

*Comments.* Several commenters identified issues relating to U.S. Department of Transportation and NRC transportation regulations and the adequacy of DOE's Environmental Impact Statement in evaluating the transportation of storage casks to a geologic repository at Yucca Mountain.

A number of commenters also expressed concerns about physical protection and security during transport of nuclear materials from current storage locations to Yucca Mountain.

*Response.* The Yucca Mountain Review Plan is guidance for NRC staff in conducting a review of the license application submitted under 10 CFR part 63. Reviews of transportation of nuclear materials is addressed by other NRC guidance. Section 180 of the Nuclear Waste Policy Act, 42 U.S.C. 10175, requires DOE to use NRC-certified package designs to transport spent nuclear fuel and high-level waste to a permanent geologic repository. The design of casks that would be used by DOE to transport spent nuclear fuel to a proposed repository must be reviewed and approved by NRC in accordance with 10 CFR part 71. The applicable NRC review guidance is in NUREG-1617, the "Standard Review Plan for Transportation Packages for Spent Nuclear Fuel." If and when DOE submits a design, or designs, for shipping casks, NRC would perform a safety review, and if the designs are found to comply with NRC regulations, then NRC would issue a Certificate of Compliance that is a license to use the cask(s) for shipping the specified fuel contents.

Review of transportation activities for Yucca Mountain will depend on whether they will be conducted by an NRC licensee other than DOE. If DOE takes custody of spent fuel at the site of an NRC licensee, DOE regulations would govern the security of spent fuel shipments. If an NRC licensee ships spent fuel to the geologic repository, 10 CFR part 71, 10 CFR part 73, and U.S. Department of Transportation regulations apply. The impacts of transportation to and from the facility have been evaluated in the DOE environmental impact statement that may be adopted by NRC under 10 CFR 51.109.

NRC's regulations for physical protection of the shipment of irradiated reactor fuel (*i.e.*, spent nuclear fuel) by NRC licensees are located in 10 CFR 73.37. Shipments made by NRC licensees to a future high-level waste repository would be subject to NRC security regulations. NRC staff would review the proposed routes for shipments. For shipments that are

subject to NRC's authority, the regulations in 10 CFR 73.37 require licensees to develop and implement security procedures to meet performance objectives, including minimizing the possibilities for radiological sabotage. These procedures provide information on how licensees comply with NRC's spent nuclear fuel shipment physical protection requirements, including advance notification of each shipment to Governors, the establishment of redundant communication capability with the shipment vehicle, the arrangement of law enforcement contacts along the route, and provisions for armed escorts. Section 180 of the Nuclear Waste Policy Act requires DOE to abide by NRC's advance notifications to state and local governments associated with transporting spent fuel and high level waste.

For NRC-licensed shipments, NRC reviews and approves in advance the routes used for road and rail shipments of irradiated reactor fuel, with respect to physical protection requirements. The U.S. Department of Transportation regulations at 49 CFR part 397 establish the requirements for the designation of preferred routes for highway shipment of hazardous material (*e.g.*, spent nuclear fuel). A shipper must choose routes that meet U.S. Department of Transportation-specified criteria that are intended to minimize the risk of exposure of the public to radiation. There is no formal U.S. Department of Transportation route approval processes as long as routes are consistent with U.S. Department of Transportation guidelines. The U.S. Department of Transportation regulations set the standards for packaging, transporting, and handling radioactive materials (including labeling, shipping documents, placarding, loading, and unloading), and specify training that is required for personnel who handle and transport hazardous materials.

Since the events of September 11, 2001, NRC has taken actions to impose additional security requirements on shippers of spent nuclear fuel. In addition, NRC is sponsoring vulnerability studies to determine the potential effects on a cask subject to attack, by terrorists, beyond current regulatory assumptions, including the crash of a jumbo jet filled with fuel. NRC staff would use results of this study to determine if its security regulations should be modified.

No changes were made to the Yucca Mountain Review Plan in response to this comment.

### 11.9 Terrorism

*Issue:* Does the Yucca Mountain Review Plan adequately address terrorism and related acts?

*Comment.* One commenter questioned whether NRC staff was going to mandate "mock attack" drills on the Yucca Mountain site as a test of the physical protection system. Another commenter inquired whether NRC staff was going to consider protection from insider threats as well as the outsider threat to a repository. Other commenters questioned the perceived lack of security at nuclear facilities in the wake of the September 11, 2001, attacks and argued that the Yucca Mountain site would be a prime target for terrorists. A commenter asked that the schedule for the U.S. Nuclear Regulatory comprehensive review of physical security be placed in the Yucca Mountain Review Plan.

One commenter stated that the technical bases and assumptions for identifying initiating events need to include acts of terrorism, sabotage, and acts of war. The same commenter stated that for calculating Category 2 event sequences, sabotage in the repository, acts of war directed at the repository, sabotage in the operations area, acts of war in the operations area, accidental criticality, intentional criticality, dirty bombs, and permanent contamination of the operations area need to be considered.

*Response.* NRC staff has taken actions regarding security at NRC-licensed facilities in the wake of the September 11, 2001, attacks. Numerous security advisories have been issued to site security managers keeping them updated on the threat environment. NRC staff monitors the threat environment and shares information and analysis with other law enforcement and intelligence agencies. Compensatory Measures have been issued to NRC licensees outlining mandatory enhancements to physical protection in areas such as access control, physical barriers, detection, assessment, and response. The Compensatory Measures are designed to enhance and strengthen physical protection until the Commission-ordered comprehensive review of physical protection is complete.

The purpose of the Yucca Mountain Review Plan is to ensure the quality and uniformity of NRC staff licensing reviews under 10 CFR part 63. The NRC comprehensive review of safeguards and security is a separate activity. The NRC safeguards and security review encompasses all types of licensed facilities and includes information and