah River that the grout does not always set up as they had projected. Since they could not predict this, they went to the vault, as they did not get in every case the structural integrity they believed they would in a theoretical sense. Mr. Prosser said one of the criteria is testing structural integrity, and they are looking specifically at this, as is the hazardous chemical division of WDOE. Mr. Provost asked if Rockwell went to the vault because they were not sure it would meet the criteria in the Draft EIS. Mr. Prosser assured him they would not grout anything unless it sets up. Both agreed the process must be shown to work.

A question was raised inquiring about the program for monitoring the vaulted wastes over the years. Mr. Prosser said they would meet the RCRA requirements, and more, for closure and post-closure issues. One issue to be met is to monitor the leachate systems to see if there is any leachate, and if so, is the leachate a hazardous chemical or not, and if remedial actions need to be taken. There must be an ability to take remedial action, he said. They will prepare, consistent with that, a remedial action plan.

In response to another question about the monitoring period of the experimental vaults, and Mr. Prosser replied the active period would be thirty years and they would be monitoring what is going on below the vaults as long as there is an active site at Hanford. The DEIS requires cutting off the institutional control at some point in time, he said, but Rockwell saw no reason why this area would not be controlled. He said they plan to move forward with tanks as they can grout them in. Mr. White added there are techniques to do accelerated testing, and that is the approach that would be taken to ensure confidence that the material would be good over long periods of time.

In response to a question about the problems mentioned at Savannah River, Larry Brown of Rockwell, said he was not aware of that situation. He said they had people down there last week to check the status of the program, and he did not hear of any problem. Characterization of the tank contents to be sure of product quality is essential before going ahead to grout it. Mr. Prosser added that they had one of their process engineers down on the grout facility for a year, following the work of DuPont at Savannah River. He said they also have technical exchanges almost monthly, with daily communication over the telephone, so there is extensive exchange of information on the program at Savannah River, as well as at Oak Ridge and other locations around the country. Mr. Prosser said he would follow up on Mr. Provost's report, as it was news to him there was any kind of an issue there.

Mr. Provost explained, as he understood it SRP went to an EIS with a similar system to that being proposed in the DEIS, and results showed the integrity of some of the batches of waste might not meet the requirements for soil disposal, so they went to vaults. Mr. Prosser said there

were many differences between the Hanford site and the Savannah River site. Hanford has a little over two hundred feet to the groundwater, and Savannah River is in the aquifer, with their underground tanks actually in the water table. The vaults at Hanford can be underground and well above the groundwater table, whereas at Savannah River they must be partially above ground. Savannah River went to a vault in partial consideration of their whole environmental situation.

Mr. Reed asked if the tank waste constituted the total liquid in the formula to produce the grout. Mr. Prosser said what comes into the grout material is mixed with dry materials, with no added liquids. Mr. Reed inquired about the total amounts of dry materials needed in the grout formula to handle all the waste that will be disposed of by this method, and the land area needed. George Williamson of Rockwell stated approximately 50 acres will be utilized. A typical grout formulation would consist of approximately seven to eight pounds of dry solids per gallon of waste. He said, figuring the life of the project, it would amount to approximately 80 million gallons of waste. Of the solids, approximately 40% would be Portland cement, 40% flyash, and the remaining 20% would be clays.

Pilot Scale Test

Mr. Prosser said the reason they had run a 22,000 gallon pilot scale pour on synthetic waste was to test the equipment, and to evaluate the properties of the grout in a continuously-poured manner over an extended period to see any differences. They also wanted to obtain data on the monolithic grout product quality of a large volume to support potential regulatory needs. They wanted to evaluate effects of scale-up from laboratory tests that had been done. One example was that small quantities in a laboratory test might not indicate if there would be a layering in the grout that might affect long-term leach rates. He showed drawings of the test site, where they checked for a number of different physical properties and are continuing to check. Next spring they will go in and destructively test the grout monolith, working through the Department of Ecology to make sure the data are what they want gathered also.

Grout Disposal Program Schedule

Mr. Prosser displayed the schedule for proceeding with the grout disposal program, showing two test campaigns. They will continue to make necessary modifications to the equipment and to the grout vaults, and any others needed. The first actual double-shell tank waste is scheduled for fiscal Year 1990.

Mr. Prosser said, in summary, the Grout Program is the first major disposal action that can be implemented. All of the technical and scientific requirements for RCRA, Hazardous Chemical Waste will be met, and he believed this was a real opportunity for moving away from storing wastes in underground tanks. He said if they can proceed on a reasonable schedule, building another generation of double-shell tanks will be avoided. The funds saved would be used to address other environmental concerns at Hanford.

The objective is to work through the issues of the state of Washington, to find a way that meets all applicable requirements.

Summary

Mr. White said the intent of the presentation today was to bring the Board and Council up to date on the defense waste disposal program at Hanford. He emphasized that the whole process is complex and difficult, and solutions will not be simple. He said they are still in the testing phase and will not implement until they know they can meet the requirements and long-term aspects of the program. The key, he said, is that they are moving ahead, having routine meetings with the states of Washington and Oregon. As new data are developed, they

are being passed on for the states' reaction and comment, with every effort being made to be responsive to their concerns as the process goes ahead. As they progress, Mr. White said, periodic briefings will be given to the Board and Council, with the next presentation in approximately three months. He added that it would take thirty to fifty years to dispose of the accumulated wastes, and it is important to get on with the program and do the best job possible in the most responsible manner.

Mr. White said Congress did add essentially $20 million to the USDOE Defense budget, with the intent that those funds would come to Hanford to allow them to move ahead with the defense waste disposal program. He said right now all programs are in a tight budget situation. Congress, because of Gramm-Rudman and other considerations, had eliminated $20 million in the defense waste program budget, as well as in others. The House, during the summer, had established a tentative mark including approximately $154 million for Hanford. The USDOE Headquarters had submitted to Congress a budget of $174 million for Hanford. The $20 million added later, thanks to the efforts of the Washington Congressional staff, Citizens' Forum, and states, brought the budget back to its original figure. It allowed enough money to finish the DEIS, proceed with the key technology areas needed to resolve some of the questions discussed today, and keep the B-Plant facility operating. This facility will do the waste segregation between high-level and low-level waste. It also provided money to enable Hanford to do some key items in the environmental management of the site meeting RCRA and CERCLA requirements. He said they had already dug out of their own budget several million dollars to be put toward environmental actions, but there still was not enough money to accomplish all the elements the state wanted done and in the time frame desired. The twenty million also gave some more money toward the stabilization of the single-wall tanks in the interim between now and the disposal of those tanks. It also provided approximately $5 million to add to the vitrification plant, allowing them to continue at a good pace toward the design of that plant. The 1988 budget will include a request for authorization to start construction. Should that be granted, and consistent with the dollars in 1987, it is hoped that facility can be brought on line some time in the 1996 time frame. This is a major project, he explained, that will cost nearly a billion dollars, and such a project cannot be accomplished in two or three years. That $20 million, Mr. White said, is key to allow them to move ahead with the program. Without it, he said they would have been able to keep the basic operations going, but the long-term program would have been zero. He said the need for funds will continue and he hoped the states and Congressional Delegation would continue to back them, as it will be a constant fight to get the dollars. He felt confident they can be secured if everyone works together as a Northwest entity.

In response to a question, Mr. White said the $20 million is secured, contrary to earlier comments in the media that the funds would go to Savannah River. The problem arose, he said, because when the guidance went from Congress to Headquarters no detail was attached as to the programs to be accomplished. Before Headquarters released the money checks were made with Congress to learn the Congressional intent, in consultation with Richland. The process took some time, but was completed last week with Congressional consultation, and there is full agreement the money will come to Hanford.

Mr. Provost commented that in July Mr. White had provided the Board with budget information, which he said was appreciated. Some have inquired if this report could be updated to keep the Board involved and informed. Mr. White responded he could do that and would need about two weeks.

In terms of the General Accounting Office Report (GAO), Mr. White said he

brought copies of a fact sheet that was distributed to the press today. He provided copies for the members. (Copy is attached.)

Mr. White said the report was done at the request of Representative Synar of Oklahoma. Mr. White said the GAO people were at Richland for a good share of the last year, looking at data on their systems. Basically, everything in the report was provided to them by Richland, including the issues identified. These included issues being worked out with the states and issues they were working through the EIS. The report gives no new information, he said. The one recommendation in the report represents basically what is already being done, and Richland's view is that the recommendation essentially supports the program already in place. He said they were disappointed the statement in the draft was deleted in the final: "None of these issues represent immediate concerns of any significance on the environment. We are really concerned about the long-term issues and the issue of the specifics of compliance." Richland's position is that the impacts from the Hanford site right now are minimal; and its concerns are meeting requirements for long-term disposal and continuing to meet requirements over time. Mr. White said there are a number of things in the report they believe are biased. There is some data given GAO that either was eliminated, or was not used properly, and that will be stated in the response. Specifics will be discussed over the next few weeks and a detailed response sent. He offered to provide the Board with a copy.

Russell Jim commented that throughout the whole presentation he had heard reference to the Indian Tribes only indirectly. He asked when a similar presentation could be made to the Yakima Indian Nation, which is an integral part of the whole process. Mr. White responded they would be glad to do that any time. Mr. Jim added that the Yakima Indian Nation had joined the fray by filing suit in the 9th Circuit against the U.S. Department of Energy in regard to the site selection process. He said he gave a Press Release to Marta Wilder to make copies for distribution. Mr. White added that they did receive comments from the Indian Tribes and those will be dealt with in the Environmental Impact Statement. Mr. Bishop thanked Mr. White and Mr. Prosser for appearing before the Board and said the Board would look forward to continuing briefings.

There being no further business the meeting was adjourned.

PERMISSIBLE STATE AND LOCAL REGULATION OF RADIOACTIVE MATERIALS TRANSPORTATION

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ABSTRACT

The Congressionally-mandated construction of a nuclear waste repository by the year 1998 has focused attention on the development of a safe transportation system for radioactive materials. While numerous state and local governments have enacted laws to regulate the movement of radioactive materials, shippers and carriers have successfully challenged some of these laws. More challenges can be expected in the future when more regulations are passed as state and local governments prepare for the greatly increased numbers of shipments associated with the operation of a high level radioactive waste repository. Therefore, state and local governments need guidance as to the criteria used to determine the validity of their regulations. Examination of the Department of Transportation's inconsistency rulings and federal court cases reveals three approaches a state or local government may choose in regulating radioactive materials transportation: conservative, moderate, or activist.

INTRODUCTION

State and local governments have met with uneven success in their attempts to regulate radioactive materials transportation. Shippers and carriers have successfully challenged some of the regulations and more challenges can be expected in the future when both the number of regulations and the volume of shipments increase as the high-level radioactive waste repository begins operations. Therefore, it is important for state and local governments to examine the criteria which the Department of Transportation and the courts will use to determine the validity of their regulations.

Examination of the existing Department of Transportation inconsistency rulings and federal court cases reveals three approaches a state or local government may choose in regulating radioactive materials transportation: conservative, moderate, or activist. The three approaches are discussed in detail below. Briefly, the most conservative course of action would be to follow the Department of Transportation's inconsistency rulings. A more moderate approach would look to the federal court decisions, which have often been more permissive than the advisory opinions issued by the Department of Transportation. Finally, some state and local governments may desire a more activist approach which tests the outer limits of the law or seeks to change existing law.

No single approach is recommended for all state and local governments. Factors which will influence the governing body's choice of an approach include: the general political philosophy of the government; the degree to which radioactive materials transportation presents a problem in the jurisdiction; and the amount of time, energy, and money the state or local government is willing to invest in defending its regulations against challenges by shippers and carriers.

In the discussion below, the types of permissible state and local regulations are cumulative. That is, the permissible regulations presented under the moderate approach are in addition to those acceptable under the conservative approach, while the activist approach includes regulations permissible under either the conservative or moderate approach.

CONSERVATIVE APPROACH

The most conservative approach would be to follow the Department of Transportation (DOT) inconsistency rulings. DOT issues advisory opinions (inconsistency rulings) as to whether a state or local regulation is inconsistent with the Hazardous Materials Transportation Act (HMTA) (49 U.S.C. Section 1801 et seq.) or the federal regulations adopted pursuant to this Act. The state or local regulations will be found inconsistent if compliance with both the federal and state/local regulations is impossible or if the state/local regulation is a significant obstacle to accomplishing the purposes of the HMTA. If the regulation is found inconsistent, the state or local government can apply to DOT for a waiver of preemption. Then DOT will waive preemption of the regulation if the state/local regulation provides at least an equal level of safety and does not place an unreasonable burden on interstate commerce.

The sixteen inconsistency rulings issued by DOT as of January, 1986, reveal a restricted view of the extent to which state and local governments may regulate the transportation of radioactive materials. In several rulings, DOT expanded the definition of "routing restriction" to include almost any regulation whose effect is to make transportation through the enacting jurisdiction less attractive to a carrier than transportation through an alternate jurisdiction. DOT then states that any routing restriction other than the designation of an alternate preferred route in accordance with the DOT-prescribed procedures is inconsistent with the HMTA. A conservative approach to state and local regulation would involve avoiding the numerous types of state and local regulations which have been held inconsistent with the federal regulations under this line of reasoning.

DOT has held that only four types of state and local regulation of radioactive materials transportation are permissible:

- traffic control or emergency restrictions which apply to all transportation, regardless of cargo;

- designation of alternate preferred routes in accordance with federal guidelines;

- adoption of federal or consistent state/local regulations; and

- enforcement of consistent regulations or regulations which have received a DOT waiver of preemption (IR-8: 49 Fed. Reg. 46,632; Nov. 24, 1984).

Traffic Control

The first type of regulation is self-explanatory. Radioactive materials shipments must obey traffic signals, speed limits, overweight truck permit requirements, weight restrictions, etc.

Route Designation

States may also designate highway routes, provided they follow the federal requirements. Under federal law, highway route controlled quantities of radioactive materials may be transported on any interstate highway unless the state has designated an alternate preferred route. In designating an alternate route, states must adequately consider the overall risk to the public, and consult "with affected local jurisdictions and with any other affected States to ensure consideration of all impacts and continuity of designated routes." 49 C.F.R. 171.8. DOT has prepared guidelines to assist the states in conducting the necessary risk analysis of alternate routes. While use of the DOT Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials is not mandatory, states using a different methodology may be required to show that the method used was equivalent to the DOT guidelines.

The federal statutes and regulations are silent on the issue of designating routes for rail shipments. Currently, the choice of rail routes is left to the shipper and carrier. No states are known to have enacted rail routing requirements. However, such requirements have a moderate chance of being upheld by DOT. Because the federal regulations are silent, there would be no direct conflict between the federal and state law. Furthermore, because the absence of federal rail routing requirements is more the result of federal inaction rather than a deliberate policy against rail routing, it would be difficult to find that the federal government has preempted this field. However, it is possible that DOT would conclude that HMTA has preempted the entire field of safety regulation (thus, including rail routing restrictions) and that state rail routing laws create unnecessary delays in transportation. A state regulation designating rail routes would be most likely to be upheld if it were based on a safety analysis similar to that outlined in the DOT guidelines for highway shipments.

A state or local requirement that radioactive materials shipments use state- or locally-designated safe havens for planned stops (and, where possible, for emergency stops) has a reasonable likelihood of being upheld by DOT. DOT has held that, absent a direct conflict between federal and state/local requirements, general operating requirements are not precluded by the HMTA. (IR-2: 44 Fed. Reg. 75,566; Dec. 20, 1979) However, if such a requirement was coupled with a failure to designate any safe havens, particularly in a geographically large state where a stop would be necessary, DOT could conclude that the requirement was a de facto ban on transportation, and thus, inconsistent with federal law.

Adoption of Consistent Rules

The third category of permissible state/local regulation, adoption of federal or consistent state/local laws, has generated the most discussion. The DOT's procedures for determining whether a state/local law is consistent with federal law are discussed elsewhere in these proceedings. Following are the specific types of regulations DOT has upheld in its inconsistency rulings:

- required radio communication via two-way radio (IR-2);

- immediate accident notification to appropriate state personnel (IR-2; IR-3: 46 Fed. Reg. 18,918; March 26, 1981);

- required illumination of headlights at all times (IR-2, IR-3);

- time-of-day restrictions in a city for shipments originating in or destined for points within the city (IR-3);

- required use of major thoroughfares within a city where possible (IR-3); and

- specified separation distances between moving or parked vehicles carrying hazardous materials except when passing or when traffic conditions make this impossible (IR-3).

DOT has invalidated the following types of state and local regulations as being within the exclusive jurisdiction of the federal government:

- any prenotification that is different from federal requirements (IR-6: 48 Fed. Reg. 760; Jan. 6, 1983; IR-8; IR-10 to 15: 49 Fed. Reg. 46,632; Nov. 27, 1984);

- different hazard classification or definitions (IR-5: 47 Fed. Reg. 41,991; Nov. 18, 1982; IR-6, 8, 12, 15);

- additional packaging and container requirements (IR-2, 8);

- statewide curfews during rush hours (IR-2);

- written accident reports to be submitted to state (IR-2, 3);

- time-of-day restrictions in a city for through-shipments (IR-3); and

- shipping papers with different color markings (IR-4: 47 Fed. Reg. 1,231; Jan. 11, 1982).

In some cases, DOT has stopped short of ruling that federal regulation has completely preempted a field, leaving no room for state or local regulation. Instead, the state or local rules were invalidated because there was no proof of unique circumstances justifying the more stringent rule. The following types of regulations received this conditional preemption treatment:

- requirements for additional personnel, equipment, or escorts, or a requirement that the state/local government be reimbursed for providing such additional resources (IR-8, 11-15); and

- liability insurance requirements in excess of those required under federal law (IR-10, 11, 13-15).

while the rulings would appear to leave the door open to state and local governments in these areas, it should be noted that proving the existence of unique circumstances to DOT's satisfaction would be difficult. In its sole waiver of preemption hearing to date, DOT denied New York City's petition to enforce its inconsistent rules because the City failed to show that transporting spent fuel through the densely populated New York City presented any unique circumstances. (50 Fed. Reg. 37,307; Sept. 12, 1985)

Enforcement of Consistent Rules

Finally, state and local governments are allowed to enforce consistent regulations or regulations which have received a DOT waiver of preemption. Enforcement procedures which have been upheld by DOT include: vehicle inspection at loading and unloading points within the state (IR-2); penalties, unless so extreme or arbitrary that they effectively reroute or delay shipments (IR-3); and a requirement that a validly-required permit be carried with the shipment and a decal displayed (IR-3).

Permit/Fee Systems and Liability

Two types of state or local regulation deserve more detailed discussion because of the attention they have received - the permit/fee system and liability. The DOT has ruled that a bare permit requirement is not inconsistent with federal law (IR-8). However, DOT has invalidated every permit/fee system it has considered.[a] This seemingly incongruous result is based on DOT's opinion that a state or local government's desire to promote safety is an impermissible basis for a permit system because the Hazardous Materials Transportation Act and its regulations have preempted the field of safety regulation. DOT has also concluded that the application processes burdened transportation, thus conflicting with the HMTA's goal of minimizing transportation delays. A state or local permit/fee system with a reasonable chance of being upheld by DOT would have the following characteristics:

- enacted for non-safety reasons, such as a need to raise funds for inspection, enforcement, and emergency response (areas which have not been preempted by federal law);

- a fast, simple application process which does not delay transportation; and

- a small or moderate permit fee.

State and local governments have expressed an interest in changing the federal liability insurance requirements. As discussed above, DOT is unlikely to uphold any requirement that increases the levels of liability insurance a shipper or carrier is required to obtain. However, the Price-Anderson Act (42 U.S.C. Sections 2014 and 2210, as amended), which establishes the federal liability system for spent fuel and high-level radioactive waste incidents, clearly recognizes a state role in determining compensation for nuclear materials transportation accidents. Congress considered, and rejected, creating a uniform federal tort system for nuclear incidents. (Reference 4, p. 17). Instead, in the absence of an extraordinary nuclear occurrence (a large nuclear incident), state law controls all issues of determining who was liable and what the damages were. Even when an extraordinary nuclear occurrence is declared, so that certain state laws are preempted, state law will continue to control many aspects of a claim. For radioactive materials transportation incidents not covered by the Price-Anderson Act (e.g., low-level radioactive waste shipments), state law will control all aspects of a claim. Therefore, DOT can be expected to uphold state or local laws regarding the standard of liability (strict liability, negligence); defenses to liability (governmental immunity, assumption of risk, contributory negligence); calculation of damages; methods of proof of causation (rebuttable presumptions, statistical probability); statutes of limitation; and sovereign immunity. (See reference 2 for a more detailed discussion of state roles in liability issues.)

MODERATE APPROACH

Limiting state and local regulation of radioactive materials transportation to those types of regulations approved by DOT may be an unnecessarily conservative approach. The DOT inconsistency rulings are advisory only and are not binding upon anyone. The courts, which are ultimately responsible for determining the validity of the state/local regulations, are influenced by DOT's rulings, but have generally adopted a more permissive attitude towards state and local laws affecting nuclear materials transportation. A moderate approach by state and local governments would involve the adoption of regulations similar to those previously approved by the courts as well as those types of regulations not yet addressed by the courts, but which are reasonably likely to be upheld if challenged in court (although possibly in direct conflict with prior DOT inconsistency rulings).

The federal courts of appeal have not had as many opportunities yet as DOT has had to address state and local regulation of radioactive materials transportation. Therefore, it is more difficult to determine at this time what types of rules the courts would uphold. However, while in several instances the courts have upheld regulations similar to those invalidated by DOT, there are no known cases of a federal court invalidating a state/local rule which would have been upheld by DOT.

The federal courts will generally use the following guidelines in determining that a state or local regulation of radioactive materials transportation is invalid:

- direct conflict with federal law;

- unnecessary duplication of rules;

- unnecessary transportation delays;

- absolute bans on shipments; and

- discrimination against shipments originating outside of the jurisdiction.

Following is a discussion of the likely results of court challenges to various types of state and local regulations.

Curfews

Rush-hour curfews for hazardous gases in urban areas, even for intercity shipments, have been upheld

a. An exception was New York City's permit system, which was upheld in 1978 in DOT's first inconsistency ruling (43 Fed. Reg. 16,954). However, in response to this ruling, the DOT then enacted the highway routing rules (known as HM-164), which were then used to invalidate the City's permit system.

in court as a justifiable inconvenience in light of "the public interest in avoiding a catastrophic accident in a densely populated area." National Tank Truck Carriers, Inc. v. City of New York, 677 F.2d 270 (2nd Cir. 1982). It is likely that a federal court would uphold similar city-wide curfews for radioactive materials transportation. This is a more liberal position than that taken by DOT, which refused to uphold such a requirement for through-shipments in Boston because the City had not consulted with other jurisdictions affected by the time-of-day restriction. (IR-3). However, the courts, like DOT, are unlikely to approve of statewide time-of-day restrictions because of their potential for creating scheduling problems and transportation delays. National Tank Truck Carriers, Inc. v. Burke, 698 F.2d 559 (1st Cir. 1983).

Transport Bans

Absolute bans on radioactive materials transportation through a state are extremely unlikely to be upheld by the courts. If a statewide time-of-day restriction is too burdensome on interstate commerce, as discussed above, a complete ban on transportation would be even more burdensome. However, a city-wide ban may be acceptable to the courts in some circumstances. A court upheld New York City's prohibition against transport through the city unless no practical alternative route existed. National Tank Truck Carriers, Inc. v. City of New York, supra. Such a decision is in conflict with the DOT rules which state that only a "state routing agency" has the authority to designate alternate routes. 49 C.F.R. Section 177.825.

Bans against out-of-state shipments, while intrastate shipments are permitted, are likely to be found invalid. People of State of Illinois v. General Electric Co., 683 F.2d 206 (7th Cir. 1982) (spent fuel); Washington State Building and Construction Trades Council, AFL-CIO v. Spellman, 684 F.2d 627 (9th Cir. 1982), cert. denied, 103 S.Ct. 1891 (1983) (low-level radioactive waste).

Permit/Fee Systems

The courts' rulings on state and local permit/fee systems have been less restrictive than the DOT inconsistency rulings. The courts may have a broader view of the permissible purposes for which state/local permit systems may be enacted. New York City's permit system for hazardous gases was upheld as a valid exercise of the local regulation of highway safety. National Tank Truck Carriers, Inc. v. City of New York, supra. This decision conflicts with DOT's ruling that permit systems based on a state or local government's desire to promote safety of radioactive materials transportation are inconsistent with federal law. (IR-8). A permit/fee system based on a state's desire to be reimbursed for its costs of inspection, enforcement, and emergency response has been upheld in court. New Hampshire Motor Transport Association v. Flynn, 751 F.2d 43 (1st Cir. 1984). DOT has not had the opportunity yet to consider a permit based on non-safety concerns, although language in its inconsistency rulings indicates that such permit systems may be acceptable.

As with DOT's inconsistency rulings, the courts' decisions on permit systems are linked to the permit application process. Thus, a state permit system which required a written application four hours before entering the state was found inconsistent with the HMTA's goal of avoiding unnecessary transportation delays. National Tank Truck Carriers, Inc. v. Burke, supra. In contrast, a permit which could be obtained over the telephone was upheld. National Tank Truck Carriers, Inc., v. City of New York, supra. Also upheld was a permit which could be purchased on-the-spot during normal business hours for a single trip or in advance on an annual basis. Flynn, supra.

The court's decision in Flynn provides guidance to state and local governments regarding the size of permissible fees. The court ruled that transport fees are permissible, provided they are not shown to be unreasonable in amount in relation to the costs imposed on the state by the transportation, even if the fees collected are used for purposes unrelated to transportation activities. Although the fees involved in Flynn were small ($15 per trip or $25 per year), presumably, the same principles would be used in determining the validity of larger fees. The court stated that if fees were imposed by numerous jurisdictions, DOT would be free to enact a rule preempting state/local fees. However, it is possible that a court confronted with a very large fee would find the fee to be an impermissible burden on interstate commerce.

Driver Training

Some state and local governments have expressed interest in adopting more stringent driver training regulations than those imposed by the federal government. Two aspects of training are discussed most frequently: actual driving experience in different types of terrain and more comprehensive training regarding the hazards of radioactive materials and emergency response to radioactive materials accidents.

The courts have not addressed the extent to which state and local governments may regulate training for interstate drivers who transport radioactive materials. However, such regulations have a reasonable chance of withstanding a court challenge. More stringent training regulations could promote safety while causing little or no delay in transportation. Because of the relatively small number of radioactive materials carriers and drivers, training requirements would probably impose only a slight burden on interstate commerce.

Recordkeeping Requirements

Some state or local governments may wish to impose recordkeeping requirements on carriers of radioactive materials and require the carriers to provide the government access to these records. Such "post-notification" can provide the governments with historical data needed to improve emergency response capabilities, infrastructure, and inspection and enforcement along the most frequently used routes.

Post-notification has not been addressed by the courts, but is likely to be upheld, especially if the information requested is of a type likely to be recorded by the carrier. The information can be valuable in promoting safety; because of the timing, it can not be said to delay transportation; and, depending on the exact information requested, may impose no burden on interstate commerce. Periodic reporting of aggregate data, rather than post-notification of each shipment, would probably impose less of a burden on interstate commerce, and thus, would be more likely to be upheld.

ACTIVIST APPROACH

Some state and local governments may not be satisfied with existing DOT advisory opinions and

court decisions and may seek to test the outer limits of the law or to actively pursue the creation of a new federal policy. An activist approach could include one or more of the following: adopt state and local regulations of a type not yet considered by the courts, but extremely unlikely to be upheld; adopt regulations similar to those invalidated by courts in other jurisdictions, but not yet considered by a court with jurisdiction over a particular state or local government; or appeal to Congress or the relevant federal agency to specifically authorize the type of state/local regulation desired.

No state or local government is bound by the decisions of a federal court in another jurisdiction. Therefore, no state or locality is barred from adopting a regulation merely because a similar regulation has been successfully challenged in another jurisdiction. Furthermore, the federal courts of appeal are not always in agreement. While one federal court may find a state or local regulation to be an undue burden on interstate commerce, another federal court may review a similar regulation in a different light and come to a different conclusion.

Even where the law is clear, there are several reasons a state or local government may wish to adopt a regulation which has little or no chance of being upheld if challenged. Until a court with jurisdiction over a particular state or local government invalidates that government's regulation, the regulation is legally enforceable. Therefore, until the regulation was successfully challenged, the state or local government could enjoy the safety benefits temporarily while seeking a more permanent solution. Permanent solutions could include a Congressional act which would specifically authorize state and local governments to enact the desired regulations, a change in technology, or a change in other aspects of regulation which eliminates the need for the challenged rule. It is also possible that the regulation would never be challenged, particularly if it caused only a minor inconvenience to shippers and carriers while promoting safety. A governing body might also adopt a stringent regulation as a political statement, even if the regulation was not enforced.

The one inadvisable reason for adopting an activist approach is to force shipments into an adjacent jurisdiction. This does nothing to increase overall safety; it merely exports the risk. It may also subject the enacting jurisdiction to legal action. Finally, obstructionist actions by state or local governments could result in Congress or the Department of Transportation explicitly preempting certain aspects of radioactive materials transportation regulation. Such preemption could be broader than the scope of the regulations which prompted the federal response, thus leaving the state and local governments with a more limited area in which to act.

Following is a list of some of the types of regulations which have been rejected by various courts, but which can be adopted in other jurisdictions:

- container testing requirements, National Tank Truck Carriers, Inc. v. City of New York, 677 F.2d 270 (2nd Cir. 1982);

- lengthy permit application processes, National Tank Truck Carriers, Inc. v. Burke, 698 F.2d 559 (1st Cir. 1983);

- written accident reports in addition to those required by the federal government, National Tank Truck Carriers, Inc. v. Burke, supra;

- statewide time-of-day restrictions, National Tank Truck Carriers, Inc. v. Burke, supra;

- different placarding requirements, National Tank Truck Carriers, Inc. v. City of New York, supra;

Other types of regulation may not have been fully addressed by the courts, but are extremely unlikely to be upheld because of the burdens they place on interstate commerce and because of the pervasive federal regulations which preempt state or local action in the field. The following regulations may be considered under an activist approach:

- high permit fees, especially if not reasonably related to the cost of providing state services;

- statewide transportation bans;

- additional insurance requirements;

- additional prenotification requirements;

- restrictions on rail stops in addition to the federal restrictions; and

- requirements for additional personnel, escorts, or equipment, or a requirement that the shipper or carrier pay for such resources provided by the state or local government.

GENERAL CONSIDERATIONS

Regardless of which approach, or combination of approaches, a state or local government chooses, there are several general ideas the governing body should consider.

Comprehensive Hazardous Materials Regulation

Radioactive materials transportation should be considered in the context of hazardous materials transportation in general. Radioactive materials, particularly high-level radioactive waste, have often received far more attention than other hazardous materials. However, radioactive materials will account for only a small portion of the total amount of hazardous materials transported even when shipments of high level waste increase sharply after the repository begins operation. Also, non-nuclear hazardous materials cause injuries and fatalities every year, while the record for nuclear materials transportation has been very good to date. While the potential (of whatever magnitude) for a radioactive materials accident of catastrophic proportions demands careful regulation of radioactive materials transportation, state and local governments should at least consider including radioactive materials regulation in a system which addresses the transportation of all hazardous materials. Advantages of a comprehensive regulatory system include: protection against shippers and carriers of radioactive materials challenging the regulation on the grounds that they have been unfairly singled out; increased safety benefits from a given expenditure of state and local resources; and an opportunity to fine-tune the regulatory system for radioactive materials transportation based on the lessons learned from a much larger number of non-radioactive hazardous materials shipments.

TABLE I

State and Local Regulation of Radioactive Materials Transportation

	Permissible	Impermissible
CONSERVATIVE APPROACH	Traffic control regulations which apply to all vehicles, regardless of cargo	Additional prenotification
	Designation of alternate routes in accordance with DOT guidelines	Different hazard classes or definitions
	Required use of two-way radios	Additional packaging and container requirements
	Immediate accident notification	Written accident reports to state
	Use of headlights at all times	Time-of-day restrictions for through-shipments
	Time-of-day restrictions for intercity shipments	Shipping papers with different color markings
	Required use of major thoroughfares	Additional personnel, equipment, or escorts
	Minimum separation distances	Additional liability insurance requirements
	Vehicle inspection at loading and unloading	Permits based on safety concerns
	Non-arbitrary, non-extreme penalties	
	Liability laws related to statutes of limitation, proof of causation, standard of liability, sovereign immunity	
MODERATE APPROACH	Rush hour curfews for intercity shipments	Permits with 4-hour advance written application
	Shipment bans through city, unless no practical alternative	Discrimination against out-of-state shipments
	Permits based on safety concerns or desire to be reimbursed for costs of emergency response, inspection and enforcement	Absolute bans on transportation
	Fees reasonably related to cost of state services	Different placarding, marking, container testing
	Permits available on-the-spot or by phone	Statewide time-of-day restrictions
	Driver training	Written accident reports to state
	Recordkeeping	
ACTIVIST APPROACH	High permit fees, with lengthy application process	Regulations adopted primarily to force transportation into another jurisdiction
	Transportation bans or statewide time-of-day restrictions	
	Additional placarding, container testing requirements	
	Written accident reports	
	Additional insurance requirements	
	Additional prenotification	
	Additional personnel, escorts, equipment	

Multi-Jurisdictional Agreements

State and local governments should also consider multi-jurisdictional agreements for inspection, enforcement, and permit/fee systems. The Commercial Vehicle Safety Alliance and the inspection agreements between Oregon and Washington and between Wisconsin and Illinois illustrate the benefits of a multi-jurisdictional approach. A multi-state approach may alleviate some of the concerns at the federal level that a multitude of individual state and local regulations will place an undue burden on interstate commerce. Other benefits include decreased expenditures of time and money by the participating states and improved safety due to increased efficiency of inspection and enforcement.

REFERENCES

1. BROWN, OMER F, "Developments Over the Last Two Years Concerning Nuclear Transportation and Federal Preemption," SAND85-7242, Sandia National Laboratories (Jan. 1986).

2. FRIEL, LORI E. and ELLEN A. LIVINGSTON-BEHAN, "Federal and State Regulatory Schemes Affecting Liability for High-Level Waste Transportation Incidents: Opportunities for Clarification and Amendment," Proc., Waste Management '85, Tucson, Arizona, March 24-28, 1985, Vol. 3, p. 231, American Nuclear Society (1985).

3. OVERCAST, THOMAS D. and BARBARA SCHUKNECHT, "Federal Preemption of State and Local Nuclear Transportation Regulations," SAND85-7180, Sandia National Laboratories (August 1985).

4. ROCKETT, LAURIE R., Financial Protection Against Nuclear Hazards: Thirty Years' Experience Under the Price Anderson Act, Columbia University, New York City, New York (1984).

Response to Inquiry

We have completed a preliminary review of the General Accounting Office report on waste management practices at Hanford. After a year's study, the GAO developed recommendations which describe actions which were initiated prior to completion of the GAO review. As such, we see the GAO recommendations as an endorsement of the efforts already underway by the Department of Energy, the Environmental Protection Agency and the State of Washington to resolve waste management issues at Hanford.

Other preliminary comments on the report are as follows:

- Having had the opportunity to review portions of an earlier draft of the GAO report, we are disappointed that the final report omitted statements contained in earlier drafts discussing the substantial body of environmental monitoring information available to place in perspective the minimal impact of Hanford operations on the offsite environment and the public. Such statements are essential if one is to accurately portray the environmental significance of the compliance issues raised by the GAO investigators.

- In his letter transmitting the GAO report to the Department, Rep. Synar expressed concern that the Hanford Defense Waste draft Environmental Impact Statement does not deal with the hazardous chemical components of Hanford defense wastes. Numerous organizations and individuals commenting on the Draft EIS expressed the same concern. The final EIS will reflect those concerns and will strengthen the analyses of the hazardous chemical components of Hanford defense wastes.

  The EIS was developed as input to Defense Waste disposal decision alternatives. These decisions will be required to initiate disposal actions and to obtain necessary funding from Congress. The draft EIS discusses process development and improved characterization of the wastes which must be completed before implementation of disposal alternatives. Comments and dialogue on the draft EIS have led to a concensus among DOE, the States of Washington and Oregon and the Northwest Citizens' Forum. This will facilitate moving promptly ahead with disposal of certain defense wastes and prioritizing the research needed on other wastes -- including the hazardous chemical components -- before making disposal decisions.

- The report fails to accurately describe the very important distinction between the EPA/DOE jurisdictional issues created by existing laws and the good-faith actions already underway at Hanford to strictly conform to current regulations, regardless of jurisdiction. Hanford intends to meet the spirit and intent of those regulations, regardless of which agency has jurisdiction. Actions already underway at Hanford will assure that by early next year Hanford liquid waste streams entering the environment will be in compliance with the Resources Conservation and Recovery Act (RCRA) regulations.

(more)

Response to Query: -2-

- While the report does discuss the large effort needed to bring Hanford into compliance with the Superfund program, it falls short of acknowledging the numerous programs, plans and activities that already are in place to evaluate inactive waste sites and implement appropriate protective measures deemed necessary at Hanford.

- The report falls short of accurately describing the complex technical problems and legal jurisdictional issues associated with protecting the environment from hazards posed by mixed wastes. Neither does the report describe the ongoing efforts underway by numerous agencies (DOE, EPA, NRC and the States) to develop appropriate technical protection criteria. Our policy and actions have been to comply with the spirit and intent of environmental and technical requirements irrespective of jurisdictional issues.

- Hanford has in place an effective ground water monitoring system that is capable of detecting and reporting contamination potentially capable of posing a hazard. DOE is working with the regulatory agencies to make necessary improvements to achieve full compliance with applicable requirements.

In summary, it is Department of Energy policy to comply with the spirit and intent of environmental regulations regardless of jurisdictional issues. We are working closely with the State of Washington and the Environmental Protection Agency to identify actions required to bring Hanford into full compliance with applicable Federal and State regulations. We plan to continue these efforts and will describe our actions in our detailed response to Rep. Synar and the General Accountaing Office. In the meantime, we are continuing to operate the Hanford Site in an Environmentally sound manner with minimal, if any, impact to the off-site public or environment.

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