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Volume 3

FINAL ENVIRONMENTAL IMPACT STATEMENT

on a

Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel

Public Comments and Department of Energy Responses
Part 1 – Overview, Governments, and Native American Groups

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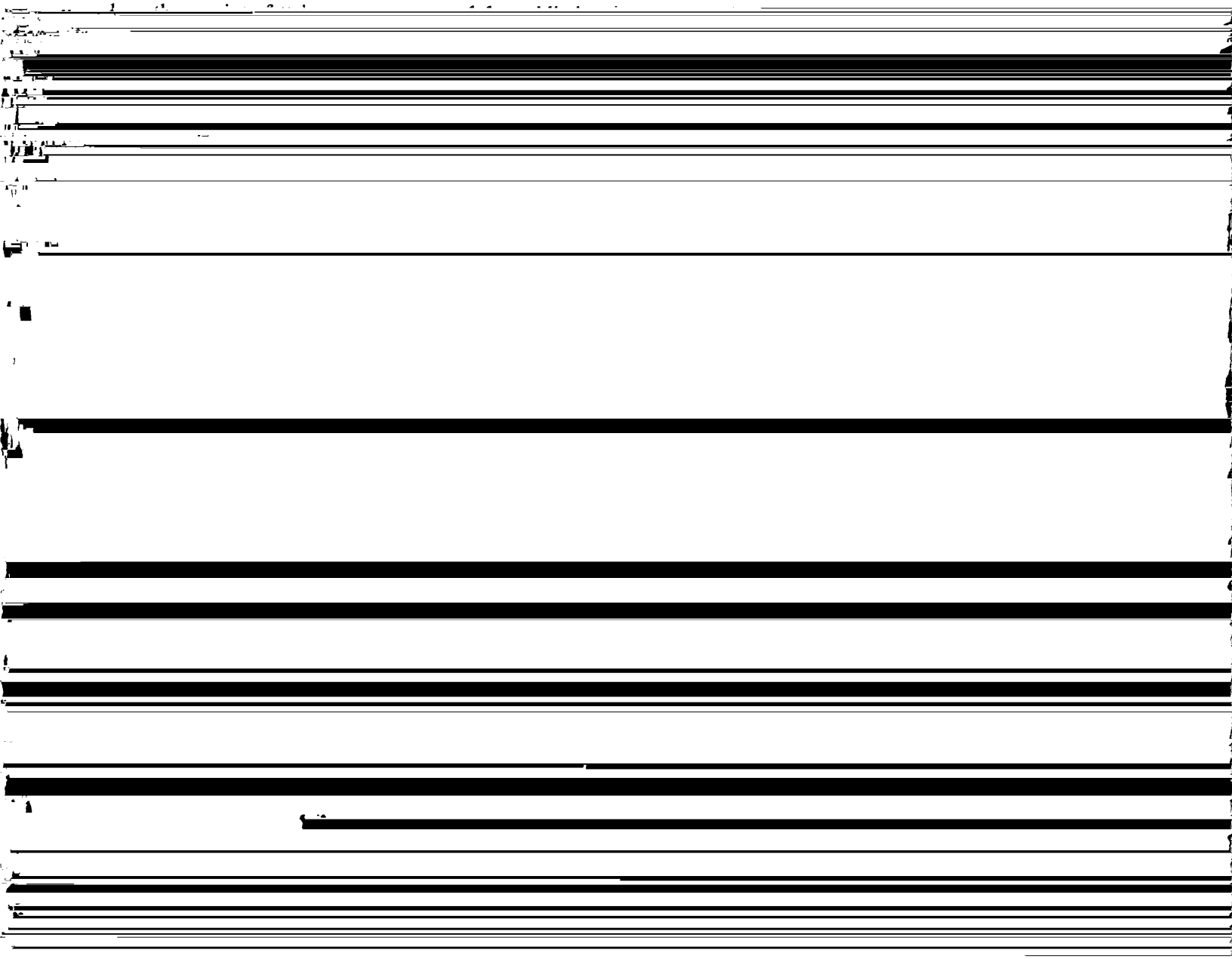
Volume 3 is organized into three sections:

- Section 1 - Overview
- Section 2 - Written Comments and Responses
- Section 3 - Public Hearings

The Overview sets the tone for the document by summarizing the public comment process, by explaining



issues raised by commentors and DOE's responses to these issues.

Section 2 of Volume 3, "Written Comments and Responses" contains all of the written comments received by DOE on the draft EIS. Upon receipt, these documents were assigned a sequential log number to be used in tracking during the comment response process. For presentation in Volume 3, these documents maintained their original log number, but were separated into the following seven distinct "affiliation" categories:

Section 2.1 - Federal Government
Section 2.2 - State Government
Section 2.3 - Local Government
Section 2.4 - Native American Groups

Public Comments and Department of Energy Responses

SECTION 1
OVERVIEW

1.0 OVERVIEW OF THE PUBLIC COMMENT AND DOE RESPONSE

On April 21, 1995, DOE published in the *Federal Register* a Notice of Availability of the Draft Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel (60 FR 19899). In accordance with Council on Environmental Quality and DOE NEPA regulations, the Notice invited interested agencies, organizations, and the general public to provide oral and written comments on the Draft EIS. This Volume 3 of the Final EIS contains DOE's responses to the comments provided during the comment period.

1.1 THE PUBLIC COMMENT PROCESS

The public comment period on the Draft EIS was initially scheduled from April 21, 1995 to June 20, 1995. In response to public requests, the comment period was extended an additional 30 days through July 20, 1995. During this period, DOE held 17 public hearings in the locations most likely to be directly affected by the EIS alternatives, including the 10 candidate ports of entry and 5 candidate spent nuclear fuel management sites. In addition, a public hearing was held in Washington, D.C. The hearing dates and locations are shown in Figure 1. The Draft EIS was made available to the public through mailings, requests to DOE's Environmental Management Information Center, and at DOE Public Reading Rooms and other designated information locations.

1.2 WRITTEN COMMENTS

DOE received approximately 5,040 written comments contained within approximately 1,250 submissions. Written comments were submitted to DOE by mail and facsimile and at many of the public hearings. These written comments were received from individuals, Federal and State agencies, local governments, foreign entities, and non-government organizations such as environmental, public interest and industry groups. All written comments were reviewed and considered in the preparation of the Final EIS and are presented in Section 2 of this Volume 3 of the Final EIS.

1.3 PUBLIC HEARINGS

In an effort to encourage a dialogue between members of the public and government officials at the public hearings, DOE used an informal, interactive format and an independent professional facilitator. The hearings were preceded by an hour-long "open house" at which exhibits, videos, and other information materials were available for review, along with opportunity for one-on-one exchanges with DOE representatives. Comment forms were provided for those wishing to submit written comments at the hearings.

Public hearings began with an explanation of the hearing format by the independent facilitator, followed by a 30-minute overview by a DOE official on the proposed policy and the factors leading to the proposal's development. Following this presentation, attendees were encouraged to ask questions, offer comments, and engage in dialogue. Notetakers summarized the questions and comments and DOE responses at all hearings. A summary of all oral comments and statements from each hearing, along with the DOE responses, is presented in Volume 3, Section 3.

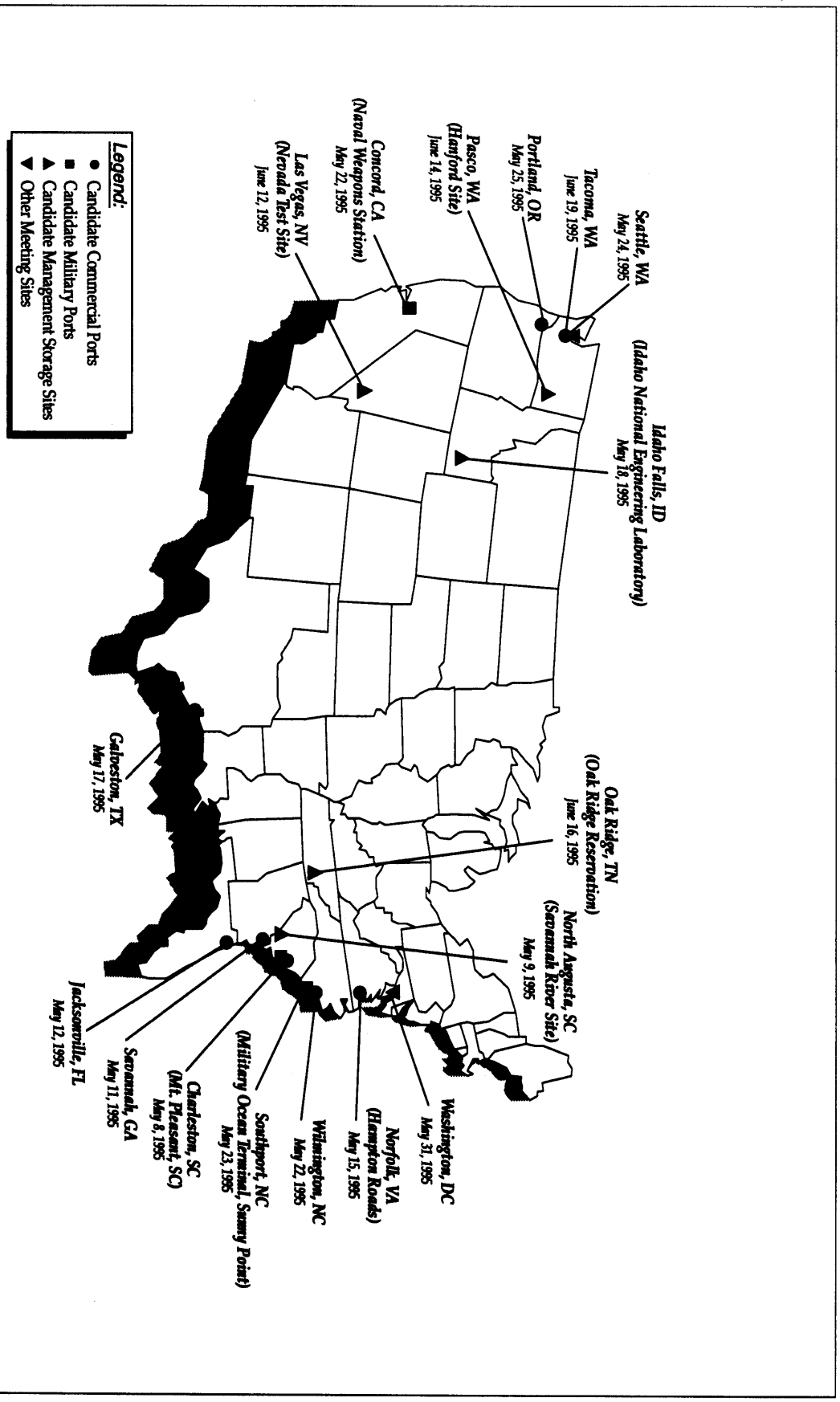


FIGURE 1. LOCATIONS AND DATES OF PUBLIC HEARINGS

Approximately 900 people attended the 17 public hearings. An interactive format was used at all hearings except in Tacoma, Washington. At the Tacoma public hearing, attendees expressed a desire for a more traditional approach in which people presented statements of up to five minutes, with little or no dialogue between commentors and DOE. In addition, the Tacoma hearing attendees requested that a verbatim transcript be made of the meeting. A copy of this transcript is included as Attachment 1 to Volume 3, Section 3.

1.4 *Environmental Protection Agency Rating of EIS*

The U.S. Environmental Protection Agency reviewed and rated the Draft EIS proposed action and each alternative as "lack of objections" (LO), which means that the EPA has not identified any potential environmental impacts requiring modifications to the proposal. A copy of the U.S. Environmental Protection Agency rating is included among the written comments in Section 2.

1.5 *Major Issues Raised By Commentors*

The public comments addressed a wide range of policy, economic, and technical issues. Of the approximately 6,000 written and oral comments received, few were critical of, or directed against, the analytical methods presented in the Draft EIS. The following is a summary characterizing the most frequently raised issues and the corresponding summary of DOE's responses. (In each case, a summary of DOE's response is provided in bold text following the summary of the public comment.) DOE's full response to each specific comment and issue are provided in Sections 2 and 3 of this Volume 3 of the EIS.

1.5.1 *Policy Considerations and Management Alternatives*

Numerous comments and questions were received concerning the need for a policy to manage foreign research reactor spent nuclear fuel. Commentors questioned the need to adopt a policy to manage spent nuclear fuel from allied countries or from countries that are considered sufficiently developed to manage their own spent nuclear fuel. Other commentors questioned the objectives of the stated U.S. nuclear weapons nonproliferation policy and the rationale for considering the proposed policy, pointing out that some of the allied nations under the proposed action do not pose a nuclear weapons proliferation risk. **The purpose of the proposed action is to support a U.S. nuclear weapons nonproliferation policy that seeks to reduce, and eventually eliminate, the use of highly-enriched (nuclear weapons-grade) uranium in civil programs worldwide. It is necessary to deal with spent nuclear fuel from the developed countries for several reasons.**

First, if the United States does not assist the developed countries with management of their spent nuclear fuel, the only mechanism available to them for spent nuclear fuel disposition would be to stay on or reconvert to use of HEU for fuel. Those who can accept the return of reprocessing wastes would disposition their spent nuclear fuel by having it reprocessed, and would recycle the remaining HEU. They would have to seek out sources of new HEU to make up for that burned, and to keep the enrichment level of the recycled uranium high enough to be of use. Since the United States could not ship additional HEU to them, they would likely resort to Russia or China as suppliers. Such actions could destroy all the progress made by the Reduced Enrichment for Research and Test Reactors program in attempting to eliminate the use of HEU in civil programs.

Second, many developed countries manufacture research reactors and sell them to developing countries. If, due to inaction by the United States, research reactors in the developed countries refuse to convert to LEU fuel, or switch back to the use of HEU fuel, their customers in the developing countries would likely insist on obtaining reactors that also use HEU fuel.

Third, inaction by the United States that leads research reactors in developed countries to shut down due to the absence of a timely means of dispositioning of their fuel is likely to lead, rightly or wrongly, to accusations that the United States is failing to comply with its obligations under the *Treaty on the Non-Proliferation of Nuclear Weapons* to assist nonnuclear weapons States with peaceful applications of nuclear energy.

Some commentors further contended that the nuclear weapons nonproliferation objectives do not apply to the foreign research reactor spent nuclear fuel that contains LEU, which is not weapons-grade material. **While it is true that LEU is not weapons-grade material, it is included in the policy because acceptance of LEU fuel would provide incentive for foreign research reactor operators to convert from HEU fuel to LEU fuel use. This incentive would be necessary to offset the considerable expense of conversion and the reductions in reactor capabilities and increased operating costs that generally accompany conversion to LEU fuel. Furthermore, by not accepting LEU, the United States would be penalizing the reactors that converted earlier under the Reduced Enrichment for Research and Test Reactors program, because those reactors are now generating only LEU spent nuclear fuel. Since there is currently no alternative available for disposition of LEU spent nuclear fuel, the reactors that supported the Reduced Enrichment for Research and Test Reactors program would be the first to shut down.**

Some commentors believe that the continued production and export of nuclear materials by the United States appears to be in conflict with the stated U.S. nuclear weapons nonproliferation objectives. Several stated their opposition to the continued sale of new fuel for foreign research reactors and a small number suggested that the United States cease production of all nuclear materials and develop alternative energy sources. **As a result of the passage of the Energy Policy Act of 1992, the United States is prohibited from selling HEU to foreign countries, except under special conditions. Since enactment of this prohibition, no new licenses for the export of HEU have been issued by the United States. The United States is continuing to sell LEU since it is not a nuclear weapons material. Furthermore, by making LEU available, the United States is providing further support for reactor operators who agree to convert from use of HEU. With respect to development of alternative energy sources, DOE currently has on-going programs that are seeking to develop and promote use of various alternative energy sources, such as wind, water, and solar.**

Representatives of foreign research reactor operators enumerated several reasons why the United States should accept and manage foreign research reactor spent nuclear fuel. This generally held position was the result of the expiration of the Off-Site Fuels Policy, under which the United States had accepted foreign research reactor spent nuclear fuel. As a result, many foreign research reactors are running out of storage space for their spent nuclear fuel. The operators assert that this may cause some research reactors to shut down, as these countries do not have, and did not plan for, long-term storage facilities. Foreign research reactor operators point out that the Dounreay, United Kingdom, reprocessing facilities can only handle HEU at this time. As a result, foreign research reactor operators would likely revert to reliance on HEU which would be contrary to U.S. nuclear weapons nonproliferation policy.

Many members of the public and State and local governments supported the objectives of the proposed action, but urged further consideration of Management Alternative 2, which is to facilitate overseas management of the spent nuclear fuel with security precautions to ensure that the spent nuclear fuel is not diverted into a nuclear weapons program. Some also supported the No Action Alternative under which the United States would neither accept nor assist with the management of foreign research reactor spent nuclear fuel. Several Non-Government Organizations also expressed support for the proposed policy and cited the need to eliminate the use and stockpiling of HEU. **DOE and the Department of State have considered these comments in selection of the preferred alternative. DOE's and the Department of State's reasons for not selecting the No Action Alternative or Management Alternative 2 are discussed in Section S.2.3 under the heading "Basis for the Preferred Alternative."**

Many commentors expressed concern about the cost to the United States of managing foreign research reactor spent nuclear fuel. Several opposed full subsidization of developed countries which they consider capable of managing their own spent nuclear fuel. Other commentors favored competitive pricing or charging the foreign research reactor operators a full-cost recovery fee for management of their spent nuclear fuel. Representatives of certain foreign research reactor operators expressed their willingness to pay a cost-based price, and stated that they are not asking U.S. taxpayers to subsidize their fuel cycles. A number of commentors asked for additional information in the Final EIS on life cycle costs, risks, and benefits. **DOE and the Department of State have evaluated several financing options in the EIS, ranging from fees from the research reactor operators that would pay all of the costs of the program to full subsidization of the program by DOE. One of these options would be for developed countries (which represent about 87 percent of the spent nuclear fuel total mass and about 78 percent of the spent nuclear fuel elements) to pay a competitive fee for U.S. management of their spent nuclear fuel. As part of this option, DOE would subsidize the costs of managing the spent nuclear fuel from developing countries. The United States does not believe the developing countries can afford to pay the expense for spent nuclear fuel management either in the United States or in the host country.**

1.5.2 Ultimate Disposition

The ultimate disposition of DOE-owned spent nuclear fuel was a widely expressed policy concern. Many commentors, concerned with a lack of long-term storage options, raised the issue of the availability, or lack thereof, of a permanent geologic repository. Many urged that, before the United States accepts any spent nuclear fuel from foreign research reactors, a permanent repository must be established in this country. Some comments promoted reprocessing as a means to stabilize and prepare the spent nuclear fuel for geologic disposal. **The Nuclear Waste Policy Act of 1982, as amended, establishes a framework for the ultimate disposition of spent nuclear fuel in the United States in a geologic repository. Any foreign research reactor spent nuclear fuel accepted into the United States under the alternatives considered in the EIS would be eligible for disposal in a geologic repository. Under authority of the Act, DOE is currently evaluating the feasibility of locating a geologic repository at Yucca Mountain in Nevada. In the meantime, however, DOE and the Department of State are seeking to stem the use of HEU in civil programs. Under the preferred alternative, if any foreign research reactor spent nuclear fuel were accepted into the United States, it would be treated and/or packaged, and the resulting materials placed in "road ready" storage pending availability of a geologic repository, if it were not otherwise disposed of in the meantime.**

1.5.3 Transportation and Emergency Response

Transportation and emergency preparedness were key concerns expressed during the public comment period. The majority of comments dealt with identification of parties responsible for responding to an accident involving transport of the foreign research reactor spent nuclear fuel, local emergency response capability, marine and ground transportation routing, shipment methods, procedures, and safety criteria. **State and local responders would be the first to respond to a transportation accident involving the foreign research reactor spent nuclear fuel shipments, as they would to any overland shipment involving hazardous materials. State, local and some Tribal governments have the basic capabilities and training that would be required in order to take initial measures to respond to a transportation accident by virtue of their preparation for responding to accidents involving hazardous materials, (i. e., assess the scene, administer emergency care, control the area, and call for a hazardous materials special team). DOE would develop emergency plans with the carrier, port officials, State, local, and Tribal officials and provide training courses for first responders to enhance their capabilities to respond appropriately in the unlikely event of an accident involving these spent nuclear fuel shipments. Technical assistance would also be provided to supplement existing State, Tribal, or local resources if any deficiencies are identified. In the event of an accident, if requested by a State, Tribal, or local government, DOE would send a radiological monitoring assistance team from the closest of eight DOE regional offices located across the country.**

Appendix H, which was added to the final EIS in response to public comments, contains the general provisions for emergency preparedness and security measures associated with the transportation of foreign research reactor spent nuclear fuel in the United States. The provisions include communications and meetings between DOE and State, Tribal, and local authorities, prior to the implementation of the policy, for the identification and resolution of emergency management and security issues specific to the communities that would be affected. These issues include capabilities and training of first emergency responders.

Many commentors were concerned about the safety of transportation casks. **Spent nuclear fuel is transported in "Type B" transportation casks that are designed and built to preclude release of radioactive material. They are subject to stringent design, fabrication, and operating requirements imposed by the Nuclear Regulatory Commission, and Department of Transportation in the United**

Plan (in which State, Tribal and local officials in addition to DOE, the carrier, shippers agent, the port and other Federal agencies would be involved), highway routes would be identified using criteria developed by the Department of Transportation. These criteria include using the Interstate highway system, selecting the shortest route or time in travel from the U.S. port of entry to the closest Interstate, and using by-passes or beltways to avoid major population centers. States and Tribes may designate alternate routes that are equivalent to the Interstate system in consultation with local officials, and approved by the U.S. Department of Transportation. Rail routing criteria used by the Department include avoiding interchanges and using the best available track. NRC approval of either rail or truck routes selected for use would be required. Official notification of the shipments would be provided to the Governor of each State and Governors or Chairpersons of Indian tribes along the route at least seven days in advance of shipment. In addition, DOE would use a satellite-based tracking system, to notify Tribes and States of the pending shipment and to continuously track shipment progress. In order to maintain security, Governors and Tribal leaders are required by the NRC to only notify State and local officials who would need to know about the shipment, usually emergency management or law enforcement officials. With respect to the safety record of potential trucking firms, DOE has developed and implemented a mandatory Motor Carrier Evaluation Program with twelve evaluation criteria. Under the Motor Carrier Evaluation Program criteria, trucking firms with poor safety records would be excluded from transporting the spent nuclear fuel. The Motor Carrier Evaluation Program would be invoked as one of the requirements in DOE's foreign research reactor spent nuclear fuel acceptance contract. Other requirements would be discussed during the development of the Transportation Plan with the appropriate State, Tribal and local officials.

Many commentors requested coordination with emergency responders in route so that localities can be prepared in the unlikely case of an accident. Many State, Tribal, and local representatives, as well as private citizens, commented that communities along shipping routes and at port and management site locations may have inadequate capabilities to respond to emergencies involving radioactive release. Many expressed the need for DOE funding for training equipment, monitoring for local emergency responders, transportation plans, and real-time shipment tracking that would be accessible to emergency response personnel. A number of commentors suggested that the Final EIS should evaluate the potential impact on local services due to the financial burden associated with emergency response preparedness. **DOE is committed to working with State, Tribal, and local governments to ensure that they are prepared to carry out their responsibilities in the unlikely event of an accident involving shipment of foreign research reactor spent nuclear fuel. Details of emergency preparedness, security, and coordination of DOE with local emergency response authorities would be contained in the Transportation Plan, which would be prepared prior to any individual spent nuclear fuel shipment and coordinated with State, Tribal and local officials. Any additional training or equipment needed would be provided as part of the planning process. In addition to direct Federal assistance to State, Tribal, and local governments for maintaining emergency response programs, there are three national emergency response plans under which DOE provides radiological monitoring and assessment assistance. Under these plans, DOE provides technical advice and assistance to the State, Tribal, and local agencies who might be involved in responding to a radiological incident.**

Another group of commentors expressed concern regarding risks of terrorist activities. Several noted that terrorist activity is a concern of all countries, including the United States, citing the

Oklahoma City bombing incident as an example. Commentors also stated that transporting nuclear material overseas to the United States would unnecessarily expose shipments to an increased possibility of terrorist threat. **In response to these concerns, Section D.5.9 was added to Appendix D of the EIS to specifically address terrorism and sabotage. This section concludes that while the risk of certain terrorist and sabotage attempts cannot be precluded, proper security measures would greatly reduce the risk. All shipments of foreign research reactor spent nuclear fuel would be conducted meeting, or exceeding, all the relevant security requirements in the Code of Federal Regulations. DOE would ensure through the spent nuclear fuel acceptance contracts with the reactor operators that proper security is provided at a port or in transit, based on NRC requirements. Often State or local law enforcement personnel would be employed by the carrier to satisfy these security requirements, which include having armed escorts on board or near the shipment when it is in highly populated areas or at the port in the U.S. In the case of military ports, a high level of security is inherently in place.**

With regard to marine transport, many commentors stated a preference for using special purpose, chartered or military ships rather than regularly-scheduled commercial liners to ship spent nuclear fuel. **The use of commercial liners, chartered ships, and purpose-built ships was considered for the marine transport of the spent nuclear fuel. The analyses in the EIS indicate that the impacts associated with the use of any of the ships evaluated would be small. The impacts of using military ships were not analyzed in the EIS because DOE believes that the added security provided by such ships would not be required to ensure safe transport. DOE's preferred alternative includes the use of military ports as points of entry to the United States.** Independent inspections by State, local, and/or public interest groups prior to and during shipments were suggested by some commentors. **DOE would encourage inspections by authorized State agencies for both radiological and vehicle inspections prior to shipment and after arrival at the management site. These inspections would be coordinated with the States through the transportation planning process.**

1.5.4 Port Selection Criteria and Activities

Many commentors, predominately those from communities at or near potential ports of entry, questioned DOE's port selection process and the methods for application of the selection criteria, especially with respect to populations in and around candidate ports. Particular concerns were that longshoremen may not be adequately trained to handle radioactive materials or that they could be exposed to high levels of radioactivity. As an alternative, military ports were supported as having the necessary experience in handling nuclear material and being more secure. **Section 3151 of Public Law 103-160 (the National Defense Authorization Act for the fiscal year 1994), requires that "the Secretary of Energy shall, if economically feasible and to the maximum extent practicable, provide for the receipt of spent nuclear fuel... at a port of entry in the United States which... had the lowest human population in the area surrounding the port of entry...." While this Act was written specifically to apply only to the receipt and storage of spent nuclear fuel at the Savannah River Site, DOE elected to apply this criterion, among others, to the maximum extent practicable, in identifying all suitable ports of entry for potential receipt of foreign research reactor spent nuclear fuel. In application of the population criterion, DOE considered both the population nearest the potential ports of entry analyzed, and the total population along the transportation routes. Analysis of the list of candidate ports against this criterion did not identify any port as a clear choice. Therefore, DOE selected ports that best**

met all of the criteria discussed in Appendix D to the EIS (e.g., appropriate experience, favorable transit from open ocean, appropriate facilities, access to intermodal transportation, and human population). Both commercial and military ports were evaluated. Based on the results of this analysis, DOE believes that foreign research reactor spent nuclear fuel could be received safely via commercial ports, as it has been in the past. Nevertheless, DOE agrees that the use of military ports would provide additional security over that which would be available in a commercial port. Furthermore, although DOE has committed to provide assistance to State and local authorities to ensure that the longshoremen (or other workers) in a commercial port would have any additional training that might be required to allow them to safely handle the spent nuclear fuel, DOE considers that the personnel at a military ordnance facility would be particularly qualified to handle the spent nuclear fuel by virtue of their training and experience performing their military function. Considerations of all these factors led to designation of the Charleston Naval Weapons Station and Concord Naval Weapons Station as the preferred ports of entry.

DOE notes that, although the maximum allowable radiation dose rate is 200 mrem per hour, this limit is applicable at the surface of the transportation cask, which would be inside of the container. The maximum radiation dose rate limit to those that would be near the container, such as longshoremen, is 10 mrem per hour at a distance of 2 meters (6.6 ft) from the surface of the container. The actual total dose that a longshoreman would get handling a cask would be quite small due to the fact that a handler would not be present at the surface of the container for long, and the total time near the cask would be quite short. The additional barrier imposed by the standard shipping container would also prevent the longshoremen from being in the near vicinity of the cask. The analysis in the EIS indicates that both the dose and dose rate for the port workers would be low.

Concerns over possible storage of spent nuclear fuel at the port of entry were raised by a number of commentors. **DOE's goal would be to minimize holding times at the ports and to provide safe transport of the spent nuclear fuel to its destination as quickly as possible. Under normal circumstances, the foreign research reactor spent nuclear fuel would remain at the port for only a few hours (e.g., 2 to 4 hours) and no more than 24 hours. In the very unlikely event that the spent nuclear fuel could not be moved within 24 hours, special provisions to move the fuel to a secure area at the port would be made. Part of the overall plan and agreements with the Department of Defense would include these special provisions.**

Several commentors pointed to recent increases in marine traffic and industrial congestion in the port areas and questioned whether the selection criteria would be affected by these factors. Some cited the need to consider site-specific factors such as hurricanes, severe winds, seismic activity, extreme weather conditions, and sinkholes. **In general, the number of ship mishaps is not proportional to the amount of ship traffic because port ship traffic is slow, and even when heavy, is normally a small number of ships per hour. Historically, increasing the volume does not significantly increase the probability of an accident. Rather, the number of ship mishaps is associated with navigational hazards and distances from the port to the open ocean or a large bay. In order to further assure safety, the U.S. Coast Guard would establish a moving zone of exclusion, which would keep all vessels away from the ship bringing the spent nuclear fuel into port. Coast Guard escort boats would accompany the ship to port. As for accidents, the potential consequences of a port or land transport accident due to an earthquake are represented and**

bounded by the potential port and land transportation accidents that are assessed in the EIS. The potential consequences of a port or land transport accident due to an earthquake are represented (and bounded) by the potential port and land transport accidents that are assessed in the EIS. Local hazards, such as earthquakes, volcanoes, and mud slides could be accident initiators; however, they would not increase the consequences of the accident, which were found to be low. Earthquakes were not analyzed separately in the EIS because seismic activity would not result in greater damage to a transportation cask than that analyzed for accidents such as challenges to the transportation cask integrity that could be caused by casks falling from a bridge or down an embankment. These kinds of accidents are within the design standards developed by the NRC and by which cask designs are evaluated. The NRC certifies the designs that contain the appropriate level of safety to protect workers, the public, and the environment from the radioactive material being transported. Analysis of the potential impacts associated with the possible existence of sinkholes along potential rail routes was added to the Final EIS in response to public comment.

1.5.5 Economic Impacts to Candidate Port and Site Communities

Potential economic impacts on affected port and site communities were the subject of many comments. Of particular concern were the socioeconomic impacts to a community in the event of an accidental release of radiation. Examples of potential impacts cited by commentors include disruptions in normal commerce, loss of business, loss of tourism, devaluation of property, and closure of ports and highway routes. Several port authorities were concerned about the potential for declining business due to the perceived stigma associated with handling nuclear waste materials in their ports, while others viewed handling these shipments positively. The costs of emergency response, cleanup, health care, and potential economic losses associated with accidents or releases were key concerns of several State, Tribal, and local officials. **The risk associated with shipments of foreign research reactor spent nuclear fuel through any of the ports identified would be less than the risk associated with the handling of other hazardous cargoes due to the rigid criteria established for spent nuclear fuel transportation casks. In fact, no adverse impacts have been observed during the 30 plus years foreign research reactor spent nuclear fuel was accepted into the United States. Historically, shipping foreign research reactor spent nuclear fuel through port has not created a stigma or had an adverse economic impact on business, major industries, tourism, or future business development at ports. DOE does not believe that actions such as permanent road closures would be required for the safe and uneventful transportation of foreign research reactor spent nuclear fuel. Costs of emergency response are covered under insurance that is required of hazardous material carriers. If that level of coverage is exceeded, Price-Anderson and other Federal provisions would cover costs.**

1.5.6 Health Effects and Environmental Risks

Many commentors raised concerns about health effects and environmental risks that could result from accidents during marine transport, handling operations at ports, ground transportation, and interim management. Of particular concern were the effects of possible radioactive releases into the ocean and rivers, and on highways and railroads; the impacts to fish, wildlife, ecosystems, and drinking water; and the possibility of an increased risk to workers and the public of cancer and genetic defects. **Human health and safety were primary considerations during the evaluation**

of environmental effects for the proposed alternatives. Conservative estimates of radiological and nonradiological impacts indicate that risks to the population and workers would be low. The analysis in the EIS indicates that the risks associated with an accident at sea or a port accident would be low. The impacts of incident-free receipt, handling, and transportation of foreign research reactor spent nuclear fuel would also be extremely low. In over 40 years of spent nuclear fuel transportation, no "Type B" spent nuclear fuel transportation cask has ever been punctured or released any of its radioactive material contents. DOE believes that spent nuclear fuel transportation casks passing through any of the potential ports of entry or any other part of the country would be highly unlikely (i.e., less than a 1 in 10 million chance) to release their contents or adversely affect air or water quality.

Several commentors questioned the results of the risk analyses in the EIS, suggesting that DOE may have underestimated the risk potential for accidents, radioactive release(s), and exposures to both workers and the public. **DOE believes that the analyses of risk to people during marine transport and for those who live near potential ports of entry, along transportation routes, and near management sites are conservative (i.e., are likely to overstate the actual risks). These estimates were generated using standard computer codes (e.g., RADTRAN) that have been adopted and used by NRC and the Department of Transportation for transportation calculations for over 19 years. These computer codes are available for public review.**

Some commentors expressed concern about potential health impacts resulting from a cask sinking in deep waters. Many challenged the applicability of the severe accident tests applied to the casks (e.g., crash, fire, drop, immersion), stating that the conditions of real-life accidents were of greater magnitude than the conditions in the tests. For example, commentors cited fires that were alleged to have burned longer and hotter than those used to test the transportation cask and pointed out that the water in Puget Sound is deeper than the cask recovery depth cited in the Draft EIS. **The EIS presents an evaluation of the consequences of accident scenarios that would result in the sinking of a spent nuclear fuel transportation cask on the continental shelf (water depth of about 200 meters), and in deep ocean (water depth of more than 200 meters). In the unlikely event that a transportation cask loaded with foreign research reactor spent nuclear fuel were to sink in any U.S. coastal or inland waters, it would be recovered, even from the deepest portions of the Puget Sound, which reaches depths of 305 meters (1,000 feet). The sequence of testing scenarios (i.e., cask drop onto unyielding surface, cask drop on a steel post [puncture], and cask fire) is required by the Nuclear Regulatory Commission as part of the certification of "Type B" spent nuclear fuel transportation casks. These tests conservatively represent a wide range of accident conditions that could occur during transport. The test results indicate that if such accidents were to occur, the cask most likely would not fail, and would not lead to a loss of containment. The cask drop and puncture tests evaluate the resulting impact on the most vulnerable orientation of the cask, and on an unyielding surface, which would be unlikely to occur while the cask was being transported in an International Standards Organization (ISO) approved container. In reference to shipboard fires, the duration of a fire is directly related to the amount of combustibles carried on board. The number of severe fires on ships is relatively small. Data available on the last 15 years from Lloyd's of London indicate that of 1,073 ship collisions in port worldwide, only 11 led to fires, and of those, only 5 caused extensive damage, with only 1 actually causing buckling of structures.**

In regard to the impact a ship fire might have on a spent nuclear fuel transportation cask, there are three facts that would mitigate the potential damage. First, ship fires tend to move to

different areas of the ship as the combustible material is consumed, so the cask would not be exposed for the entire duration of the fire. Second, a ship fire's intensity is normally limited by the amount of oxygen that can reach the interior of a hold. Third, all ships that would be used to transport foreign research reactor spent nuclear fuel have built-in fire suppression equipment, which at a minimum would keep fires well below the extreme temperatures needed to damage the transportation cask. For these reasons, it would be almost impossible for spent nuclear fuel inside the transportation cask to reach 900 degrees Kelvin (1,160 degrees F), the melting point of foreign research reactor spent nuclear fuel. The probability of reaching such a temperature is discussed in Attachment D5 to Appendix D of the EIS.

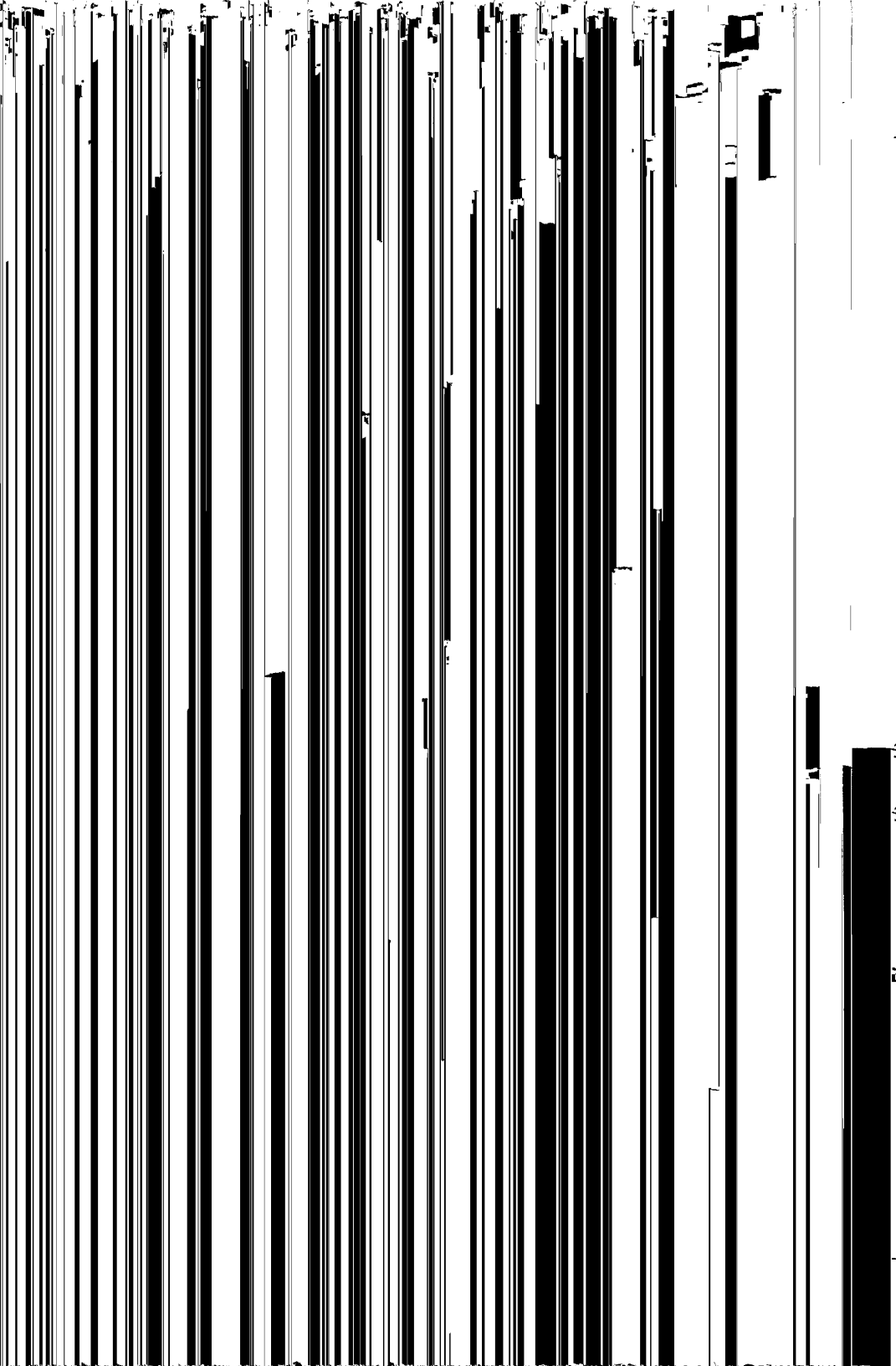
1.5.7 Public Involvement Process

A number of comments dealt with DOE's policies and procedures for conducting the public hearings, the duration of the public comment period, the degree to which comments would be considered by DOE in the decision making process, and general distrust of DOE. Several commentors stated that there was insufficient notice and advertising for the public hearings. Many commentors stated the need for additional time to comment on the Draft EIS. Commentors at the heavily-attended West Coast port hearings tended to favor the more traditional, formal public hearing format, and strongly opposed the use of notetakers to summarize hearing issues. In the Tacoma area, commentors urged DOE to hold another hearing to tape record their comments for the record, without allowing for dialogue with DOE representatives. Many State and local officials requested that DOE provide better advance notification to communities that are being considered as candidate ports or management sites so that they have more time to review the Draft EIS. Many individuals stated they had not received the Draft EIS in a timely manner, and consequently, had little time to review and comment. Several commentors expressed a desire for increased DOE interaction with local officials and more community participation in DOE's planning and decision making processes.

Notice of the availability of the Draft EIS for public review and comment was published in the *Federal Register* (60 FR 19899, April 21, 1995). This notice advised concerned parties, including State, Tribal, and local authorities, of the availability of the Draft EIS and the dates and locations of the public hearings on the Draft EIS. In addition, advertisements of the public hearings were placed in local papers prior to their occurrence. The public hearing format provided an opportunity for interaction between DOE and the public, thus serving to facilitate communication.

In response to public concerns of insufficient time to review the Draft EIS, DOE extended the deadline for submission of written public comments from June 20 to July 20, 1995. DOE considers that this 90-day period was sufficient for public comment. All oral comments presented at each hearing were summarized and have been addressed along with the written comments in Section 3 of this Volume 3 of the Final EIS. DOE considers that these actions have provided ample opportunity for the public to comment. Issues raised by the public during the comment period were considered in selection of the preferred alternative for this proposed action. All comments, written and oral, are part of the public record.

SECTION 2.1
FEDERAL GOVERNMENT



Response to Comment
Commentor No. 35: Naval Weapons Station Concord

35-1

35-2

35-3

Response to Comment No. 35-1

DOE understands that Concord NWS's primary mission is to support the military through handling munitions and that no handling of the foreign research reactor spent nuclear fuel could occur concurrently with handling explosives. These facts have been incorporated into the EIS.

Response to Comment No. 35-2

DOE understands that scheduling conflicts could arise unexpectedly and that they would be resolved in favor of the port's primary mission of supporting the military.

Response to Comment No. 35-3

Emergency preparedness, security, and coordination of DOE with local emergency response authorities that would be involved with the acceptance and transportation of foreign research reactor spent nuclear fuel will be discussed in detail in the DOE Transportation Plan, that would be prepared prior to any individual spent nuclear fuel shipment and coordinated with State and local officials. The general provisions of the Transportation Plan are included in Appendix H, which was added to the final EIS in response to public comments.

COMMENTOR NO. 35: NAVAL WEAPONS STATION CONCORD (CONT'D.)

a. Naval Weapons Station Concord is not a general purpose and routinely available shipping "port" in the publicly accepted use of the term.. Whenever this station is being directly referred to, please use WPNSTA Concord as a short term rather than "port". 35-4

b. Change the last sentence of the first paragraph on page D-60 to read: "Naval Weapons Station Concord is aligned under the Pacific Division of the Naval Ordnance Center. The Pacific Division is located at Seal Beach, CA and the Naval Ordnance Center is located at Indian Head, MD." 35-5

c. Concord's floating crane is 112 ton, not 110. 35-6

d. The modernization program is for $57 million for completion in 1999, not $50 M for completion in 1997. 35-7

e. Pier 3 load bearing capacity will not change. The upgrade to the pier adds gantry crane rails outside of the existing pier structures and will not change the working area pier load bearing capacity. 35-8

f. The facility in Hawthorne, Nevada, referred to as the "Naval Ordnance" facility is really the Army's and is called the "Hawthorne Army Ammunition Depot" which reports to the Army's Industrial Operations Command, Rock Island, Illinois. 35-9

g. There are several small inaccuracies in the first sentence in the "Other Pertinent Information" paragraph which should be rewritten to read: "Since it is a military facility and an explosives operating area, the entire pier operations waterfront is surrounded by barbed wire fencing with access through military posted gates." 35-10

h. Also in the first "Other Pertinent Information" paragraph, "The existing State highway through the site" was closed off to general public access in February 1995, and the correct term is "the town of Clyde", not "the hamlet of Clydes". 35-11

i. The Coast Guard facility on site does provide some explosive oversight services, however they do not "provide small craft security around the piers during loading and unloading" for explosive operations. If that would be required by DOE for your operations, that would have to be separately addressed with the Coast Guard. 35-12

Again, I appreciate the opportunity to comment on the DEIS. We are prepared to discuss the details of a Memorandum of Understanding when and if that becomes appropriate. As DOE moves through it's decision process, please forward to us any future documents on this project which mentions or refers to the Naval Weapons Station.

Sincerely,

R. B. LANNING
Captain, U. S. Navy
Commanding Officer

Copy to:
PACDIV
NAVORDCEN

RESPONSE TO COMMENT
COMMENTOR NO. 35: NAVAL WEAPONS STATION CONCORD (CONT'D.)

Response to Comment No. 35-4

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-5

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-6

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-7

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-8

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-9

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-10

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-11

This correction has been made in Appendix D, Section D.2.1.6 of the EIS.

Response to Comment No. 35-12

This correction has been made in Appendix D, Section D.2.1.6 of the EIS

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COMMENTOR NO. 52:
U.S. REPRESENTATIVE ELIZABETH FURSE (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 52:
U.S. REPRESENTATIVE ELIZABETH FURSE (CONT'D.)

Response to Comment No. 52-3

According to U. S. regulations, all workers who handle or come in contact with spent nuclear fuel are required to receive appropriate prior training. Details of emergency preparedness and security measures for port activities, as well as ground transportation, would be contained in the Transportation Plan, that would be prepared prior to any individual spent nuclear fuel shipment and coordinated with State and local officials.

Appendix H, which was added to the final EIS in response to public comments, contains the general provisions for emergency preparedness and security measures associated with the transportation of foreign research reactor spent nuclear fuel in the United States. The provisions include an interface between DOE and State, Tribal, and local authorities, prior to the implementation of the policy, for the identification and resolution of emergency management and security issues specific to the communities that would be affected. These issues include capabilities and training of first emergency responders. Funding for special needs, if necessary, would be addressed during this interface.

DOE considers that the foreign research reactor spent nuclear fuel, if managed in the United States, would be movable, recoverable and secure while in storage during the 40-year period covered by this EIS.

COMMENTOR NO. 60:
DEUTCH, JOHN - DEPUTY SECRETARY OF DEFENSE

THE DEPUTY SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-1600

8 April 1994

The Honorable Hazel O'Leary
Secretary of Energy
Washington, D.C. 20585

Dear Madam Secretary:

I am writing you to provide the Department of Defense's views regarding the proposed take back of the U.S. origin highly enriched uranium (HEU) spent research reactor fuel.

The Department of Defense fully supports your efforts to take back a limited number of spent fuel elements on an urgent basis. We agree with your assessment that return of these spent fuel elements is important to the future success of the Reduced Enrichment for Research and Test Reactors program. The return of research reactor spent fuel is an important part of the Administration's nonproliferation efforts and its goal of minimizing the civil use of highly enriched uranium.

The price charged to research reactor operators is critical to the success of this endeavor. We share the Department of State's view that the price should not be so high as to discourage foreign reactor operators from returning this HEU to the United States. Too high a price would seriously damage the Administration's nonproliferation efforts.

I appreciate the importance of assuring that we are not subsidizing foreign use of HEU. On the other hand, for over fifteen years, the value of the nonproliferation efforts of this program have been widely recognized. I am aware of your recent decision to set

60-1

07598

RESPONSE TO COMMENT
COMMENTOR NO. 60:
DEUTCH, JOHN - DEPUTY SECRETARY OF DEFENSE

Response to Comment No. 60-1

The Department of Defense's position on competitive fees is noted. Alternative financing arrangements are discussed in Section 2.2.2.3 of the EIS.

(b.)

131:
EORGE MILLER

d States
tives
3507

s proposal to ship spent
eapons Station (CNWS) in
attached comments I have
t Statement.

RESPONSE TO COMMENT
COMMENTOR NO. 131:
U.S. REPRESENTATIVE GEORGE MILLER

MENT

131:

MILLER (CONT'D.)

rch reactor spent nuclear fuel are
OE is currently evaluating the
Mountain, NV. In the meantime,
requires DOE and the Department
ign research reactor spent nuclear
nd 4.2.7 of the EIS, if a geologic
rch reactor spent nuclear fuel or
he chemical separation or other
e 40 year program period, DOE
he high level waste forms, until

dvantages in safety and security
ing countries. (Sections 2.3 and

awareness of the threat of nuclear
of the various countries currently
roperly care for it. Despite the
ies of third world nations, coupled
ent of State to conclude that the
ed. The option of storing foreign
d in the EIS under Management
S). Environmental impacts that
are discussed in Section 4.4.1 of

, several financing options have
e research reactor operators that
ation of the program by DOE. A
eloped countries to be charged a
fuel. While it would be beneficial
countries and financial assistance
ntries, it is unclear if this can be
represent about 78 percent of the
ent nuclear fuel by total mass),
e fee based on current costs as
ecent spent nuclear fuel retrieval
developing countries is a policy

'PONSE TO COMMENT
MMENTOR No. 131:
'ATIVE GEORGE MILLER (CONT'D.)

131-4

s and officials were informed in advance that their region
cific mechanism used to inform potentially affected
ls in advance is to announce the availability of and widely
ıblic comment period to give the public time to familiarize
ıction and comment on it, and to hold public hearings to
ıction and provide opportunity for public comment. For
ings were held. A ninety day public comment period was
5 days required by the applicable regulation. All of these
the final EIS, which is required by regulation to precede
ı of a proposed action by at least 30 days.

131-5

comments in response to the draft EIS was extended from

131-6

ials be alerted, prior to shipment, of radioactive materials
.S. Department of Transportation regulations only require
f each State and any Tribal chair, or their designee, along
t seven days in advance of the shipment of hazardous
materials. It would be the responsibility of the Governor
ion to State and local officials.

urity, and coordination of DOE with local emergency
d be involved with the acceptance and transportation of
nt nuclear fuel would be discussed in detail in the
d be prepared prior to any individual spent nuclear fuel
State and local officials. The general provisions of the
ed in Appendix H, which was added to the final EIS in

ce from DOE that DOE - not local governments - would
shipment of casks, including costs arising from accidents.
DOE will indemnify contractors for public liability with
ere is a nuclear incident, as defined under law. In pertinent
that causes, for example, injury or sickness or property
tive, toxic, explosive, or other hazardous properties of the
nding to States and Tribes, as described in Section 2.7.3.1
elated issues. Such funding can enhance a jurisdiction's
anning capabilities.

ESPONSE TO COMMENT
OMMENTOR NO. 131:
NTATIVE GEORGE MILLER (CONT'D.)

o. 131-7

, it would remain at a port for only a few hours. In the event
nd transportation systems due to adverse weather, seismic
OE's goal is to minimize holding times at the ports and to
pent nuclear fuel to its destination as quickly as possible. In
or seismic event isolates Concord NWS and prevents the
nuclear fuel from leaving the port, the cask would be placed
from personnel. The radiation exposure to personnel from
he radiation exposure rate beyond 100 meters is essentially

o. 131-8

l that there would be no significant adverse impacts to the
t might be used to receive the material (Section 4.2.4.2.8 of
ansportation casks are designed and built to preclude release
ate, no radioactive material has ever been released from a
on cask as a result of an accident (Section 2.6.2 of the EIS).
ion casks passing through Concord NWS, or any other port,
lic fuel is transported dry, thus it would not affect either the
aph has been added to Section 4.2.2.2 of the EIS to make
he no-impact nature of these shipments on air and water
, safety, or environmental risk were found to exist at any of
nilitary ports selected (Section 4.2.2 of the EIS).

e passage from San Francisco Bay to Concord NWS were
selection process. The passage does meet the requirements
sit From Open Ocean) for the port selection (Appendix D,

ates that the use of any of the ports indicated by the port
oncord NWS, would not pose any significant risk to either
ulation in the area of the port, and that the risk associated
n 4.2.2.3) and the risk associated with incident-free handling
r spent nuclear fuel casks is also low (Section 4.2.2.2).

NWS is guided to Concord by a certified professional pilot
nd Sacramento River who is onboard the incoming ship.
is the normal manner of entry into Concord as well as every
States, and is superior to the suggested use of escort tugs.

COMMENTOR NO. 131:
U.S. REPRESENTATIVE GEORGE MILLER (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 131:
U.S. REPRESENTATIVE GEORGE MILLER (CONT'D.)

Response to Comment No. 131-9

The impact of the receipt of foreign research reactor spent nuclear fuel on local police departments would be small. While at Concord NWS, the base would provide the security for the foreign research reactor spent nuclear fuel. When it was en-route to the management site, some escort would be required, however this would be the responsibility of the shipper who would make the necessary arrangements and pay any costs.

Dealing with demonstrations is the responsibility of the local and State governments, as well as the military, if such demonstrations occur on military bases. However, if the demonstrations were the result of the receipt of foreign research reactor spent nuclear fuel, DOE would support local, State, or military organizations in dealing with demonstrations.

See also the 2nd paragraph of the response to Comment 131-6, above.

Response to Comment No. 131-10

The commentor's preference for overseas management of the foreign research reactor spent nuclear fuel is noted. This alternative is analyzed in the EIS as Management Alternative 2 (Section 2.3). However, management of this material at DOE facilities offers advantages in safety and security over storage in most foreign nations, especially developing countries. (Sections 2.3 and 4.4.1 of the EIS.)

For the subject of ultimate disposition, see the response to Comment 131-1 above.

COMMENTOR NO. 162: U.S. SENATOR PATTY MURRAY

COMMITTEES:
APPROPRIATIONS
BUDGET

United States Senate
WASHINGTON, DC 20510-4704

June 8, 1995

y
ent of Energy
dence Ave., SW
D.C. 20585

ry O'Leary,

ng to express our concerns over the alternatives proposed
tment of Energy's (DOE) Draft Environmental Impact
EIS) on the management of spent nuclear fuel (SNF) from
arch reactors. We are concerned about the proposed
porting the foreign SNF through commercial ports such as

sire to encourage other nations' research reactors to
w-enriched uranium (LEU) from highly-enriched uranium
integral component of the United State's overall nuclear
tion policy; importing foreign SNF through commercial
t be necessary. The DOE DEIS lists two military ports
n possible ports of entry for the SNF. We feel that DOE
further consideration of importing SNF to these or other
military ports because of the considerable concern among
city officials about importing SNF through commercial

is significant apprehension about the threats to public
ting this SNF through commercial ports would create.
has stated that the threats to public health are not
given the state of the material and the overly cautious
e storage casks, we are not convinced that no public
t exists. There is public concern that longshoremen,
average citizens could potentially become exposed to
radiation levels. Whether this risk is real or only
irrelevant. Importing foreign SNF through commercial
at best threaten public confidence and citizen's sense of
at worst pose a significant threat to public health.

DEIS states: "Primary responsibility for emergency
a foreign research reactor SNF incident would reside with
ities.". Although the port and city of Tacoma have
sponse plans for hazardous materials, neither the Police
rtments nor the Port workers are properly equipped or
ontend with a significant radiation emergency. Properly
d training these people would add a significant and
cost to the overall proposal. In addition, it is not
olice Officers, Fire Fighters, and port workers would be
ndergo such training, knowing that it opens them up to
ture radiation exposure. In fact, port workers in Tacoma
their unwillingness to handle the material during even

PRINTED ON RECYCLED PAPER

162-1

162-2

162-3

RESPONSE TO COMMENT COMMENTOR NO. 162: U.S. SENATOR PATTY MURRAY

Response to Comment No. 162-1

Based on the low risk as shown by the analysis of impacts associated with accidents and incident-free operations involving foreign research reactor spent nuclear fuel, DOE considers that commercial ports and facilities represent an acceptable option for the transportation of foreign research reactor spent nuclear fuel. Sections 4.2.2.2 and 4.2.2.3 of the EIS provide the analysis on impacts of incident-free operation and consequences of port accidents, respectively.

DOE also considers that foreign research reactor spent nuclear fuel could safely be received at commercial ports, as it has in the past, without the additional security that might be present at military bases. The security provided for the spent nuclear fuel shipments would be required to meet or exceed all of the applicable security requirements in the Code of Federal Regulations (10 CFR Part 73). If any port did not already provide security sufficient to satisfy these requirements, it would be the responsibility of the shipper to provide the required additional security.

Response to Comment No. 162-2

The commentor's opposition to the use of commercial ports is noted. DOE considers the real risk to be important. DOE has estimated the real risk, found it to be low, and presented it to the public in a straightforward manner in this EIS.

Although public perceptions of risk cannot be addressed in an EIS, DOE would implement some additional measures to increase public confidence upon port selection (Section 2.7.5 and Appendix H of the EIS).

Response to Comment No. 162-3

Appendix H, which was added to the final EIS in response to public comments, contains the general provisions for emergency preparedness and security measures associated with the transportation of foreign research reactor spent nuclear fuel in the United States. The provisions include an interface between DOE and State, Tribal, and local authorities,

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COMMENTOR NO. 165: U.S. SENATOR DIANNE FEINSTEIN

DIANNE FEINSTEIN
CALIFORNIA

COMMITTEE ON FOREIGN RELATIONS
COMMITTEE ON THE JUDICIARY
COMMITTEE ON RULES AND ADMINISTRATION

United States Senate
WASHINGTON, DC 20510-0504

June 5, 1995

Department of Energy
Office of Congressional Affairs
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Friend:

INQUIRY FROM: John Losh (Reference #: rcl-31158)

RE: Nuclear Waste Disposal

I am forwarding the attached constituent inquiry for your review and consideration. I believe that my constituent would benefit from your direct response to the specific issues raised in the enclosed letter.

I would appreciate it if you would return your response, in duplicate, as quickly as possible so that I can share the information with my constituent.

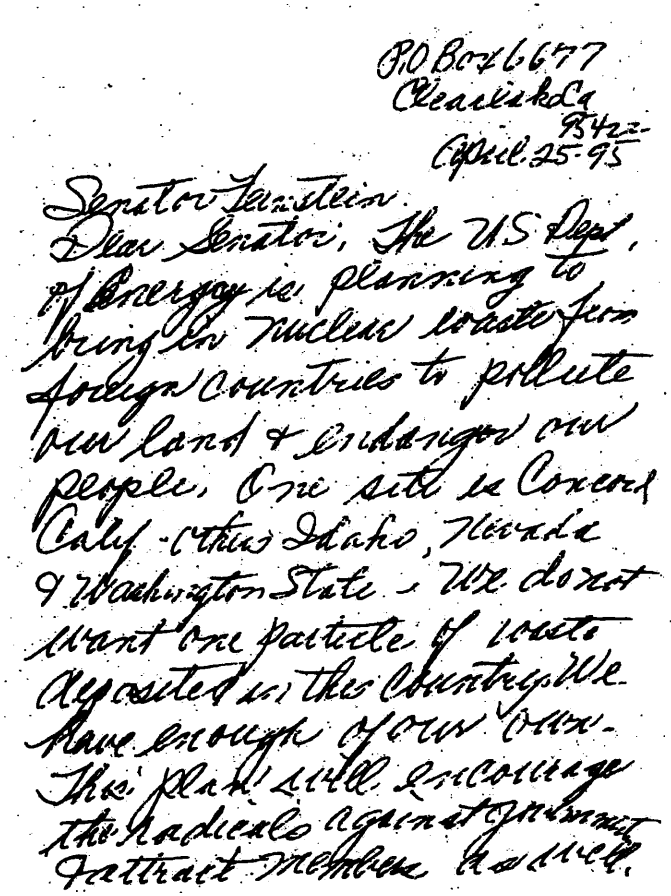
Since my office receives a large volume of mail, refer your return correspondence to the attention of Robert Lum in my Washington office. Please also include the constituent's name and reference number in your response. If you have any further questions, Robert can be reached at (202) 224-3841.

Sincerely,

Dianne Feinstein
United States Senator

DF:rcl
Enclosure

RESPONSE TO COMMENT COMMENTOR NO. 165: U.S. SENATOR DIANNE FEINSTEIN (CONT'D.)



P.O Box 6677
Pleasanton Ca
94566-
April 25-95

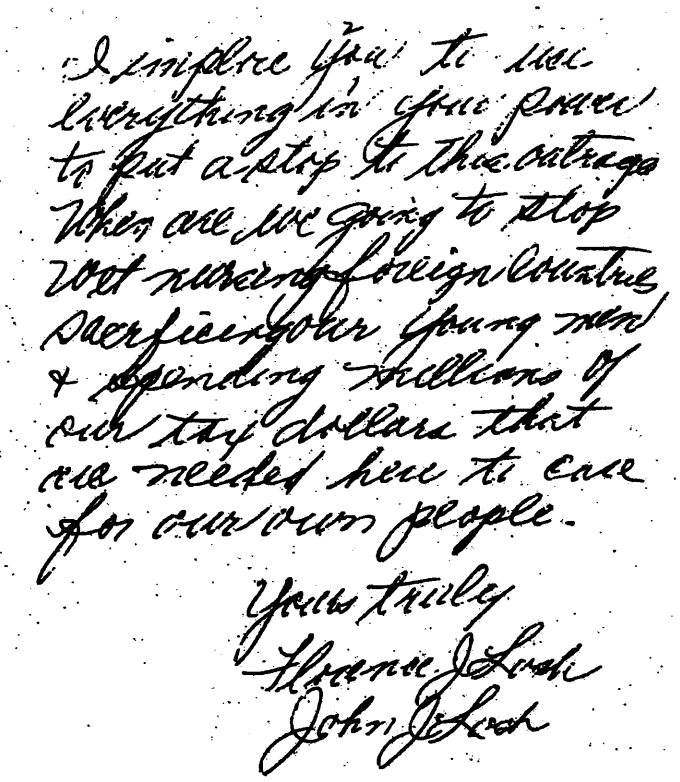
Senator Feinstein
Dear Senator, The US Dept.
of Energy is planning to
bring in nuclear waste from
foreign countries to pollute
our land & endanger our
people. One site is Concord
Calif - others Idaho, Nevada
& Washington State - We don't
want one particle of waste
deposited in this Country. We
have enough of our own -
This plan will encourage
the Radicals against Nuclear
Power Members to vote

165-1

Response to Comment No. 165-1

The commentor's opposition to the management of spent nuclear fuel from foreign research reactors in the United States is noted. Sections 2.3, 2.5, and 4.4 of the EIS describe other alternatives under consideration.

COMMENTOR NO. 165: U.S. SENATOR DIANNE FEINSTEIN (CONT'D.)



I implore you to use
everything in your power
to put a stop to the outrage
When are we going to stop
Our nursing foreign countries
Sacrificing our young men
& spending billions of
our tax dollars that
are needed here to care
for our own people.

Yours truly
Eleanor J. Lash
John J. Lash

RESPONSE TO COMMENT
COMMENTOR NO. 165:
U.S. SENATOR DIANNE FEINSTEIN (CONT'D.)

SEASE CONTROL,
TAL HEALTH

licate that marine workers

the commentor's concern.

e same crew member may
heasures that DOE would
bove what is allowed for a
.5 of the EIS.

CONTROL, (CONT'D.)	
	, and are used in ry used in ICRP- dified to address
	re not trained to : These workers 0 mrem/yr. But irectly involved in Appendix E,
	to this comment.
	).3 are voluntary, evertheless, the posed action into ie public. Those nvoluntary risks

COMMENTOR NO. 200: CENTER FOR DISEASE CONTROL, NATIONAL CENTER FOR ENVIRONMENTAL HEALTH (CONT'D.)

Thank you for the opportunity to review this draft document. Please ensure that we are included on your list to receive a copy of the Final EIS, and future EIS's which may indicate potential public health impact and are developed under the National Environmental Policy Act (NEPA). If you have questions concerning these comments, you may contact Mr. C.M. Wood, Radiation Studies Branch, at (404) 488-7642, or me at (404) 488-7074.

Sincerely yours,

Kenneth W. Holt

Kenneth W. Holt, M.S.E.H.
Special Programs Group (F-29)
National Center for Environmental Health

RESPONSE TO COMMENT
COMMENTOR NO. 200: CENTER FOR DISEASE CONTROL, NATIONAL CENTER FOR ENVIRONMENTAL HEALTH (CONT'D.)

COMMENTOR NO. 264: ENVIRONMENTAL PROTECTION AGENCY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 19 1995

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

Mr. Charles Head
Program Manager
Office of Spent Nuclear Fuel Management (EM-37)
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20858

Dear Mr. Head:

In accordance with the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) and Section 309 of the Clean Air Act, the Environmental Protection Agency (EPA) has reviewed the Department of Energy Draft Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel.

264-1

DOE proposes a policy to manage foreign research reactor spent nuclear fuel that was enriched in the U.S. The draft EIS analyses the environmental effects of three management alternatives and a No Action alternative. EPA has reviewed the proposed action and the alternatives and rated each alternative lack of objections (LO). An explanation of EPA's ratings is provided in the attached enclosure.

Thank you for the opportunity to comment. If you have any questions, please contact Susan Offerdal at (202) 260-5059.

Sincerely,

Richard E. Sanderson
Director
Office of Federal Activities

Enclosure

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RESPONSE TO COMMENT
COMMENTOR NO. 264: ENVIRONMENTAL PROTECTION AGENCY

Response to Comment No. 264-1

The United States Environmental Protection Agency's review and lack of objection to each alternative analyzed in the EIS are noted.

Commentor No. 307: U.S. Representative Randy Tate

DEPARTMENT OF ENERGY
ON DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR
THE PROPOSED NUCLEAR WEAPONS NONPROLIFERATION
POLICY CONCERNING FOREIGN RESEARCH REACTOR
NUCLEAR SPENT FUEL

TESTIMONY OF CONGRESSMAN RANDY TATE
AT THE PUBLIC HEARING ON JUNE 19, 1995

Thank you for allowing me the opportunity to testify this evening.

I would like to begin by thanking the Department of Energy (DOE) for holding this public hearing tonight. As you know, DOE originally had scheduled only one hearing on this issue -- in SeaTac. I was concerned with the possible adverse impact of transporting this extremely hazardous material through the Tacoma area and felt it should be discussed by Tacoma residents in Tacoma. That is why we are here tonight.

Let me also state the DOE has willingly complied with my other requests: (1) Make available the Draft Environmental Impact Statement For The Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Nuclear Spent Fuel (DEIS) in two Tacoma public libraries; (2) Send DOE nuclear spent fuel experts to the Tacoma Port-DOE Fact-Finding and Public Comment Meeting held on May 22, 1995; (3) Transcribe tonight's public comments; and (4) Extend the time for public comments to be filed with the DOE to June 30. Every one of these events is significant because they are all based on one fundamental principle of government -- The people of our community deserve and will now be allowed to have ample opportunity to voice their concerns.

Nuclear nonproliferation is a big concern to all of us. What we are discussing tonight is the disposal of enriched uranium from research reactors in about 40 nations around the globe.

Response to Comment
Commentor No. 307: U.S. Representative Randy Tate

COMMENTOR NO. 307: U.S. REPRESENTATIVE RANDY TATE (CONT'D.)

The U.S. does not need terroristic regimes and unfriendly nations having access to raw materials that can be used to produce nuclear weapons.

As we all know, the Port of Tacoma is one of the ten ports of entry under consideration for receiving these hazardous waste shipments. Shipping spent nuclear fuel through the Port of Tacoma, the sixth largest container port in the country, and the Tacoma community, is not a prudent approach. Hundreds of thousands of our families could be hurt in the event that a tragedy occurs. 307-1

Our community is not prepared to handle some of the circumstances that could potentially occur. What would happen if the shipping cask or the nuclear waste was breached? What are the possible effects on humans and the environment? What agencies are responsible for putting out a fire? An explosion? Or an act of terrorism? What are the plans if a catastrophe takes place?

There are also other issues that need to be addressed such as: Was a full and fair cost-benefit analysis performed? What does the risk assessment study say? Are our allies being asked to share the burden of storing or disposing of this nuclear spent fuel? 307-2

The second critical issue in this debate is the final destination of any nuclear hazardous waste delivered through the Tacoma Port. Hanford is still struggling with the financial burdens of their clean-up. The Idaho National Engineering Laboratory has also expressed concerns with receiving shipments of radioactive waste. 307-3

I look forward to working with the City of Tacoma, the Port of Tacoma, the surrounding community and with other Members of our Congressional delegation on this very important issue. Again, thank you for giving me this opportunity to share my views tonight.

RESPONSE TO COMMENT COMMENTOR NO. 307: U.S. REPRESENTATIVE RANDY TATE (CONT'D.)

Response to Comment No. 307-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any other ports analyzed in the EIS, is low.

Foreign research reactor spent nuclear fuel has been safely transported in the United States for over 40 years (Section 4.2.3 of the EIS). None of the shipments, including shipments involved in accidents, has ever resulted in a release of the radioactive contents of a spent nuclear fuel transportation cask (Section 4.2.3 of the EIS). In the unlikely event of a severe accident, the analysis performed for the EIS indicates that some radioactive material could be released from the cask and distributed into the environment. However, the analysis in Section 4.2.2.2 and Appendix D, Section D.5 of the EIS determined that no decontamination, interdiction, or condemnation of property would result from the worst plausible accident. Close in to the accident, near the cask would likely require some cleanup, but the overall impact on the water and air quality in the port would be very small.

Neither acts of terrorism nor theft of materials by a determined group or individual can be completely precluded. However, proper security measures greatly reduce the risk. Section D.5.9 has been added to Appendix D of the EIS to address terrorism and sabotage. All shipments of foreign research reactor spent nuclear fuel would be conducted meeting or exceeding all security requirements in the Code of Federal Regulations (10 CFR Part 73). Appendix H has been added to the final EIS in response to public comments to better describe the security and emergency preparedness associated with transportation of the foreign research reactor spent nuclear fuel. This appendix presents the general provisions of the Transportation Plan, which is a document that provides all of the details associated with the transportation of the foreign research reactor spent nuclear fuel, including the security arrangements in port and in transit to the management site.

Response to Comment No. 307-2

A cost-benefit analysis in the traditional sense was not performed. No request was made to attempt to quantify the benefits of avoiding nuclear weapons proliferation or the conversion of weapons-grade material by terrorists. Rather, it has been assumed by essentially all the governments involved in the program that removing HEU from civilian commerce and converting all foreign research reactors to LEU was worth the cost.

The risk assessment study says that the risks to shipping, handling, managing, and disposing of spent nuclear fuel, either as spent nuclear fuel or as high-level waste, are extremely low.

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COMMENTOR NO. 312: U.S. REPRESENTATIVE NORM DICKS

NORM DICKS
8TH DISTRICT, WASHINGTON
COMMITTEES:
SELECT COMMITTEE ON INTELLIGENCE
APPROPRIATIONS
SUBCOMMITTEES:
DEFENSE
INTERIOR
MILITARY CONSTRUCTION

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BREMERTON, WA 98337
PHONE: (206) 479-4011

Congress of the United States
House of Representatives

June 19, 1995

U.S. Department of Energy
Environmental Impact Panel Members
Tacoma Public Meeting
June 19, 1995

Re: Proposed shipments of spent fuel through the Port of Tacoma

As the United States Congressman representing portions of the Tacoma-Pierce County area, I have received numerous communications from constituents and from public officials from this area strongly protesting the use of the Port of Tacoma as one of the points of entry for spent fuel shipments from foreign reactors. Let me take this opportunity to join them in their opposition and to urge the Department of Energy to look elsewhere for a more appropriate candidate site.

My objections to the use of the Port of Tacoma as a port of entry are related to the nature of the Port and to the selection process, which I believe was overly biased in favor of bringing these materials into the United States. 312-1

To begin with, the Port of Tacoma is the fastest growing container port on the West Coast and, as such, is a primary economic force in Pierce County and the entire Pacific Northwest region. In addition, it is a major transshipment port for military cargo during a mobilization, acting synergistically with Fort Lewis and McChord AFB. Over the past several years, I have been supportive of actions which enhance the Port's commercial intermodal capability and competitiveness as well as the military capability that remains in reserve. Likewise, I have attempted to discourage the Port from pursuing opportunities unrelated to those missions. In this regard, I believe that the spent fuel mission would detract from this direction, and that it would require the unnecessary expenditure of scarce resources for the enhanced safety and security requirements of the fuel shipments.

Moreover, I am not convinced that the Department of Energy's EIS process resulted in a thorough-enough evaluation of alternatives that are readily available outside the United States. After review of the draft EIS document, I believe that closer examination of Alternative No. 2 should have been conducted, which appears to offer the clear advantage of encouraging a longer-term solution to the issues of storage and re-processing. With at least 8 nations other than the United States interested in a similar objective and willing to 312-2

RESPONSE TO COMMENT
COMMENTOR NO. 312: U.S. REPRESENTATIVE NORM DICKS

Response to Comment No. 312-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

DOE considers that the use of any of the ports indicated by the port selection process, including Tacoma, would not impact normal commercial operations, and therefore not endanger the ports' status with respect to their clients. This is based on the fact that the foreign research reactor spent nuclear fuel would be accepted into the United States in standard shipping containers that would require no special handling or precautions. As such, there should be no adverse commercial or economic reaction to the use of the port. Historically, there were no adverse commercial impacts to the ports that received foreign research reactor spent nuclear fuel for the 30 plus years it was received.

Tacoma was one of 161 ports (153 commercial and eight military ports) considered. These ports were evaluated against selection criteria, resulting in 10 ports that met all of the criteria. Appendix D, Sections D.1.8 and D.1.9 of the EIS present a detailed discussion of the process and results.

The benefit to the citizens of the United States from the proposed action, including those in potential ports of entry, along transportation routes, or near potential management sites, is less risk that weapons grade uranium from civil programs could be diverted into the production of nuclear weapons that might be used against us or our allies. On the other hand, the analyses recorded in Section 4 of the EIS demonstrate that the risks associated with the proposed action are low.

Response to Comment No. 312-2

The commentor's preference for Management Alternative 2 is noted. This alternative is discussed in Sections 2.3 and 4.4 of the EIS.

COMMENTOR NO. 312: U.S. REPRESENTATIVE NORM DICKS (CONT'D.)

participate in this program, I believe greater priority should have been given to this international option in the EIS process. I will be discussing this and other related matters with Assistant Secretary Grumbly in the near future, but I wanted to express my strong opposition at this time to proceeding with the evaluation of the Port of Tacoma option based upon what I consider to be faulty assumptions in the EIS process. 312-2 *(Cont'd.)*

With best wishes,

Sincerely,

Norm Dicks

NORM DICKS
Member of Congress

RESPONSE TO COMMENT COMMENTOR NO. 312: U.S. REPRESENTATIVE NORM DICKS (CONT'D.)

-SSAB-INEL

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Policy Concerning
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Response to Comment
Commentor No. 949: EM-SSAB-INEL

Response to Comment No. 949-1

The commentor's support for accepting and managing foreign research reactor spent nuclear fuel in the United States, is noted. Acceptance of foreign research reactor spent nuclear fuel in the U.S. is considered under Management Alteratives 1 or 3, described in Section 2.2 and 2.4 of the EIS, respectively.

Response to Comment No. 949-2

The commentor's suggestion that the acceptance period for the foreign research reactor spent nuclear fuel under Management Alternative 1 be only 10 years is noted. Management Alternative 1, as described in Section 2.2 of the EIS, allows for a period of 13 years for the acceptance of the foreign research reactor spent nuclear fuel, the last 3 years would allow for the cooling of the spent nuclear fuel discharged towards the end of the 10-year policy period.

Response to Comment No. 949-3

The commentor's support for the financing arrangement considered under the basic implementation of Management Alternative 1 (Section 2.2.1.2 of the EIS) is noted.

Response to Comment No. 949-4

The commentor's suggestion that aluminum-based and TRIGA fuel should be managed at the Savannah River Site and the Idaho National Engineering Laboratory is noted. The suggestion is in line with the Record of Decision for the Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact Statement, which was issued by DOE on May 30, 1995.

Response to Comment No. 949-5

The commentor's preference for a hybrid alternative is noted. One example hybrid alternative is considered as Management Alternative 3, which is discussed in Sections 2.4 and 4.5 of the EIS.

Response to Comment No. 949-6

The commentor's suggestion that the United States should take title to the foreign research reactor spent nuclear fuel at the port of entry is noted. This alternative location is considered under implementation alternative 4, which is discussed in Section 2.2.2.4 of the EIS.

(CONT'D.)

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COMMENTOR NO. 1118:
REPRESENTATIVE RANDY TATE (CONT'D.)

ce for your attention to this matter. If you have any questions, please
k forward to your prompt response.

Sincerely,

Randy

Randy Tate
Member of Congress

Tacoma
of Tacoma
of America Northwest
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RESPONSE TO COMMENT
COMMENTOR NO. 1118:
U.S. REPRESENTATIVE RANDY TATE (CONT'D.)

would make the United States vulnerable, fairly or unfairly, to accusations that we are not living up to our obligations under the Treaty on the Non-Proliferation of Nuclear Weapons to assist nonnuclear weapons states with peaceful applications of nuclear energy and could lead to a resurgence in the use of HEU in civil programs.

Overseas Reprocessing: For overseas reprocessing, as discussed in Sections 1.1, 2.3, and 4.4.2 of the EIS, the answer is that United States policy goals could possibly be achieved, for at least a portion of the foreign research reactor spent nuclear fuel, under the right conditions. As discussed in Section 1.1, Dounreay does not currently have the capability to reprocess the new high density LEU fuel that the United States developed to replace the original HEU fuel. In addition, in the past, Dounreay has allowed their customers to specify the form in which uranium separated during reprocessing would be returned. Most of the uranium from spent nuclear fuel containing HEU was returned as HEU. So far, the operators of Dounreay are insisting that they will continue this practice in the future. As a result, reprocessing at Dounreay, as it has been conducted in the past, could only be used as a means of spent nuclear fuel management by reactors that are using HEU for fuel. This would serve to perpetuate the use of HEU in civil programs, in direct opposition to United States nuclear weapons nonproliferation policy goals. However, if some means can be developed for revising the practices for reprocessing at Dounreay, in a manner that will achieve United States nuclear weapons nonproliferation policy objectives (such as are discussed in Section 2.3 of the EIS), then this approach might be acceptable. DOE and the Department of State are actively working with counterparts in the United Kingdom in an attempt to make this a feasible option.

Response to Comment No. 1118-3

In general, any developed nation either has the technical capability to store the foreign research reactor spent nuclear fuel, if that is what they choose to do with it, or could obtain any required technical expertise from commercial engineering firms. The United Kingdom and France, in particular, have scientific capability and expertise in spent nuclear fuel management at least equal to that of the United States. Their capability in spent nuclear fuel reprocessing as a commercial activity exceeds that of the United States. However, as discussed above, there are significant issues that make it in the best interest of the United States to avoid overseas storage of foreign research reactor spent nuclear fuel. Similarly, overseas reprocessing would only be in the best interest of the United States if the past reprocessing practices were changed (Sections 1.1, 2.3, 4.4.1, and 4.4.2 of the EIS).

Response to Comment No. 1118-4

A comparison of the costs of reprocessing overseas to chemical separation in the United States would depend on several assumptions about the operational status of the Savannah River Site. If the Savannah River Site is chemically separating other materials during the

COMMENTOR NO. 1118:
U.S. REPRESENTATIVE RANDY TATE (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 1118:
U.S. REPRESENTATIVE RANDY TATE (CONT'D.)

period 1998 through 2002 (as is possible under the Interim Management of Nuclear Materials EIS), then chemical separation in the United States is less costly than reprocessing overseas or any other technical approach. If several years of independent chemical separation are added, then costs for the U.S. option could equal or exceed the overseas option depending upon the way fixed and variable costs are allocated to the foreign research reactor spent nuclear fuel program. For chemical separation through about 2005, costs are similar to those overseas.

The costs of storing the material in countries with major commercial nuclear power installations, e.g., France, United Kingdom, would be equal to or less than that of the United States (including all shipping and disposal costs). The costs of storing the material in countries without major commercial nuclear power installations or with no effective plans for commercial power reactor spent nuclear fuel disposal would be higher than those in the United States. For countries with limited industrial capability and relatively low national security, costs would be speculative and risks would be high. Overall, excluding the half-dozen or so commercial nuclear powers, distributed storage and disposal at a level of safety and security commensurate with that of the United States would be more expensive than aggregated storage in a single country.

SECTION 2.2
STATE GOVERNMENT

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COMMENTOR NO. 1: SOUTH CAROLINA STATE PORTS AUTHORITY (CONT'D.)

Mr. Charles Head
Page two
May 8, 1995

There are many military installations available for this cargo and the SPA respectfully suggests that they be utilized. *1-1 (Cont'd.)*

Sincerely,

W. Don Welch

W. Don Welch

WDW/lr

RESPONSE TO COMMENT
COMMENTOR NO. 1: SOUTH CAROLINA STATE PORTS AUTHORITY (CONT'D.)

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: PORT AUTHORITY

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COMMENTOR NO. 69: JACKSONVILLE PORT AUTHORITY (CONT'D.)

Mr. Charles Head
Program Manager
Office of Spent Nuclear Fuel Management (EM-37)
U. S. Department of Energy
May 19, 1995
Page 2

4. The port of Jacksonville has never handled this type of highly radioactive hazardous material in the forty (40) years this type of cargo has been entering the United States. We see no reason to start at this critical point. It would seem prudent that those ports which have the experience and knowledge of handling spent nuclear fuel over the forty (40) year history should be the only ones considered for this port of entry situation. 69-4

We therefore respectfully request that the Port of Jacksonville be withdrawn from the list of ports being considered in your deliberations

Thank you for your understanding in this matter.

Sincerely,

C. Mendoza

C. Cliff Mendoza
Managing Director

CCM/BMP/kje

RESPONSE TO COMMENT
COMMENTOR NO. 69: JACKSONVILLE PORT AUTHORITY (CONT'D.)

Response to Comment No. 69-4

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Jacksonville is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Jacksonville, or to any of the ports analyzed in the EIS, is low.

As the port selection process section (Appendix D, Section D.1 of the EIS) explains in detail, Jacksonville and the other nine ports all meet the criterion to safely handle the foreign research reactor spent nuclear fuel. The experience criterion used in the port selection process (Criterion 1; Appendix D, Section D.1.9.1 of the EIS) evaluates the port's experience in handling containerized cargo, not in dealing with radioactive material. Although the foreign research reactor spent nuclear fuel is radioactive material, the dose rates from the casks used to transport it would be low, so no special handling is required; experience with handling containers is sufficient. The Port of Jacksonville has significant experience handling containers, so it met the experience selection criteria.

COMMENTOR NO. 114: OREGON DEPARTMENT OF ENERGY

STATEMENT OF THE OREGON DEPARTMENT OF ENERGY

on Acceptance of Foreign Reactor Spent Nuclear Fuel

May 25, 1995

I am Michael Grainey. I am the Assistant Director for the Oregon Department of Energy. The State of Oregon has had a longstanding interest in assuring that the shipment of radioactive materials through Oregon occurs safely.

We consider both Hanford and the Idaho National Engineering Laboratories as unacceptable for storage of any shipments of foreign spent fuel. Therefore, it makes no sense to bring the shipments through the Port of Portland. Other U.S. Department of Energy sites should be selected, depending on whether USDOE will simply store the fuel or reprocess it. In our opinion, neither the Hanford site nor the Idaho site should be used for storage or reprocessing this fuel. 114-1

The U.S. Department of Energy has included Hanford and the Idaho site as possible locations for storing some or all of the foreign research reactor spent fuel. This storage period is expected to last at least 40 years. Given the massive problems that exist already at Hanford, the State of Oregon opposes any proposal to bring large amounts of spent fuel to Hanford for long-term storage.

The Hanford Site has suffered an enormous toll of environmental contamination from nearly fifty years of plutonium production. Oregon has consistently urged the U.S. Department of Energy to devote all its efforts at Hanford to the monumental task of environmental restoration of the site. Bringing in more spent fuel to Hanford would only serve to complicate clean-up issues and further delay restoration of the site.

Recently, a new Hanford cleanup agreement was negotiated between the State of Washington, the U.S. Department of Energy and the Environmental Protection Agency. That document does not take into account the receipt of additional spent fuel for long-term storage. 114-2

The U.S. Department of Energy's own draft Environmental Impact Statement on foreign spent fuel considers Hanford an unacceptable site. That statement provides the following: -- and I quote -- "The age, condition, available capacity of these facilities, and the Tri-Party Agreement milestones generally prevent the use of the existing facilities for storage of foreign reactor spent fuel. .... The Hanford Site has concluded that there are no existing facilities available and ready for accepting foreign research reactor spent nuclear fuel." (Page F-53).

Indeed, there are major environmental problems associated with the current storage of spent nuclear fuel at Hanford. Eleven hundred and fifty metric tons of spent fuel is now stored in a leaking basin at the K-E reactor. This has resulted in tritium contamination

RESPONSE TO COMMENT
COMMENTOR NO. 114: OREGON DEPARTMENT OF ENERGY

Response to Comment No. 114-1

The Oregon Department of Energy's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Portland is noted. Based on the criteria used for identifying the ports evaluated (Section 2.6.3.1 of the EIS), the port identification is not affected by the choice of a management site.

Response to Comment No. 114-2

In accordance with the Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact Statement Record of Decision released on May 30, 1995, all of the aluminum-based foreign research reactor spent nuclear fuel managed by DOE will be managed at the Savannah River Site in South Carolina. Any other foreign research reactor spent nuclear fuel to be managed by DOE will be managed at the Idaho National Engineering Laboratory. Accordingly, no foreign research reactor spent nuclear fuel would be shipped to the Hanford Site. A Consent Order, embodying the litigation settlement between the State of Idaho, the Navy, and DOE was issued on October 17, 1995.

COMMENTOR NO. 114: OREGON DEPARTMENT OF ENERGY (CONT'D.)

of the groundwater and of the Columbia River. This problem won't be resolved until after the turn of the century. To bring more spent fuel in -- when there is still much to be done to safely store the fuel at Hanford now -- would be folly.

114-2 (Cont'd.)

While we are not as familiar with the problems at the Idaho site, we have major concerns about use of that site as well. Because of serious concerns by the State of Idaho about the storage and handling of spent fuel at the Idaho site, the U.S. Department of Energy has been under a court order that severely restricts the number of shipments allowed there. Idaho was successful in its court action because of USDOE's woeful record on waste handling and storage; that record raises serious questions about the suitability of INEL to accept more spent fuel for long-term storage.

Moreover, even if the federal court order at the Idaho site is eventually removed, we have concerns about the use of the Idaho site. Spent fuel sent to Idaho would likely be "reprocessed" in aged facilities. These facilities should be decommissioned, not restarted. Reprocessing creates more waste which would complicate the task of managing wastes at the Idaho site and cleaning it up. If the fuel is to be reprocessed, and we have concerns about reprocessing any fuel, other USDOE sites are better suited than Idaho.

114-3

In opposing shipment of foreign spent fuel through the Port of Portland, let me make clear that we believe that spent nuclear fuel can be transported safely and public confidence can be maintained as long as the federal government works cooperatively with state, Tribal, and local agencies. Emergency responders must receive adequate funding, training and equipment. Dock workers must be trained in the safe and proper handling of the spent fuel casks. State officials must receive advance notice of shipments. Independent inspections must occur at all critical points in the shipment. And, the routing and timing of shipments must avoid adverse weather and road conditions.

114-4

There have been dozens of shipments of spent fuel through the Port of Portland over the past 20 years. Our experience with Port Management and the Longshoremen has been exceptional. We have no concerns about whether the Port is professional enough to safely handle these shipments. The issue is, why ship through Portland at all? No shipments should go to Hanford or to Idaho and therefore no shipments should come through Portland.

114-1 (Cont'd.)

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RESPONSE TO COMMENT
COMMENTOR NO. 114: OREGON DEPARTMENT OF ENERGY (CONT'D.)

Response to Comment No. 114-3

The commentor's opposition to chemical separation at the Idaho National Engineering Laboratory is noted. The Record of Decision for its Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs EIS was issued on May 30, 1995. Chemical separation at Idaho National Engineering Laboratory was not included in this Record of Decision, so additional site-specific NEPA documentation would be required to restart the chemical separation facilities at this site.

Response to Comment No. 114-4

DOE will continue to work with State and local officials to ensure that emergency response capabilities are adequate and that the communications channels between the DOE and State and local governments remain open.

As discussed in Section 2.7 of the EIS, the primary responsibility for emergency response to an incident would reside with State, Tribal, and local authorities. DOE would provide coordination and technical assistance, and training to the State, Tribal, and local emergency response personnel. In addition, DOE has Radiological Assistance Program teams that operate from eight strategically located DOE offices around the country. Upon State, Tribal, or local request, these teams can provide technical expertise and assistance to monitor and assess radiological hazards. The teams are activated on an as-needed basis and generally can be ready to deploy from their home station within four hours of notification.

Appendix H has been added to the final EIS in response to public comments, to better describe the security and emergency preparedness associated with transportation of the foreign research reactor spent nuclear fuel. This appendix presents the general provisions of the Transportation Plan, which is a document that describes the overall management of and requirements for transportation. Details associated with the transportation of the foreign research reactor spent nuclear fuel, including the security arrangements in port, transit to the management site(s), and plans in the case of severe weather or adverse road conditions,

would be contained in individual transportation plans for each shipment. DOE is required to inform the Governor of each State and any Tribal chair, or their designee, along a transportation route at least seven days in advance of the shipment of hazardous cargos, including radioactive materials.

Although the foreign research reactor spent nuclear fuel is radioactive material, the dose rates from the transportation casks would be low. No special handling or loading/unloading procedures would be required for the foreign research reactor spent nuclear fuel when it is contained in standard shipping containers; experience with handling containers is sufficient. Therefore, no special training of dock workers would be required.

The foreign research reactor spent nuclear fuel containers would be inspected numerous times during transport. First, the transportation cask and the container that carries the cask would be inspected for integrity at the foreign research reactor site. Next, the container would be inspected prior to loading it on the ship in the foreign port. During the time that the container would be onboard the ship, it would be inspected daily to ensure the container's integrity and to verify that the container was properly secured to the ship (Appendix C, Section C.4.1 of the EIS). Then the container would be inspected in the U.S. port of entry prior to off loading for overland transport (Appendix D, Section D.4.4 of the EIS) to the management site(s). This inspection schedule exceeds the regulatory requirements and has been proven sufficiently thorough over 30 years of previous shipments.

Response to Comment
tor No. 159: State of Florida
tment of Community Affairs

No. 159-1

on of comments in response to the draft EIS was extended from
OE considers the comment period (90 days total) to be sufficient

;PONSE TO COMMENT
No. 240: WASHINGTON STATE
ENTATIVE TOM CAMPBELL

240-1

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Response to Comment
Commentor No. 265: California Energy Commission

nergy Commission

June 19, 1995

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DOE's Notice of Intent
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(916) 654-5000
FAX: (916) 654-6420

COMMENTOR NO. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

Charles Head
June 19, 1995
Page 2

After reviewing DOE's environmental assessment and impact statement on foreign research reactor spent nuclear fuel, we conclude the following:

1. DOE's proposed foreign reactor spent nuclear fuel shipments to waste management sites in the East, e.g., the Savannah River Site in South Carolina (SRS), should be made via the East Coast, not the West Coast. Spent fuel should be shipped directly to an off-loading point located near the point of destination (DOE Waste Management Site). Analyses by DOE have shown that spent fuel shipments to SRS via the West Coast pose a greater risk to public safety than shipping via the East Coast. To help ensure the safe and uneventful shipment of spent nuclear fuel to waste management sites, shipping cost considerations should not be allowed to override efforts to minimize public risks.

2. DOE's criteria for selecting ports of entry for foreign research reactor spent fuel shipments would appear to disqualify from consideration both the Port of Oakland and the Naval Weapons Station in Concord, California. High population densities, extremely heavy traffic congestion, high seismic risk and co-location with weapons shipments would appear to disqualify these ports.

3. If feasible, DOE should take title to the foreign research reactor spent fuel shipments prior to shipment departure to provide greater assurance that the casks, shippers, carriers, routes and appropriate procedures for accident avoidance and emergency response procedures (key variables for determining shipment safety) are used.

4. DOE should work with corridor states affected by these shipments to develop rail and truck transport plans and procedures prior to the proposed foreign reactor spent fuel shipments. A transportation program, similar to that used for cesium shipments and that planned for transuranic waste shipments to the Waste Isolation Pilot Plant in New Mexico, should be developed by DOE and corridor states. Shipments should be inspected using the most recent inspection standards, e.g., Commercial Vehicle Safety Alliance (CVSA) enhanced inspection standards developed for spent fuel shipments and transuranic waste shipments.

5. Only cask designs that meet current federal transport safety requirements for transporting spent fuel should be used, i.e., the cask designs should be able to meet current spent fuel cask licensing requirements.

6. DOE should work with states to select rail and truck routes that minimize public risk and potential public impacts in the event of a transport accident.

RESPONSE TO COMMENT
COMMENTOR NO. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

COMMENTOR NO. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

Mr. Charles Head
June 19, 1995
Page 3

These recommendations and conclusions are discussed in greater detail in the enclosed comments. We appreciate the opportunity to review these documents and hope to work with the Department of Energy in developing transport plans for these shipments.

Sincerely,

CHARLES R. IMBRECHT
Chairman

Enclosures: 2

RESPONSE TO COMMENT
COMMENTOR NO. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

COMMENTOR NO. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

Enclosure 1

Comments by the
STATE OF CALIFORNIA
on the

U.S. DEPARTMENT OF ENERGY AND U.S. DEPARTMENT OF DEFENSE
DRAFT ENVIRONMENTAL IMPACT STATEMENT
ON A PROPOSED NUCLEAR WEAPONS NONPROLIFERATION POLICY
CONCERNING FOREIGN RESEARCH REACTOR SPENT NUCLEAR FUEL

NTRODUCTION

he Draft Environmental Impact Statement (DEIS) is the result of a long legal struggle between ates and DOE regarding DOE's policy to manage spent nuclear fuel from foreign research actors. Over the past decade, the State of California has expressed concerns to the Department f Energy (DOE) regarding DOE's plans to transport spent nuclear fuel as part of the foreign esearch reactor spent nuclear fuel policy. These concerns were communicated in letters to OE, legal challenges, as well as our comments on environmental assessments regarding this olicy. In particular, the State objected to DOE's plans to use California ports for receiving oreign research reactor spent fuel destined for the Savannah River Site in South Carolina. In 986, Governor Deukmejian wrote DOE to express concern regarding DOE's plans to use the ort of Long Beach to receive spent nuclear fuel from Taiwan for transport to the Savannah iver Site in South Carolina.

alifornia's Attorney General joined the Port of Oakland and the State of Washington in a legal hallenge regarding DOE's failure to prepare an environmental assessment of the potential mpacts from these shipments. Following DOE's preparation of an Environmental Assessment, OE concluded that shipping this fuel via the East Coast, rather than the West Coast, decreased verall transport risk. As a result, the Taiwanese spent fuel was shipped in 1988 via ortsmouth, Virginia.

n 1991, DOE released a Finding of No Significant Impact (NOI) and Environmental Assessment n the proposed policy. The State of California provided comments on these documents as well s comments, provided in 1993, on DOE's Notice of Intent (NOI) to prepare an EIS.

Key issues raised by California in these proceedings have included:

1) Concern over DOE's selection of the Port of Long Beach and the Port of Oakland for off-loading spent fuel from overseas; Governor Deukmejian stated that "a more direct route would further enhance the safety and security of these shipments."

RESPONSE TO COMMENT
COMMENTOR NO. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

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ociated with alternative marine
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h traffic congestion, which may
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he Port of Oakland is one of the
distribution center for northern

permit this waste to be shipped
where the fuel would be managed

that adequate safety procedures
shipments. In earlier documents,
hey arrive at the Savannah River
t means of returning the fuel to
g costs. Decisions regarding the
nts were to be left to the shipper

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RESPONSE TO COMMENT
COMMENTOR NO. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

...MENTOR No. 265:
...ERGY COMMISSION (CONT'D.)

the Savannah River Site (SRS) in South Carolina should be West Coast. Analyses for the DEIS show that, for both truck SRS via the Naval Weapons Station (NWS) in Concord, ulation densities when compared to the other ports under gh DOE has stated that economic factors support shipping Coast to SRS, rather than via the Panama Canal to the SRS, override public safety. 265-1

EIS, rail routing should not be left solely to the discretion of alifornia traverse some of the most densely populated and These routes would begin in, and continue for hundreds of e highest seismic risk zones. DOE should work with states nd rail routes that minimize public risk.

perative Planning for These Shipments

tates affected by these spent fuel shipments in developing (including accident prevention and emergency response uch plans could be based on the successful nuclear waste shortening the time needed for developing these plans. For rogram, similar to that used for cesium shipments and that Isolation Pilot Plant, could be developed through cooperation d shipment corridor states. 265-2

t needs to develop a program to provide shipment corridor assistance and training to prepare for the large number of E and other federal agencies such as the U.S. Department of il Administration, should assist, cooperate with, and fund, as tates to ensure the safe transport of spent fuel and assure the al transport incidents. The State of California will work with plan. 265-3

t of Oakland in California as a port of entry for "Urgent- nt fuel. In addition, the DEIS designated the Naval Weapons ne of three western ports for shipments of foreign research DOE's own criteria for selecting these ports of entry would Weapons Station and the Port of Oakland. Characteristics a transport accident, such as total shipment distance between d the population distribution along routes, would make NWS ble ports of entry for these shipments. 265-4

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RESPONSE TO COMMENT
COMMENTOR No. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

Response to Comment No. 265-1

DOE agrees with the commentor that cost considerations should not override public safety. The analysis in the EIS demonstrates that the risk associated with using Concord NWS, or either of the other two West Coast ports, to receive foreign research reactor spent nuclear fuel bound for the Savannah River Site, is low. If foreign research reactor spent nuclear fuel is accepted into the United States, the decision as to which port to use for each shipment would include consideration of the population along the land route to the designated management site(s).

While rail route selection is not covered by specific U.S. Department of Transportation or NRC regulations, the routes must be approved in advance by the NRC (10 CFR Part 73.37 (b)(7)). DOE is required to inform the Governor of each State and any Tribal chair, or their designee, along a transportation route at least seven days in advance of a shipment of hazardous cargo (10 CFR Part 73.37 (f)), including radioactive materials. If foreign research reactor spent nuclear fuel is accepted into the United States, and if Concord NWS is utilized, DOE will work with the State of California to help minimize public risk.

Response to Comment No. 265-2

The commentor's suggestion that DOE work with corridor states affected by spent nuclear fuel shipments to develop transport plans and procedures is noted. A Transportation Plan would be prepared prior to any individual spent nuclear fuel shipment and coordinated with State and local officials. The general provisions of the Transportation Plan are included in Appendix H, which was added to the final EIS in response to public comment..

Response to Comment No. 265-3

The commentor's suggestion that the federal government needs to develop a program to provide shipment corridor states with necessary assistance and training to prepare for a large number of spent nuclear fuel shipments is noted. As discussed in Section 2.7.3.2 of the EIS, DOE provides funding to States and Tribes through the Office of Environmental Management and the Office of Civilian Radioactive Waste Management to assist with transportation related issues. This funding has been used in the past to enhance a jurisdiction's emergency management and response capabilities. Besides funding, much of DOE's assistance is provided in the form of technical assistance, for which DOE bears the cost. Assistance may be provided through DOE's Radiological Assistance Program and under the National Contingency Plan, as well as through training, DOE sponsored meetings, informal discussions, and informational materials.

Appendix H of the EIS contains the general provisions for emergency preparedness and security measures associated with the transportation of foreign research reactor spent nuclear fuel in the United States. The provisions include an interface between DOE and State,

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COMMENTOR No. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

7. Shipping Casks

The DEIS states that Type B packaging will be used for shipping foreign research reactor spent nuclear fuel and naval reactor spent fuel. In the past, DOE has used Type B packaging that meets 1967 Nuclear Regulatory Commission requirements for shipping transuranic wastes. These older package designs could not be licensed under current transport package licensing requirements, although they can still be used for shipping transuranic waste. (Current licensing requirements for transporting plutonium are more stringent.)

The DEIS also states that the casks proposed for ground transport are not currently certified for shipping foreign research reactor spent fuel. How will the casks used by foreign countries be certified? Will they have full-scale testing? The casks used for the proposed spent fuel shipments should be required to meet current federal transport requirements for transporting spent fuel.

265-9

6

RESPONSE TO COMMENT
COMMENTOR No. 265:
CALIFORNIA ENERGY COMMISSION (CONT'D.)

Response to Comment No. 265-9

Spent nuclear fuel is required to be transported in "Type B" transportation casks that are certified for transporting radioactive materials. These transportation casks are subject to stringent design, fabrication, and operating requirements imposed by the competent authority for the country of origin (the NRC, in the United States) to withstand very severe accidents without releasing their contents. Regardless of where a transportation cask is designed, fabricated, or certified for use, if used internationally it must meet certain minimum performance requirements and regulations established by the international Atomic Energy Agency. The selection of a specific model of "Type B" transportation cask to be used depends on the particular spent nuclear fuel to be shipped.

COMMENTOR NO. 266: OREGON DEPARTMENT OF ENERGY

Oregon

DEPARTMENT OF ENERGY

June 16, 1995

U.S. Department of Energy
Office of Environmental Management (EM-37)
Attn: Mr. Charles Head
1000 Independence Avenue, S.W.
Washington D.C. 20585-0001

Dear Mr. Head:

Thank you for this opportunity to offer the state of Oregon's comments on the draft Environmental Impact Statement (EIS) on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel. Our comments focus on the following four areas: potential U.S. storage sites, reprocessing, transport issues, and emergency preparedness.

The issue of whether or not to ship foreign spent fuel back to the United States is beyond our scope for comment. We do not have enough information to determine whether adequate security can be established at each of the foreign sites to safeguard the spent fuel. Nor do we have detailed information on the treaty agreements that were made with these countries.

POTENTIAL U.S. STORAGE SITES

We support the U.S. Department of Energy's (USDOE) position (as outlined in the Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Waste Management Programs Final EIS and the subsequent Record of Decision) not to use the Hanford Site as a storage site for foreign spent fuel. As we stated during hearings in Portland in December 1993 and May 1995, we oppose storage of foreign research spent nuclear fuel at the Hanford Site. Hanford does not have facilities available for storage. Further, we are concerned that bringing additional waste into the site would seriously detract from the vital clean up work currently underway. 266-1

The draft EIS lists several options in which foreign fuel is stored temporarily (for about 10 years) at one or more USDOE facilities, then moved to another USDOE facility. We oppose this approach. Although we believe spent nuclear fuel can be transported safely, we also believe it is not good public policy to move high level nuclear waste from one interim storage facility to another. There is some risk, although small, 266-2

John A. Kitzhaber
Governor

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FAX (503) 373-7806
Toll-Free 1-800-221-8035

RESPONSE TO COMMENT
COMMENTOR NO. 266: OREGON DEPARTMENT OF ENERGY

Response to Comment No. 266-1

The commentor's support for the statement in the Record of Decision for the Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact Statement that no foreign research reactor spent nuclear fuel would be shipped to the Hanford Site, is noted.

Response to Comment No. 266-2

As discussed in Section 2.6.5 of the EIS, the management of foreign research reactor spent nuclear fuel at an interim site would have become a necessity if the decision to manage the rest of DOE's spent nuclear fuel involved the exclusive use of a site lacking existing facilities to accept the fuel at the start of the policy. These sites were the Hanford Site, the Oak Ridge Reservation, and the Nevada Test Site. Since the Record of Decision discussed in response to comment 266-1 above did not select these sites for future management of spent nuclear fuel, the commentor's concern is no longer an issue, as both the Savannah River Site and the Idaho National Engineering Laboratory have existing facilities capable of accepting the fuel on the effective starting date of the policy.

COMMENTOR NO. 266: OREGON DEPARTMENT OF ENERGY (CONT'D.)

State of Oregon Comments on a
Proposed Nuclear Weapons Nonproliferation
Policy Concerning Foreign Research
Reactor Spent Fuel
June 16, 1995
Page 2

involved with the transport of spent nuclear fuel. Shuttling it from one site to another unnecessarily increases the risk. 266-2 (Cont'd.)

If shipments do come to the United States, USDOE proposes storage at the Savannah River Site and the Idaho National Engineering Laboratory (INEL). Both sites do have available storage capacity and experience in handling foreign spent fuel. However, we believe INEL has serious problems which preclude its use as a site to store additional foreign research reactor spent nuclear fuel. Because of serious concerns by the state of Idaho about the storage and handling of spent fuel at the Idaho Site, USDOE is under a court order that severely restricts transporting additional waste to INEL. Idaho was successful in its court action because USDOE's past record of waste handling and storage at INEL is less than exemplary. 266-3

REPROCESSING

We oppose the reprocessing of foreign research reactor spent fuel. Reprocessing does little to reduce the volume of high level waste. It creates new waste streams. It adds to the amount of weapons grade material that is available. We oppose reprocessing whether the spent fuel remains in Europe or is returned to the United States. 266-4

TRANSPORT ISSUES

USDOE should reassess, based on its own selection criteria, the continued study of the Port of Portland as a receiving point for foreign research reactor spent fuel. One screening criteria used by USDOE to select potential ports of entry was favorable transit from the open ocean to the selected terminal. The draft EIS states that "DOE concluded that ports meeting the intent of this criterion would have relatively short trips to port from large deep bodies of water that were either oceans, seas, or notable extensions thereof....and which present no special navigational hazards to ships." Yet, the Port of Portland is more than twice as far from large deep bodies of water than any of the other ports still under consideration. Further, the draft EIS states "There are a number of cautions concerning entering and navigating the Columbia and Willamette Rivers. The U.S. Coast Guard warns that entry into the Columbia River can be dangerous because of sudden and unpredictable changes in the currents often accompanied by breakers." The draft EIS goes on to list free floating logs and submerged 266-5

RESPONSE TO COMMENT COMMENTOR NO. 266: OREGON DEPARTMENT OF ENERGY (CONT'D.)

Response to Comment No. 266-3

In accordance with the Department of Energy's Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact Statement Record of Decision released on May 30, 1995, all of the aluminum-based foreign research reactor spent nuclear fuel managed by DOE will be managed at the Savannah River Site in South Carolina. Any other foreign research reactor spent nuclear fuel to be managed by DOE will be managed at the Idaho National Engineering Laboratory. A Consent Order, embodying the litigation settlement between the State of Idaho, the Navy, and DOE was issued on October 17,1995.

Response to Comment No. 266-4

The commentor's opposition to chemical separation is noted. The advantages and disadvantages of chemical separation are discussed in Section 2.2.2.6 of the EIS.

Response to Comment No. 266-5

The passage from the Pacific Ocean up the Columbia River to Portland meets the requirements of Criterion 2 (Favorable Transit From Open Ocean) for the port selection (Appendix D, Section D.1.9 of the EIS). Favorable transit from open ocean is only one of the considerations in selecting ports of entry for the foreign research reactor spent nuclear fuel. Other considerations include port population, along the route to the management site, port experience with handling containers, and port facilities. Appendix D, Section D.1.9 of the EIS, presents details of the port selection process.

COMMENTOR NO. 266: OREGON DEPARTMENT OF ENERGY (CONT'D.)

State of Oregon Comments on a
Proposed Nuclear Weapons Nonproliferation
Policy Concerning Foreign Research
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June 16, 1995
Page 3

deadheads or sinkers as sources of danger. The draft EIS also cites Coast Guard statistics of 112 ship collisions and 145 (hard) groundings between 1990 and 1993. Given these warnings, it appears that USDOE disregarded its own criteria to keep Portland among the ports under consideration. 266-5 (Cont'd.)

We believe that USDOE should seriously consider exclusive use of military ports for shipments. Military ports are far more suitable to meet the security needs of these shipments. The use of military ports would also eliminate the very real possibility that longshoremen would refuse to unload foreign spent fuel. 266-6

Since USDOE proposes to store spent fuel at Savannah River and INEL based on fuel type, some shipments bound for Savannah River would likely be delivered to West Coast ports and some fuel destined for INEL would likely be delivered to East Coast ports. This would necessitate cross-country shipments by rail or truck. We believe the final EIS should evaluate shipping these materials through the Panama Canal in lieu of cross-country shipments. 266-7

USDOE asked for comments on when the federal government should take title to the fuel. We believe this should occur before shipment, if shipments are to occur. This is the only way to ensure that all components of the transport system comply with U.S. transport safety regulations. 266-8

EMERGENCY PREPAREDNESS

The shipment of foreign research reactor spent fuel to and through the United States raises significant issues about the adequacy of emergency response preparedness. The draft EIS rightfully states that the primary responsibility for emergency response resides with local authorities. The draft EIS also says an emergency management and response infrastructure already exists to support these shipments. To a limited extent, that is true. However, that does not remove USDOE from its responsibility to work with states and Indian tribes along shipping routes to ensure an adequate level of preparedness exists. 266-9

Spent nuclear fuel can be transported safely and public confidence can be maintained as long as the federal government works cooperatively with state, Tribal and local agencies. Emergency responders must receive adequate funding, training and equipment. Dock workers must be trained in the safe and proper handling of spent fuel casks. State officials must

RESPONSE TO COMMENT COMMENTOR NO. 266: OREGON DEPARTMENT OF ENERGY (CONT'D.)

Response to Comment No. 266-6

Section 2.8 of the EIS addresses the security measures that would be taken to ensure that there would be no unacceptable risks of terrorism or theft of materials. The commentor's preference for the exclusive use of military ports to ship foreign research reactor spent nuclear fuel is noted. DOE considers that foreign research reactor spent nuclear fuel could safely be received at commercial ports, as it has in the past, without additional security that might be present at military bases. The security provided for the spent nuclear fuel shipments would be required to meet or exceed all the applicable security requirements in the Code of Federal Regulations (10 CFR Part 73). If any port did not already provide security sufficient to satisfy these requirements, it would be the responsibility of the shipper to provide the required additional security. Nevertheless, the commentor's preference for the use of military ports is noted. Sections 4.2.2.2 and 4.2.2.3 of the EIS provide the analysis on impacts of incident-free operation and consequences of port accidents, respectively.

The possibility of a longshoremen's refusal to off-load this material was not considered in the ports selection process (Appendix D, Section D.1.9 of the EIS) because such a policy, even if valid, would be impossible to predict.

Response to Comment No. 266-7

In the evaluation of sea routes (Appendix C, Section C.3.2 of the EIS) and the incident-free impacts of the ocean transit of the foreign research reactor spent nuclear fuel (Appendix C, Section C.4.1 of the EIS) the assumption was made that some of the shipments would pass through the Panama Canal. There are no regulations against sending spent nuclear fuel through the Panama Canal.

Response to Comment No. 266-8

The commentor's support for taking title to the foreign research reactor spent nuclear fuel at the point of origin of the shipments instead of the territorial waters or continental U.S borders (Section 2.2.1.4 of the EIS) is noted. Regardless of which location were selected for taking title, DOE would, through contractual agreements, ensure that the appropriate inspections take place at the point of origin to verify that the casks and their contents meet U.S transport safety requirements.

Response to Comment No. 266-9

DOE considers that if foreign research reactor spent nuclear fuel is managed in the United States, there is adequate regulatory and emergency preparedness infrastructure to ensure its safe acceptance and transportation to the designated management site. As discussed in Section 2.7.1 of the EIS, Federal funding to State, Tribal, and local governments is being provided for maintaining emergency response programs. There are three national emergency

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COMMENTOR NO. 266:
OREGON DEPARTMENT OF ENERGY (CONT'D.)

State of Oregon Comments on a
Proposed Nuclear Weapons Nonproliferation
Policy Concerning Foreign Research
Reactor Spent Fuel
June 16, 1995
Page 5

- If shipments are to be made to the United States, USDOE must work cooperatively with state, Tribal and local officials along shipping routes to ensure an adequate level of emergency preparedness exists.

Sincerely,

John Savage
Acting Director

cc: Kerry Barnett, Director, Oregon Department of Consumer and Business Services
Paula Burgess, Natural Resources Advisor to Governor John Kitzhaber
Steve Marks, Senior Policy Advisor to Governor John Kitzhaber
Oregon Congressional Delegation Staff

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RESPONSE TO COMMENT
COMMENTOR NO. 266:
OREGON DEPARTMENT OF ENERGY (CONT'D.)

310: WASHINGTON STATE TATIVE RUTH FISHER

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TRANSPORTATION
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310-1

310-2

310-3

RESPONSE TO COMMENT
COMMENTOR NO. 310: WASHINGTON STATE REPRESENTATIVE RUTH FISHER

Response to Comment No. 310-1

The commentor's concern related to adding truck traffic to the I-5 corridor is noted. Even if Management Alternative 1 were adopted and the Port of Tacoma were to be used exclusively (an unlikely assumption), then only an additional 721 ISO containers would be unloaded at Tacoma over a period of 13 years, an average of one container per week. This would represent a very small increase to the existing and future truck or rail traffic burden. This subject is discussed in detail in Section 2.6.4 of the EIS.

Response to Comment No. 310-2

The commentor's concern related to rail traffic congestion is noted. See the response to comment 310-1 above.

Response to Comment No. 310-3

As discussed in Section 2.10 of the EIS, transportation of foreign research reactor spent nuclear fuel by air was considered as an alternative and was dismissed.

COMMENTOR NO. 325: WASHINGTON STATE SENATOR MARILYN RASMUSSEN (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 325: WASHINGTON STATE SENATOR MARILYN RASMUSSEN (CONT'D.)

requirements, it would be the responsibility of the shipper to provide the required additional security. DOE supports these regulations as being adequate to protect the foreign research reactor spent nuclear fuel in any port.

Appendix H has been added to the final EIS in response to public comments to better describe the security and emergency preparedness associated with transportation of the foreign research reactor spent nuclear fuel. This appendix presents the general provisions of the Transportation Plan, which is a document that provides details associated with the transportation of the foreign research reactor spent nuclear fuel, including the security arrangements in port and in transit to the management site.

In the unlikely event of a severe accident, the analysis performed for the EIS indicates that some radioactive material could be released from the cask and distributed into the environment. However, the analysis in Section 4.2.2.3 and Appendix D, Section D.5 of the EIS determined that no decontamination, interdiction, or condemnation of property would result from the worst plausible accident. Close in to the accident, near the cask would likely require some cleanup, but the overall impact on the water and air quality in the port would be very small.

Commentor No. 385: Washington State Senator Lorraine Wojahn

Tell the Department of Energy what you think about nuclear waste coming through Tacoma.

I strongly oppose shipments and believe the citizens of the region will be subjected to serious risks. Further, I believe the draft environmental statement prepared by the federal government is incomplete and inaccurate and based on outdated information about the port and its terminals. Further, it fails to adequately address citizen security and cleanup concerns.

385-1

Name and Address: Lorraine Wojahn, State Senator
2515 South Cedar
Tacoma WA 98405

Response to Comment Commentor No. 385: Washington State Senator Lorraine Wojahn

Response to Comment No. 385-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

In regard to the EIS being based on outdated and inaccurate information, errors have been found in the draft EIS, including some of the information on the Port of Tacoma and the associated map. Updated information on the Port of Tacoma has been incorporated into Appendix D, Section D.2.1.9 of the EIS. All of these errors have been corrected in the final EIS, and the conclusion that the risks associated with accepting foreign research reactor spent nuclear fuel into the United States through Tacoma, or any of the other candidate ports, are low and would result in low impacts is still valid. The population data used in the analyses, which was verified as being correct, were based on the 1990 census.

Appendix H has been added to the final EIS in response to public comments to better describe the security and emergency preparedness associated with transportation of the foreign research reactor spent nuclear fuel. This appendix presents the general provisions of the Transportation Plan, which is a document that provides all of the details associated with the transportation of the foreign research reactor spent nuclear fuel, including the security arrangements in port and in transit to the management site.

No cleanup is expected to be needed. Spent nuclear fuel transportation casks are designed and built to preclude release of radioactive material. To date, after more than 30 years of spent nuclear fuel shipments, no radioactive contents have ever been released from a spent nuclear fuel transportation cask, nor has a spent nuclear fuel transportation cask ever been punctured, even as a result of an accident. A paragraph has been added to Section 4.2.2.2 of the EIS to make this point and to emphasize the no-impact nature of these shipments on air and water quality. In the unlikely event of a severe accident, the analysis performed for the EIS indicates that some radioactive material could be released from the cask and distributed into the environment. However, the analysis also shows that the resultant contamination is so small that no cleanup would be required, other than possibly in the immediate vicinity of the accident.

COMMENTOR NO. 463: STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY PETE WILSON, Governor

DEPARTMENT OF TRANSPORTATION
BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
TDD (510) 286-4454

June 14, 1995

04–General
SCH # 95054003

United States Department of Energy
Office of Environmental Management (EM–37)
Attn: Mr. Charles Head
1000 Independence Avenue, S. W.
Washington, D. C. 20585–0001

Re: Draft Environmental Impact Statement: PROPOSED NUCLEAR WEAPONS NONPROLIFERATION POLICY CONCERNING FOREIGN RESEARCH REACTOR SPENT NUCLEAR FUEL.

Dear Mr. Head:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for this project. We have examined the above referenced document and forward the following comments:

The casks used to transport the spent nuclear fuel are too heavy to be hauled on the public roads within the weight limits of the California Vehicle Code. To accommodate such shipments, Caltrans Transportation Permit policy provides for the issuance of overweight permits.

483-1

In those instances where the conditions of the transportation permit require the hauler to deviate from the designated hazardous material route for the radioactive material, the hauler must first obtain permission from the California Highway Patrol.

We appreciate the opportunity to work with you on this project. Should you have any questions regarding these comments, please call Timothy Sable of my staff at (510) 286-5555.

Sincerely,

JOE BROWNE
District Director

By: Phillip Badal

PHILLIP BADAL
District Branch Chief
IGR/CEQA

RESPONSE TO COMMENT
COMMENTOR NO. 463: STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Response to Comment No. 463-1

If any foreign research reactor spent nuclear fuel is accepted into the United States, DOE and its shipping contractor would review and comply with all State and Federal laws and regulations involving ground transport.

DOE estimates that the transportation of foreign research reactor spent nuclear fuel would have about the same impact on the structural integrity of local roadways and bridges as does the commercial transportation of gravel and cement. As shown in Table B-14 in Appendix B of the EIS, marine transport casks for foreign research reactor spent nuclear fuel weigh between 10.9 and 25.5 metric tons. Including the truck, the total weight would be approximately 24 to 38 metric tons. For comparison, commercial ten-wheel sand and gravel trucks usually weigh almost 30 metric tons when fully loaded. Newer sand and gravel trucks which have an additional axle can weigh as much as 34 metric tons.

M. BEASLEY,
CAROLINA

POST OFFICE BOX 11369
COLUMBIA 29211

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RESPONSE TO COMMENT
COMMENTOR NO. 483: DAVID M. BEASLEY, GOVERNOR, STATE OF SOUTH CAROLINA

Response to Comment No. 483-1

The intent of the proposed action is to support U.S. nuclear weapons nonproliferation policy seeking to reduce, and eventually eliminate, the use of highly enriched (weapons-grade) uranium in civil programs worldwide (Section 1.2 of the EIS). The inclusion of developed countries and/or U. S. allies in the proposed action is designed to support the United States under the RERTR program. If these stable, developed allies are not included in this program, many of these research reactors will have to shut down or are likely to switch back, or continue to use, HEU fuel. The increase in the amount of spent nuclear fuel from foreign research reactors eligible for the program is discussed in Section 2.2.1.3 of the EIS. The policy considerations and environmental impacts are discussed in Section 4.4 of the EIS.

This EIS provides an evaluation of environmental effects that would result from implementation of three basic policy alternatives and the No Action Alternative (Sections 2.2 through 2.5 of the EIS). Results given in Section 4 of the EIS indicate that implementation of any of the alternatives would have no significant effects on human health or the environment.

The commentor's preference for overseas management of spent nuclear fuel from foreign research reactors is noted. Overseas management of spent nuclear fuel from foreign research reactors, including overseas reprocessing and storage, is described in Section 2.3 of the EIS.

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RESPONSE TO COMMENT COMMENTOR NO. 483: DAVID M. BEASLEY, GOVERNOR, STATE OF SOUTH CAROLINA (CONT'D.)

Response to Comment No. 483-2

The commentor's support for domestic chemical separation and vitrification are noted. This is Management Alternative 1, Implementation Alternative 6, which is discussed in Sections 2.2.2.6 and 4.3.6 of the EIS. It is also part of Management Alternative 3, which is discussed in Section 2.4 and 4.5 of the EIS.

Response to Comment No. 483-3

DOE and the Department of State agree that any policy that might be implemented should be tailored to meet the objectives of the United States and be in the best interest of the United States.

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Response to Comment
Commentor No. 485: North Carolina State Clearinghouse

Response to Comment No. 485-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Ports of Wilmington, NC and Military Ocean Terminal, Sunny Point, NC, is noted. However, analysis in Section 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to these ports, or to any of the ports analyzed in the EIS, is low.

DOE is required to inform the Governor of each State and any Tribal chair, or their designee, along a transportation route at least seven days in advance of the shipment of hazardous cargoes, including radioactive materials. It would be the responsibility of the Governor to provide any further notification to State and local officials.

DOE would continue to work with State and local officials to ensure that emergency response capabilities are adequate and that the communications channels between DOE and State and local governments remain open.

Response to Comment No. 485-2

As discussed in Section 2.6.4.2 of the EIS, the NRC regulations concerning route notification are set forth in 10 CFR Part 73 . The regulation requires DOE to protect the schedules and itineraries of specific shipments, so DOE would not release this information to the news media.

COMMENTOR NO. 485: NORTH CAROLINA STATE CLEARINGHOUSE (CONT'D.)

June 9, 1995
Page 2

movement of "weapons grade" spent nuclear fuel has the potential of severely compromising the security of the shipments. This information in the hands of terrorists or extremist groups creates a potential threat and necessitates implementation of security measures.

- If DOE intends to release information on the movement of this material we must insist that a State law enforcement agency provide necessary security and be reimbursed for this service. The North Carolina Highway Patrol has personnel highly trained in law enforcement, security and radiological response. The Highway Patrol is adequately equipped to provide both ground and aerial surveillance as well as radiological monitoring and armed security.

485-2 (Cont'd.)

•DOE in Volume 1 Section 2.7.5 of the Draft Environmental Impact Statement, (EIS) states that "Primary responsibility for emergency response to a foreign research reactor spent nuclear fuel incident would reside with local authorities.... Each corridor State or Tribe would be responsible for augmenting their existing emergency management and response plans and procedures with any foreign research reactor spent fuel specific information they felt were necessary. They would also provide personnel and equipment to take charge of a foreign reactor spent fuel emergency in the unlikely event one should occur." DOE infers, in Volume I Section 2.7.1 of the Draft EIS that, because of existing federal funding programs, State and local governments should be able to manage all-hazards on a day-to-day basis. We agree that States and local governments receiving federal emergency preparedness funds should have emergency management and response programs to manage all-hazards on a day-to-day basis when such hazards have existed and come within the context of the State and local governments "Hazard and Risk Analysis". We submit that, because the movement of this type hazardous cargo is a new hazard and potential risk to many local areas, these local governments should not be presumed to have adequate programs to deal with "weapons grade" spent nuclear fuel accidents or incidents.

485-3

•DOE should be required to develop and implement, in coordination with the Division of Emergency Management, an on-going program to provide technical and financial support to the Division of Emergency Management and to all emergency response agencies within a ten mile radius of the selected port and with ten miles either side of selected transportation routes within North Carolina. This technical and financial support would enable these agencies to develop emergency management plans, training programs and equipment resources to deal with this new hazard and potential risk being introduced by DOE.

If you need further information on this matter please contact Buddy Jackson of my staff at 733-2931.

RESPONSE TO COMMENT COMMENTOR NO. 485: NORTH CAROLINA STATE CLEARINGHOUSE (CONT'D.)

Response to Comment No. 485-3

DOE considers that there is adequate regulatory and emergency preparedness infrastructure to ensure the safe acceptance and transport to designated management sites if the foreign research reactor spent nuclear fuel is managed in the United States. Federal funding to State, Tribal, and local governments for maintaining emergency response programs is discussed in Section 2.7.1 of the EIS. There are three national emergency response plans under which DOE provides radiological monitoring and assessment assistance. Under these plans, DOE provides technical advice and assistance to the State, Tribal and local agencies involved with a radiological incident. Emergency preparedness, security, and coordination of DOE with local emergency response authorities, are discussed in general in Sections 2.7 and 2.8 of the EIS. Details would be contained in the Transportation Plan, that would be prepared prior to any individual spent nuclear fuel shipment and coordinated with State and local officials. The general provisions of the Transportation Plan are included in Appendix H, which was added to the final EIS in response to public comments.

TOR NO. 485: NORTH CAROLINA TE CLEARINGHOUSE (CONT'D.)

[redacted] shipments should be made through a single port or
t discussed in this draft EIS or referenced from prior
ven the purpose of the Nonproliferation Policy, sensitivity
need for discretion there is a lot to be said for a multi port
deserves consideration as a critical element of the

485-5 (Cont'd.)

ed on the issue of radiation, possible human exposure
n, and related health effects. On the other hand, it was
width of documentation given to the affected environment
ld perspective of policy considerations, rather than as a
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ntially inconsequential levels of impact regardless of
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can be regained through attention to the unique
site differences among the ports under consideration, as
plications of a low probability but high impact
with release of radiation. Such sensitivity analysis among
mation to decisionmakers about which port(s) are best
n.

485-6

RESPONSE TO COMMENT COMMENTOR NO. 485: NORTH CAROLINA STATE CLEARINGHOUSE (CONT'D.)

DOE considers that there would be no significant adverse impacts on the natural resources or on the air and water quality at any of the ports that might be used to accept the material under the proposed policy of managing foreign research reactor spent nuclear fuel. Spent nuclear fuel transportation casks are designed and built to preclude release of radioactive material. To date, no radioactive material has ever been released from a spent nuclear fuel transportation cask as a result of an accident. A paragraph has been added to Section 4.2.2.2 of the EIS to make this point and to emphasize the no-impact nature of these shipments on air and water quality.

The port selection process and results presented in Appendix D, Sections D.1.8 and D.1.9, of the EIS only indicate ports that would be acceptable for the receipt and handling of foreign research reactor spent nuclear fuel; it does not determine which ports would ultimately be used. While all ports, if they are selected by the selection criteria, would be equally acceptable, the commentor's preference for a multi port strategy will be considered among other factors in determining the port or ports to be used.

Response to Comment No. 485-6

As discussed in Section 4.1.2 of the EIS, the detailed analysis of the potential environmental impacts presented in the Appendices of the EIS did not reveal any factor that would differentiate among alternatives. These factors include socioeconomic and ecology considerations for the ports considered. The emphasis on worker and public exposure to radiation is because of the public interest in that area.

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Response to Comment
Commentor No. 485: North Carolina
State Clearinghouse (Cont'd.)

Response to Comment No. 485-9

Based on the commentor's statement, clarification of this matter has been made in Appendix D, Section D.2.1.10 of the EIS.

Response to Comment No. 485-10

The captions of the two figures cited in this comment have been corrected in the final EIS.

Response to Comment No. 485-11

DOE has not yet selected ports, routes, or transport modes for the foreign research reactor spent nuclear fuel. Truck routes would be selected in accordance with Department of Transportation regulations (49 CFR Part 397.101 (a)(2)). A State routing agency can designate a preferred route, which the shipments would be required to follow, in accordance with 49 CFR Part 397.103.

Response to Comment No. 485-12

The experience criterion used in the port selection process evaluates the port's experience in handling containerized cargo, not necessarily for dealing with nuclear or radioactive material (Appendix D, Section D.1.9.1 of the EIS). Although the foreign research reactor spent nuclear fuel is radioactive material, the dose rates from the casks used to transport it would be low, so no special handling would be required; experience with handling containers would be sufficient. The ten ports selected all meet the criteria and hence are considered to be able to safely handle the foreign research reactor spent nuclear fuel.

TO COMMENT 35: NORTH CAROLINA GHOUSE (CONT'D.)

ficant adverse impacts on the natural resources ports that might be used to receive the material ign research reactor spent nuclear fuel. Spent ed and built to preclude release of radioactive of spent nuclear fuel shipments, no radioactive ent nuclear fuel transportation cask, nor has a en as a result of an accident. A paragraph has s to make this point and to emphasize the no- water quality.

e analysis performed for the EIS indicates that ased from the cask and distributed into the acts also shows that the resultant contamination d in any of the ports or surrounding areas. The ation, interdiction, or condemnation of property ccident. Close in to the accident, near the ne cleanup, but the overall impact on the water ections 4.2.2.3 and Appendix D, Section D.5 of lts.

COMMENTOR NO. 485: NORTH CAROLINA STATE CLEARINGHOUSE (CONT'D.)

State of North Carolina
Department of Environment,
Health and Natural Resources
Division of Environmental Management

James B. Hunt, Jr., Governor
Jonathan B. Howes, Secretary
A. Preston Howard, Jr., P.E., Director

DEHNR

June 6, 1995

TO: Melba McGee

FROM: Dianne M. Reid

RE: Review of Draft EIS on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel.

I have reviewed the referenced document and found that they have addressed all the concerns indicated in the April 1994 review of the program-wide acceptance of foreign research reactor spent nuclear fuel. The one thing I would note for consideration is the location of Outstanding and High Quality Waters in the lower Cape Fear that could be directly affected should an accident occur. These areas include Masonboro Sound (Outstanding Resource Waters) and Walden Creek (High Quality Waters). These waters have excellent water quality and high resource values. There are also primary nursery areas and shellfishing waters downstream of the two North Carolina ports. If there are other ports which do not support these types of natural resources and excellent water quality areas, they should receive higher priority than the North Carolina ports.

485-14

cc: Monika Swihart
Steve Zoulsky
Bill Flournoy, Office of Policy and Development

P.O. Box 29535, Raleigh, North Carolina 27626-0535 Telephone 919-733-4984 FAX 919-733-9919
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RESPONSE TO COMMENT
COMMENTOR NO. 485: NORTH CAROLINA STATE CLEARINGHOUSE (CONT'D.)

Response to Comment No. 485-14

See the response to Comment 485-13 above.

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COMMENTOR NO. 485: NORTH CAROLINA STATE CLEARINGHOUSE (CONT'D.)

Chrys Baggett
June 4, 1995
Page 2

It would seem appropriate to consider the ease with which these movements could be made from the port of entry to their final destination. Presumably, movement on an interstate type highway or a higher level rail line would offer the greatest degree of safety, security, and efficiency. Access to southbound Interstate 95, the most likely direction for these shipments, clearly is inconvenient from both Wilmington and Sunny Point.

485-15 (Cont'd.)

ls

cc: Secretary Sam Hunt
Garland Garrett
Larry B. Goode
Chris McAdams

RESPONSE TO COMMENT
COMMENTOR NO. 485: NORTH CAROLINA STATE CLEARINGHOUSE (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 498: STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

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Response to Comment
or No. 498: State of Tennessee
Environment and Conservation (Cont'd.)

No. 498-1

5 of the EIS, the selection of the site or sites at which the foreign
clear fuel would be managed is based on the analysis in the
grammatic Spent Nuclear Fuel Management and Idaho National
nvironmental Restoration and Waste Management Programs
tement. The Record of Decision for this EIS was released on
lance with this Record of Decision, all of the aluminum based
nt nuclear fuel managed by DOE will be managed at the Savannah
na. Any other foreign research reactor spent nuclear fuel to be
managed at the Idaho National Engineering Laboratory.

No. 498-2

on of potential management sites as discussed in response to
gn research reactor spent nuclear fuel would be shipped to the

No. 498-3

d in detail in Sections 2.2.1.1 and 2.2.2.2 of the EIS. Detail in the
conciseness.

No. 498-4

g spent nuclear fuel by fuel type under the Regionalization By
he Department of Energy's Programmatic Spent Nuclear Fuel
ational Engineering Laboratory Environmental Restoration and
ams Environmental Impact Statement include more than just
tise. Handling, inspection, canning, and storage expertise are
tment to chemically separate was not a prerequisite for selecting
ive. The selection criteria are discussed on Page 3-3 of Volume

ESPONSE TO COMMENT No. 498: STATE OF TENNESSEE VIRONMENT AND CONSERVATION (CONT'D.)

. 498-5

urate on information presented in the EIS, Sections 3.3.4.1, 6 have been revised. With regard to Appendix F, Section il desired by the commentor is not required to determine the evaluated alternatives.

. 498-6

erm zircoloy cladding is incorrect with regard to the TRIGA t the commentor means incoloy cladding when mentioning EIS has been revised to include the word incoloy when fuel

. 498-7

round transport routes to specify them all. DOE has presented ndix E, but these exact routes may not be the ones selected by C. The results presented in Appendix E and Section 4.2.3 of ound transport risks would be low along all the representative also be expected to have similarly low risks.

ientor's intent to minimize the inherent ground transport to minimize these risks is to minimize the total distance ific cases, however, when DOE would choose to transport

COMMENTOR NO. 498: STATE OF TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (CONT'D.)

2. Volume 1, Section 2.6.4, "Ground Transport Route Options and Route Identification Process", page 2-35 through 2-40. According to this section, foreign research reactor spent nuclear fuel could be delivered to a port on the opposite side of the country from its destination. This would result in excessive ground transportation of the SNF. In order to minimize inherent ground transportation risks, each shipment of foreign research reactor SNF should be delivered to a port near its destination. Accordingly, foreign research reactor SNF destined for Idaho National Engineering Laboratory (INEL) should be shipped to a west coast port. If a shipment contains SNF destined for both INEL and SRR, the ship should deliver SNF to ports at both coasts in order to minimize ground transportation. It should be explained in this section and other applicable sections how this will be accomplished.

498-7 (Cont'd.)

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RESPONSE TO COMMENT
COMMENTOR NO. 498: STATE OF TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (CONT'D.)

Response to Comment
mentor No. 527: State of Florida
epartment of Community Affairs

ment No. 527-1

EIS indicates that there would be no significant adverse impacts on the
on the air and water quality at any of the ports that might be used to
research reactor spent nuclear fuel. Spent nuclear fuel transportation
nd built to preclude release of radioactive material. To date, after more
nt nuclear fuel shipments, no radioactive material has ever been released
ar fuel transportation cask, nor has a spent nuclear fuel transportation
ctured, even as a result of an accident. A paragraph has been added to
e EIS to make this point and to emphasize the no-impact nature of these
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t of a severe accident, the analysis performed for the EIS indicates that
naterial could be released from the cask and distributed into the
/ever, the analysis in Section 4.2.2.3 and Appendix D, Section D.5
lecontamination, interdiction, or condemnation of property would result
ısible accident. Close in to the accident, near the transportation cask
: some cleanup, but the overall impact on water supplies and air quality,
fe, in the port and its approaches would be low.

FLORIDA (CONT'D.)

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RESPONSE TO COMMENT COMMENTOR NO. 527: STATE OF FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

Response to Comment No. 527-2

The distance from the port to the management site(s) is only one of the considerations in selecting ports of entry for the foreign research reactor spent nuclear fuel. Other considerations such as port population, route population, port experience with handling containers, and access to the ocean would also be considered in making the final selection of ports of entry. Appendix D, Section D.1.9 of the EIS presents details of the port selection process.

Response to Comment No. 527-3

Regarding navigation of the St. Johns River, see response to comment 527-4 below.

As discussed in the response to comment 527-4 , the spent nuclear fuel transportation casks are unlikely to affect the air or water quality. For this reason, there would be no impact on the water supplies, marine, estuarine, aquatic or uplands areas surrounding Jacksonville.

Mr. Charles Head
June 16, 1995
Page Three

addition, the EIS should also be revised to more thoroughly describe the affected environment and the potential impacts to those areas, including water supplies, and marine, estuarine, aquatic and upland areas surrounding Jacksonville and along potential transportation routes to the storage site.

527-3 (Cont'd.)

The DEP and SJRWMD letters of June 5, 1995, are enclosed for your review. We appreciate the opportunity to review the draft EIS, and look forward to working with you on the issue in the future.

Very truly yours,

for Mary Anne Price
Linda Loomis Shelley
Secretary

LLS/cmk

Enclosures

cc: Virginia Wetherell, Department of Environmental Protection
Carliane Johnson, Department of Environmental Protection
Margaret Spontak, St. John's River Water Management District

RESPONSE TO COMMENT
COMMENTOR NO. 527: STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

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JUN 2 8 1995

Virginia B. Wetherell
Secretary

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Florida Coastal
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RESPONSE TO COMMENT
COMMENTOR NO. 527: STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

COMMENTOR NO. 527: STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

JUN 2 8 1995

Ms. Traub-Metlay
June 2, 1995
Page Two

Blount Island is on the southwest border of the preserve. Much of the salt marsh is among the least disturbed on the southern Atlantic Coast. Many resident, migratory and rare species rely on the important habitats in the preserve. The preserve also provides important spawning grounds for fish and invertebrates and is designated as Class II waters of the State, suitable for shellfish harvesting. Many threatened and endangered species utilize the preserve's resources including: the West Indian manatee, bald eagle, wood stork, shortnose sturgeon and Atlantic sturgeon. 527-1 (Cont'd.)

Although the draft EIS states that accidents are rare, this unique and sensitive coastal ecosystem should be adequately protected from any potential releases of chemical contamination.

2. The accidental release of radioactive materials could also adversely affect manatees, sea turtles and right whales. Manatees are regularly present in the Jacksonville area including the surrounding estuaries and the St. Johns River system. Sea turtles utilize the beaches for nesting throughout Florida including the Jacksonville area. Right whales are prevalent in the northeastern region of Florida, particularly during winter months, and they utilize the waters off the eastern coast of the U.S. throughout the year.

3. The draft EIS states that the St. Johns River is difficult to navigate which could increase the possibility of accidents. Strong tidal currents could exacerbate the problem if an accident did occur in which there is a loss of cargo. The EIS should make a detailed comparison of the navigational risks posed at each of the candidate ports. 527-4

4. It seems most logical to designate a port as close as possible to the storage site(s) at Savannah River Plant and Oak Ridge National Laboratory to minimize the distance necessary for overland transport. A road or rail accident has the potential to directly affect the citizen population, the upland environment, surface waters and groundwater. It would also be preferrable to designate a port with the most previous experience in handling spent nuclear waste. 527-5

5. If overseas transport is to be used, the cargo should be shipped on vessels of the safest design possible to minimize environmental and health risks to the greatest extent possible. 527-6

If Jacksonville is selected as the preferred location to receive spent nuclear fuel, the EIS should be revised to more thoroughly describe the affected environment and the potential impacts to those areas. This would include the marine, estuarine,

RESPONSE TO COMMENT
COMMENTOR NO. 527: STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

Response to Comment No. 527-4

The passage from open ocean up the St. Johns River to the terminals operated by the Jacksonville Port Authority meets the requirements of Criterion 2 (Favorable Transit From Open Ocean) for port selection (Appendix D, Section D.1.9.2 of the EIS). As noted in the EIS, both terminals serve a number of major general cargo and container ship lines from around the world. Favorable transit from open ocean is only one of the considerations in evaluating and selecting ports of entry for the foreign research reactor spent nuclear fuel. Other considerations such as port population, along the route to the management site, port experience with handling containers, and port facilities have also been considered in making the final selection of ports of entry. Appendix D, Section D.1.9 of the EIS presents details of the port selection process.

In the unlikely event that a transportation cask loaded with foreign research reactor spent nuclear fuel were to sink in any U.S. coastal waters, it would be recovered even where tidal currents may be strong. Appendix C, Section C.5.5 of the EIS presents information on the probability of a cask sinking in coastal and deep ocean waters.

Response to Comment No. 527-5

The risk due to ground transport does increase as the travel distance increases and this effect was taken into account in the traffic risk calculations that are presented in Section 4 and Appendix E of the EIS. In all cases the risks were found to be low.

As discussed in Appendix D, Section D.1 of the EIS, independent maritime safety experts have informed DOE that any modern breakbulk or container terminal can accommodate the safe receipt, handling, and transshipments of foreign research reactor spent nuclear fuel. Thus, previous port experience in handling nuclear materials is not necessary.

Response to Comment No. 527-6

Appendix C, Section C.3.1.2 of the EIS discusses types of ships that could be used, including purpose-built ships designed specifically for the transport of spent nuclear fuel. While the specific risks of using purpose-built ships were not analyzed, Section 4.2.1.3 of the EIS analyzes and compares the impacts of using either commercial or chartered (which includes purpose-built ships) shipping. This section demonstrates that, although there are differences between them, both would have low environmental effects and low risks. The Record of Decision will state the type(s) of ships to be used, if foreign research reactor spent nuclear fuel is to be accepted into the United States.

COMMENTOR NO. 527: STATE OF FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

Ms. Traub-Metlay
June 2, 1995
Page Three

aquatic, and upland areas surrounding Jacksonville and along potential transportation routes to the storage site. On consideration of this information and the issues addressed above, the Department can evaluate the consistency of designating Jacksonville with its authorities in the Florida Coastal Management Program.

If I can be of further assistance, please feel free to contact me at (904) 487-2231.

Sincerely,

Carliane D. Johnson
Environmental Specialist
Office of Intergovernmental Programs

/cdj
cc: Jan Brewer
Roxana Dow
Ed Irby
Frank Votra

RESPONSE TO COMMENT COMMENTOR NO. 527: STATE OF FLORIDA DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

IMENTOR No. 527: STATE OF FLORIDA
TMENT OF COMMUNITY AFFAIRS (CONT'D.)

Henry Dean, Executive Director
John R. Wehle, Assistant Executive Director
Charles T. Myers III, Deputy Assistant Executive Director

POST OFFICE BOX 1429 PALATKA, FLORIDA 32178-1429
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: Draft Environmental Impact Statement on Foreign Research Spent Nuclear Fuel

s River Water Management District has reviewed the document listed ith Chapter 373, Florida Statutes and offer the following comments.

arious policy alternatives for managing foreign research spent nuclear es that involve transporting and storing foreign fuel in the U.S. vs t nuclear fuel overseas. In general, it would appear the management be in our best interest to insure protection of the United States natural ust the transporting of such fuels would greatly increase the potential for

527-7

f the proposed ports is Jacksonville, Florida. Jacksonville is situated on er, an area that has been prioritized by many state and regional agencies vater body. The Lower St. John's River is one of six project areas for the gement Program. It is one of the original state Surface Water gement (S.W.I.M.) project areas based on environmental and economic he area is being considered for funding through EPA's National Estuary District would be glad to furnish more specific information of this priority st.

would have to be taken in transporting of the fuels from the port in ge site in Savannah. Because residents in Florida depend almost entirely king water supplies, the protection of our aquifer system is vitally ed a copy of our most recent aquifer recharge map for your assistance. vicinity of the Northeast Interstate I-95 system are in low recharge (0-4

527-8

RESPONSE TO COMMENT
COMMENTOR No. 527: STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

Response to Comment No. 527-7

The commentor's preference for Management Alternative 2 or 3 is noted. These are discussed in Sections 2.3, 2.4, 4.4, and 4.5 of the EIS.

Response to Comment No. 527-8

The commentor's concern for the protection of drinking water supplies is noted. The chance of a cask carrying foreign research reactor spent nuclear fuel crashing in an aquifer recharge area in northeast Florida is very low. Even if such an accident did occur, however, the cask would be expected to survive the crash without releasing any of its radioactive contents. (Appendix B, Section B.2 and Section 2.6.2 of the EIS.)

COMMENTOR NO. 527: STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

Page 2
SAI# 9504170247C

JAN 28 [redacted]

In addition to ground water protection, the northeast area contains many regionally significant habitat areas which are depicted on the enclosed map. These areas should be considered when establishing transportation routes, etc. A more detailed map with supporting information is available. The Florida Game & Fresh Water Fish Commission can provide you with a detailed study indicating their strategic habitat areas and a listing of endangered species for this region.

527-8 (Cont'd.)

This letter does not constitute or substitute for a permit review. Permit reviews require more specific information.

Please feel free to have the Department of Energy staff contact us for further assistance on this important project at (904) 329-4374.

Sincerely,

Margaret Spontak, Director
Division of Policy and Planning

Enclosure

MS/ac

RESPONSE TO COMMENT
COMMENTOR NO. 527: STATE OF FLORIDA
DEPARTMENT OF COMMUNITY AFFAIRS (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 541: THE RESOURCES AGENCY OF CALIFORNIA

Y OF CALIFORNIA

Douglas P. Wheeler
Secretary

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artment of Water Resources

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Energy
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Health

comment
ave no

541-1

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Counsel

5102
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ent Commission

Response to Comment No. 541-1

Satisfactory completion of the reviews of the draft EIS by environmental agencies of the State of California is noted. A copy of this final EIS will be provided to the Resources Agency of California, Office of Planning and Research.

Response to Comment
Commentor No. 551: State of Idaho
Office of the Attorney General

ponse to Comment No. 551-1

is comment states, DOE has already responded to the State of Idaho's comments on
nuclear fuel transportation and storage alternatives in the Programmatic SNF and
Draft EIS, so DOE will not repeat them here. This comment does not contain any
fic references to the foreign research reactor spent nuclear fuel EIS, so DOE cannot
nd in specific terms.

Response to Comment mentor No. 551: State of Idaho of the Attorney General (Cont'd.)

nent No. 551-2

ıate disposition of the foreign research reactor spent nuclear fuel are y in Section 4.2.7 of the EIS. DOE is currently evaluating the feasibility isposal site at Yucca Mountain, NV. In the meantime, support for U.S. nproliferation policy requires DOE and the Department of State to of dealing with the foreign research reactor spent nuclear fuel (Section

COMMENTOR NO. 576: THE TEXAS OFFICE OF STATE-FEDERAL RELATIONS

THE TEXAS OFFICE
OF STATE-FEDERAL RELATIONS

122 C STREET, N.W., SUITE 800
WASHINGTON, D.C. 20001
(202) 638-1027
FAX (202) 628-1941

201 E. 14TH STREET, SUITE 500
AUSTIN, TEXAS 78701
(512) 463-1001
FAX (512) 463-1004

June 13, 1995

Mr. Charles Head (EM-37)
U.S. Dept of Energy/Ofc Spent Nucler Fuel
1000 Independence Avenue, SW
Washington, D.C. 20585

RE: TX-R-95-05-01-0001-50-00
DRAFT EA/PROPOSED NUCLEAR WEAPONS NONPROLIFEATION

Dear Mr. Head:

Your environmental impact statement for the project referenced above has been reviewed. No substantive comments were received. 576-1

We appreciate the opportunity afforded to review this document. Please let me know if we can be of further assistance.

Sincerely,

T. C. Adams, State Single Point of Contact

TCA//yjy

RESPONSE TO COMMENT
COMMENTOR NO. 576: THE TEXAS OFFICE OF STATE-FEDERAL RELATIONS

Response to Comment No. 576-1

The reviewer's satisfactory evaluation of the draft EIS is noted. A copy of the final EIS will be forwarded to the Texas Office of State-Federal Relations.

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COMMENTOR NO. 689: WASHINGTON STATE REPRESENTATIVE GRANT O. PELESKY

STATE REPRESENTATIVE
25th DISTRICT
GRANT OWEN PELESKY

State of
Washington
House of
Representatives

APPROPRIATIONS
EDUCATION
FINANCIAL INSTITUTIONS & INSURANCE

June 21, 1995

Mr. Charles Head
Office of Spent Nuclear Fuel Mgt (EM-37)
U.S. Dept. of Energy
1000 Independence Ave.
Washington, D.C. 20585

Dear Mr. Head,

As you know, ours is a government of, by and for the people. As a Representative of the 25th Legislative District of Washington State, I am compelled to write regarding shipments of nuclear spent fuel through the Port of Tacoma. 689-1

Via resolutions of the Pierce County Council, The Port Commission of Tacoma, and citizen input, it is abundantly clear that said shipments of spent fuel through the port do not have the consent of the governed.

It is my further belief that shipment of spent fuel without the consent of the governed would exemplify federal overreach as defined in the 10th Amendment to the United States Constitution.

As a legislator familiar with sensitive public issues, I am convinced that alternative #2 of the Draft Environmental Impact Statement is the only acceptable solution. Finally, The United Kingdom is willing to accept the material at a cost savings to us. Please feel free to contact me if you would like to discuss this matter further. 689-2

Respectfully,

Grant Pelesky

Rep. Grant O. Pelesky
State Representative
25th District

cc: Patrick O'Malley, President
Mike Fletcher, Commissioner
Mr. Leonard Sanderson, Mayor
Mr. John Komen, Editor, TNT
Mr. George Pica, Editor, Pierce County Herald

LEGISLATIVE OFFICE: 330 JOHN L. O'BRIEN BUILDING, PO BOX 40600, OLYMPIA, WA 98504-0600 • (360) 786-7968
HOTLINE DURING SESSION: 1-800-562-6000 • TDD: 1-800-635-9993

RESPONSE TO COMMENT
COMMENTOR NO. 689: WASHINGTON STATE REPRESENTATIVE GRANT O. PELESKY

Response to Comment No. 689-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

Response to Comment No. 689-2

The commentor's preference for the overseas management alternative is noted. This is Management Alternative 2, which is discussed in Sections 2.3 and 4.4 of the EIS.

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IE REGALA (CONT'D.)

as stated that France, Japan
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in Scotland. The United
capability. I believe
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for evaluation of ports,
he Port of Tacoma in at least
have studied the DEIS and
he adequacy of that document.
g objection to further
he Department of Energy. As
jection.

690-5

RESPONSE TO COMMENT
COMMENTOR NO. 690: WASHINGTON STATE REPRESENTATIVE DEBBIE REGALA (CONT'D.)

The frequency of accidents on highways has been taken into account in all the ground transport risk estimates in the EIS. As discussed in Section 4.2.3 and Appendix E of the EIS, spent nuclear fuel has been transported along highways, railways, and waterways for over 40 years without release of the radioactive contents from the spent nuclear fuel transportation cask.

The population along all representative truck transport routes was taken into account in the calculations of ground transport risks. In all cases the risk was found to be low. This subject is discussed further in Section 4.2.3 and Appendix E of the EIS.

Response to Comment No. 690-3

Although the foreign research reactor spent nuclear fuel is radioactive material, the dose rates from the casks used to transport it would be low. No special handling or loading/unloading procedures would be required for the foreign research reactor spent nuclear fuel when it is contained in approved standard shipping containers; experience with handling containers is sufficient. Therefore, no special training of longshoremen is required.

There is a maximum allowable radiation dose rate of 200 mrem per hour, however, this limit is on the dose rate at the surface of the transportation cask, which would be inside of the container. The maximum radiation dose rate limit of interest to those that would be near the container, such as longshoremen, is 10 mrem per hour at a distance of 2 meters from the surface of the container (both dose rate limits come from regulation 49 CFR 173). The actual total dose that a longshoreman would get handling a cask would be quite small due to the fact that a handler would not be present at the surface of the container for long and the total time near the cask would be quite short. Appendix D, Section D.4.3.2.1 of the EIS provides the time/distance analysis of cask handling, Appendix D, Section D.4.5 presents the resulting doses and risks, and Appendix F, Section F.5 presents an evaluation of the dose rates from a transportation cask containing research reactor spent nuclear fuel. The maximum allowable exposure for port workers would be 100 mrem per year, the same radiation dose limit established by the NRC to protect individual members of the public (Section 4.2.2.2 of the EIS). As the EIS demonstrates, both the dose and dose rate for the port workers would be low.

As discussed in Section 2.7.3.2 of the EIS, DOE provides funding to States and Tribes through the Office of Environmental Management and the Office of Civilian Radioactive Waste Management to assist with transportation related issues. This funding has been used in the past to enhance a jurisdiction's emergency management and response capabilities. Besides funding, much of DOE's assistance is provided in the form of technical assistance, for which DOE bears the cost. Assistance may be provided through DOE's Radiological Assistance Program and under the National Contingency Plan, as well as through training, DOE-sponsored meetings, informal discussions, and informational materials.

COMMENTOR NO. 690: WASHINGTON STATE REPRESENTATIVE DEBBIE REGALA (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 690: WASHINGTON STATE REPRESENTATIVE DEBBIE REGALA (CONT'D.)

Appendix H, which was added to the final EIS in response to public comments, contains the general provisions for emergency preparedness and security measures associated with the transportation of foreign research reactor spent nuclear fuel in the United States. The provisions include an interface between DOE and State, Tribal, and local authorities, prior to the implementation of the policy, for the identification and resolution of emergency management and security issues specific to the communities that would be affected. These issues include capabilities and training of first emergency responders. Funding for special needs, if necessary, would be addressed during this interface.

Response to Comment No. 690-4

DOE considers that foreign research reactor spent nuclear fuel could safely be received at commercial ports, as it has in the past, without the additional security that might be present at military bases. The security provided for the spent nuclear fuel shipments would be required to meet or exceed all of the applicable security requirements in the Code of Federal Regulations (10 CFR Part 73). If any port did not already provide security sufficient to satisfy these requirements, it would be the responsibility of the shipper to provide the required additional security. Nevertheless, the commentor's preference of the use of military ports is noted.

Response to Comment No. 690-5

The commentor's preference for overseas reprocessing is noted. This is Management Alternative 2, Subalternative 1b, which is discussed in Sections 2.3 and 4.4.2 of the EIS.

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. 818: WASHINGTON STATE
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ging foreign research reactor spent nuclear fuel through
ver, Sections 4.2.2 and 4.5 of the EIS demonstrate that
ent nuclear fuel to the Port of Tacoma, or to any of the
The analysis of impacts associated with an accident
ent nuclear fuel also determined that no decontamination,
roperty would result from the worst plausible accident

ear fuel in a transportation cask cannot spill because it is
y. Spent nuclear fuel transportation casks are designed
ioactive material. To date, no radioactive material has
clear fuel transportation cask as a result of an accident.

on outdated and inaccurate information, errors have
ding some of the information on the Port of Tacoma
information on the terminals at the Port of Tacoma
dix D, Section D.2.1.9 of the EIS. All of these errors
IS, and the conclusion that the risks associated with
r spent nuclear fuel into the United States through
date ports, are low and would result in low impacts is
d in the analyses, which was verified as being correct,

e security measures that would be taken to ensure that
s of terrorism or theft of materials. DOE considers that
ar fuel could safely be received at commercial ports, as
security such as might be present at military bases. The
ear fuel shipments would be required to meet or exceed
ents in the Code of Federal Regulations (10 CFR Part
vide security sufficient to satisfy these requirements, it
hipper to provide the required additional security.

provided in the new Appendix H that has been added to
mments. This appendix presents the general provisions
s a document that would be prepared for each foreign
hipment to specify details of the transportation process,
t and during transit.

Response to Comment
Commentor No. 942: Washington State
Representative Velma Veloria

Response to Comment No. 942-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

Some outdated and inaccurate information has been found in the draft EIS, including some of the information on the Port of Tacoma and the associated map. Updated information on the terminals at the Port of Tacoma has been incorporated into Appendix D, Section D.2.1.9 of the EIS. All of these errors have been corrected in the final EIS, and the conclusion that the risks associated with accepting foreign research reactor spent nuclear fuel into the United States through Tacoma, or any of the other candidate ports, are low and would result in low impacts is still valid. The population data used in the analyses, which was verified as being correct, were based on the 1990 census.

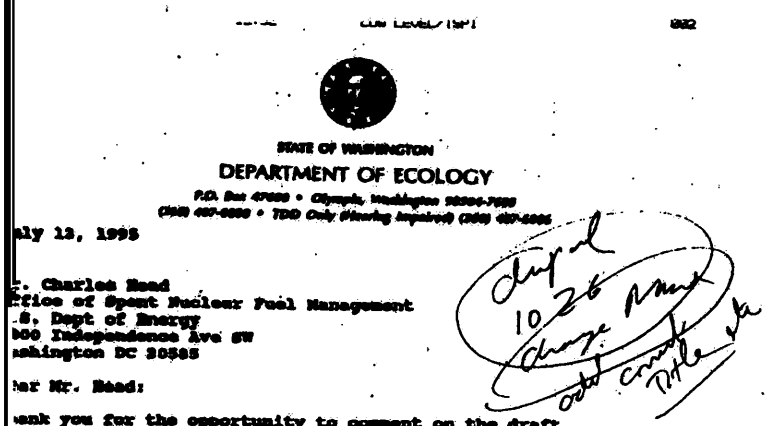
In the unlikely event that a transportation cask loaded with foreign research reactor spent nuclear fuel were to sink in any U.S. coastal waters, it would be recovered, even from the deepest portions of Puget Sound, which reaches depths of 305 meters (1,000 feet). Section D.2.1.3 of the EIS has been modified to include this assurance of recovery in coastal waters. Appendix C, Section C.5.5 of the EIS presents information on the probability of a cask sinking in coastal and deep ocean waters.

DOE has added a sentence to Appendix D, Section D.2.1.9 of the EIS regarding Commencement Bay being a Superfund site. The analysis of impacts in Section 4 of the EIS demonstrates that there would be no significant adverse impacts on the ports, people, or natural environment from shipments of foreign research reactor spent nuclear fuel and the overall impacts to Commencement Bay would be unchanged by the various management alternatives.

The port selection process that determined that Tacoma was an acceptable port considered the population of the port and surrounding areas (Appendix D, Section D.1.9.5 of the EIS). Additionally, all population within a fifty mile radius of the Port of Tacoma was considered when analyzing the potential impact of a range of hypothetical port accidents. The risks were found to be low (Appendix D, Section D.5 of the EIS).

Human health and safety were primary considerations during the evaluation of environmental effects for the proposed action. Conservative estimates of radiological and non-radiological impacts show that risks to the population and workers are low (Sections 4.2.2 and 4.5 of the EIS). Section 4.10 of the EIS describes risks associated with U.S. acceptance of the spent nuclear fuel and compares these risks with those due to natural background radiation and other common risks.

COMMENTOR NO. 1026: STATE OF WASHINGTON DEPARTMENT OF ECOLOGY



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

ly 13, 1995

. Charles Head
ffice of Spent Nuclear Fuel Management
.S. Dept of Energy
00 Independence Ave SW
ashington DC 20585

ar Mr. Head:

ank you for the opportunity to comment on the draft
vironmental impact statement (DEIS) for the Proposed Nuclear
apons Nonproliferation Policy Concerning Foreign Research
actor Spent Nuclear Fuel (DOE/EIS-0218D). We reviewed the
IS and have the following comments for the State of Washington.

y Principles

shington State has dealt with the issue of importing foreign
clear reactor spent fuel since the mid-1980s. Based on public
ncerns and on the work of an interagency task force, the state
s developed a consistent position based on the following key
inciples:

- There must be a clear demonstration of the need to return spent fuel to the United States.
- There must be a basis to select the safest option for transport and storage of the spent fuel.
- There must be early, open, and honest communication with workers, responsible officials and the public in affected communities.
- The federal government must support and work cooperatively with the responsible state and local government agencies in developing the regulatory and emergency preparedness measures needed to assure safe and uneventful transport of spent fuel.

1026-1

propriateness of DEIS

July, 1991, Ecology strongly challenged the U.S. Department of
rgy's (USDOE) draft environmental assessment covering the same
ues, and urged that a full environmental impact statement
S) be prepared. Ecology argued that only an EIS would provide

RESPONSE TO COMMENT
COMMENTOR NO. 1026: STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Response to Comment No. 1026-1

Section 1.2 of the EIS describes the purpose of and need for the proposed action and management alternatives. The intent of the proposed policy is to remove as much U.S.-origin HEU as possible from civil programs worldwide and give foreign research reactor operators time to convert their reactors to the use of LEU fuels and to make arrangements for disposition of their LEU spent nuclear fuel (Section 1.2 of the EIS).

Appendices D through F provide the rationale for selection of candidate ports, transportation routes, and management sites. As discussed in Section 4 of the EIS, environmental effects were evaluated at the candidate ports, along representative transportation routes and at potential management sites. The proposed action and management alternatives were found to result in no significant benefits or risks to human health or the environment.

DOE has attempted to develop this EIS in a completely open manner. In fact, DOE's public interaction related to this draft EIS has been well in excess of the requirements set forth in NEPA and DOE's environmental regulations. Seventeen public hearings were held in the locations determined most likely to be directly affected by the EIS alternatives. In addition, the period of acceptance for written comments was extended from June 20 to July 20, 1995, for a total comment period of 90 days. DOE considers that these actions have provided sufficient opportunity for the public to comment on the draft EIS.

DOE considers that if foreign research reactor spent nuclear fuel is managed in the United States there is adequate regulatory and emergency preparedness infrastructure to ensure its

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RESPONSE TO COMMENT
COMMENTOR NO. 1026: STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY (CONT'D.)

safe acceptance and transportation to the designated management site. As discussed in Section 2.7.1, Federal funding to State, Tribal, and local governments is being provided for maintaining emergency response programs. There are three national emergency response plans under which DOE provides radiological monitoring and assessment assistance. Under these plans, DOE provides technical advice and assistance to the State, Tribal and local agencies involved with a radiological incident. DOE is also required to inform the Governor of each State and any Tribal chair, or their designee, along a transportation route at least seven days in advance of the shipment of hazardous cargoes, including radioactive materials. It would be the responsibility of the Governor to provide any further notification to State and local officials.

Emergency preparedness, security, and coordination of DOE with local emergency response authorities that would be involved with the acceptance and transportation of foreign research reactor spent nuclear fuel will be discussed in detail in the Transportation Plan, that would be prepared prior to any individual spent nuclear fuel shipment and coordinated with State and local officials. The general provisions of the Transportation Plan are included in Appendix H, which was added to the final EIS in response to public comments.

Response to Comment No. 1026-2

The subject Record of Decision designates the Savannah River Site and the Idaho National Engineering Laboratory as interim DOE management sites for domestic and foreign research reactor spent nuclear fuel. Accordingly, no foreign research reactor spent nuclear fuel would be shipped to the Hanford Site.

Response to Comment No. 1026-3

The process of selecting ports is complex because all ports are unique in their positive and negative attributes so that selecting acceptable ports involves evaluating trade-offs. DOE decided that five of the most important attributes would be used as selection criteria: container experience, favorable transit from the open ocean, appropriate facilities, access to intermodal land transportation, and relatively low human population in the port and along routes to management site(s) (Appendix D, Section D.1.9 of the EIS). Other attributes were considered, but were not mandatory (Desirable Attributes, Appendix D, Section D.1.9.6). The application of these criteria required judgement and expert opinion to be applied. For example, Criterion 2, favorable transit from the open ocean or large deep body of water, involves not only distance from the open ocean or deep body of water, but relative safety of the passage. For this reason, a port relatively close to the ocean, such as Houston, may be eliminated while a port such as Portland, which is far from the open ocean (actually the preferred Terminal 6 is about 140 km from open ocean and has been corrected in Appendix D, Table D-4), was not. See Appendix D, Section D.1.9.2 for more information. As stated in Appendix D, Section D.1.9.2 of the EIS, reliable accident rate information is difficult to find and so could not be used as a stand-alone criterion. However, where available, accident rate data was considered as part of the favorable transit.

Response to Comment Commentor No. 1026: State of Washington Department of Ecology (Cont'd.)

rion 4, ready intermodal transportation, turned out to be an easily met criteria for most which passed the first three screening criteria. However, this simply reflects the fact good ports generally have access to intermodal facilities. Thus, while the criterion to screen out any additional ports, it was one which DOE felt obliged to evaluate due United States Merchant Marine Academy Workshop determination that it was important ety.

onfusion between the mandatory requirement for ready intermodal access and desirable ttribute of usefulness is understandable. DOE defined usefulness in Appendix D, on D.1.9.6 as a relative term reflecting the potential for receiving spent nuclear fuel around the world to specific ports (Relative Usefulness by Foreign Research Reactor Shippers in Table D-6), and the ability of those ports to transship the spent nuclear fuel OE storage facilities around the United States via truck and rail routes (Relative lness by Storage Sites in Table D-6). For example, Wilmington, Delaware was removed further consideration because of the relatively high population along the rail routes to aho National Engineering Laboratory, the Hanford Site, and the Nevada Test Site, s limited service by conventional carriers.

own in Appendix D, Figures D-8 through D-17 of the EIS, some combined port/truck populations are significantly different than the combined port/rail route populations en the same port and management site(s). For example, Appendix D, Figure D-8 of S indicates that the combined port/truck-route population from Tacoma to the Savannah Site is clearly below the average for the group of 28 ports evaluated. On the other Appendix D, Figure D-9 shows that the combined port/rail-route population from na to the Savannah River Site is well above the average for the same group of ports ould not be permitted under the low population criterion. Thus, the usefulness of a not based on intermodal usefulness, but on the number of sites which can eventually e spent nuclear fuel by truck and rail from that port within the restrictions imposed by w population criterion.

onse to Comment No. 1026-4

comment states, the representative route selections in Appendix E do contribute to fected population, which is a contributing factor to port selection. This process is sed in Appendix D, Section D.1.9.5 of the EIS. Since the commentor did not mention ific inconsistency, DOE is unable to respond in specific terms.

epresentative truck routes from Tacoma used in the EIS analysis are presented in E1-17 in Appendix E of the EIS. These are representative routes only, which were ed using the HIGHWAY computer code. The representative routes all use I-90, but ecognizes the possibility of using I-84 via Portland. A State of Washington routing y could designate a preferred route, which the shipments would be required to follow, ordance with 49 CFR Part 397.103.

COMMENTOR NO. 1026: STATE OF WASHINGTON DEPARTMENT OF ECOLOGY (CONT'D.)

Charles Head
July 13, 1995
Page 4

consideration to chartered shipping. No cost differential is presented, yet the DEIS appears to assume the higher risks of scheduled cargo shipping are low enough to be acceptable, and that cost tips the balance. There is no explicit analysis of the two alternatives to support the choice of commercial shipping.

The DEIS does include analysis that shows lower health impacts and risks from chartered ships than from regularly scheduled commercial ships. Routine (incident-free) results are presented in Table 4-5. Accident results can be derived from Table 4-7, using the "direct" line for shipments into each port. If one also assumes that chartered ships can go to a port closest to the receiving site, potentially affected populations along land transport routes can be minimized.

As Table 4-7 also indicates, there is in-port risk for ports other than those selected as potential ports of entry if break-bulk cargo ships are used. (This elevated risk is more thoroughly discussed in Appendix D, Section D.5.5.)

1026-5 (Cont'd.)

USDOE appears to prefer general cargo liner transport, probably for cost reasons. However, section 4.8, Costs, does not separate ocean and ground transport costs out. There is no indication of the proportion of total program costs allotted to transport, or the relative costs of charter as against general commercial shipping. Therefore, the public has no basis to discuss the tradeoffs between an obviously lower risk option and supposedly higher costs.

Consistent with the principle of selecting the safest practicable option, we strongly urge USDOE to assess fully the charter ship option.

Consideration of economic impacts of spent fuel shipments on ports. Neither the DEIS nor Appendix D deals with economic impacts of proposed alternatives on potential ports of entry. Appendix A, on Environmental Justice, deals only with minority and low-income population distribution. This is a serious deficiency in the DEIS.

1026-6

Two economic impacts need to be analyzed. First, refusal of union workers to off-load spent fuel casks--or even to work on a ship containing a spent fuel container--could be highly disruptive of port activities and schedules. Yet there is strong indication, not only from comments on the present DEIS, but from comments on previous environmental assessments relating to this program, that such refusals are likely.

RESPONSE TO COMMENT
COMMENTOR NO. 1026: STATE OF WASHINGTON DEPARTMENT OF ECOLOGY (CONT'D.)

As discussed in Appendix E, Section E.4.2 and Section 2.6.4.2 of the EIS, all the representative rail routes were selected using the INTERLINE computer code, which uses a shortest-route algorithm that finds the minimum impedance path. Again, since the commentor does not suggest an alternative rail route, DOE cannot perform a specific comparison.

If a port, such as Tacoma, is found not to be useful for rail shipment, then DOE would use only truck shipments from that port. While truck accident rates are generally higher than rail accident rates, risk is a complex function of the severity of these accidents, the incident-free doses to the public and crew, the vehicle emissions, and the affected population. The affected population should not be restricted to those people who might be involved in accidents, but should include everyone at risk to all aspects of the transport.

The usefulness of a port may change in the future, as population distributions shift or port facilities are upgraded. Thus, DOE evaluated all the transport modes from each port to each management site to maintain flexibility for the future and to make the comparisons complete.

Response to Comment No. 1026-5

The risks associated with using either charter or commercial ships were found to be low (Sections 4.2.2.2 and 4.2.2.3 of the EIS), even though those for charter ships were slightly lower. Since the risks were low for both types of vessels, either type of vessel was determined to be acceptable for use. Since risk is essentially the same, cost, as well as many other items, such as the availability of commercial lines that would accept nuclear material, would go into the final decision of what type of vessel to use, if the foreign research reactor spent nuclear fuel is to be accepted into the United States.

Response to Comment No. 1026-6

The possibility of union workers' refusal to off-load spent nuclear fuel was not considered in the port selection process (Appendix D, Section D.1.9 of the EIS) since that factor does not impact on the capability to safely receive containers carrying foreign research reactor spent nuclear fuel. The decision as to which port or ports would be used, in the case that foreign research reactor spent nuclear fuel is accepted into the United States, will be made in the Record of Decision. In either case, the possibility of union workers' refusal to off-load spent nuclear fuel is one of the many factors that must be considered in determining which ports to use.

ɔ COMMENT
STATE OF WASHINGTON
COLOGY (CONT'D.)

in Section 4 of the EIS, the risk associated
spent nuclear fuel through any of the ports
with the handling of other hazardous cargos.
. the perception by the public of the risks
ter than the actual risk, or the risk from other
erse impacts have not been observed during
ıt nuclear fuel was accepted into the United
he socioeconomic effects evaluated for this
ological fear of receiving spent nuclear fuel.
ɔr cultural impacts to the ports that received
the 30 plus years it was received.

e handling accidents were not analyzed in
ortation cask is correct. The tests performed
casks are more severe than any accidents
drop test is only from 30 feet and dockside
test is still considered more severe because
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mounted on an unyielding surface. Section
ıtion.

the surface of every ISO container to ensure
dent-free exposures that were calculated in
ɔuld be maintained of ships' crews and dock
ɔroach the regulatory limit of 100 mrem per
ties associated with the shipment of foreign

OE provides funding to States and Tribes
nent and the Office of Civilian Radioactive
ɔn related issues. This funding enhances a
ɔonse capabilities. Appendix H of the EIS
eparedness and security measures associated
ctor spent nuclear fuel in the United States.
OE and State, Tribal, and local authorities,
identification and resolution of emergency

COMMENTOR NO. 1026: STATE OF WASHINGTON DEPARTMENT OF ECOLOGY (CONT'D.)

Charles Head
July 13, 1995
Page 6

Public Involvement

As previously mentioned, the DEIS is a major step toward the kind of public involvement this issue requires. The public needs to have the information on which to make up its own mind about tradeoffs, risk management, costs and other key issues. However, USDOE still has some way to go to secure good public involvement. The public hearing that was originally scheduled in Tacoma, as one of the ten potential ports of entry, was moved to SeaTac. There was also no repository library for the DEIS located in Tacoma. Together, this appears to signal a lack of respect for input from the potentially affected public, and the result is increased mistrust and decreased substantive dialogue. 1026-9

Conclusion

Briefly, the items requiring federal support, are: 1026-10

- Independent inspections at all critical points in the shipment;
- Avoiding unsafe sea and road conditions, as determined by responsible state, port, and other officials;
- Provision for pre-arranged safe parking areas along transport routes;
- "Real-time" shipment tracking, accessible to emergency response personnel;
- Training for emergency responders; and
- Active incorporation of shipment-specific provisions in, and regularly exercising of, emergency response plans.

If you have any questions, please call Mr. Mark Wallace with our Nuclear Waste Management Program at (360) 407-7121.

Sincerely,

Keith E. Phillips

Keith E. Phillips
Environmental Review Section

KEP:ri
95-3235

cc: Mark Wallace, Nuc Waste

Attachments

RESPONSE TO COMMENT
COMMENTOR NO. 1026: STATE OF WASHINGTON DEPARTMENT OF ECOLOGY (CONT'D.)

management and security issues specific to the communities that would be affected. These issues include capabilities and training of first emergency responders. Funding for special needs, if necessary, would be addressed during this interface.

Response to Comment No. 1026-9

When DOE first attempted to arrange for a public hearing in Tacoma, a suitable meeting facility could not be located. When a meeting facility was located at SeaTac airport, DOE erroneously concluded that this would be close enough to allow interested participants to attend the meeting. However, after being informed of the dissatisfaction of Tacoma citizens with the SeaTac meeting location, and in the interests of securing good public involvement, DOE held a second public hearing in the city of Tacoma on June 19, 1995. Although the applicable regulations only require DOE to hold one public hearing on a draft EIS, the Tacoma public hearings were among 17 public hearings DOE held on the draft of this EIS.

In addition, as announced in the April 21, 1995 Federal Register notice announcing the availability of the draft EIS, a copy of the draft EIS was available in Tacoma in the Tacoma Public Library, 1102 Tacoma Avenue South, Tacoma, Washington. Additional copies were made available in other locations in the State of Washington, and were available by mail by calling a toll free telephone number specified in the April 21 Federal Register notice.

In addition, the period of acceptance for written comments was extended from June 20 to July 20, 1995, for a total period of 90 days. DOE considers that the public hearings, coupled with the numerous mechanisms used to distribute the draft EIS and accommodate written comments, provided ample opportunity for public involvement.

Response to Comment No. 1026-10

Appendix H of the EIS contains the general provisions for emergency preparedness and security measures associated with the transportation of foreign research reactor spent nuclear fuel in the United States. The provisions include an interface between DOE and State, Tribal, and local authorities, prior to the implementation of the policy, for the identification and resolution of emergency management and security issues specific to the communities that would be affected. The issues would include capabilities and training of first emergency responders as well as the other issues raised by the comment.

'SE TO COMMENT 30: MIKE LOWRY, GOVERNOR OF WASHINGTON

l

to bringing foreign research reactor spent nuclear d. However, analysis in Sections 4.2.2 and 4.5 of the ith bringing spent nuclear fuel to the Port of Tacoma, EIS, is low. The use of a remote port might slightly f an accident, however there are other considerations ort selection. See Appendix D, Section D.1.9 for a on process.

curity measures that would be taken to ensure that f terrorism or theft of materials. DOE considers that uel could safely be received at commercial ports, as urity such as might be present at military bases. The would be required to meet or exceed all the security egulations (10 CFR Part 73). If any port did not sfy these requirements, it would be the responsibility dditional security. DOE supports these regulations esearch reactor spent nuclear fuel in any commercial

al EIS in response to public comments to better reparedness associated with transportation of the uel, This appendix presents the general provisions locument that provides details associated with the reactor spent nuclear fuel, including the security e management site.

pent nuclear fuel is radioactive material, the dose it would be low. No special handling or loading/ l for the foreign research reactor spent nuclear fuel ard shipping containers; experience with handling pecial training of longshoremen is required.

the ports indicated by the port selection process, ormal commercial operations, and therefore not their clients. This position is based on the fact that ar fuel would be accepted by the United States in l require no special handling or precautions. As ercial or economic reaction to the use of the port. mercial impacts to the ports that received foreign e 30 plus years it was received.

ion for exclusive use of military ports to transport r fuel is noted.

9: MIKE LOWRY, GOVERNOR STATE OF WASHINGTON (CONT'D.)

tes and minimize overall risk. We also believe of charter vessels which go directly to an off- l vessels which may make intermediate stops at ee greater discussion of these points in the EIS.

1030-2 (Cont'd.)

ent to an equipped military off-loading facility e the preferred option. This option meets our les relatively less risk to the public and

1030-3

ment of Ecology's detailed comments on this

cerely,

KE LOWRY
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RESPONSE TO COMMENT COMMENTOR NO. 1030: MIKE LOWRY, GOVERNOR STATE OF WASHINGTON (CONT'D.)

Candidate ports were chosen from among commercial and military ports along the eastern seaboard, western seaboard, and the Gulf of Mexico. The selection process is described in Appendix D, Section D.1 of the EIS. No significant human health, safety, or environmental risks were found to exist at any of the candidate commercial or military ports selected (Section 4.2.2 of the EIS). The experience criterion used in the port selection process (Appendix D, Section D.1.9.1) evaluates the port's experience in handling containerized cargo, such as would be the case for any spent nuclear fuel shipments. Although the foreign research reactor spent nuclear fuel is radioactive material, the dose rates from the casks used to transport it are low, so no special handling is required.

Response to Comment No. 1030-3

The commentor's preference for greater consideration of charter vessels, as opposed to commercial vessels, is noted. Based on the analysis of impacts associated with accidents and incident-free operations involving foreign research reactor spent nuclear fuel, the EIS demonstrates that commercial ships represent an acceptable option for the transportation of foreign research reactor spent nuclear fuel (Section 4.2.2.3 of the EIS on consequences of port accidents and Section 4.2.2.2 for impacts of incident-free operation). Whether the shipments come as cargo on a scheduled carrier or on a chartered ship, no special precautions are expected to be required by the Coast Guard or any other authority. As such, there need be no additional requirements to use dedicated ships, nor any adverse consequences to the use of the commercial ships.

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ma for receipt of foreign research
in the EIS indicates that the risks
4.5) and that the risks associated
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rt personnel, the local population,

103-160 (the National Defense
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Commentor No. 1209: Washington State Representatives Marilyn Mitchell and Tim Hickel

WASHINGTON STATE LEGISLATURE

July 14, 1995

Mr. Charles Head
Office of Spent Nuclear Fuel Management
U.S. Department of Energy
1000 Independence Ave. S.W.
Washington D.C. 20585

Dear Mr. Head,

We firmly oppose adoption of a policy by your agency to ship spent nuclear fuel through the Port of Tacoma, Washington.

This letter outlines our objections in detail. Please enter it into the record of written comments on the Draft Environmental Impact Statement (DEIS) on foreign research reactor spent nuclear fuel. We applaud the Department of Energy's commitment to the EIS process, and we welcome the opportunity to share not only our views, but those of many citizens in Washington's 30th Legislative District.

I. GENERAL COMMENTS

In our state, people matter more than policy. The safety and well-being of port employees and residents of neighboring communities must guide DOE's decisions in this matter. The port is no place for nuclear waste. It is bordered by Tacoma and Federal Way, two of Washington's six largest cities. When residents from the other neighboring city of Fife and unincorporated Pierce County are factored in, the civilian population surrounding the port exceeds 200,000 -- which hardly can be classified as low-density. Please note that the city of Federal Way, the city of Milton, the city of Puyallup, the Pierce County Council and the Port of Tacoma have passed resolutions opposing this action, and the city of Tacoma has expressed grave concerns. The representatives of these communities recognize, as we do, that the risk to residents from an accident during transport of this hazardous material is too great. *1209-1*

Though we are pleased by USDOE's commitment to the public process, we note that it has not been entirely satisfactory. Initially, the agency did not even schedule a public hearing in the Tacoma/Federal Way area. It was inexcusable to exclude citizens who would feel the greatest impact from the proposed action. It implied a lack of concern on the part of USDOE, not to mention a failure to recognize the simple geography and population of the surrounding area. USDOE has since remedied the situation by scheduling a hearing in Tacoma, but we must point out that this took place only after significant public outcry. *1209-2*

Response to Comment
Commentor No. 1209: Washington State Representatives Marilyn Mitchell and Tim Hickel

Response to Comment No. 1209-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

All population within a fifty mile radius of the Port of Tacoma was considered when analyzing the impact of both incident-free transport and the range of hypothetical port accidents. The risks were found to be low. (Section D.5 of Appendix D, of the EIS provides details on accident analysis).

Response to Comment No. 1209-2

DOE has attempted to provide ample opportunity for individuals, organizations, and government representatives to comment and/or attend hearings on the proposed action. In fact, seventeen public hearings were held on the draft EIS in the locations determined most likely to be directly affected by the EIS alternatives, specifically in the ports of entry and at the potential management sites. In addition, as stated by the commentor, at the request of the City of Tacoma, representatives of DOE attended a second hearing in that area to allow interested parties to presents comments on the proposed action.

STATE *CKEL (CONT'D.)*	
	elimination of HEU the nonproliferation rams.
	Sections 2.3 and 4.4 ge and reprocessing.
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HICKEL (CONT'D.)

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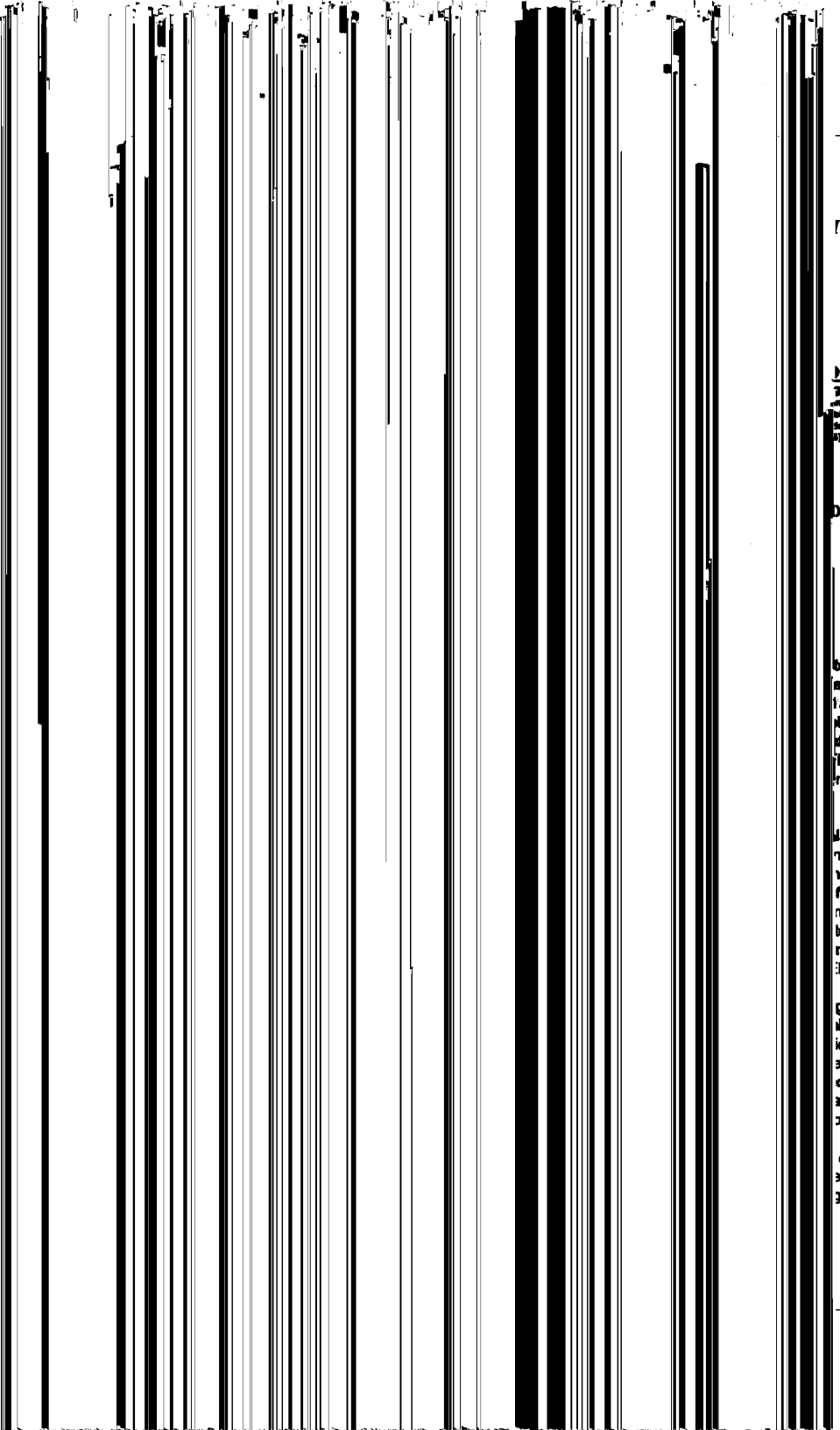

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Response to Comment
Commentor No. 1220: Georgia Department of Natural Resources

Response to Comment No. 1220-1

The commentor's concerns about to the nation's emergency management system are noted.

DOE considers that if foreign research reactor spent nuclear fuel is managed in the United States, there is adequate regulatory and emergency preparedness infrastructure to ensure its safe acceptance and transportation to the designated management site. As discussed in Section 2.7.1 of the EIS, Federal funding to State, Tribal, and local governments is being provided for maintaining emergency response programs. There are three national emergency response plans under which DOE provides technical advice and assistance to the State, Tribal and local agencies involved with a radiological incident. DOE is also required to inform the Governor of each State and any Tribal chair, or their designee, along a transportation route at least seven days in advance of the shipment of hazardous cargos, including radioactive materials. It would be the responsibility of the Governor to provide any further notification to State and local officials.

Emergency preparedness, security, and coordination of DOE with local emergency response authorities that would be involved with the acceptance and transportation of foreign research reactor spent nuclear that would be involved with the acceptance and transportation of foreign research reactor spent nuclear fuel will be discussed in detail in the Transportation Plan, that would be prepared prior to any individual spent nuclear fuel shipment and coordinated with State and local officials. The general provisions of the Transportation Plan are included in Appendix H, which was added to the final EIS in response to public comments.

RESPONSE TO COMMENT 'O. 1220: GEORGIA DEPARTMENT OF URAL RESOURCES (CONT'D.)

Jo. 1220-2

Comment 1220-1 above, this support and assistance is currently ntinue to be supplied.

Jo. 1220-3

that no local responders from the State of Georgia participated ncy Training for Local Responders (RETLR) course referred . The participants were from the States of North and South een revised to correct the inaccuracy.

Jo. 1220-4

7.3.2 of the EIS, DOE provides funding to States and Tribes onmental Management and the Office of Civilian Radioactive with transportation related issues. This funding has been used isdictions emergency management and response capabilities. OE's assistance is provided in the form of technical assistance, st. Assistance may be provided through DOE's Radiological ler the National Contingency Plan, as well as through training, nformal discussions, and informational materials.

e transportation emergency response capabilities mentioned in tine functions any jurisdiction would be expected to maintain.

comment 1220-1, above, Appendix H to the EIS contains the ency preparedness associated with the transportation of foreign

'O COMMENT
GEORGIA DEPARTMENT OF 'RCES (CONT'D.)

ed States. The provisions include an interface
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COMMENTOR NO. 1264: TEXAS STATE REPRESENTATIVE A. CRAIG EILAND

TEXAS HOUSE OF REPRESENTATIVES

CRAIG EILAND

July 21, 1995

VIA FAX: (202)586-5256
Charles Head, Program Manager
Office of Spent Nuclear Fuel Mgmt. (EM-37)
U.S. Department of Energy
1000 Independence Avenue SW
Washington, D.C. 20585

Dear Mr. Head,

I am responding to your request for public comments for the period ending July 20, 1995. I have received and reviewed the letter from various Galveston individuals including Ms. Gini Brown. I join in those comments and have two other items to point out;

1. The Houston Ship Channel is one of the busiest ports in the United States. The entrance to the Houston Ship Channel is the same entrance to the Port of Galveston and is the same entrance to the Port of Texas City. It is a narrow channel and is very crowded. I do not believe that it would be safe or appropriate to transport nuclear waste through such a narrow and busy water way. 1264-1

2. Texas City is home to one of the largest petro-chemical complexes in the world. This complex is within clear view of the Port of Galveston and is only a couple of miles away. There have been historic explosions of unparalleled magnitude at these plants, additionally highways and byways have been shut down because of chemical spills and releases. This does not even take into account the chemicals and product which are shipped through the Houston Ship Channel as previously mentioned, nor does it include the items that are brought by barge through the intracoastal waterway. The intracoastal waterway also contributes to the congestion around the entry to the Houston Ship Channel and the Port of Galveston. 1264-2

Please consider the above as well as those items contained in Ms. Brown's correspondence when rejecting Galveston as a port of transport for nuclear waste. 1264-3

Sincerely yours,

A. Craig Eiland

ACE\ps

DISTRICT 24

RESPONSE TO COMMENT
COMMENTOR NO. 1264: TEXAS STATE REPRESENTATIVE A. CRAIG EILAND

Response to Comment No. 1264-1

The physical constraints of the passage from the Gulf of Mexico to the Port of Galveston were considered as part of the port selection process and were found to meet the requirements of Criterion 2 (Favorable Transit From Open Ocean) for port selection (Appendix D, Section D.1.9.2 of the EIS).

The volume or size of the local marine traffic (present or future) was not considered in the calculation of risk associated with the shipment of foreign research reactor spent nuclear fuel. In general, the number of ship mishaps is not proportional to the amount of ship traffic because port ship traffic is slow, and even when heavy, is normally a small number of ships per hour. Historically, increasing the volume does not significantly increase the probability of an accident. Rather, the number of ship mishaps is associated with navigational hazards and distances from the port to the open ocean or a large bay (Appendix D, Section D.1.9.2 of the EIS). Appendix D, Section D.5.3.1.3 of the EIS presents a discussion of the determination of the probability of ship accidents used in the EIS.

Response to Comment No. 1264-2

The port selection criterion do not consider the existence of land-based facilities such as refineries because they have no direct impact on the risk associated with the shipment of foreign research reactor spent nuclear fuel. The worst case accident is considered to be the collision of the ship carrying the foreign research reactor spent nuclear fuel with a petroleum tanker. In this accident the transportation cask is damaged in the collision, then subjected to a fire that resulted from the collision (Appendix D, Section D.5 of the EIS). The addition of some mishap at a land-based facility would not add to the severity of this accident, and so was not considered. Section 4.2.2.3 of the EIS discusses the assumptions that went into the port accident analyses and the results of those analyses. As discussed in response to Comment 1264-1, the port selection process does not specifically consider the amount of marine traffic as a criterion.

DOE would like to point out that the foreign research reactor spent nuclear fuel is neither volatile nor unstable. The fuel that the proposed policy deals with is a metal which contains enriched uranium matrixed in, all clad with either aluminum or stainless steel. This type of fuel is very stable. Section 2.6.1 of the EIS presents a detailed description of the foreign research reactor spent nuclear fuel.

Response to Comment No. 1264-3

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Galveston is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing foreign research reactor spent nuclear fuel to the Port of Galveston, or to any of the ports analyzed in the EIS, is low. With respect to the comments received by DOE from Ms. Gini Brown, please see the response to comment 1140.

SECTION 2.3
LOCAL GOVERNMENT

ONSE TO COMMENT
: CHERYLL N. WOODS-FLOWERS, WN OF MOUNT PLEASANT

-1

1 of the National Defense Authorization Act for Fiscal idered in development of the criteria for port selection EIS). The application of the criteria that was developed ents, along with the other port selection criteria, are IS.

specifically note the presence of Mount Pleasant in the Terminal, and the rate of population growth of Mount ndix D). The demographic data pertaining to Mount cation of the port selection criteria, but still resulted in Wando Terminal in Mount Pleasant) being identified as .

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mergency response requirements and capabilities are ndix D, Sections D.2.1.1, and D.4.3. The EIS does not ous Material Team, but states in Appendix D, Section ate Ports Authority Port Police are part of an emergency al fire departments, Coast Guard, and private hazardous Such teams are primarily trained for first response rmation on the availability of well-trained and equipped ns, including DOE's Radiological Assistance Program pt, reliable assistance to first responders for long-term

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f the port, including the population in closest proximity calculating the effects of possible accidents (Appendix s additional details on this issue). Although there may t of the fence around the terminal, due to the large size individuals actually live quite some distance from the ar fuel transportation casks would be unloaded. The ontaining foreign research reactor spent nuclear fuel is ction F.5 of the EIS). The calculations in the EIS om incident-free operations (Section 4.2.2.2) and the .3) to all individual would be low, including that to the

-*FLOWERS,*
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COMMENTOR NO. 22:
HELEN M. ALLEN, MAYOR, CITY OF CONCORD (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 22:
HELEN M. ALLEN, MAYOR, CITY OF CONCORD (CONT'D.)

Response to Comment No. 22-10

Yes, for traffic accidents. The chance of a traffic accident does increase as the travel distance increases and this effect was taken into account in the traffic risk calculations that are presented in Section 4.2.3 and Appendix E of the EIS.

Section D.5.9 has been added to Appendix D of the EIS to address the issue of attack by disgruntled persons or terrorists. Also see the response to Comment 78-2 for a brief description of the requirements for physical protection of spent nuclear fuel shipments.

Response to Comment No. 22-11

DOE has not yet selected ports, routes, or transport modes for the foreign research reactor spent nuclear fuel. If Concord NWS is selected, then DOE would choose the best route to I-680 in accordance with Department of Transportation regulations (49 CFR Part 397.101 (a)(2)). That route could use Route 4, Route 24, and/or Waterfront Road. The State of California routing agency can designate a preferred route, which the shipments would be required to follow, in accordance with 49 CFR Part 397.103.

COMMENTOR NO. 63: THOMAS C. TAYLOR, AIRMAN, COUNTY COUNCIL OF BEAUFORT COUNTY

COUNTY COUNCIL OF BEAUFORT COUNTY
ADMINISTRATION BUILDING
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DEPUTY ADMINISTRATORS

MORRIS C. CAMPBELL
THOMAS A. HENDRICKSON, CPA
RANDOLPH L. WOOD, JR.

LAUREN F. HOWELL
COUNTY ATTORNEY

ON

May 5, 1995

R.

artment of Energy
f Environmental Management (EM-37)
n: Mr. Charles Head
ependence Avenue, SW
on, DC 20585-0001

ft Environmental Impact Statement on Proposed Nuclear
pons Non-Proliferation Policy Concerning Foreign Research
ctors Spent Nuclear Fuel

Head:

iting to you as the Chairman of the Beaufort County
Our County Council represents the 87,000 citizens of
County which is located in the lower southeastern
of South Carolina, near Savannah and within 150 miles of
nnah River Site. Over 20,000 of our citizens in Beaufort
eceive their drinking water from the Savannah River. I
ng you to express our Council's serious concern about the
nt of Energy's consideration of further expansion of the
program of storage of spent nuclear fuel rods at the
River Site. As I understand it, the Environmental
Statement on the proposed Nuclear Weapons Non-
ation Policy estimates that further storage of foreign
uclear rods may be forthcoming. While we certainly
te the overall intent of this policy, that being to stop
ad of nuclear weapons grade material, we have serious
on behalf of the citizens of Beaufort County about
storage of spent nuclear fuel rods at the Savannah River

63-1

f of our citizens, we strongly request the Department of
efforts be directed toward cultivating and procuring
tes away from South Carolina for the disposal and/or
of foreign spent nuclear fuel rods. South Carolina has
its fair share of storage for nuclear waste in the

63-2

RESPONSE TO COMMENT
COMMENTOR NO. 63: THOMAS C. TAYLOR, CHAIRMAN, COUNTY COUNCIL OF BEAUFORT COUNTY

Response to Comment No. 63-1

The commentor's opposition to the acceptance and management of foreign research reactor spent nuclear fuel in South Carolina is noted. The EIS has analyzed the environmental impacts that could result from management of foreign research reactor spent nuclear fuel at the Savannah River Site in Section 4.2.4. The analysis indicates that the risk to the health and safety of the public within 50 miles from the Savannah River Site would be low.

Response to Comment No. 63-2

As explained in Section 1.5 of the EIS, the selection of the site or sites at which the foreign research reactor spent nuclear fuel would be managed is based on the analysis in the Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Environmental Impact Statement. The Record of Decision for this EIS was released on May 30, 1995. In accordance with this Record of Decision, all of the aluminum-based foreign research reactor spent nuclear fuel managed by DOE will be managed at the Savannah River Site in South Carolina. Any other foreign research reactor spent nuclear fuel to be managed by DOE will be managed at the Idaho National Engineering Laboratory.

COMMENTOR NO. 63: THOMAS C. TAYLOR, CHAIRMAN, COUNTY COUNCIL OF BEAUFORT COUNTY (CONT'D.)

COUNTY COUNCIL OF BEAUFORT COUNTY

U.S. Department of Energy
May 5, 1995
Page 2

United States. We urge you to now look elsewhere for the protection of future generations of our citizens in this State. 63-2 (Cont'd.)

Cordially

Thomas C. Taylor
Chairman

TCT:smr

cc: Beaufort County Council
Legislative Delegation
County Administrator

RESPONSE TO COMMENT
COMMENTOR NO. 63: THOMAS C. TAYLOR, CHAIRMAN, COUNTY COUNCIL OF BEAUFORT COUNTY (CONT'D.)

NSE TO COMMENT 72: BAY POINT MUNICIPAL . MEMBER GEORGE DELACRUZ

with containers may not equal some of the ports that er traffic, a majority of the containers that Concord erials. DOE considers that Concord NWS's extensive materials easily balances any concern there might be th handling containers. In regard to container handling re adequate. In the longer term Concord NWS is by 1999. Appendix D, Section D.2.1.6 of the EIS iner handling.

ay to Concord meets the requirements of Criterion 2 n) for port selection (Appendix D, Section D.1.9.2). s only one of the considerations in selecting ports of or spent nuclear fuel. Other considerations such as e route to the management site, port experience with ties have also been considered in making the final x D, Section D.1.9 of the EIS presents details of the

be used for the foreign research reactor spent nuclear certain tests, including a fire test, and if the individual tion 2.6.2 of the EIS). These certification standards ortation casks on land, hence the 30 minute fire test, of a high intensity fire resulting from a collision with fire is directly related to the amount of combustibles ere fires on ships is relatively small. Data available London indicate that of 1,073 ship collisions in port , and of those, only five caused extensive damage, ling of structures.

ight have on a spent nuclear fuel transportation cask, igate the potential damage. First, ship fires tend to s the combustible material is consumed, so the cask duration of the fire. Second, a ship fire's intensity is xygen that can reach the interior of a hold. Third, all ort foreign research reactor spent nuclear fuel have which at a minimum would keep fires well below the

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Commentor No. 72: Bay Point Municipal Advisory Council Member George Delacruz (Cont'd.)

Charles R. Head
page 4 of 6

There are reports of 1,000 lb. bombs being dropped into the waters around CNWS, and it is said that some of the munitions are unrecoverable. If they remain submerged at the piers, they would pose a substantial risk to the safety of ships calling at CNWS. — 72-14 (Cont'd.)

I believe that the port selection process is deficient. Some highly qualified ports were left off the list which could perform the work called for in the EIS--Seal Beach Naval Weapons Station and Point Mugu Naval Station, to name just two. These ports were not on the original list for consideration. Why? — 72-15

Within less than one mile of the offloading site at CNWS, is Contra Costa Water District's Mallard reservoir which provides safe drinking water for as many as 500,000 people. — 72-16

The map on page 3-27, figure 3-24, Volume 1, March 1995 of the Draft EIS, is very deceptive. It does not show the close proximity to a large population of Contra Costa County residents. It does not show the prevailing winds in this area which would, in the normal course blow directly over Bay Point, Pittsburg, Antioch, Brentwood, Oakley and the rest of East Contra Costa County. In the event of a release of radioactivity, the life and well being of everyone in the these communities would be jeopardized — 72-17

Figures 3-23 and 3-26 are incorrect and show some lack of care in the preparation of this document. These tables consider surrounding counties only when Contra Costa is the county which would bear the brunt of any accidental release of radiation from SNF. — 72-18

Having lived in this area all of my life, I must take exception to the calling of Suisun Bay, San Suison Bay. It appears your cartographers are documenting the area from afar, and don't care about the historic significance of our area. — 72-19

What percentage of SNF casks are of the 125-ton variety? These, of course, would demand special handling. The exhibits shown at the Concord Centre Public meeting showed standard 20 and 40 foot SO containers. The public needs to know which are going to be the predominant type. — 72-20

What will the D.O.E. do to indemnify residents for the drop in property values which will surely follow the bringing of SNF into the Concord Naval Weapons Station. Under California Realty Law, one sellers are required to notify potential buyers of any hazards incumbent upon their property, such as electro magnetic power fields and earthquake faults. Potential radiation exposure will be included in this list. — 72-21

Response to Comment Commentor No. 72: Bay Point Municipal Advisory Council Member George Delacruz (Cont'd.)

Response to Comment No. 72-9

If the foreign research reactor spent nuclear fuel is accepted into the United States (Management Alternative 1 or 3) there would be no storage of this material at Concord NWS, any other port, or anyplace except for DOE management sites. Under normal circumstances, it would remain at a port for only a few hours. In the event of a major disruption of ground transportation systems, due to adverse weather, seismic activity, or other situation, DOE's goal is to minimize holding times at the ports and to provide safe transport of the spent nuclear fuel to its destination as quickly as possible. Spent nuclear fuel from foreign research reactors is radioactive, but is not toxic, flammable, or explosive.

Response to Comment No. 72-10

DOE expects that agreements between Concord NWS and Contra Costa County would be followed in the unlikely event of an accident. The Station has a Disaster Preparedness Plan which includes a Mutual Aid Agreement between the Naval Weapons Station and Contra Costa County. Under the terms of the agreement each party is to immediately notify the other of any emergency which presents an imminent danger. A similar mutual aid agreement also exists between the Station and the County Fire Protection District.

Several accident scenarios including a breach of the cask and fire sufficient to oxidize the contents were analyzed during preparation of the EIS. Results of the accident analysis at the ports are given in Section 4.2.2 of the EIS with supporting detail in Appendix D, Section D.5. of the EIS. No catastrophic effects were found to result from severe accidents involving foreign research reactor spent nuclear fuel.

Response to Comment No. 72-11

The routes in Appendix E of the EIS are representative routes and the actual routes may vary, but all the routes do take into consideration accident rates, transit times, and population densities. Since the commentor did not specify what activities in the area that DOE did not consider, a more specific response cannot be provided.

Response to Comment No. 72-12

DOE has not yet selected transportation routes or transport modes for the foreign research reactor spent nuclear fuel. If the Concord NWS is selected, then DOE would choose the best route to I-680 in accordance with U.S. Department of Transportation regulations (49 CFR Part 397.101 (a)(2)). That route could use Route 4, Route 24, and/or Waterfront Road. These are the local Concord streets that the trucks would probably use. The State of California routing agency can designate a preferred route, which the shipments would be required to follow, in accordance with 49 CFR Part 397.103.

...SE TO COMMENT
72: BAY POINT MUNICIPAL
...BER GEORGE DELACRUZ (CONT'D.)

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...icy on alcohol and drug abuse. Individuals suspected
...s or alcohol would be removed from their worksite
...y for a competence-for-duty examination. If found
...ld be sent home and action initiated to rehabilitate
...pending on specific circumstances in each case. A
...WS has been approved by the Navy and is expected
...lar year 1995.

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...from a September 1993 television report, the Contra
... initiated an investigation of the safety at Concord
...Safety at the Concord Naval Weapons Station dated
...t: "There were no incidents involving explosions or
... of the reported incidents were not accidents caused
...rather, were discoveries by employees that materials
...ring loading or transit." In some cases the shipments
...ed or banded.

...rd NWS is significantly better than that of similar
...or. According to the Department of Labor statistics,
...dling, the number of lost workday cases per 100 full-
...nwide (current data not available), which is typical.
...per 100 workers at Concord NWS for the first three
..., which is also typical for Concord.

...rklifts would not be expected to be used to unload
...r fuel containers, however, if a forklift was to puncture
...tor spent nuclear fuel, the cask would not be damaged
... gap between the cask and the container wall of
...nd second, the rugged construction of the cask would
...because the casks are designed and built to withstand
...s) onto a 15 cm (6 inch) steel bar without damage
... EIS).

...ce has been dropped into the water and not recovered,
...sured DOE that no ordnance has ever been dropped
...d that if ordnance were to be dropped into the water,
... exception. As a confirmation that no ordnance has
...ported, periodic dredging of the dock area has never

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RESPONSE TO COMMENT
COMMENTOR NO. 72: BAY POINT MUNICIPAL ADVISORY COUNCIL MEMBER GEORGE DELACRUZ (CONT'D.)

Response to Comment No. 72-15

The initial screening of both military and commercial ports removed those ports and bases that did not regularly handle containerized cargo from ocean-going ships in any sufficient quantity. Only 31 commercial ports and three military bases qualified, not including Seal Beach Naval Weapons Station or Point Mugu Naval Station (Appendix D, Section D.1.9.1 of the EIS).

Response to Comment No. 72-16

Spent nuclear fuel transportation casks are designed and built to preclude release of radioactive material. To date, after more than 40 years of spent nuclear fuel transports within the United States, no radioactive contents have ever been released from a spent nuclear fuel transportation cask, nor has a spent nuclear fuel transportation cask ever been punctured, even as the result of an accident. Based on this experience, DOE considers that spent nuclear fuel transportation casks passing through the Concord NWS would not release their radioactive contents, and would not affect the quality of the water supply for Contra Costa Water District via Mallard Reservoir or any other path. Analysis of a severe accident involving a ship at Concord NWS (Section 4.2.2.3 of the EIS) indicates that the resultant contamination would be so small that no cleanup would be required, other than possibly in the immediate vicinity of the accident. This means that contamination of Mallard Reservoir would be minimal. To insure that this was the case, if such a severe accident were to occur, all water supplies in the area, as well as food and air, would be tested for contamination.

Response to Comment No. 72-17

The maps in Section 3.2 of the EIS are presented to provide the reader with some detail of the immediate area of the proposed site of receipt to aid in identifying the site being discussed, not to show the general area and major population centers or meteorology. If the scale were to be increased so as to show the general area, the details of the immediate area of the port or base would be lost. The text of Section 3.2 for each port does discuss the population within 10 miles, and the analysis of the impacts of accidents considers the population within 50 miles of the port (Appendix D, Section D.5 of the EIS), so the population of the general area has been considered. Likewise, the local meteorology was taken into account when the impacts of accidents were calculated (Appendix D, Section D.5.3.3 of the EIS). To present a map showing the prevailing wind might wrongly convey that only that wind was considered, when in fact that is not the case.

Section 4.2.2.3 of the EIS discusses the impacts of accidents in ports, and shows that the risks of using any of the proposed ports to receive foreign research reactor spent nuclear fuel would be low.

Response to Comment
Commentor No. 72: Bay Point Municipal
sory Council Member George Delacruz (Cont'd.)

nse to Comment No. 72-18

ion 3 of the EIS, Figures 3-23 and 3-26 show the number of low-income households ıding the Military Ocean Terminal at Sunny Point, North Carolina and the Naval ns Station at Concord, California, respectively. The enumeration of households g within 10 miles (16 km) of candidate ports, and within counties whose boundaries ast partially within a 10-mile radius centered at the port, was obtained from data ed by the United States Bureau of the Census based on the 1990 Census (Appendix e EIS). County data shown in Section 3 and Appendix A for the Military Ocean al at Sunny Point includes Brunswick and New Hanover Counties, while the onding data for the Naval Weapons Station at Concord includes Contra Costa and counties. Additional data concerning low-income households surrounding ate ports is given in Table A-3 of Appendix A. Figures A-11 through A-20 of dix A show distributions of low-income households residing near candidate ports.

nse to Comment No. 72-19

rrection has been made in Section 3.2.1.6 and Appendix D, Section D.2.1.6 of the

nse to Comment No. 72-20

ussed in Appendix B of the EIS the potential casks identified for marine transport ign research reactor spent nuclear fuel weigh approximately 10 to 25 metric tons. 5-ton variety of casks are rail transportation casks to be potentially used for spent fuel transportation between management sites. These casks are not used for marine ort. Either size of ISO container might be used, depending on availability at the a shipment

nse to Comment No. 72-21

is no evidence that property values would be diminished at Concord NWS, or any ort for that matter, due to the implementation of the proposed action. Furthermore, alysis in the EIS examined in detail potential risks related to the proposed action, termined that they are low. Additionally, as to the concern that California realty uld eventually require home sellers to notify potential buyers of potential radiation re, DOE's safe management and operation of the foreign research reactor spent fuels program would minimize any potential risk.

nse to Comment No. 72-22

on the evaluation of impacts presented in Section 4 of the EIS, the risk associated e shipments of foreign research reactor spent nuclear fuel through any of the ports

RESPONSE TO COMMENT
COMMENTOR NO. 72: BAY POINT MUNICIPAL ADVISORY COUNCIL MEMBER GEORGE DELACRUZ (CONT'D.)

identified is not greater than the risk associated with the handling of other hazardous cargos. DOE acknowledges that, in many instances, the perception by the public of the risks associated with spent nuclear fuel may be greater than the actual risk, or the risk from other even more hazardous activities. However, such adverse impacts have not been observed during the 30 plus years foreign research reactor fuel was accepted into the United States in the past. Under NEPA regulations, the socioeconomic effects evaluated for this EIS do not include those associated with psychological fear of receiving spent nuclear fuel at Concord NWS.

Response to Comment No. 72-23

The commentor's position on Management Alternative 2 is noted. Management Alternative 2 is discussed in Sections 2.3 and 4.4. of the EIS.

Response to Comment No. 72-24

The risk of releasing radioactive material from a foreign research reactor spent nuclear fuel transportation cask as the result of a seismic event is low. Transportation casks are designed and built to withstand significant punishment without releasing their contents (Section 2.6.2 of the EIS). Therefore, a seismic event, even if it caused structures at Concord NWS to fail, is not expected to compromise the transportation cask.

Response to Comment No. 72-25

DOE understands that the expansion of capabilities at Concord NWS will continue as scheduled regardless of the outcome of the proposed policy on foreign research reactor spent nuclear fuel. The principal upgrade to occur at Concord NWS is the addition of two container cranes. Although these cranes would facilitate the off-loading of the foreign research reactor spent nuclear fuel, if it were to be shipped to Concord NWS, the current container handling equipment is adequate. Therefore, no new facilities are required in order to use Concord NWS. The facility upgrade that is to occur at Concord NWS has no connection with the proposed policy to manage foreign research reactor spent nuclear fuel. The need for construction of new facilities or modification of existing facilities discussed in Section 1.4 is referring to construction or modification of DOE management sites, not ports or bases that might receive the spent nuclear fuel for transshipment to the management sites.

Response to Comment No. 72-26

The impacts of ultimate disposition of foreign research reactor spent nuclear fuel are discussed qualitatively in Section 4.2.7 of the EIS. DOE is currently evaluating the feasibility of construction of a disposal site at Yucca Mountain, NV. In the meantime,

RESPONSE TO COMMENT
COMMENTOR NO. 72: BAY POINT MUNICIPAL ADVISORY COUNCIL MEMBER GEORGE DELACRUZ (CONT'D.)

support for U.S. nuclear weapons nonproliferation policy requires DOE and the Department of State to consider other means of dealing with the foreign research reactor spent nuclear fuel (Section 1.1. of the EIS).

Response to Comment No. 72-27

Under Implementation Alternative 6, vitrified high-level waste generated after chemical separation of spent nuclear fuel is expected to be acceptable for geologic disposal. The criteria for waste acceptance in a geologic repository and the long-term performance of the repository are still under investigation, but vitrified waste is known to be very stable over long periods of time.

The technology for chemical separation of spent nuclear fuel is not under development, but rather has been used for decades and is still being used today in several nations.

If the decision is made to accept foreign research reactor spent nuclear fuel into the United States, and if DOE's decision is to store the foreign research reactor spent nuclear fuel instead of chemically separating it, then new construction for long-term storage would be necessary at any of the five management sites.

As explained in Section 1.5 of the EIS, the selection of the site or sites at which the foreign research reactor spent nuclear fuel would be managed is based on the analysis in the Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs EIS. The Record of Decision for this EIS was released on May 30, 1995. In accordance with this Record of Decision, all of the aluminum-based foreign research reactor spent nuclear fuel managed by DOE will be managed at the Savannah River Site in South Carolina. Any other foreign research reactor spent nuclear fuel to be managed by DOE will be managed at the Idaho National Engineering Laboratory.

Response to Comment No. 72-28

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through Concord NWS is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing foreign research reactor spent nuclear fuel to the Concord NWS, or to any port analyzed in the EIS, is low.

There are no regulations against sending spent nuclear fuel through the Panama Canal. Furthermore, Mr. Head does not recall stating that the Panama Canal would not be used. It is possible that, if foreign research reactor spent nuclear fuel is accepted into the United States, some of it may pass through the Panama Canal. Appendix D, Section D.5.3.1 of the EIS discusses the probability of the release of radioactive material from a spent nuclear fuel transportation cask and shows that the probability is low.

COMMENTOR NO. 72: BAY POINT MUNICIPAL ADVISORY COUNCIL MEMBER GEORGE DELACRUZ (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 72: BAY POINT MUNICIPAL ADVISORY COUNCIL MEMBER GEORGE DELACRUZ (CONT'D.)

Response to Comment No. 72-29

The EIS evaluates the risk associated with marine port activities in Section 4.2.2. The port impacts were evaluated for both incident-free and accident conditions. Earthquakes were not analyzed separately in the EIS because seismic activity would not result in greater damage to a transportation cask than that caused by a ship collision and subsequent fire. Rather, the consequences from the worst plausible accidents involving foreign research reactor spent nuclear fuel transportation casks were evaluated, regardless of what initiated them. An earthquake could be the initiator of either a ship or road accident and thus effect the probability of such accidents, however, the number of earthquake-induced ship and road accidents is small compared to other causes. DOE considers that the inclusion of geologic survey maps of the Concord NWS area is not relevant to the impacts analysis presented in Section 4 of the EIS.

Response to Comment No. 72-30

The commentor's suggestion that all spent nuclear fuel go to a new wet storage facility at the Oak Ridge Reservation is noted.

Response to Comment No. 72-31

DOE did not specify a preferred alternative in the draft EIS. DOE's preferred alternative is specified in this final version of the EIS (Sections 2.9 and 4.7). However, if DOE decides to accept the maximum quantity of foreign research reactor spent nuclear fuel into the United States under the basic implementation of Management Alternative 1 (Section 2.2.1), the number of shipments expected to be received at West Coast ports would be approximately 185 over 13 years, or about one a month. Other possible amounts of foreign research reactor spent nuclear fuel that might be accepted on the West Coast under the hybrid alternative range from 185 to zero.

The volume or size of the local marine traffic (present or future) was not considered in the calculation of risk associated with the shipment of foreign research reactor spent nuclear fuel. In general, the number of ship mishaps is not proportional to the amount of ship traffic because port ship traffic is slow, and even when heavy, is normally a small number of ships per hour. Historically, increasing the volume does not significantly increase the probability of an accident. Rather, the number of ship mishaps is associated with navigational hazards and distances from the port to the open ocean or a large bay Appendix D, Section D.1.9.2). (Appendix D, Section D.5.3.1.3 presents a discussion of the determination of the probability of ship accidents used in the EIS.

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cargos. DOE acknowledges that, in many instances, the perception by the public of the risks associated with spent nuclear fuel may be greater than the actual risk, or the risk from other even more hazardous activities. However, adverse impacts have not been observed during the 30 plus years foreign research reactor spent nuclear fuel was accepted into the United States in the past. Under NEPA regulations, the socioeconomic effects evaluated for this EIS do not include those associated with psychological fear of receiving foreign research reactor spent nuclear fuel. Based on this past experience, DOE considers that shipping foreign research reactor spent nuclear fuel through the Port of Tacoma would have no adverse economic impacts on business within the port or the surrounding communities.

COMMENTOR NO. 79:
MARTINEZ CITY COUNCIL MEMBER JULIAN FRAZER

City of Martinez
525 Henrietta Street, Martinez, CA 94553-2394
(510) 372-3505
FAX: (510) 372-0257

May 26, 1995

Charles Head, Program Manager
Office of Spent Nuclear Fuel Management (EM-37)
U.S. Department of Energy
1000 Independence Avenue
Washington, D.C. 20585-0001

Re: Draft Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel

Dear Mr. Head:

I appreciated the opportunity to address questions to you at the May 22 public hearing in Concord. As an elected councilperson and resident of the City of Martinez, I am concerned that the Department of Energy (DOE) has not fully considered critical health and safety issues raised by its proposal to ship foreign spent nuclear fuel through the Concord Naval Weapons Station (Concord NWS).

This letter is my individual position. The City Council will consider adopting a City position on June 5, 1995.

The City of Martinez, like Concord, has been a close neighbor to the Concord NWS for over 50 years. Martinez is a major refinery and chemical production center, and together with Richmond and Benicia, forms part of one of the largest refinery areas in the United States. Millions of tons of petroleum and chemicals pass through these ports every year. The proposed federal action will move spent nuclear fuel directly through the heart of this busy area. We note that the draft environmental impact statement (Draft EIS) does not appear to take the proximity to refineries or refinery ship traffic into consideration in its calculations of risk of accident from the project. The ships bearing spent nuclear fuel will pass under at least six bridges (including the Golden Gate) before reaching Concord NWS. Moreover, the Draft EIS does not appear to acknowledge the close proximity of the Concord Fault to the Concord NWS, or consider the risk of seismic disturbances in the immediate vicinity of shipping activities. 79-1 79-2

The Draft EIS considers the hazards of an accident to be so minimal as to be comparable to routine human activities, as shown in Table 4-60. This assertion appears inconsistent with DOE's explanation for moving the proposed entry port from Oakland to Concord NWS, namely that the area around Concord NWS has a lower population than that surrounding Oakland. In addition, the stated preference for military ports also suggests a higher level of risk than acknowledged in the Draft EIS. 79-3 79-4

CITY COUNCIL ... CITY MANAGER

RESPONSE TO COMMENT
COMMENTOR NO. 79:
MARTINEZ CITY COUNCIL MEMBER JULIAN FRAZER

Response to Comment No. 79-1

The volume or size of the local marine traffic (present or future) was not considered in the calculation of risk associated with the shipment of foreign research reactor spent nuclear fuel. In general, the number of ship mishaps is not proportional to the amount of ship traffic because port ship traffic is slow, and even when heavy, is normally a small number of ships per hour. Historically, increasing the volume does not significantly increase the probability of an accident. Rather, the number of ship mishaps is associated with navigational hazards and distances from the port to the open ocean or a large bay (port selection Criterion 2; Appendix D, Section D.1.9.2 of the EIS). Appendix D, Section D.5.3.1.3 of the EIS presents a discussion of the determination of the probability of ship accidents used in the EIS. The addition of some mishap at a land-based facility would not add to the severity of this accident, and so was not considered. Section 4.2.2.3 discusses the assumptions that went into the port accident analysis and the results of those analyses.

Response to Comment No. 79-2

Appendix D, Section D.2.1.6 of the EIS discusses the seismic activity at Concord NWS. Transportation casks are designed and built to withstand significant punishment without releasing their contents (Section 2.6.2 of the EIS). Therefore, a seismic event, even if it caused structures at Concord NWS to fail, is not expected to compromise the transportation cask. Earthquakes were not analyzed separately in the EIS because seismic activity would not result in greater damage to a transportation cask than that caused by a ship collision and subsequent fire. Rather, the consequences from the worst plausible accidents involving foreign research reactor spent nuclear fuel transportation casks were evaluated, regardless of what initiated them. An earthquake could be the initiator of either a ship or road accident and thus effect the probability of such accidents, however, the number of earthquake-induced ship and road accidents is small compared to other causes.

Response to Comment No. 79-3

Concord NWS was one of ten ports that was indicated to be acceptable to receive the foreign research reactor spent nuclear fuel, if accepted into the United States. Population of the port and surrounding areas is one of the considerations of the port selection criteria, and one of the reasons the port of Oakland was not included in the final list of ports. Section 3151 of Public Law 103-160 (the National Defense Authorization Act for the Fiscal Year 1994), requires that the Secretary of Energy shall, "if economically feasible and to the maximum extent practicable, provide for the receipt of spent nuclear fuel...at a port of entry in the United States which...had the lowest human population in the area surrounding the port of entry..." Public Law 103-160 was signed on November 30, 1993, which is after completion of the scoping process for this EIS, including the scoping meeting in Oakland, California. While the National Defense Authorization Act was written

R No. 79: BER JULIAN FRAZER (CONT'D.)

or economic impact of a catastrophic 79-5
s not address the hazard to human health
ctive cask. One of the principal reasons 79-6
ch potential activities (i.e., terrorism) in
ry is not exempt from these activities.

s imposed by the proposed project upon
in the event of an accident. In your
would be responsible for responding to
wever, we do not know what assistance
a ship-board fire or accident at Concord 79-7
vices would be required in the event of
nities imposed by the project? What
NWS in order to carry out the proposed
se to the county, Martinez, Concord, and

he immediate vicinity of Concord NWS
k of such information inhibits the ability 79-8
potential responses in the event of an
I-680 is Waterfront Road, which passes

s 20) provides insufficient time for local
nal proposal of such local significance.
ity require months of consideration and 79-9
extend the comment period for at least
d to these concerns in writing at your

these matters to you.

Senator Barbara Boxer
Senator Dianne Feinstein
Congressman Bill Baker
Congressman George Miller

RESPONSE TO COMMENT COMMENTOR NO. 79: MARTINEZ CITY COUNCIL MEMBER JULIAN FRAZER (CONT'D.)

specifically to regulate the receipt and storage of foreign research reactor spent nuclear fuel at DOE's Savannah River Site, DOE elected to apply this criterion, among others, in identifying potential ports of entry, to the maximum extent practicable.

DOE included consideration of Section 3151 of Public Law 103-160 by including Criterion 5 in the port selection criteria for this EIS (Appendix D, Section D.1.9.5). Application of this criterion resulted in Oakland being dropped from the list of proposed ports of entry, while Concord NWS stayed on the list.

Response to Comment No. 79-4

Ten ports that are considered to be able to safely receive foreign research reactor spent nuclear fuel were selected using the port selection criteria discussed in Appendix D, Section D.1.9. of the EIS. Examination of the port selection criteria will show that there is no stated preference for military ports, contrary to the comment. Either military or commercial ports, if they meet the selection criteria, are equally acceptable. Risks associated with accidents in both military and commercial ports are discussed in Appendix D, Section D.5.5.

Response to Comment No. 79-5

Appendix D, Section D.5.3.1 of the EIS describes several accident scenarios, including catastrophic accidents. The results of the analysis of these accidents can be found in Appendix D, Section D.5.4.

Response to Comment No. 79-6

An analysis of an enveloping sabotage scenario, cask explosion, is evaluated in Appendix D, Section D.5.9, of the EIS. The consequences of such scenario indicate that the general property destruction and numerous fatalities and injuries that could result from the explosion would result in far greater harm to the general health of the public in the immediate vicinity of such explosion than caused by the release of radioactive material from the spent nuclear fuel inside the transportation cask.

Response to Comment No. 79-7

DOE considers that there is adequate regulatory and emergency preparedness infrastructure to ensure the safe acceptance and transportation to the designated management site if foreign research reactor spent nuclear fuel is managed in the United States. As discussed in Section 2.7.1 of the EIS, Federal funding to State, Tribal, and local governments is being provided for maintaining emergency response programs. There are three national emergency response plans under which DOE provides radiological monitoring and assessment assistance. Under these plans, DOE provides technical advice and assistance

SE TO COMMENT
O. 79: MARTINEZ CITY
JULIAN FRAZER (CONT'D.)

involved with a radiological incident. Emergency
h of DOE with local emergency response authorities,
ı Sections 2.7 and 2.8 of the EIS. Details would be
ı, that would be prepared prior to any individual
dinated with State and local officials. The general
are included in Appendix H, which was added to
nments.

, or transport modes for the foreign research reactor
s selected, then DOE would choose the best route
rtment of Transportation regulations (49 CFR Part
: Route 4, Route 24, and/or Waterfront Road. The
ı designate a preferred route, which the shipments
lance with 49 CFR Part 397.103.

nts in response to the draft EIS was extended from
lers that the comment period (90 days total) to be

Response to Comment
mmentor No. 91: City of Berkeley

omment No. 91-1

e proposed action is to support U.S. nuclear weapons nonproliferation
o reduce, and eventually eliminate, the use of highly enriched (weapons-
in civil programs worldwide (Section 1.2 of the EIS). The proposed
es the continued use of, or conversion to, LEU fuels in foreign research
um is present in such minute quantities in spent nuclear fuel from research
not considered a proliferation threat. The uranium-235 content of HEU
el is a significant proliferation concern.

omment No. 91-2

erse environmental and human health effects were evaluated and found
eneral radiological health effects are quantified in Section 4.1.3 and the
with each alternative are presented throughout the rest of Section 4 of the

omment No. 91-3

due to accidents involving the transportation and other management of
rch reactor spent nuclear fuel are discussed in Sections 4.2.3 and 4.2.4 of
ults of the analyses of the credible accidents involving foreign research
lear fuel demonstrate that the risk associated with implementation of the
is low. Due to differences in the nature of the foreign research reactor
l from the situation at Chernobyl (e.g., Chernobyl involved an operating
ith a graphite moderated core versus the foreign research reactor spent
ch is metallic, water moderated, shutdown and shipped dry in relatively
there are no accidents involving the foreign research reactor spent nuclear
pproach the severity of the Chernobyl accident.

omment No. 91-4

of an accident at sea is discussed in Appendix C, Section C.5.5 of the
ort accident probabilities are found in Appendix D, Section D.5.3.1.3.
e EIS indicates that the risks associated with an accident are low (Section
spect to accidents involving a fire as mentioned by the commentor, the
results of an analysis of the effects of an accident that involves a severe
gory 6), during which an airborne release of radioactive material results.
ction D.5.4 of the EIS presents the results of the analysis.

COUNTY COUNCIL

6/6/95
e County Council
Tacoma Ave So #1046
oma, WA 98407
(206) 591-7777

PROPOSAL NO. R95-113
Wendell Brown, Ken Madsen,

-113

EXPRESSING STRONG OPPOSITION
KING PROPOSED JOINTLY BY THE
ENERGY AND UNITED STATES
PT AND MANAGE SPENT NUCLEAR
REACTORS BY SHIPMENT THROUGH
M.

t of Energy and the United
posing to adopt a policy to
search reactors; and

nium enriched in the United
policy; and

is to promote United States
objectives, specifically
from civilian commerce, and

nd policy considerations of
for implementation of the

uld be the acceptance and
Department of Energy in the

RESPONSE TO COMMENT
COMMENTOR NO. 94: PIERCE COUNTY COUNCIL

MMENT

UNTY COUNCIL (CONT'D.)

Tacoma has been incorporated into

d with foreign research reactor spent
t would be recovered, even from the
s of 305 meters (1,000 feet). Section
is assurance of recovery in coastal
nts information on the probability of
The impacts of a foreign research
ing in coastal and deep waters are
he results of this analysis show that
nts are low (Appendix C, Sections

veral accident scenarios that involve
ose to land as would be the case in
idents can be found in Appendix D,
vent of a severe ship fire, neither the
ection D.5.5). Although the non-
would obviously impact the local
to the presence of foreign research

ear fuel through the Port of Tacoma
Commencement Bay as a result of
nal burden to this designation. The
not add any hazardous material to
nce to Appendix D, Section D.2.1.9
encement Bay as a Superfund Site.
not other more hazardous material
d create a stigma is an unjustified
tion 4 of the EIS, shows that there
eople, or natural environment from

Response to Comment No. 94: Pierce County Council (Cont'd.)

research reactor spent nuclear fuel through any of the ports of entry.
re no adverse economic or cultural impacts to the ports that received
tor spent nuclear fuel for the 30 plus years it was received.

nent No. 94-5

esearch reactor spent nuclear fuel would not jeopardize the significant
aken in the area of Commencement Bay and the Port of Tacoma as
tor. The analysis in the EIS indicates that there would be no significant
ıy of the ports or bays, or the quality of water or air (Section 4.2.1.1
ction C.2 of the EIS). Spent nuclear fuel transportation casks are
› preclude release of radioactive material. Based on over 30 years
spent nuclear fuel, DOE considers that transportation casks passing
ıcoma, Commencement Bay, or any other port or waterway analyzed
affect air or water quality. A paragraph has been added to Section
› make this point and to emphasize the no-impact nature of these
water quality. Similarly, DOE considers that based on the experience
ceived spent nuclear fuel in the past, there would be no adverse
ıesses or industry in the Commencement Bay/Port of Tacoma area
›reign research reactor spent nuclear fuel.

nent No. 94-6

ıism nor theft of materials by a determined group or individual can
ıded. However, proper security measures greatly reduce the risk.
ın added to Appendix D of the EIS to address terrorism and sabotage.
ign research reactor spent nuclear fuel would be conducted meeting
security requirements in the Code of Federal Regulations (10 CFR
I has been added to the final EIS in response to public comments to
ecurity and emergency preparedness associated with transportation
ch reactor spent nuclear fuel. This appendix presents the general
nsportation Plan, which is a document that provides all of the details
transportation of the foreign research reactor spent nuclear fuel,
y arrangements in port and in transit to the management site.

nent No. 94-7

d for the spent nuclear fuel shipments would be required to meet or
ble security requirements in the Code of Federal Regulations (10 CFR
id not already provide security sufficient to satisfy these requirements,
nsibility of the shipper to provide the required additional security.

graph of the response to Comment 94-6, above.

SPONSE TO COMMENT
: PIERCE COUNTY COUNCIL (CONT'D.)

94-8

ection F.7 of the EIS fully address the life cycle costs, ed action. The use of a net present value approach reflects would be primarily in the form of reduced risks of the is to countries who might use them on us or our allies, as nt to the management sites and regions conducting the om reducing the commerce in certain types of nuclear ks would be low, as discussed fully Section 4 of the EIS . Economic risks are described in detail in Appendix F, is paid to major cost uncertainties (e.g., waste acceptance nomic impacts relating to ports are minor in all respects.

94-9

es in the EIS, the risk associated with accepting spent rch reactors through any of the ports analyzed would be the experience gained in over 30 years of shipments of nuclear fuel to the United States. Accordingly, DOE ss or equity issue to be resolved.

94-10

ndled foreign research reactor spent nuclear fuel for over nmercial ports.

earch reactor spent nuclear fuel could safely be received the past, without additional security that might be present provided for the spent nuclear fuel shipments would be e applicable security requirements in the Code of Federal If any port did not already provide security sufficient to ould be the responsibility of the shipper to provide the evertheless, the commentor's preference for the use of s 4.2.2.2 and 4.2.2.3 of the EIS provide the analysis on on and consequences of port accidents, respectively.

94-11

nse to action by Congress, the current DOE programs for uel would have to be transferred to some other Federal e health and safety of the public. Since the spent nuclear ese programs cannot simply be abolished.

NSE TO COMMENT
PIERCE COUNTY COUNCIL (CONT'D.)

12

letter and fax on June 16, 1995. The response gave
ar the spent nuclear fuel under the assumption that
rovide shielding, as requested by the Port of Tacoma.

ot require a worst cause analysis in an EIS. For the
is no such thing as a worst case scenario, because for
ill more severe accident can be postulated by adding
wrecked rail car, one more terrorist, etc. In addition,
ake a postulated accident more severe, the probability
he EIS does not contain a worst case scenario, but a
s, including severe accidents, is discussed in Section
tion D.5.4.3.2 of the EIS presents the risks of a very
ask, which was part of a sensitivity study on release
has been added to Appendix D of the EIS to address
rsons or terrorists.

13

ging the foreign research reactor spent nuclear fuel
l. However, Section 4.4.2 and 4.5 demonstrate that
e spent nuclear fuel through the Port of Tacoma, or

COMMENTOR NO. 113: CITY OF CONCORD

AGENDA ITEM NO. 4

Concord REPORT TO MAYOR AND COUNCIL

TO THE HONORABLE MAYOR AND COUNCIL:

DATE: June 6, 1995

SUBJECT: CONSIDERATION OF A RESPONSE TO THE U. S. DEPARTMENT OF ENERGY'S DRAFT ENVIRONMENTAL IMPACT STATEMENT ON A PROPOSED NUCLEAR NONPROLIFERATION POLICY CONCERNING FOREIGN RESEARCH REACTOR SPENT NUCLEAR FUEL

Report in Brief

The U. S. Department of Energy has had a Draft Environmental Impact Statement prepared on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel. The Port of Concord at the Naval Weapons Station could be used by ships bringing spent fuel rods into the United States. Spent fuel rods would be loaded on trucks and trains and transported to designated temporary storage sites. There are numerous public safety and public welfare issues associated with this project. The City of Concord has until June 20, 1995 to respond to the Department of Energy regarding the adequacy of the EIR and the proposed project.

Background

For a number of years the federal government has provided foreign countries with nuclear fuel for research purposes. After the fuel is used, or spent, it cannot be used for nuclear research activities. However, this spent fuel could be used by foreign countries or terrorist organizations to manufacture nuclear bombs.

The federal government is considering the adoption of a policy which would allow foreign countries to have their spent nuclear fuel shipped to and stored in this country. Storage in this country, according to the Department of Energy, would lessen the possibility of spent nuclear fuel rods falling into the hands of terrorists or irresponsible governments. The Port of Concord at the Concord Naval Weapons Station is one of the port facilities being considered by the Department of Energy as an entry point for fuel rods into the United States.

The Department of Energy has had a draft environmental impact statement (DEIS) prepared on the proposed policy to ship and store spent nuclear fuel rods in the U. S. The Department of Energy conducted a public informational hearing on this proposal at Centre Concord on May 22. About 235 people were in attendance. Mayor Allen and Councilmember McManigal were at the meeting. The Mayor read the attached letter into the record. The letter outlines the City's concerns and raises questions; it does not take a position on the issue.

113-1

RESPONSE TO COMMENT
COMMENTOR NO. 113: CITY OF CONCORD

Response to Comment No. 113-1

The letter referenced in and attached to the Concord City Council Agenda Item No. 4 summary has been received by DOE and is identified as document 22. Responses have been provided to each comment stated in document 22, which is located in the portion of this volume designated for comments received from local governments.

COMMENTOR NO. 113: CITY OF CONCORD (CONT'D.)

Discussion

The City Council has the option whether or not to respond to the EIS. If the Council does decide to respond, staff recommends that comments be limited to potential impacts to life and property in Concord. Staff further recommends that the City Council not take a position on the merits of the federal government's proposed policy to ship fuel rods from foreign countries to the U. S. International foreign policy issues are not matters normally addressed by local governments.

Staff also recommends that the City's response separate the role of the Weapons Station from the Department of Energy proposal. This issue is discussed in the second paragraph of the attached letter from the Mayor to the Department of Energy.

If the Council does decide to respond to the EIS, the Council could express concerns similar to those addressed in the letter from the Mayor to the Department of Energy. Alternatively, the Council could take a position either in support or in opposition to the Department of Energy proposal.

A staff member from the Department of Energy will be present at the June 6 City Council meeting to address relevant issues.

Fiscal Impact

There are no known direct and significant fiscal impacts to the federal proposal.

Public Contact

This item was announced to the public at the Department of Energy public information meeting of May 22. Posting of the Council agenda.

Alternative Courses of Action

1. Submit a letter to the Department of Energy in opposition to the proposed policy due to the concerns mentioned in the attached letter. Stress the inadequacy of the EIS and potential impacts to the community.
2. Take no position but submit a letter to the Department of Energy addressing the City's concerns about the proposed policy.
3. Submit a letter to the Department of Energy supporting the proposed policy.
4. Take no position.

RESPONSE TO COMMENT
COMMENTOR NO. 113: CITY OF CONCORD (CONT'D.)

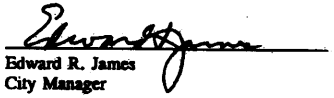
COMMENTOR NO. 113: CITY OF CONCORD (CONT'D.)

Recommendation for Action

1. Alternative #1 or #2 above.

Prepared by David Golick
Chief of Planning

Bill Reeds
Director of Community Development



Edward R. James
City Manager

Enclosure: Letter to U. S. Department of Energy from Mayor Helen Allen dated May 22, 1995.

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RESPONSE TO COMMENT
COMMENTOR NO. 113: CITY OF CONCORD (CONT'D.)

ESPONSE TO COMMENT
'OMMENTOR NO. 158:
DIS, MAYOR, CITY OF PLEASANT HILL

o. 158-1

red alternative in the draft EIS. DOE's preferred alternative
nd 4.7 of the final EIS. The commentor's opposition to the
:d. However, analysis in Sections 4.2.2 and 4.5 of the EIS
ated with bringing spent nuclear fuel to the Concord NWS,
:d in the EIS, is low.

o. 158-2

iat determined that Concord NWS was an acceptable port
:he port and surrounding areas (Appendix D, Section D.1.9.5
population within a fifty mile radius of Concord NWS was
ie potential impact of a range of hypothetical port accidents.
)w (Appendix D, Section D.5 of the EIS).

isco Bay to Concord meets the requirements of Criterion 2
n Ocean) for port selection (Appendix D, Section D.1.9.2 of
:riteria do not consider the existence of land-based facilities
: addition of some mishap at a land-based facility would not
st plausible accident, which is considered to be the collision
:ign research reactor spent nuclear fuel with a petroleum
such as earthquakes, may slightly increase the probability of
icrease the consequences of the accident, which were found

o. 158-3

ss all the subjects raised by the commentor. Section 2.2.1.8
inations, Section 2.6.4 discusses truck and rail route selection,
lice services, disaster preparedness, etc.,

this issue, individual Transportation Plans would be prepared
:heduled for acceptance through the Concord NWS (or any
ransportation Plans would be prepared in consultation with
l officials to ensure that details of the transportation process
viduals or organizations who would perform all required
iat these individuals and parties know what is expected of
endix H of the EIS).

COMMENTOR NO. 158: WILLIAM D. LANDIS, MAYOR, CITY OF PLEASANT HILL (CONT'D.)

June 8, 1995 Letter to U.S.Dept. of Energy
Page 2

We further object to the short time which has been made available for public comment. The June 20, 1995 deadline for responses should be extended to allow thorough evaluation and consideration of this proposal which has serious consequences to our community. *158-4*

Very truly yours,

William D. Landis, Mayor
City of Pleasant Hill

Enclosure: June 7, 1995 Letter from City of Martinez City Council

cc: City Council Members, Pleasant Hill
Mayor and City Council, Martinez
Contra Costa County Board of Supervisors
Senator Barbara Boxer
Senator Dianne Feinstein
Congressman Bill Baker
Congressman George Miller

[I:\legal\wobbles\DOE.ltr]

RESPONSE TO COMMENT COMMENTOR NO. 158: WILLIAM D. LANDIS, MAYOR, CITY OF PLEASANT HILL (CONT'D.)

Response to Comment No. 158-4

The deadline for submission of comments in response to the draft EIS was extended from June 20 to July 20, 1995. DOE considers the comment period (90 days total) to be sufficient for public comment.

Response to Comment
Commentor No. 160: City of Milton

Response to Comment No. 160-1

160-1 Updated information on the Port of Tacoma has been incorporated into Appendix D, Section D.2.1.9 of the EIS.

Response to Comment No. 160: City of Milton (Cont'd.)

t No. 160-2

'a transportation cask loaded with foreign research reactor spent
n any U.S. coastal waters, it would be recovered, even from the
Sound, which reaches depths of 305 meters (1,000 feet). Section
:en modified to include this assurance of recovery in coastal
tion C.5.5 of the EIS presents information on the probability of
and deep ocean waters. The impacts of a foreign research
l transportation cask sinking in coastal and deep waters are
pendix C, Section C.5). The results of this analysis show that
ıd the risk of these accidents are low (Appendix C, Sections

No. 160-3

3.1 of the EIS describes several accident scenarios that involve
ısport, including accidents close to land as would be the case in
of the analysis of these accidents can be found in Appendix D,
:is shows that even in the event of a severe ship fire, neither the
ıre great (Appendix D, Section D.5.5). Although the non-
ch a catastrophic accident would obviously impact the local
ıl impacts are predicted due to the presence of foreign research

No. 160-4

research reactor spent nuclear fuel through the Port of Tacoma
:tivities being conducted in Commencement Bay as a result of
ɔr would it add any additional burden to this designation. The
lear fuel on the Bay would not add any hazardous material to
ıt. DOE has added a sentence to Appendix D, Section D.2.1.9
: designation of the Commencement Bay as a Superfund Site.
nuclear fuel shipments, but not other more hazardous material
:h the Port of Tacoma would create a stigma is an unjustified
acts, as documented in Section 4 of the EIS, shows that there
verse impacts on the port, people, or natural environment from
rch reactor spent nuclear fuel through any of the ports of entry.
adverse economic or cultural impacts to the ports that received
ɔent nuclear fuel for the 30 plus years it was received.

SE TO COMMENT
): CITY OF MILTON (CONT'D.)

ent nuclear fuel would not jeopardize the significant
of Commencement Bay and the Port of Tacoma as
n the EIS indicates that there would be no significant
bays, or the quality of water or air (Section 4.2.1.1
EIS). Spent nuclear fuel transportation casks are
of radioactive material. Based on over 30 years
OE considers that spent nuclear fuel transportation
coma, Commencement Bay, or any other port or
ot affect air or water quality. A paragraph has been
make this point and to emphasize the no-impact
ater quality. Similarly, DOE considers that based
ceived spent nuclear fuel in the past, there would
ny businesses or industry in the Commencement
nts of foreign research reactor spent nuclear fuel.

naterials by a determined group or individual can
roper security measures greatly reduce the risk.
dix D of the EIS to address terrorism and sabotage.
or spent nuclear fuel would be conducted meeting
ents in the Code of Federal Regulations (10 CFR
o the final EIS in response to public comments, to
ency preparedness associated with transportation
nuclear fuel. This appendix presents the general
which is a document that provides all of the details
the foreign research reactor spent nuclear fuel,
port and in transit to the management site.

clear fuel shipments would be required to meet or
irements in the Code of Federal Regulations (10
ready provide security sufficient to satisfy these
lity of the shipper to provide the required additional

ıENT

MILTON (CONT'D.)

lly address the life cycle costs,
t present value approach reflects
ıe form of reduced risks of the
t use them on us or our allies, as
ites and regions conducting the
rce in certain types of nuclear
ussed fully Section 4 of the EIS
scribed in detail in Appendix F,
rtainties (e.g., waste acceptance
o ports are minor in all respects.

ssociated with accepting spent
of the ports analyzed would be
ı over 30 years of shipments of
ed States. Accordingly, DOE
esolved.

ıctor spent nuclear fuel for over

ır fuel could safely be received
ıl security that might be present
clear fuel shipments would be
ırements in the Code of Federal
y provide security sufficient to
of the shipper to provide the
tor's preference for the use of
ıe EIS provide the analysis on
ort accidents, respectively.

the current DOE programs for
sferred to some other Federal
ublic. Since the spent nuclear
ly be abolished.

T

LTON (CONT'D.)

owever, all oral comments
addressed along with the
ts, written and oral, are part

, 1995. The response gave
under the assumption that
sted by the Port of Tacoma.

analysis in an EIS. For the
t case scenario, because for
an be postulated by adding
re terrorist, etc. In addition,
more severe, the probability
worst case scenario, but a
ents, is discussed in Section
presents the risks of a very
sensitivity study on release

COMMENTOR NO. 195: CITY OF FEDERAL WAY

CITY OF FEDERAL WAY
33630 1ST WAY SOUTH

(206) 661-4000
FEDERAL WAY, WA 98003-6210

une 9, 1995

Mr. Charles Head
Office of Spent Nuclear Fuel Management (EM-37)
J. S. Department of Energy
000 Independence Avenue SW
Washington, D. C. 20585

Dear Mr. Head:

The City of Federal Way is a municipality of 73,500 persons north of and adjacent to the City of Tacoma. Our municipal boundary is only one mile from the Port of Tacoma. In a comment letter on the Draft Environmental Impact Statement (DEIS) dated May 26, 1995, I stated the growing concerns of the City of Federal Way over the proposed transportation of spent nuclear fuel through the Port of Tacoma and the inadequacy of the DEIS.

Since then, the Federal Way City Council has passed Resolution 95-205 which strongly opposes the shipment of spent nuclear materials through the Port of Tacoma. The Council also believes that the DEIS is incomplete in its findings regarding security, catastrophic mishap and economic impact on the entire area around the Port, including the City of Federal Way.

You can contact me at (206) 661-4106 if you have any questions.

Sincerely,

Greg Moore

Gregory D. Moore, AICP
Director of Community Development Services

Attachment
United States Representative Randy Tate
United States Senator Patty Murray
United States Senator Slade Gorton
State Representative Ray Schow
State Representative Tim Hickel
State Representative Maryann Mitchell
Patrick O'Malley, President, Port of Tacoma, and Commissioners
Harold G. Moss, Mayor, City of Tacoma, and Council
Mic Dinsmore, Executive Director, Port of Seattle, and Commissioners

RESPONSE TO COMMENT
COMMENTOR NO. 195: CITY OF FEDERAL WAY

(CONT'D.)

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EIS and are
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reactor spent
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to oxidize the
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Appendix D,
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sk associated
y of the ports
her hazardous
public of the
k, or the risk
ave not been
was accepted
nomic effects
r of receiving

COMMENTOR NO. 195: CITY OF FEDERAL WAY (CONT'D.)

THE CITY COUNCIL OF THE CITY OF FEDERAL WAY HEREBY RESOLVES AS FOLLOWS:

Section 1. Statement of Opposition. The Federal Way City Council strongly opposes the shipment of spent nuclear materials through the Port of Tacoma and encourages the Department of Energy to choose a more suitable site to receive these shipments.

195-5

Section 2. Severability. If any section, sentence, clause or phrase of this resolution should be held to be invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the validity or constitutionality of any other section, sentence, clause or phrase of this resolution.

Section 3. Ratification. Any act consistent with the authority and prior to the effective date of the resolution is hereby ratified and affirmed.

Section 4. Effective Date. This resolution shall be effective immediately upon passage by the Federal Way City Council.

RESOLVED BY THE CITY COUNCIL OF THE CITY OF FEDERAL WAY, WASHINGTON, this 6th day of June, 1995.

CITY OF FEDERAL WAY

Mary E. Gates

MAYOR, MARY E. GATES

ATTEST:

CITY CLERK, N. CHRISTINE GREEN, CMC

Res.#95-205, Page# 2

RESPONSE TO COMMENT
COMMENTOR NO. 195: CITY OF FEDERAL WAY (CONT'D.)

foreign research reactor spent nuclear fuel. Based on this past experience, DOE considers that shipping foreign research reactor spent nuclear fuel through the Port of Tacoma would have no adverse economic impacts on business within the port or the surrounding communities.

Response to Comment No. 195-5

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

210: THE PORT OF LONG BEACH

t of Long Beach

0 437-0041 · FAX (310) 437-3831 · TELEX 65-6462 PORTOBEACH LGB

r
(EM-37)

Environmental Impact Statement on
pons Nonproliferation Policy
earch Reactor Spent Nuclear Fuel

n a Proposed Nuclear Weapons
ng Foreign Research Reactor Spent
e are in agreement with the
t of Long Beach should not be
e to the Port's location in a
sisting of the Long Beach/Los
olitan Areas.

each was the busiest container
ing 2,573,827 twenty-foot equiva-
rcent of this cargo is either
s east of the Rocky Mountains.
rough the port facility would
vement throughout the nation.
s located in the same vicinity as
lar discussions regarding sensi-
ld be addressed for both ports.

ing our comments or the general
ng Beach, please contact Mr. Ron
158.

Beach

PRESIDENT'S "E" AND "E-STAR"
AWARDS FOR EXCELLENCE IN EXPORT

210-1

RESPONSE TO COMMENT
COMMENTOR NO. 210: THE PORT OF LONG BEACH

Response to Comment No. 210-1

The commentor's agreement with the EIS in regard to Long Beach not being one of the selected ports is noted.

COMMENTOR NO. 236: PORT OF GALVESTON

PORT of GALVESTON

123 Rosenberg
P.O. Box 328
Galveston, Texas 77553

Galveston (409) 766-6103
Houston (713) 286-2484
Fax (409) 766-6171

June 9, 1995

Ernest Connor
General Manager

Mr. Charles Head
Office of Spent Nuclear Fuel Management (EM-37)
U. S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585

Dear Mr. Head:

The Port of Galveston is still in the process of assimilating the data required to formulate our response to the EIS on the potential transhipment of spent nuclear fuel thorough Galveston. 236-1

It is anticipated that our reply will reach your office on or about June 27, 1995 and therefore we request that it be made a part of the public comment record on this important issue and further to be used in reaching your decision.

Sincerely,

Ernest Connor
General Manager

EC:JE

RESPONSE TO COMMENT
COMMENTOR NO. 236: PORT OF GALVESTON

Response to Comment No. 236-1

The deadline for submission of comments in response to the draft EIS was extended from June 20 to July 20, 1995. DOE considers the comment period (90 day total) to be sufficient for public comment.

p. 262:
District Commission

. of
, VICE CHAIRMAN • V. WAYNE ORTON, TREASURER
ARTHUR L. COLLINS, EXECUTIVE DIRECTOR/SECRETARY

June 5, 1995

onproliferation Policy EIS
:NV:NUKE)

quest from the Department of
mpton Roads Planning District
mental Impact Statement on a
ion Policy Concerning Foreign
HRPDC and its member local
and commented on the
lated projects.

as well as of the earlier related
llowing comments:

of Hampton Roads has been
Spent Nuclear Fuel associated
in the past. Although past
vithout incident, the HRPDC
f ports located in areas of lower
referable. — *262-1*

is selected as the port of entry
nt of Energy should notify the
port area and subsequent
ce of the shipments so that
nay be taken. In all cases, the
directly in advance of any — *262-2*

ROCKLAND DRIVE • CHESAPEAKE, VIRGINIA 23320 • (804) 420-2330
N STREET • SUITE 300 • HAMPTON, VIRGINIA 23669 • (804) 728-2667

Response to Comment Commentor No. 262: Hampton Roads/Planning District Commission

Response to Comment No. 262-1

The commentor's preference for ports with low population density is noted. This is one of the criteria for selecting ports, as discussed in Section 2.6.3.1 and Appendix D of the EIS.

Response to Comment No. 262-2

DOE is required under 10 CFR Part 73 to inform the Governor of each State and any Tribal chair, or their designee, along a transportation route seven days in advance of the shipment of hazardous cargos, including radioactive materials. It would be the responsibility of the Governor to provide any further notification to State and local officials.

COMMENTOR NO. 262:
HAMPTON ROADS/PLANNING DISTRICT COMMISSION (CONT'D.)

3. If the Port of Hampton Roads is selected as the port of entry, all highway transportation of the material through the metropolitan area should be restricted to Interstate facilities. Movement of this material should be restricted to off-peak hours.

262-3

We appreciate the opportunity to participate in the review of this project. If you have questions or need further information, please do not hesitate to call.

Sincerely,

Arthur L. Collins
Executive Director/Secretary

JMC:th

cc: Mr. Paul Miller, NN
Mr. Lee Rosenberg, NO
Ms. Marlise Hawkins, PO

RESPONSE TO COMMENT
COMMENTOR NO. 262:
HAMPTON ROADS/PLANNING DISTRICT COMMISSION (CONT'D.)

Response to Comment No. 262-3

The commentor's preference for the use of Interstate highways and off-peak hours is noted. Route selection would follow Department of Transportation regulations. DOE's policy on the truck's departure time is for the trucks to leave the port as soon as they are ready. This would minimize the time the radioactive material is in the port. These subjects are discussed in detail in Section 2.6.4.2 and Appendix E of the EIS.

o COMMENT
1: PORT OF TACOMA

fax on June 16, 1995. The response gave
ent nuclear fuel under the assumption that
quested by the Port of Tacoma.

re a worst case analysis of accidents in an
ere is no such thing as a worst case scenario,
still more severe accident can be postulated
re wrecked rail car, one more terrorist, etc.
to make a postulated accident more severe,
ler. The EIS does not contain a worst case
scenarios, including severe accidents, is
ndix D, Section D.5.4.3.2 presents the risks
cask, which was part of a sensitivity study
9 has been added to Appendix D of the EIS
ersons or terrorists.

NT'D.)

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274-1 (Cont'd.)

274-2

RESPONSE TO COMMENT
COMMENTOR NO. 274: PORT OF TACOMA (CONT'D.)

Response to Comment No. 274-2

The deadline for submission of comments in response to the draft EIS was extended from June 20 to July 20, 1995. DOE considers the comment period (90 days total) to be sufficient for public comment.

TACOMA (CONT'D.)

tal Impact Statement

dge the non-
furnish information
formal agreements
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nded to, the

tion to produce HEU
the future? What
in MTHM/year at
select?

already agreed with
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expect to adopt the
orld-wide HEU

xpect to not adopt
EU capacity does

aft EIS, please
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greements, and iii) is
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HEU conversion

If any, are placed
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Nuclear

274-3

274-4

274-5

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274-7

274-8

274-9

RESPONSE TO COMMENT
COMMENTOR NO. 274: PORT OF TACOMA (CONT'D.)

Response to Comment No. 274-3

Argentina, France, Germany, Japan, Netherlands, Pakistan, South Africa, and United Kingdom possess enrichment capability. Brazil has proposed building an enrichment facility. China, Russia, and the United States also have enrichment capability, so the total number of countries is twelve. (World Nuclear Industry Handbook, 1995).

Enrichment capacity is measured in Separative Work Units per year (SWU/yr), not in MTHM/yr. Any enrichment plant could theoretically produce HEU, but the conversion from SWU/yr to MTHM/yr would depend on the amount of uranium feedstock the starting enrichment level, as well as the final enrichment level. Due to the number of the unknowns it is not possible to perform the calculation. Also, it is outside the scope of this EIS.

Response to Comment No. 274-4

Of the twelve countries listed above, ten, including the United States, are covered under the proposed action and have participated in the RERTR Program in some fashion. Not all of the research reactors in those countries, however, have converted or are able to convert to LEU.

The fraction of worldwide enrichment capacity is not relevant because, if the research reactor operators demand fresh supplies of HEU fuel, then several nations have the enrichment capacity necessary to supply it. As stated above and in Section 1.1 of the EIS, Russia or China are potential suppliers of HEU.

Response to Comment No. 274-5

The United States is pursuing discussions with Russia and China, the remaining countries, to encourage them to follow the United States lead and adopt an RERTR-type program which would encourage their client states to convert to LEU fuels. The RERTR program has enjoyed wide support from the international community (Section 1.1 of the EIS).

Response to Comment No. 274-6

There are no remaining countries. All countries listed in 274-3 above are participants in the RERTR Program with the exception of Russia and China.

Response to Comment No. 274-7

There are no existing agreements that would force research reactor operators to stop using HEU fuel. Future agreements that might occur as a result of this EIS would remove up to approximately 4.6 MTHM of HEU from international commerce. If Russia agrees to follow the U.S. lead and start its own RERTR Program, then all the reactors that were supplied by the former U.S.S.R. would also be converted to LEU fuel.

TO COMMENT
PORT OF TACOMA (CONT'D.)

ction B.1.1.3 of the EIS present all the research version status. There are three research reactors annot be converted from HEU to LEU fuel with ssary to convert these three research reactors is 10-year period, however, so none of the existing on the HEU fuel cycle for technical reasons.

unt of HEU that might not be eliminated due to

trict limitations on the export of HEU by the nce passage of this act, no new export licences States.

are parties to the Treaty on the Nonproliferation e safeguards program.

of Nuclear Weapons (the NPT), nuclear weapons eated differently. In the NPT, the following five ons states: Russia, China, the United Kingdom, Kingdom and France would be covered by any fuel policy. Information available from the U.S. es, if any, are believed to have a nuclear weapons mes of any such countries are not pertinent to the his EIS since removal of spent nuclear fuel from l U.S. nuclear weapons nonproliferation policy ate, the use of highly enriched (weapon-grade) ction 1.2 of the EIS).

ed action, over 20 have operating power reactors. to end operation of these facilities and not to ts. Power reactors and research reactors are power reactors run on either low enriched or e used to construct nuclear weapons.

RESPONSE TO COMMENT
MENTOR NO. 274: PORT OF TACOMA (CONT'D.)

o Comment No. 274-12

have spent nuclear fuel storage pools onsite, but these are only appropriate
n storage of limited amounts of spent nuclear fuel. Finland, France, Germany,
len, and the United Kingdom have larger scale interim storage facilities in
Vorld Nuclear Industry Handbook, 1995).

o Comment No. 274-13

nada, Finland, France, Germany, Japan, Sweden, Switzerland, and the United
ve spent nuclear fuel and/or high-level waste disposal programs. No country
uclear fuel geologic repository site in operation yet.

o Comment No. 274-14

, France, Germany, Japan, Netherlands, Pakistan, South Africa, and United
ve enrichment capability. Brazil has proposed building a facility. (World
stry Handbook, 1995).

Italy, Japan, and United Kingdom have spent nuclear fuel reprocessing
razil has a facility under construction. (World Nuclear Industry Handbook,

o Comment No. 274-15

States and the foreign research reactors have a combined inventory of
y two thousand tons of HEU. About four hundred to five hundred tons of
is scheduled for blending down to LEU in order to reduce the risk of nuclear
iferation. As discussed in Section 2.2.1.3 of the EIS, the inventory of HEU
earch reactors is nearly five tons - an amount sufficient to make about two
bs comparable in size to those dropped on Hiroshima and Nagasaki near the
cond World War. While the total amount of HEU subject to the proposed
vely small in comparison to the total inventory, it is nevertheless a significant
ms of the risk of diversion to a weapons program. Efforts by the United
ce the availability of plutonium are complementary to efforts to reduce the
HEU. Differences in policies and approaches for reduction of plutonium
e from the different physical properties and applications for these materials.

Comment No. 274-16

aration value is not based on the market price of the recovered uranium but
ion of the spent nuclear fuel to a more stable waste form. If all the uranium
work in the spent nuclear fuel were recovered via chemical separation, the

COMMENTOR NO. 274: PORT OF TACOMA (CONT'D.)

foreign spent fuel, and its subsequent transportation, treatment, and storage in the U.S. especially when the U.S. has not demonstrated the ability to manage its own defense and commercial spent fuel wastes in a timely or cost effective manner?

Why would the U.S. seriously consider any alternative of increasing its spent nuclear fuel problems at a time in the U.S. when managing the cleanup of the defense nuclear wastes is in a turmoil (see "Train Wreck Along the River of Money - An Evaluation of the Hanford Cleanup" March 1995 by Steve Stush and Tom Hallman under contract to the U.S. Senate Committee on Energy and Natural Resources)? 274-21 (Cont'd.)

Why would the U.S. seriously consider any alternative of increasing its spent nuclear fuel problems at a time in the U.S. when the cost of disposing of highly radioactive wastes, e.g., storage, treatment and disposal of the U.S.'s commercial spent nuclear fuel, is at least $10 billion overrun and 10 years late, without substantial increases in funding, compared to the initial estimates (see GAO's report to Congress "Nuclear Waste - Comprehensive Review of the Disposal Program is Needed" September 1994 GAO/RCED-94-299)?

In a floor statement submitted to the Senate Record on May 26, 1995, Senator Frank Murkowski, Chair of the Senate Committee on Energy and National Resources, reported that:

- 30,000 tons of spent nuclear fuel is being temporarily stored at power plants at 75 sites,
- In less than three years, 23 reactors will run out of space in their spent fuel storage pools,
- By 2010, a total 78 reactors will have run out of space
- We've already spent 12 years and $4.2 billion to find a permanent high-level repository and conduct site characterization at Yucca Mountain

9. What independent, third party entities performed/will perform the risk assessments, cost/benefit and nonproliferation assessments for DOE and its Contractors? 274-22

Congress, the GAO, and others have been calling for independent, third party, peer reviewed risk assessments performed in accordance with a standardized methodology. The same is true for cost/benefit analyses. Traditional, long term contractors to DOE do not qualify as an "independent, third party". How does DOE propose to establish the necessary mutual trust and credibility with the public unless it helps to facilitate such third party reviews?

RESPONSE TO COMMENT
COMMENTOR NO. 274: PORT OF TACOMA (CONT'D.)

undiscounted value would be roughly $60 million. Even if the price of uranium and the cost of separative work were to double, the relative costs of a chemical separation option and a storage option would not change enough to affect the policy decision one way or the other. The substantial commerce in commercial spent nuclear fuel is not in HEU; it is in LEU, which is not suitable for weapons. Separated plutonium (which is suitable for weapons) is not a substantial commercial product. Plutonium is either retained at the reprocessing facility (e.g., Dounreay) or, in a very few cases, shipped to the country of origin for use in breeder reactor or mixed oxide fuels. In these latter cases, such as the one from France to Japan earlier in 1995, the shipments are guarded. As a practical matter, the commercial shipment of material suitable for weapons is limited and controlled. Diversion of commercial spent fuel for the purpose of separation by a country or group without advanced commercial or military nuclear technology is unrealistic because the material is too radioactive to handle and too difficult to separate.

Response to Comment No. 274-17

The commentor is suggesting an alternative under which foreign research reactor spent nuclear fuel from seven commercial nuclear reactor countries (Germany, Sweden,...etc) would be excluded from the policy, would manage their own spent nuclear reactor fuel with or without U.S. incentives, and the United States would include only the remaining developing countries under the policy.

DOE considers that, in terms of environmental impacts, this alternative is one of many hybrid alternatives covered under Management Alternative 3, as discussed in Section 2.4 of the EIS. In terms of policy considerations, however, the suggested exclusion of certain countries from the proposed action introduces implications detrimental to the U.S. nuclear weapons nonproliferation policy. The United States has played in the past , and continues to play, a leadership role within the world community in matters of nuclear weapons nonproliferation. In this role, it initiated programs such as the Reduced Enrichment for Research and Test Reactors (RERTR) program and encouraged other nations to support it. Some of the nations which have supported RERTR, such as Britain, France, Japan, Sweden and others, may not currently present the nuclear weapons proliferation risk as others. The reasons for considering these nations under this policy are presented in Section 1.3 of the EIS.

Response to Comment No. 274-18

As discussed in Section 2.2.1.1 the policy duration for the basic implementation of Management Alternative 1 is proposed to be 10 years. Section 4.9 discusses the cost associated with all management alternatives, including the basic implementation of Management Alternative 1. Other policy periods, shorter and longer, have also been evaluated (Section 2.2.2.2 of the EIS). The cost analysis is based on best available information and engineering judgement. It includes appropriate contingencies to account

PONSE TO COMMENT
274: PORT OF TACOMA (CONT'D.)

ith a program of this duration and size. No bilateral or
l for the policy implementation. The policy duration for
actor operator would be dictated by DOE. The number
licy are those that would be discharged from the reactor
should be noted that the number of elements considered
e end of the policy period (Tables 2-1 and 2-2) has been

74-19

reign costs to the United States after termination of the
lternative 1 is implemented.

74-20

s of Management Alternative 2 are discussed in Sections
eas reprocessors have refused to take responsibility for
d wastes, so either the 41 countries with research reactors
provide disposal. In addition, in the past the reprocessors
HEU. This would not be consistent with U.S. nuclear

the EIS, nearly all of the medical radioisotopes used in
ctor in Canada. The United States does not have any
usiness area.

74-21

nates do not include either direct or indirect costs for
ts for shipping do include administrative costs far in
commercial shipments. The final EIS includes a risk
management that recognizes the cost impacts on the

manage its own defense and commercial nuclear waste
opment of contingencies and uncertainties, especially
disposal. Although legal costs, per se, are not included,
ions as meeting strict waste acceptance criteria include
public opposition, and similar factors. The basis for
perience in these fields — an experience that includes

OMA (CONT'D.)

n because it would greatly
he amount of spent nuclear
l mass of heavy metal that
nse and commercial waste
spent nuclear fuel disposal
f 1-2 percent. The foreign
ues such as the status of the
isks associated with delays

d cost/benefit analyses are
n. However, the public is
yses presented in the EIS,
entation pertaining to the

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304:

COMMISSION (CONT'D.)

ng transportation routes were an
ction and in the evaluation of
, Appendix D, and Appendix E of

epted at ports in the United States
of the EIS). If a policy to accept
this spent nuclear fuel would be
ıely handled at all of the candidate

ırch reactor spent nuclear fuel are
DOE is currently evaluating the
Mountain, NV. In the meantime,
requires DOE and the Department
ign research reactor spent nuclear

ents would be required to meet or
Code of Federal Regulations (10
curity sufficient to satisfy these
r to provide the required additional

termined group or individual can
easures greatly reduce the risk of
in the new Appendix H that has
nents. This appendix presents the
document that would be prepared
hipment to specify details of the
ı port and during transit.

Response to Comment
Commentor No. 304:
y of Tacoma, Environmental Commission (Cont'd.)

onse to Comment No. 304-9

ommentor's opinion that the risks are unacceptable is noted. DOE considers the stimates presented in Section 4 to be accurate.

onse to Comment No. 304-10

nvironmental Commission's recognition of the importance of the proposed action ed. The proposed policy is an important part of the overall United States campaign mote worldwide nonproliferation of nuclear weapons.

onse to Comment No. 304-11

ommentor's preference for Concord NWS as a port of entry for foreign research r spent nuclear fuel is noted. Results of the environmental analyses given in Section e EIS indicate that there is no environmental basis for preference among the candidate If any foreign research reactor spent nuclear fuel is to be accepted into the United , the selection of the actual port(s) of entry to be used will be in the Record of ion, subsequent to completion of this final EIS.

onse to Comment No. 304-12

plained in Section 1.5 of the EIS, the selection of the site or sites at which the n research reactor spent nuclear fuel would be managed is based on the analysis in epartment of Energy Programmatic Spent Nuclear Fuel Management and Idaho nal Engineering Laboratory Environmental Restoration and Waste Management ams Environmental Impact Statement. The Record of Decision for this EIS was d on May 30, 1995. In accordance with this Record of Decision, all of the aluminum- foreign research reactor spent nuclear fuel managed by DOE will be managed at avannah River Site in South Carolina. Any other foreign research reactor spent r fuel to be managed by DOE will be managed at the Idaho National Engineering atory. Accordingly, no foreign research reactor spent nuclear fuel would be shipped Hanford Site.

nse to Comment No. 304-13

mmentor's preference for the Nevada Test Site as the site for managing foreign ch reactor spent nuclear fuel in the United States is noted. As discussed in the se to Comment 304-11, based on the Record of Decision issued for the Department rgy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering atory Environmental Restoration and Waste Management Programs Environmental t Statement, the Nevada Test Site would not be used as a management site.

Commentor No. 304:
City of Tacoma, Environmental Commission (Cont'd.)

Response to Comment
Commentor No. 304:
City of Tacoma, Environmental Commission (Cont'd.)

Response to Comment No. 304-14

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

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Commentor No. 305:
Seattle City Council Member Jane Noland (Cont'd.)

each transportation corridor involved, which conclusively establish that shipments will not pose risks to the health or safety of residents. Until we are satisfied with the EIS process and the results, the City of Seattle will continue, by all legal means available, to oppose such a plan.

305-3 (Cont'd.)

Sincerely,

Jane Noland
Seattle City Council

cc: Washington State Congressional Delegation
Nick Schultz, Port of Tacoma
Gerry Pollet, Heart of America NW

Response to Comment
Commentor No. 305:
Seattle City Council Member Jane Noland (Cont'd.)

Commentor No. 319: Tacoma-Pierce County Visitor and Convention Bureau

Testimony - from Nancy Watkins, Executive Director of
the Tacoma-Pierce County Visitor and
Convention Bureau

l to the United States Department of Energy
ublic Hearing on Monday, June 19, 1995

MING

IS NANCY WATKINS, AND I AM HERE TONIGHT ON BEHALF OF
MA-PIERCE COUNTY VISITOR AND CONVENTION BUREAU, AN
TION THAT REPRESENTS PIERCE COUNTY'S TOURISM
AND ITS INTERESTS.

N THE IMAGE BUILDING BUSINESS. THE VISITOR AND
ON BUREAU PROMOTES OUR COMMUNITIES TO TOURISTS, TOUR
S, MEETING PLANNERS AND THEIR CONVENTION DELEGATES,
EL WRITERS. WE NOT ONLY PROMOTE OUR AREA'S
OMS, FACILITIES AND VISITOR SERVICES, WE PROMOTE
OUNTY AS A SAFE, FRIENDLY AND ATTRACTIVE PLACE TO

TACOMA-PIERCE COUNTY

906 BROADWAY, PO BOX 1754, TACOMA, WA 98401
206-627-2836 FAX 206 627 8783

Response to Comment
Commentor No. 319: Tacoma-Pierce County Visitor and Convention Bureau

COMMENTOR NO. 319: TACOMA-PIERCE Y VISITOR AND CONVENTION BUREAU (CONT'D.)

estimony from Nancy Watkins
1995

TING SPENT NUCLEAR WASTE THROUGH THE PORT OF TACOMA
M PIERCE COUNTY'S PUBLIC IMAGE. IT WILL DESTROY THE
' IMAGE OF A SAFE DESTINATION AND IT WILL DESTROY
GNITION THAT PIERCE COUNTY HAS WON FROM TRAVEL
AND THEIR READERS IN THIS PAST YEAR.

NUCLEAR FUEL IS TRANSPORTED THROUGH THE PORT OF
TRAVEL WRITERS WILL HAVE A NEW STORY. INSTEAD OF
ABOUT TACOMA'S NEW HISTORY MUSEUM, AND THE FUTURE
ENT OF GLASS AND MARITIME MUSEUMS, THE STORY WILL BE
G TO VISITORS. INSTEAD OF PRAISING OUR WATERFRONT
ENT EFFORTS, OUR CUSTOMERS WILL READ ABOUT THE
OF RADIATION TACOMA RESIDENTS MUST PREPARE FOR IN
T OF A NUCLEAR ACCIDENT ON OUR WATERFRONT.

TOR INDUSTRY IS A $365 MILLION DOLLAR INDUSTRY IN
OUNTY. IT DIRECTLY EMPLOYS 5,350 PEOPLE. PIERCE
VISITOR INDUSTRY HAS A BRIGHT FUTURE AND WE DO NOT
DESTROYED WITH A NEGATIVE BLOW SUCH AS THIS.

RTMENT OF ENERGY SHOULD DROP THE PORT OF TACOMA FROM
F PUBLIC PORTS CONSIDERED AS ENTRY POINTS FOR THE
S ENT NUCLEAR FUEL.

319-1

RESPONSE TO COMMENT
COMMENTOR NO. 319: TACOMA-PIERCE COUNTY VISITOR AND CONVENTION BUREAU (CONT'D.)

Response to Comment No. 319-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Port of Tacoma, or to any of the ports analyzed in the EIS, is low.

In evaluating and selecting acceptable ports of entry, DOE has developed evaluation criteria. DOE considers that the port selection criteria successfully identify ports that can safely handle foreign research reactor spent nuclear fuel. DOE further considers that the use of any of the ports indicated by the port selection process, including Tacoma, would not pose any significant risk to either the port personnel or the population near the port. The analysis in the EIS indicates that the risks associated with an accident are low (Sections 4.2.2.3 and 4.5 of the EIS) and that the risks associated with incident-free handling of the foreign research reactor spent nuclear fuel casks are also low (Sections 4.2.2.2 and 4.5 of the EIS).

Response to Comment Commentor No. 319: Tacoma-Pierce ɔunty Visitor and Convention Bureau (Cont'd.)

ɔnse to Comment No. 319-2

ɔonsiders that foreign research reactor spent nuclear fuel could safely be received ɹmercial ports, as it has in the past, without additional security that might be present tary bases. The security provided for the spent nuclear fuel shipments would be ɐd to meet or exceed all the applicable security requirements in the Code of Federal ɪtions (10 CFR Part 73). If any port did not already provide security sufficient to these requirements, it would be the responsibility of the shipper to provide the ɐd additional security. Nevertheless, the commentor's preference for the use of ʏ ports is noted. Sections 4.2.2.2 and 4.2.2.3 of the EIS provide the analysis on ɪs of incident-free operation and consequences of port accidents, respectively.

ɯmmentor's preference for the overseas storage alternative is noted. This is evaluated ɳagement Alternative 2, Subalternative 1a, which is discussed in Section 4.4.1 of S.

12/08/93
JW:saj

RESOLUTION 28848

A RESOLUTION stating the City's position that high level nuclear wastes should not be moved through Seattle or the Puget Sound area by water or land transportation.

WHEREAS, in response to a proposal from the Federal Department of Energy in 1986 to ship high-level nuclear waste from Asia through Puget Sound and Seattle to inland destinations, the Mayor and all Councilmembers signed letters to the Secretary of Energy requesting a site-specific EIS before undertaking such shipments; and

WHEREAS, in 1990 the City Council again, this time by resolution, opposed a Department of Energy proposal to ship high-level radioactive wastes from the Hanford Nuclear Reservation to West Germany through the city and Port of Seattle; and

WHEREAS, this proposal was also withdrawn; and

WHEREAS, in 1991, the Department of Energy made another policy proposal for a ten-year program to transport from 100-352 cask-shipments of high-level nuclear waste from research reactors in foreign countries to DOE facilities in South Carolina and Idaho through Puget Sound ports without a complete EIS and again, the Council, through Resolution 28433, opposed such shipment; and

WHEREAS, the Department of Energy on October 21, 1993 began a public comment period on the scope of an EIS for a proposed policy which would permit acceptance through the Port of Seattle of spent nuclear fuel containing enriched uranium of U.S. origin from foreign research reactors; and this EIS will evaluate the impact of such shipments on marine ports of entry, overland transportation routes and storage at its Hanford or the Idaho National Engineering Laboratory (INEL) site, until a means for permanent disposition is available; and

WHEREAS, the DOE press release of October 21, 1993 appears to suggest that it wishes to return up to 700 spent fuel elements from foreign research reactor while the EIS on the acceptance policy is being prepared; and

WHEREAS, the City Council, the Port of Seattle, and the Longshoremen's Union in Seattle continue to oppose these nuclear shipments through Seattle without adequate safeguards, procedures and risk assessments in place, in advance of any such shipments; NOW, THEREFORE,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SEATTLE, THE MAYOR CONCURRING, THAT

337-1

Response to Comment No. 337-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Seattle or the Puget Sound area is noted. The Port of Seattle is not among the candidate ports listed in Section 2.2.1.6 of the EIS. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk of bringing spent nuclear fuel through the Puget Sound area and the Port of Tacoma is low.

COMMENTOR NO. 337: SEATTLE CITY COUNCIL (CONT'D.)

RESOLUTION

I. It is the City's position that no shipments of high level nuclear waste, from any source and to any destination requiring transport through the State of Washington, shall be moved through Seattle by land or water transportation without complete site-specific EIS's for each port and each transportation corridor involved, which conclusively establish that shipments will not pose risk to the health or safety of Seattle's residents.

II. It is the City's position that the EIS which is being prepared for the proposed policy should be as thorough and detailed as possible, addressing all potential risks to human health and the environment. The EIS should explore a range of alternatives including leaving the nuclear waste in situ until a strategy for disposal is resolved upon; having DOE take title to the material at the point of its generation, rather than when it arrives at the storage facility; using less-populated locations than the Port of Seattle for transfer from ship to land transport; and using a less congested and dangerous transportation corridor than through Seattle and over the Cascades. It should fully evaluate accidents or events which might result in breakage or leaking from the transport casks, as well as the resulting risks of harm from such leaks and the existance and availability of appropriate emergency equipment and facilities.

III. It is further the City of Seattle's position that if it is not completely satisfied with the EIS, and Seattle is chosen as a Port of Entry, the City will continue, by all means available, to oppose such a plan.

RESPONSE TO COMMENT
COMMENTOR NO. 337: SEATTLE CITY COUNCIL (CONT'D.)

COMMENTOR NO. 337: SEATTLE CITY COUNCIL (CONT'D.)

Page 3
RESOLUTION

IV. This resolution shall be transmitted by the City Clerk to the Secretary of the U.S. Department of Energy and the Congressional delegation from the State of Washington.

ADOPTED by the City Council of the City of Seattle the 6th day of December, 1993, and signed by me in open session in authentication of its adoption this 6th day of December, 1993.

Gene R. Benson Jr.
President of the City Council

Filed by me this 9th day of December, 1993.

BY:
Margaret Carter
Deputy Clerk

THE MAYOR CONCURRING:

Norman B. Rice 12/8/93
Norman B. Rice, Mayor

RESPONSE TO COMMENT
COMMENTOR NO. 337: SEATTLE CITY COUNCIL (CONT'D.)

RG

439-1

Response to Comment
Commentor No. 439:
Taylor Davis, Mayor, City of Pittsburg

Response to Comment No. 439-1

DOE acted in full compliance with NEPA by publishing in the Federal Register an Advance Notice of Proposed Rulemaking (ANPR), which announced DOE's intention to conduct scoping meetings related to the proposed policy of managing foreign research reactor spent nuclear fuel. The ANPR constitutes DOE notice, under NEPA, that a major federal action is being proposed. Further notice of the proposed policy came with the publication in the Federal Register (60 FR 19899, April 21, 1995) of the availability of the draft EIS and the notification of the public hearings on the draft EIS. In addition, advertisements of the public hearings were placed in local papers prior to their occurrence.

MMENT
439:
PITTSBURG (CONT'D.)

to the draft EIS was extended from
ment period (90 days total) to be
public hearings, were held on the
o be directly affected by the EIS
the potential management sites. In
g these hearings, written comments
rs that these actions have provided
Iraft EIS.

l eight military ports) considered.
resulting in 10 ports that met all of
resent a detailed discussion of the

Command, a total of eight military
ice with dry containerized cargoes.
mercial ports, Concord NWS was
ible to receive the foreign research
ccepted by the United States. In
ports, located in Oakland, CA and
unacceptable. The Port Hueneme
e with transshipping containerized
while the Oakland facility did not
). Appendix D, Sections D.1.8 and
results.

RESPONSE TO COMMENT COMMENTOR NO. 439: AVIS, MAYOR, CITY OF PITTSBURG (CONT'D.)

ıment No. 439-5

document addresses interim management for the overall spent nuclear luding domestic and foreign research reactor spent nuclear fuel. As a ument, it does not include port evaluation or port selection for the nuclear fuel from foreign research reactors since no decisions relating entry were to be made pursuant to the programmatic document. Port ction for foreign research reactor spent nuclear fuel is discussed in D of this EIS.

ument No. 439-6

licate that the risks associated with receipt of foreign research reactor even through the most heavily populated ports in the United States, ction 4.2.2.3 of the EIS). Nevertheless, in the National Defense or the Fiscal Year 1994, Congress indicated that low port population n for use in port selection, where economically feasible (Appendix D, EIS). Please note that even the National Defense Authorization Act did not make low port population an absolute requirement. Oakland ossible port of entry during the scoping process for this EIS. However, ational Defense Authorization Act for Fiscal Year 1994 requirement, ıed after the scoping process for this EIS had been completed, DOE ı density as one of the factors to be considered in selecting ports of in the port selection criteria after completion of scoping resulted in ened out.

identified for consideration at the same time as all the other potential ssed in the draft EIS, as a result of the detailed evaluation of available mplished for the EIS and documented in Appendix D. This port esulted in the addition of three other potential ports of entry that had ified at the time scoping was conducted, namely Galveston, TX; ıd Wilmington, NC.

ıat resulted in selection of Concord NWS as a potential port of entry ɔendix D. The location of this port on the West Coast is certainly a stic, but is not specified in the criteria and was not a factor in its

ment No. 439-7

tion 2.7.3.2 of the EIS, DOE provides funding to States and Tribes f Environmental Management and the Office of Civilian Radioactive to assist with transportation related issues. This funding has been used

G (CONT'D.)

response capabilities.
f technical assistance,
DOE's Radiological
ll as through training,
naterials.

comments, contains
sures associated with
e United States. The
nd local authorities,
olution of emergency
ld be affected. These
. Funding for special

tate governments, as
es. However, if the
eactor spent nuclear
ns in dealing with

ve.

accidents divided all
1.1 of the EIS). The
ne ship carrying the
n a collision with a
ortation cask. The
/orst case scenario),
ssociated with these
tained from Lloyd's
experience shipping

quences and risks of
If a policy to accept
fuel elements would

o Comment
r No. 439:
Y of Pittsburg (Cont'd.)

resistant to destruction by collision and fire
ent that a cask is breached by collision and/
be low and the associated risks would also

the EIS because seismic activity would not
ask than that caused by a ship collision and
om the worst plausible accidents involving
nsportation casks were evaluated, regardless
the initiator of either a ship or road accident
lents, however, the number of earthquake-
npared to other causes.

would be no significant adverse impacts to
foreign research reactor spent nuclear fuel
fuel transportation casks are designed and
al. As stated in Section 2.6.2 of the EIS, to
ask has ever released any of its contents
ts. Spent nuclear fuel transportation casks
port or waterway, cannot leak because the
affect water quality. A paragraph has been
e this point and emphasize the no-impact

eign research reactor spent nuclear fuel in
tric tons (28.1 tons). (See next response.)
lations are published in 10 CFR Part 73.
w and comply with all Federal and State
ort. How to comply with these laws and
us outside the scope of this EIS.

MENT
139:
ITTSBURG (CONT'D.)

esponse to Comment 22-11. For
Comment 485-15. For possible
ne the response to Comment 22-9
t activities. DOE expects that no
nuclear fuel transportation cask
ld be necessary.

1 of the EIS, the heaviest marine
action weighs only 25.5 metric
hat weigh more, but these would
ite to another management site.
NWS.

g off-peak hours. DOE's policy
go in order to minimize the time

ppendix A and Section 4.2 of the
iological effects of the proposed
ugh F of the EIS. These analyses
bles 4-6 and 4-7 of the EIS). It is
every accident scenario, one can
nts analyzed in this EIS include
ntense fire. As shown in Section
pent nuclear fuel would result in
uding minority and low-income
NWS. As a result, there are no
om the proposed action.

S were obtained using a circle of
ulation data are correct. The scale
s in Appendix A) of the draft EIS
As discussed in Appendix A,
90 census data published by the
e 1990 census data, the Census
ck groups (a block group usually
hese block groups lie completely

SE TO COMMENT
NTOR No. 439:
, CITY OF PITTSBURG (CONT'D.)

and two of these block groups lie partly within a 10
discussed in Appendix A, populations within each
alysis to be uniformly distributed throughout the
. Data for Concord NWS shown in the figures and
ight percent of the population of the City of Pittsburg

18

uipment from trace radiation would occur during
earch reactor spent nuclear fuel in port. Appendix
worker radiation doses resulting from off-loading a
from a vessel; no radioactive particles are generated
rker contamination. Therefore, no waste disposal
be necessary.

9

, above.

COMMENTOR NO. 439:
TAYLOR DAVIS, MAYOR, CITY OF PITTSBURG (CONT'D.)

robability of a transportation accident involving spent nuclear fuel in
ay Area is significantly increased by the water and ground based
ortation of significant amounts of refinery and chemical industry
ts in the region. 439-20

IS does not adequately identify and analyze emergency response
edness, environmental justice issues, and economic impacts related
proposed project. 439-21

has been an inadequate period of time for the communities affected
proposal to use CNWS as a Potential Port of Entry to review
ial impacts.

ities of Concord and Martinez, and the County of Contra Costa have
ly taken positions opposing the designation of CNWS as a Potential
Entry for the Spent Fuel project.

EFORE, BE IT RESOLVED, that the Pittsburg City Council opposes the
he Concord Naval Weapons Station as a Potential Port of Entry of spent
due to the proximity of major population centers and the potential for a
accident which could impact the City of Pittsburg and other local
This resolution requests that the proposal review for this project be
directs City staff to prepare comments on DOE/EIS-0218D which detail the
ns. 439-22

D ADOPTED, by the City Council of the City of Pittsburg, at a regular
held thereof, on the 19th day of June, 1995 by the following vote:

Taylor Davis, Mayor

e, City Clerk

RESPONSE TO COMMENT
COMMENTOR NO. 439:
TAYLOR DAVIS, MAYOR, CITY OF PITTSBURG (CONT'D.)

Response to Comment No. 439-20

The methodology for determining the probability of a transportation accident in port is discussed in Appendix D and Section 4.2.2.3 of the EIS and the probability was found to be low. The probability of a ground transport accident is discussed in Appendix E and Section 4.2.3.3 of the EIS and it was also found to be low.

Response to Comment No. 439-21

Section 2.7 of the EIS describes in general, the emergency preparedness issues associated with the transportation of foreign research reactor spent nuclear fuel through the proposed ports and along the ground transportation routes. Details of the process would be included in the Transportation Plan that would be prepared for any individual spent nuclear fuel shipment and coordinated with State and local officials. Environmental justice issues are included in Appendix A of the EIS. The cost associated with the proposed policy, under all management alternatives, is detailed in Section 4.9.

See also the 2nd paragraph to the response to Comment 439-7, above.

Response to Comment No. 439-22

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through Concord NWS is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to the Concord NWS, or to any of the ports analyzed in the EIS, is low. Not only is the risk low, but the analysis of impacts associated with an accident involving foreign research reactor spent nuclear fuel determined that no decontamination, interdiction, or condemnation of property would result from the worst plausible accident (Section 4.2.2.3 2nd Appendix D, Section D.5 of the EIS). Regarding the commentor's concern about the population of the area, the port selection process that determined that Concord NWS was an acceptable port considered the population of the port and surrounding areas. Appendix D, Section D.1.9.5 of the EIS presents an explanation of the population criterion.

COMMENTOR NO. 440:
GREATER CONCORD CHAMBER OF COMMERCE

The Chamber
Greater Concord Chamber of Commerce
Contra Costa's Leading Business Association

Fax: 202-586-5256
June 16, 1995

Charles Head, Program Manager
Office of Spent Nuclear Fuel Management (EM-37)
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0001

Dear Mr. Head:

RE: Draft EIS for Transfer Facility for Foreign Research Reactor Spent Nuclear Fuel Rods

The Greater Concord Chamber of Commerce opposes the use of the Concord Naval Weapons Station port as a transfer facility for foreign research reactor spent nuclear fuel rods.

The Chamber sides with concerns and issues raised by the City of Concord, other cities within Contra Costa County and the Contra Costa Board of Supervisors. We agree that there are too many unanswered questions, i.e., particular hazards in this area which might increase risk of accidents, such as earthquake faults; the port's capacity or equipment to off-load spent nuclear fuel rods; additional public personnel or military personnel needed to secure the port area and temporary storage area; additional role placed on City, County and State law enforcement agencies; and what to do if an accident resulted in health hazards, contaminated water supply, closed major roads and caused localized panic. 440-1

Because the three western storage sites (Hanford, Washington, Idaho National Engineering Laboratory and the Nevada Test Site near Las Vegas) are far away and not easily reached from Concord due to significant amounts of traffic and road closures due to snow storms, the Chamber feels assurances of error and fail-safe procedures are not possible.

While the Chamber recognizes the Concord Naval Weapons Station as a good neighbor and long-standing and contributing member of the Chamber of Commerce and the greater Concord community, the Naval Weapons Station port is situated in a well-populated and very seismically active area, not an appropriate site through which nuclear waste should be shipped.

We trust the D.O.E. will hear the testified reasoning offered here and not move forward with a federal government plan to ship nuclear waste through the Concord Naval Weapons Station.

Sincerely,

Larry Azevedo
President

cc: City of Concord, Board of Supervisors, Senators Diane Feinstein and Barbara Boxer, Congressmen George Miller and Bill Baker, Secretary of the Navy, Captain Roger B. Lanning

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RESPONSE TO COMMENT
COMMENTOR NO. 440:
GREATER CONCORD CHAMBER OF COMMERCE

Response to Comment No. 440-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through Concord NWS is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with bringing spent nuclear fuel to Concord NWS, or to any of the ports analyzed in the EIS, is low.

With respect to the commentor's question regarding increased risk of accidents due to local hazards such as earthquakes, see the response to Comment 22-7 for a discussion of this topic.

The commentor questions Concord NWS's capacity or equipment to off-load spent nuclear fuel, see the response to Comment 22-2 for a discussion of this topic.

The security provided for the spent nuclear fuel shipments is required to meet or exceed all the applicable security requirements in the Code of Federal Regulations (10 CFR Part 73). If any port did not already provide security sufficient to satisfy these requirements, it would be the responsibility of the shipper to provide the required additional security. The security provisions are summarized in the new Appendix H that has been added to the final EIS in response to public comments. This appendix presents the general provisions of the Transportation Plan, which is a document that would be prepared for each foreign research reactor spent nuclear fuel shipment to specify details of the transportation process, including security provisions in port and during transit.

In response to emergencies involving foreign research reactor spent nuclear fuel, see the response to Comment 22-6 for a discussion of this topic.

In response to the commentor's concern over shipment from Concord to the management site(s), the EIS evaluates the access to intermodal transportation and distance from the port to the management site in selecting ports of entry for the foreign research reactor spent nuclear fuel. Appendix D, Section D.1.9 presents details of the port selection process. The EIS accident risk assessment uses route-specific information to assess the consequences of accidents during overland transportation. Appendix E, Section E.5.2 discusses the accident assessment methodology for overland transportation. The analysis in the EIS indicates that the risks associated with an accident are low (Section 4.2.3.3) and that the risks associated with incident-free handling of the foreign research reactor spent nuclear fuel transportation casks are also low (Section 4.2.3.2).

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COMMENTOR NO. 455: CITY OF ANTIOCH (CONT'D.)

RESPONSE TO COMMENT
COMMENTOR NO. 455: CITY OF ANTIOCH (CONT'D.)

The risk of releasing radioactive material from a spent nuclear fuel transportation cask as the result of a seismic event is low. Transportation casks are designed and built to withstand significant punishment without releasing their contents (Section 2.6.2 of the EIS). Therefore, a seismic event, even if it caused structures at Concord NWS to fail, is not expected to compromise the transportation cask. Further, the analyses of impacts associated with accidents involving foreign research reactor spent nuclear fuel presented in Section 4.2.2.3 demonstrates that the use of any of the selected ports would not pose any significant risk to the port personnel or the population near the ports.

Response to Comment No. 455-4

The addition of up to 186 truck shipments to the routes near Concord spread out over a period of 13 years would have an insignificant impact on the traffic congestion or the traffic accident rate because tens of thousands of truck shipments will travel the same roads during those 13 years. As discussed in Appendix E and Section 4.2.3.3 of the EIS, the potential for fatal traffic accidents caused by the proposed action would be very low.

See the response to Comment 22-9 for DOE's role in emergency response and management activities, which would include assistance to local public safety authorities. Based on over 40 years of experience, DOE expects that no radioactive material would be released from the spent nuclear fuel transportation cask during a truck accident, so there would be no radiological damage to the community's physical and social environment.

COMMENT No. 456: CITY OF PLEASANTON

sponse to the draft EIS was extended from
nment period (90 days total) to be sufficient
e, nor is it required by NEPA, to conduct
ential transportation routes for the foreign
eventeen public hearings were held on the
likely to be directly affected by the EIS
and at the potential management sites. In
c during these hearings, written comments
onsiders that these actions have provided
on the draft EIS.

OE provides funding to States and Tribes
ent and the Office of Civilian Radioactive
on related issues. This funding has been
emergency management and response
's assistance is provided in the form of
ost. Assistance may be provided through
under the National Contingency Plan, as
gs, informal discussions, and informal

in response to public comments, contains
ess and security measures associated with
ent nuclear fuel in the United States. The
and State, Tribal, and local authorities,
identification and resolution of emergency
ommunities that would be affected. These
ergency responders. Funding for special
this interface.

Commentor No. 456:
Ben Tarver, Mayor, City of Pleasanton (Cont'd.)

Thank you for your consideration.

Sincerely,

Ben Tarver
Mayor

cc: Senators Feinstein and Boxer
Representative Bill Baker
City Council
City of Concord
City of Martinez

Response to Comment
Commentor No. 456:
Ben Tarver, Mayor, City of Pleasanton (Cont'd.)

COMMENTOR NO. 459: CHAMBER OF EASTERN PIERCE COUNTY

The Chamber of Eastern Pierce County

d St. S.W. • P.O. Box 1298 • Puyallup, WA 98371 • (206) 845-6755 • FAX (206) 848-6164
1-800-634-2334

Manager
ar Fuel Mngmt.
gy
., SW

astern Pierce County opposes the importation of spent
he Port of Tacoma, as not in the best interest of the
ity. Social, safety and economic impacts must be
partment of Energy. 459-1

abilities are of concern to any operation at the Port
local #23 has declared they will not handle this
ents will come by regular commercial carrier, other
.. Potentially, cargos of adjacent berthed ships
reby hampering the movement of commercial cargos.

an commerce of nuclear materials is anonymous, which
security. However, the result of this environmental
clusion will identify the trans-shipment point for
reby compromising security and may attract the
groups. 459-2

lsions or funding for safety planning or training or
spondents or adjacent worksites or populations. 459-3

ing fears associated with nuclear energy is expected
: whichever port's community is announced as the
Pierce County has had it's share of unreasoned

tern Pierce County would like to see the Port of
Department of Energy's list of potential sites for
ear fuel.

Pierce County

Representatives
missioners

RESPONSE TO COMMENT COMMENTOR NO. 459: THE CHAMBER OF EASTERN PIERCE COUNTY

Response to Comment No. 459-1

The commentor's opposition to bringing foreign research reactor spent nuclear fuel through the Port of Tacoma is noted.

Candidate ports were chosen from among commercial and military ports along the eastern seaboard, western seaboard, and the Gulf of Mexico. The selection process is described in Appendix D, Section D.1 of the EIS. No significant human health, safety, or environmental risks were found to exist at any of the candidate commercial or military ports selected (Section 4.2.2 of the EIS). Spent nuclear fuel from foreign research reactors is shipped in standard containers, and does not require special handling techniques (Section 2.6.3.2.2 of the EIS). The security provided for the spent nuclear fuel shipments is required to meet or exceed all the applicable security requirements in the Code of Federal Regulations (10 CFR Part 73). If any port did not already provide security sufficient to satisfy these requirements, it would be the responsibility of the shipper to provide the required additional security.

The possibility of a longshoremen strike was not considered in the ports selection process (Appendix D, Section D.1.9 of the EIS) since that factor does not impact on the capability to safely receive containers carrying foreign research reactor spent nuclear fuel. The decision as to which port or ports would be used, in the case that foreign research reactor spent nuclear fuel is accepted by the United States, will be made in the Record of Decision. In either case, the possibility of strikes is one of the many factors that must be considered in determining which ports to use.

Response to Comment No. 459-2

Neither acts of terrorism nor theft of materials by a determined group or individual can be completely precluded. However, proper security measures greatly reduce the risk of such actions. Security would be provided for all shipments of foreign research reactor spent nuclear fuel, as required by the Code of Federal Regulations (10 CFR Part 73). The security provisions are summarized in the new Appendix H that has been added to the final EIS in response to public comments. This appendix presents the general provisions of the Transportation Plan, which is a document that would be prepared for each foreign research reactor spent nuclear fuel shipment to specify details of the transportation process, including security provisions in port and during transit.

Response to Comment No. 459-3

DOE considers that there is adequate regulatory and emergency preparedness infrastructure to ensure the safe acceptance and transport to designated management sites if the foreign research reactor spent nuclear fuel is managed in the United States. Federal funding to State, Tribal, and local governments for maintaining emergency response programs is

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SE TO COMMENT
NTOR No. 472:
AYOR, CITY OF PORTSMOUTH

title of the foreign research reactor spent nuclear
d not later than its entry into U.S. territorial waters
h taking title are described in Sections 2.2.1 and

he site(s) where the foreign research reactor spent
d be cleared prior to the unloading of the spent
rts. Under normal circumstances, it would remain
ent of a major disruption of ground transportation
mic activity, or other situation, DOE's goal is to
d to provide safe transport of the spent nuclear fuel
e.

of each State and any Tribal chair,or their designee,
ven days in advance of the shipment of hazardous
. It would be the responsibility of the Governor to
e and local officials.

nal EIS in response to public comments, contains
eparedness and security measures associated with
actor spent nuclear fuel in the United States. The
en DOE and State, Tribal, and local authorities,
, for the identification and resolution of emergency
to the communities that would be affected. These
of first emergency responders. Funding for special
d during this interface.

provides details on the evaluation criteria used to
eceipt of foreign research reactor spent nuclear

RESPONSE TO COMMENT
COMMENTOR NO. 472:
MAYOR, CITY OF PORTSMOUTH (CONT'D.)

population of the port and along the route to the management ail in Appendix D, Section D.1.9.5 of the EIS. After applying , the Port of Hampton Roads was identified as a potential port kland and the Port of Seattle were excluded.

nd results presented in Appendix D, Sections D.1.8 and D.1.9 rts that are acceptable for the receipt and handling of foreign ar fuel, not which port(s) is best.

SPONSE TO COMMENT
MMENTOR NO. 474:
RAY, MAYOR, CITY OF PINOLE

474-1

comments in response to the draft EIS was extended from
onsiders the comment period (90 days total) to be sufficient
not be feasible, nor is it required by NEPA, to conduct
unity along potential transportation routes for the foreign
uel. As such, seventeen public hearings were held on the
rmined most likely to be directly affected by the EIS
ports of entry and at the potential management sites. In
from the public during these hearings, written comments
raged. DOE considers that these actions provided ample
mment on the draft EIS.

474-2

of the EIS, DOE provides funding to States and Tribes
ntal Management and the Office of Civilian Radioactive
transportation related issues. This funding has been used
ion's emergency management and response capabilities.
assistance is provided in the form of technical assistance,
Assistance may be provided through DOE's Radiological
e National Contingency Plan, as well as through training,
nal discussions, and informational materials.

the final EIS in response to public comments, contains
ncy preparedness and security measures associated with
arch reactor spent nuclear fuel in the United States. The
tween DOE and State, Tribal, and local authorities, prior
licy, for the identification and resolution of emergency
pecific to the communities that would be affected. These
ining of first emergency responders. Funding for special
ressed during this interface.

COMMENTOR NO. 474:
PETER MURRAY, MAYOR, CITY OF PINOLE (CONT'D.)

CHARLES HEAD
June 15, 1995

to assist potentially affected cities, counties, and local agencies involved in emergency services in evaluating and anticipating the proposed federal action.

I look forward to your prompt response to the foregoing matters.

Sincerely,

Peter Murray
Mayor of Pinole

PM:se

RESPONSE TO COMMENT
COMMENTOR NO. 474:
PETER MURRAY, MAYOR, CITY OF PINOLE (CONT'D.)

; TO COMMENT
TOR NO. 494:
YOR, CITY OF HERCULES

s in response to the draft EIS was extended from
lers the comment period (90 days total) to be
l not be feasible, nor is it required by NEPA, to
nity along potential transportation routes for the
l. As such, seventeen public hearings were held
ed most likely to be directly affected by the EIS
ntry and at the potential management sites. In
public during these hearings, written comments
OE considers that these actions provided ample
the draft EIS.

S, DOE provides funding to States and Tribes
agement and the Office of Civilian Radioactive
ortation related issues. This funding has been
ion's emergency management and response
DOE's assistance is provided in the form of
s the cost. Assistance may be provided through
and under the National Contingency Plan, as
eetings, informal discussions, and informational

l EIS in response to public comments, contains
aredness and security measures associated with
tor spent nuclear fuel in the United States. The
DOE and State, Tribal, and local authorities,
r the identification and resolution of emergency
the communities that would be affected. These
irst emergency responders. Funding for special
uring this interface.

Response to Comment
Commentor No. 495:
Norman La Force, Mayor, City of El Cerrito

ponse to Comment No. 495-1

deadline for submission of comments in response to the draft EIS was extended from 20 to July 20, 1995. DOE considers the comment period (90 days total) to be cient for public comments. It would not be feasible, nor is it required by NEPA, to luct public hearings in every community along potential transportation routes for the gn research reactor spent nuclear fuel. As such, seventeen public hearings were on the draft EIS in the locations determined most likely to be directly affected by the alternatives, specifically in the ports of entry and at the potential management sites. dition to accepting comments from the public during these hearings, written comments also welcomed, and encouraged. DOE considers that these actions provided ample rtunity for the public to comment on the draft EIS.

ponse to Comment No. 495-2

iscussed in Section 2.7.3.2 of the EIS, DOE provides funding to States and Tribes igh the Office of Environmental Management and the Office of Civilian Radioactive e Management to assist with transportation related issues. This funding has been in the past to enhance a jurisdiction's emergency management and response bilities. Besides funding, much of DOE's assistance is provided in the form of nical assistance, for which DOE bears the cost. Assistance may be provided through E's Radiological Assistance Program and under the National Contingency Plan, as as through training, DOE sponsored meetings, informal discussions, and informational rials.

endix H, which was added to the final EIS in response to public comments, contains eneral provisions for emergency preparedness and security measures associated with ransportation of foreign research reactor spent nuclear fuel in the United States. The isions include an interface between DOE and State and local authorities, prior to the lementation of the policy, for the identification and resolution of emergency agement and security issues specific to the communities that would be affected. These s include capabilities and training of first emergency responders. Funding for special ls, if necessary, would be addressed during this interface.

COMMENTOR NO. 495:
NORMAN LA FORCE, MAYOR, CITY OF EL CERRITO (CONT'D.)

Charles Head, Program Manager
June 14, 1995
Page Two

Among the concerns and reasons for requesting the extension of the study and comment period are such concerns as detailed by the City of Concord in their letter of May 22 to you, and the City of Martinez in their letters of June 6 to you and to Hazel O'Leary, Director of your Department, (copies of all three enclosed). Rather than repeat these concerns, I wish, by reference, to indicate that we join in their concerns and comments and offer them as reasons why the study period should be extended until September 20, 1995.

We look forward to your prompt response to the foregoing matters.

Sincerely,

Norman La Force,
Mayor

NLF:lg

cc: City Council
City Manager

RESPONSE TO COMMENT
COMMENTOR NO. 495:
NORMAN LA FORCE, MAYOR, CITY OF EL CERRITO (CONT'D.)

OMMENT
o. 496:
COUNCIL (CONT'D.)

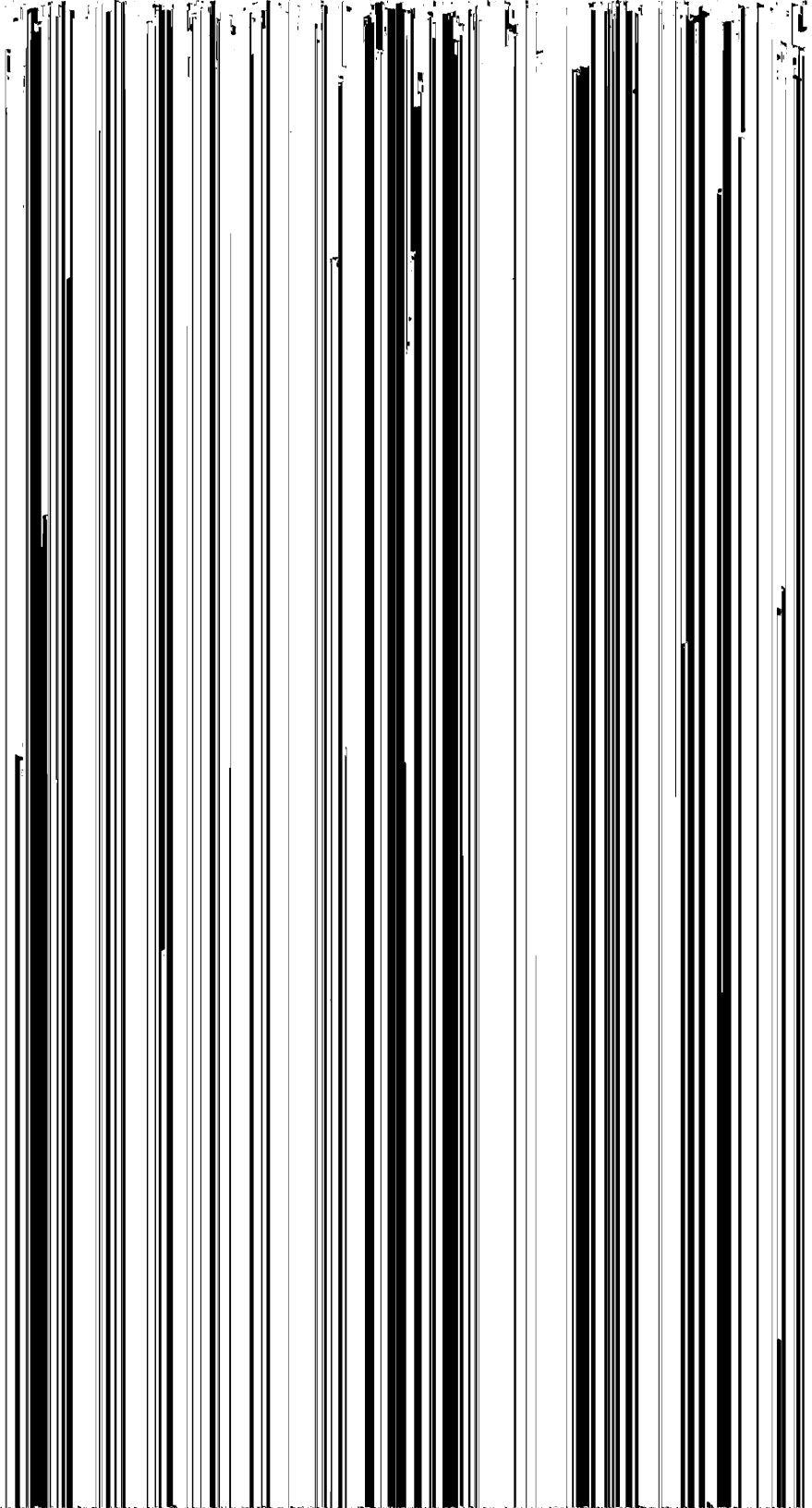
port to the open ocean or a large bay
endix D, Section D.5.3.1.3 of the EIS
robability of ship accidents used in the

preparation of the EIS, some of then
ee the list of references at the end of

ansportation routes, or transport modes
. If the Concord NWS is selected, then
ance with Department of Transportation
oute could use Route 4, Route 24, and/
ting agency can designate a preferred
ollow, in accordance with 49 CFR Part

gned and built to preclude release of
40 years of spent fuel shipments, no
a transportation cask, nor has a spent
ured, even as the result of an accident.
that spent nuclear fuel transportation
release radioactive materials or affect
Water District via Mallard reservoir or
olving a ship at Concord NWS (Section
ntamination would be so small that no
the immediate vicinity of an accident.
voir would be minimal. To insure this
ur, all water supplies in the area, as well
n.

onse to the draft EIS was extended from
comment period (90 days total) to be



ONCORD

Council.
M. Allen, Mayor
ason, Vice Mayor
n Gill
Manigal
rd A. Patrick

Reibl, City Clerk
n Wentling, City Treasurer

R. James, City Manager

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500-1

Response to Comment
Commentor No. 500:
Helen M. Allen, Mayor, City of Concord

Response to Comment No. 500-1

The draft and final versions of this EIS provide an evaluation of the environmental effects which would occur under implementation for all reasonable management alternatives. Section 2 of the EIS describes the proposed action and management alternatives, and results of the environmental evaluation are given in Section 4 of the EIS. Appendices of the EIS provide detailed supporting data and information for the evaluation. Human health and safety were primary concerns included in the environmental evaluation. As discussed in Sections 4.2.2 and 4.5 of the EIS, the risk associated with bringing spent nuclear fuel to Concord NWS, or any port analyzed in the EIS, is low.

Environmental impacts of a proposed action are one factor in an agency's decision process. Since management of spent nuclear fuel from foreign research reactors would have no significant environmental effects, decisions regarding management of spent nuclear fuel from foreign research reactors would be based on non-environmental considerations.

TO COMMENT '00: HELEN M. ALLEN, CONCORD (CONT'D.)

has been determined to be acceptable to receive
ar fuel, if the material is to be accepted into the
d surrounding areas is one of the considerations
he reasons the Port of Oakland was not included
iterion for port selection (Criterion 5) is discussed
).1.9.5 of the EIS. Other considerations such as
rs, access to the open ocean, and port facilities
e final selection of ports of entry. Appendix D,
ils of the port selection process. (Also see the

dioactive material from foreign research reactor
endix D, Section D.5.3.1 of the EIS presents a
marine accidents.

ome operators of commercial ports believed that
aded at military ports merely reported the nature
ived, not DOE's position regarding the need to

with an accident in San Francisco Bay were
d found to be low, in spite of the large population
be safe to use Concord NWS as a receipt port for
ar fuel.

rt considered in the EIS has developed an Area
vention Act of 1990. This plan outlines response
for responding to and recovering from hazardous
ion 2.7.3.2 of the EIS, DOE provides funding to
Environmental Management and the Office of
t to assist with transportation related issues. This
ance a jurisdiction's emergency management and
, much of DOE's assistance is provided in the
OE bears the cost. Assistance may be provided
Program and under the National Contingency
sponsored meetings, informal discussions, and

OMMENT
ELEN M. ALLEN,
ORD (CONT'D.)

nse to public comments, contains the
nd security measures associated with
nuclear fuel in the United States. The
d State, Tribal, and local authorities,
ntification and resolution of emergency
munities that would be affected. These
gency responders. Funding for special
s interface.

.e., seiches, earthquakes, volcanism,
: D, Section D.1.9.6). The probability
research reactor spent nuclear fuel
tremely short period of risk (typically

earch reactor spent nuclear fuel would
ent and remain in contact with weather
ship were to experience a collision or
i.e., tsunamis), the analysis in the EIS
dix D, Section D.5 of the EIS presents
associated with accidents in port and

ned and built to preclude release of
) years of experience shipping spent
n released from a transportation cask
the EIS). Based on this experience,
rough the Concord NWS would not
uality of the water supply for Contra
ner path. Analysis of a severe accident
of the EIS) indicates that the resultant
e required other than possibly in the
ny such severe accident, DOE would
food, air, and water to ensure that no

sion is to support the military through
reign research reactor spent nuclear
es. These facts have been incorporated

ONSE TO COMMENT
O. 500: HELEN M. ALLEN,
Y OF CONCORD (CONT'D.)

of the EIS. The Concord NWS has the experience and containers in which the foreign research reactor spent Currently the Concord NWS has a floating crane that so, Concord NWS is scheduled to add two container ndling capacity of the facility.

0-7

f the receipt of foreign research reactor spent nuclear ould be low. The requirements for physical protection specified in 10 CFR Part 73.37. The principal points w enforcement agencies, (2) armed escorts, and (3) ations center that is staffed 24 hours per day. (Section

pulated areas, one escort vehicle containing an armed nother escort vehicle containing another armed guard opulated areas, there would be only one escort vehicle s, the escort would ride on the train in a location that nt car while the train is in motion. (Section 2.7.5 and

ssue, individual Transportation Plans would be prepared led for acceptance through the Concord NWS (or any portation Plans would be prepared in consultation with cials to ensure that details of the transportation process als or organizations who would perform all required se individuals and parties know what would be expected dix H of the EIS).

e responsibility of the local and State governments, as onstrations occur on military bases. However, if the the receipt of foreign research reactor spent nuclear al, State, or military organizations in dealing with

Appendix D of the EIS to address the issue of potential

[. *ALLEN,*
NT'D.)

aken into account in the
2.3 in the EIS. Terrorist
his activity is impossible

t 22-11. The hours for
nts would be determined
: port as soon as they are

clear fuel transportation
ad structures are strong

on, see the responses to

d due to the absence of
asures are presented in

Response to Comment Commentor No. 506: William D. Landis, Mayor, City of Pleasant Hill

sponse to Comment No. 506-1

e commentor's opposition to bringing foreign research reactor spent nuclear fuel through Concord NWS is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates t the risk associated with bringing spent nuclear fuel to the Concord NWS, or to any of ports analyzed in the EIS, is low.

egard to Concord being a highly populated area, the population of the areas surrounding ncord NWS to a radius of ten miles, and the population along the transportation routes ne of the considerations of the port selection criteria. The population around Concord l on the routes to the management site(s) was low enough to qualify Concord NWS as acceptable port. The population criteria for port selection (Criterion 5) is discussed in re detail in Appendix D, Section D.1.9.5 of the EIS.

e topic of heavy marine traffic and potentially hazardous land facilities near the terway are discussed in the response to Comment 79-1.

e topic of impacts of seismic events is discussed in the response to Comment 452-1.

sponse to Comment No. 506-2

discussed in Section 2.2.1.8, five potential management sites were identified for nagement of the foreign research reactor spent nuclear fuel. These are: the Savannah ver Site, the Idaho National Engineering Laboratory, the Hanford Site, the Oak Ridge servation, and the Nevada Test Site. See the response to Comment 266-3 for more ormation on management site selection.

r the streets that might be used, see the response to Comment 22-11. Representative l routes from Concord to the five potential management sites are shown in Figure E1- in Appendix E of the EIS.

e police services and emergency response training that might be necessary are discussed Section 2.7 of the EIS.

T
D. LANDIS,
L (CONT'D.)

draft EIS was extended from
period (90 days total) to be

COMMENTOR NO. 514: CONTRA COSTA COUNTY

Community Development Department
County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553-0095

Phone:
(510) 646-2096

Contra Costa County

Harvey E. Bragdon
Director of Community Development

June 19, 1995

Secretary Hazel R. O'Leary
Secretary of Energy
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585

SUBJECT: USE OF THE CONCORD NAVAL WEAPONS STATION AS A PROPOSED PORT OF ENTRY FOR FOREIGN RESEARCH REACTOR SPENT NUCLEAR FUEL

Dear Madam Secretary:

The Contra Costa County, California, Board of Supervisors, on June 6, 1995, unanimously voted to strongly oppose the use of the Concord Naval Weapons Station (located in Contra Costa County) as a port of entry for foreign research reactor spent nuclear fuel. The Concord Naval Weapons Station is one of three West Coast ports which are currently under review as ports of entry in the U.S. Department of Energy's Draft Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel.

The Contra Costa County Board of Supervisors' opposition to the use of the Concord Naval Weapons Station for the intake and trans-shipment of spent nuclear fuel is based on concerns for the cumulative impacts of the proposed program on Contra Costa County and the Bay Area which are already affected by military installations, nuclear research facilities, petroleum refineries, and chemical industries. The Board's position of opposition also reflects concerns over the handling of accidents and security.

514-1

The Contra Costa County Board of Supervisors also has concluded that the Draft Environmental Impact Statement on a Proposed Nuclear Weapons Nonproliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel is inadequate for evaluating the potential impacts of the use of the Concord Naval Weapons Station on the County and the Bay Area. The Board, in this respect, adopted the attached Board Order in which County staff reported deficiencies in spent nuclear fuel logistics and transportation corridor analyses. It further noted the absence of comparative impact analyses for the candidate West Coast ports.

RESPONSE TO COMMENT
COMMENTOR NO. 514: CONTRA COSTA COUNTY

Response to Comment No. 514-1

The Contra Costa County Board of Supervisors' opposition to the use of Concord NWS for the shipment of foreign research reactor spent nuclear fuel is noted. However, analysis in Sections 4.2.2 and 4.5 of the EIS indicates that the risk associated with accepting the spent nuclear fuel would present no significant health, safety, or environmental risk to Concord or any of the candidate commercial or military ports selected. Spent nuclear fuel from foreign research reactors is shipped in standard containers, and does not require special handling techniques (Section 2.6.3.2.2 of the EIS).

The security provided for the spent nuclear fuel shipments is required to meet or exceed all the applicable security requirements in the Code of Federal Regulations (10 CFR Part 73). If any port did not already provide security sufficient to satisfy these requirements, it would be the responsibility of the shipper to provide the required additional security. The security provisions are summarized in the new Appendix H that has been added to the final EIS in response to public comments. This appendix presents the general provisions of the Transportation Plan, which is a document that would be prepared for each foreign research reactor spent nuclear fuel shipment to specify details of the transportation process, including security provisions in port and during transit.

Responses to the detailed comments included in the staff report to the Contra Costa County Board of Supervisors can be found in response to Comments 514-2 through 514-5. In regard to the comment that there are no comparative impact analyses for candidate West Coast ports, Section 4.2.2 of the EIS provides just such comparative analyses. The impacts calculated were low for all ten candidate ports.

Finally, the Board of Supervisors designated the County Health Officer, William B. Walker, M.D., as County's staff contact on the matter of the proposed use of the Concord Naval Weapons Station as a port of entry for spent nuclear reactor fuel. Dr. Walker's address is Contra Costa County, Health Services Department, 20 Allen Street, Martinez, CA 94553, and his telephone number is (510) 370-5010.

Sincerely,

Charles A. Zahn
Assistant Director

Attachment: Board Order 6/6/95

c.c.: Charles Head, Program Manager
Office of Spent Nuclear Fuel Management (EM-39)
U.S. Department of Energy

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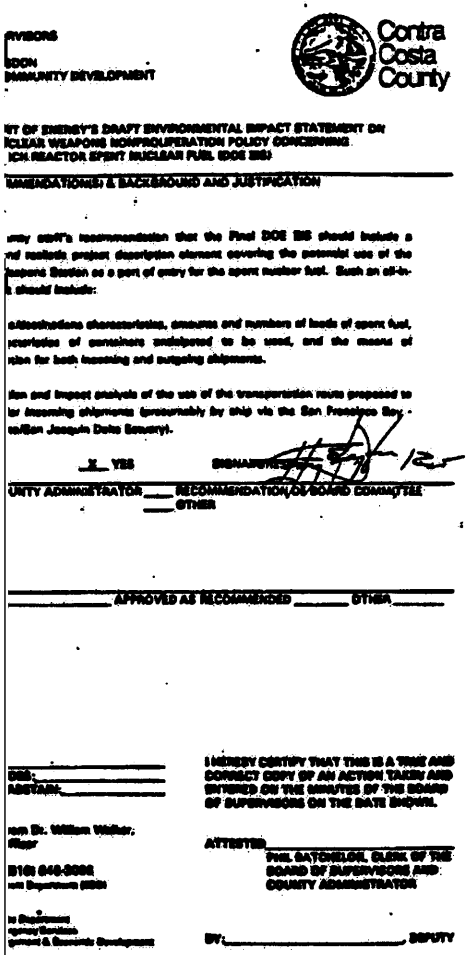
14: CONTRA COSTA COUNTY (CONT'D.)



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NT OF ENERGY'S DRAFT ENVIRONMENTAL IMPACT STATEMENT ON
CLEAR WEAPONS NONPROLIFERATION POLICY CONCERNING
ION REACTOR SPENT NUCLEAR FUEL (DOE EIS)

MMENDATION(S) & BACKGROUND AND JUSTIFICATION

unty staff's recommendation that the Final DOE EIS should include a
ral radiation project description element covering the potential use of the
ncord Station as a port of entry for the spent nuclear fuel. Such an all-in-
should include:

a)Characteristics characteristics, amounts and numbers of loads of spent fuel,
quantities of containers anticipated to be used, and the means of
ation for both incoming and outgoing shipments.

ysis and impact analysis of the use of the transportation route proposed to
for incoming shipments (presumably by ship via the San Francisco Bay -
ta/San Joaquin Delta Estuary).

X YES SIGNATURE

UNTY ADMINISTRATOR ___ RECOMMENDATION OF BOARD COMMITTEE
___ OTHER

APPROVED AS RECOMMENDED _____ OTHER _____

AYE:
ABSTAIN:

I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF AN ACTION TAKEN AND ENTERED ON THE MINUTES OF THE BOARD OF SUPERVISORS ON THE DATE SHOWN.

ATTESTED
PHIL BATCHELOR, CLERK OF THE BOARD OF SUPERVISORS AND COUNTY ADMINISTRATOR

BY: _____, DEPUTY

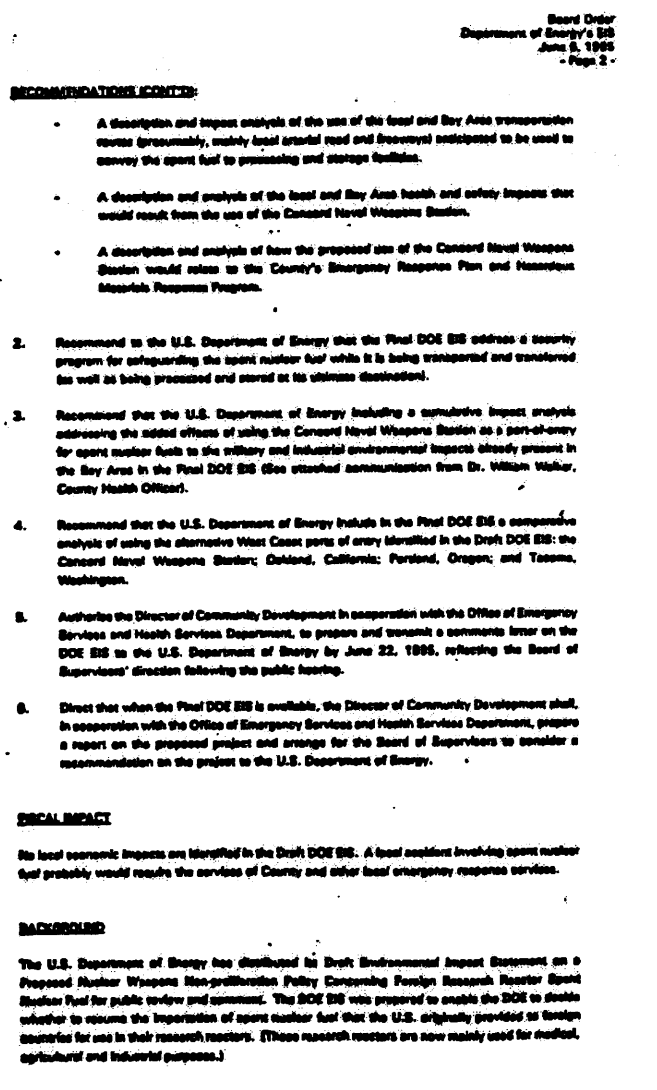
514-2

RESPONSE TO COMMENT
COMMENTOR NO. 514: CONTRA COSTA COUNTY (CONT'D.)

Response to Comment No. 514-2

If foreign research reactor spent nuclear fuel is accepted into the United States, the detailed shipping arrangements would then be initiated. Since the shipping program could extend over 13 years, some of the details would not be available in the near term. A Transportation Plan would be developed prior to the first shipment to provide specific details. Appendix H to the EIS provides the general provisions of the Transportation Plan. The EIS cannot include the detailed information requested because it is not yet available. Much of the information requested is in the EIS, such as origins of the spent nuclear fuel, amounts and numbers of spent nuclear fuel shipments (Section 2.2.1.3), characteristics of the shipping containers (Appendix B, Section B.2), the means of transportation (Sections 2.6.3 and 2.6.4), and the health and safety impacts of shipping the spent nuclear fuel (Section 4.2 for marine and Section 4.3 for land). Appendix D, Section D.2.1.6 discusses transportation routes and access at Concord NWS. The conclusion of all these analyses is that the impacts of using Concord NWS, or any other of the candidate ports, are low.

COMMENTOR NO. 514: CONTRA COSTA COUNTY (CONT'D.)



Board Order
Department of Energy's EIS
June 6, 1995
- Page 2 -

RECOMMENDATIONS (CONT'D):

- A description and impact analysis of the use of the local and Bay Area transportation routes (presumably, mainly local arterial road and freeways) anticipated to be used to convey the spent fuel to processing and storage facilities.
- A description and analysis of the local and Bay Area health and safety impacts that would result from the use of the Concord Naval Weapons Station.
- A description and analysis of how the proposed use of the Concord Naval Weapons Station would relate to the County's Emergency Response Plan and Hazardous Materials Response Program.

2. Recommend to the U.S. Department of Energy that the Final DOE EIS address a security program for safeguarding the spent nuclear fuel while it is being transported and transferred (as well as being processed and stored at its ultimate destination).

3. Recommend that the U.S. Department of Energy including a cumulative impact analysis addressing the added effects of using the Concord Naval Weapons Station as a port-of-entry for spent nuclear fuels to the military and industrial environmental impacts already present in the Bay Area in the Final DOE EIS (See attached communication from Dr. William Walker, County Health Officer).

4. Recommend that the U.S. Department of Energy include in the Final DOE EIS a comparative analysis of using the alternative West Coast ports of entry identified in the Draft DOE EIS: the Concord Naval Weapons Station; Oakland, California; Portland, Oregon; and Tacoma, Washington.

5. Authorize the Director of Community Development in cooperation with the Office of Emergency Services and Health Services Department, to prepare and transmit a comments letter on the DOE EIS to the U.S. Department of Energy by June 22, 1995, reflecting the Board of Supervisors' direction following the public hearing.

6. Direct that when the Final DOE EIS is available, the Director of Community Development shall, in cooperation with the Office of Emergency Services and Health Services Department, prepare a report on the proposed project and arrange for the Board of Supervisors to consider a recommendation on the project to the U.S. Department of Energy.

FISCAL IMPACT

No local economic impacts are identified in the Draft DOE EIS. A local accident involving spent nuclear fuel probably would require the services of County and other local emergency response services.

BACKGROUND

The U.S. Department of Energy has distributed its Draft Environmental Impact Statement on a Proposed Nuclear Weapons Non-proliferation Policy Concerning Foreign Research Reactor Spent Nuclear Fuel for public review and comment. The DOE EIS was prepared to enable the DOE to decide whether to resume the importation of spent nuclear fuel that the U.S. originally provided to foreign countries for use in their research reactors. (These research reactors are now mainly used for medical, agricultural and industrial purposes.)

514-2 (Cont'd.)

514-3

514-4

514-5

RESPONSE TO COMMENT
COMMENTOR NO. 514: CONTRA COSTA COUNTY (CONT'D.)

Response to Comment No. 514-3

Foreign research reactor spent nuclear fuel shipments are subject to the same types of potential hazards as those of other ships carrying nonradiological hazardous materials.

As discussed in Section 2.7.3.2 of the EIS, DOE provides funding to States and Tribes through the Office of Environmental Management and the Office of Civilian Radioactive Waste Management to assist with transportation related issues. This funding has been used in the past to enhance a jurisdiction's emergency management and response capabilities. Besides funding, much of DOE's assistance is provided in the form of technical assistance, for which DOE bears the cost. Assistance may be provided through DOE's Radiological Assistance Program and under the National Contingency Plan, as well as through training, DOE sponsored meetings, informal discussions, and informational materials.

Appendix H of the EIS contains the general provisions for emergency preparedness and security measures associated with the transportation of foreign research reactor spent nuclear fuel in the United States. The provisions include an interface between DOE and State, Tribal, and local authorities, prior to the implementation of the policy, for the identification and resolution of emergency management and security issues specific to the communities that would be affected. These issues include capabilities and training of first emergency responders. Funding for special needs, if necessary, would be addressed during this interface.

Response to Comment No. 514-4

Candidate ports were chosen from among commercial and military ports along the eastern seaboard, western seaboard, and the Gulf of Mexico. The selection process is described in Appendix D, Section D.1 of the EIS. No significant health, safety, or environmental risks were found to exist at any of the candidate commercial or military ports selected (Section 4.2.2 of the EIS) which would warrant a cumulative impact analysis in the EIS addressing the effect of receiving spent nuclear fuel on existing commercial and military environments at the various ports, including the Concord NWS. Spent nuclear fuel from foreign research reactors is shipped in standard containers, and does not require special handling techniques (Section 2.6.3.2.2 of the EIS). The security provided for the spent nuclear fuel shipments is required to meet or exceed all the applicable security requirements in the Code of Federal Regulations (10 CFR Part 73). If any port did not already provide security sufficient to satisfy these requirements, it would be the responsibility of the shipper to provide the required additional security.

Response to Comment No. 514-5

Section 4.2.2.3 of the EIS provides the results of analyses on the impacts of port activities at all of the candidate ports. These impacts are presented in text and in table form for comparison purposes. The impacts are low at all of the candidate ports.