

January 28, 2002

The Honorable John D. Dingell, Ranking Member
Committee on Energy and Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Congressman Dingell:

I am responding on behalf of the U.S. Nuclear Regulatory Commission (NRC) to your letter of November 26, 2001, in which you requested a legal memorandum describing the NRC's authority over the movement of nuclear materials as it has evolved from the enactment of the Atomic Energy Act of 1954 (AEA) to the present. The NRC has possessed independent authority to regulate safety in the transport of radioactive materials within its jurisdiction since this authority was granted to its predecessor, the Atomic Energy Commission, in the AEA. The enclosed legal memorandum describes the basis of NRC's authority and the evolution of NRC's exercise of that authority since passage of the AEA.

Thank you for your interest in this matter. Please contact me if we can be of further assistance.

Sincerely,

/RA/

Richard A. Meserve

Enclosure: Legal Memorandum

cc w/encl: The Honorable W. J. "Billy" Tauzin, Chairman
Committee on Energy and Commerce

Legal Memorandum on the Nuclear Regulatory Commission's Authority
Over the Movement of Radioactive Materials

The U.S. Nuclear Regulatory Commission (NRC), under the Atomic Energy Act of 1954, as amended (AEA), 42 U.S.C. § 2011 *et seq.* (1994), and the U.S. Department of Transportation (DOT), under the Hazardous Materials Transportation Uniform Safety Act of 1990 (HMTUSA), 49 U.S.C. § 5101 *et seq.* (1994),¹ each have independent regulatory authority over safety in the transportation of radioactive materials. This memorandum describes the sources of NRC's jurisdiction and the development of NRC's exercise of that jurisdiction as both agencies have sought to establish consistent comprehensive regulations that avoid duplication of effort and unnecessary regulatory burden on shippers and carriers of radioactive materials.

I. NRC's Jurisdiction over Safety in the Transportation of Radioactive Materials

When Congress enacted the 1954 Atomic Energy Act, it granted independent authority to the Atomic Energy Commission (AEC) over the regulation of safety in the transportation of radioactive materials covered by the AEA - - namely, source, byproduct, and special nuclear material. Congress placed this authority in the licensing provisions of the AEA. These sections provide that it is unlawful for any person, except as authorized by a general or specific license issued by the Commission to (1) "transfer or receive in interstate commerce, transfer, deliver, acquire, own, possess, receive possession of or title to, or import into or export from the United States any special nuclear material" (section 57); (2) "transfer or receive in interstate commerce, transfer, deliver, receive possession of or title to, or import into or export from the United States any source material after removal from its place of deposit in nature [except for unimportant quantities]" (section 62); or (3) "transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, own, possess, import, or export any byproduct material [with some exceptions]" (section 81).

In enacting the AEA, Congress did not, however, vest exclusive authority in the AEC to regulate the transportation of radioactive materials. The Interstate Commerce Commission (ICC) retained its authority to regulate all radioactive materials, including AEA materials as well as accelerator produced and naturally occurring radioactive materials not regulated by the AEA, as part of its regulation of the safe transportation of "explosives and other dangerous articles" under the Transportation of Explosives Act, 18 U.S.C. §§ 831-835 (repealed 1979).² ICC regulated radioactive materials as a Class D poison. In 1960, Congress amended the Transportation of Explosives Act to make explicit ICC's authority to regulate the transport of radioactive materials. Pub. L. No. 86-710, 74 Stat. 808 (1960). The amendment also directed ICC to advise and consult with AEC before adopting any regulations relating to radioactive materials. Thus, from the outset of Federal regulation of safety in the transportation of radioactive materials, Congress has sanctioned a dual regulatory regime.

¹The HMTUSA was recodified in Pub. L. No. 103-272, 108 Stat. 759 (1994). Prior to this recodification this Act was found at 49 U.S.C. §§ 1801-1819.

²The Post Office Department, United States Coast Guard and Federal Aviation Agency also had statutory authority and regulations applicable to safety in the transportation of radioactive materials but their rules followed closely those of the ICC.

AEC first addressed the matter of jurisdiction over the transport of radioactive materials in 1965 when it was considering a proposed Memorandum of Understanding with ICC. At the time, the Commission considered arguments opposing AEC's jurisdiction, e.g., the fact that Congress had not used the word "transport" in the licensing provisions of the AEA and the fact that Congress had confirmed ICC's regulatory authority over the transport of radioactive materials in the 1960 amendments to the Transportation of Explosives Act. However, the Commission concluded that, on balance, the countervailing arguments were more compelling: that the AEA provided AEC with authority over possession and transfer of source, byproduct and special nuclear material; that nothing in the legislative history of the 1960 amendments to the Transportation of Explosives Act reflected an intent to repeal or limit AEC jurisdiction; that AEC's public position that it possessed such authority had not been questioned by ICC or licensees; and the fact that overlapping jurisdiction in two Federal agencies was not uncommon.³

In the Energy Reorganization Act of 1974, § 201, 42 U.S.C. § 5841 (1994), Congress transferred the licensing and regulatory authority of AEC to the newly established Nuclear Regulatory Commission. Thus, the primary source of NRC's independent authority over the transport of radioactive materials remains the licensing provisions of the AEA.⁴

In the Department of Transportation Act of 1966, Pub. L. No. 89-670, 80 Stat. 931 (1966), Congress transferred ICC's authority over the transport of hazardous materials (including

³ With respect to Congress' choice to use the term "transfer" rather than "transport" in the licensing provisions, it should be noted that the legislative history of neither the 1946 nor the 1954 Acts contains any affirmative indication that the term "transfer" was intended to cover only transfers of title. Shippers of radioactive material described in the Act possess and transfer the material and thus may be regarded as subject to the Commission's licensing jurisdiction with respect to the activity of shipment as they would be with respect to any other activity involving such radioactive material. Nothing in the sections of the Act conferring jurisdiction on the Commission suggests that once such materials are placed in vehicles and begin physical movement, Commission jurisdiction ceases. Accordingly, the Commission may be viewed as having regulatory jurisdiction over shippers as part of its licensing and regulatory authority over "possession" and "transfer" of radioactive materials.

⁴ Congress subsequently enacted legislation governing specific aspects of the transportation of radioactive materials: Pub. L. No. 94-79, § 201, 89 Stat. 413 (1975), 42 U.S.C. § 5841 Note (restricting NRC's authority to license shipments of plutonium by air transport); Pub. L. No. 96-295, § 301, 94 Stat. 789 (1980), 42 U.S.C. § 5841 Note (requiring notification to State Governors of certain shipments of nuclear waste); Pub. L. No. 100-203, § 5062, 101 Stat. 1330-251 (1987), 42 U.S.C. § 5841 Note (prohibiting the transport of plutonium through the air space of the United States unless the NRC has certified that the container used for the shipment is safe as determined by tests specified in the legislation); Nuclear Waste Policy Act of 1982, as amended, § 180, 42 U.S.C. § 10175 (1994) (requiring NRC certification of packages to be used by the Department of Energy for making certain shipments of spent nuclear fuel and high-level radioactive waste).

radioactive materials) to DOT, which was established on April 1, 1967. DOT exercises broad regulatory authority in this field:

Section 5103. General regulatory authority

(a) DESIGNATING MATERIAL AS HAZARDOUS. - The Secretary of Transportation shall designate material (including an explosive, radioactive material, etiologic agent, flammable or combustible liquid or solid, poison, oxidizing or corrosive material, and compressed gas) or a group or class of material as hazardous when the Secretary decides that transporting the material in commerce in a particular amount and form may pose an unreasonable risk to health and safety or property.

(b) REGULATIONS FOR SAFE TRANSPORTATION. - (1) The Secretary shall prescribe regulations for the safe transportation of hazardous materials in intrastate, interstate, and foreign commerce. The regulations --

(A) apply to a person--

(i) transporting hazardous material in commerce;

(ii) causing hazardous material to be transported in commerce; or

(iii) manufacturing, fabricating, marking, maintaining, reconditioning, repairing, or testing a package or container that is represented, marked, certified, or sold by that person as qualified for use in transporting hazardous material in commerce; and

(B) shall govern safety aspects of the transportation of hazardous material the Secretary considers appropriate.

49 U.S.C. § 5103 (1994).

Although the authorities of both agencies overlap, the authorities are not co-extensive. NRC has authority only over “persons” who possess, use or transfer “source,” “byproduct,” and “special nuclear material” as those terms are defined in the AEA. See AEA §11, 42 U.S.C. §2014. As stated supra, such persons are required to become licensees of the Commission unless exempted.⁵ NRC does not have authority to regulate shipments (or possession, use, transfer, etc.) of non-AEA radioactive materials, such as radium or accelerator-produced radioactive material. Further, NRC has relinquished its authority with respect to shipments made by Agreement State licensees, but it requires Agreement State programs to be compatible with NRC’s regulatory program. See AEA §274, 42 U.S.C. §2021. DOT’s authority to regulate is limited to shipments in commerce. DOT’s authority does not extend to shipments not in commerce, such as a local government employee transporting a government-owned source in a government-owned vehicle.

II. The Development of NRC’s Exercise of its Jurisdiction

A. The AEC- ICC Memorandum of Understanding of 1966

⁵The Commission, e.g., has exempted common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service from the requirements for a license to the extent that they transport or store licensed material in the regular course of carriage for another or storage incident thereto. See 10 CFR §§30.13; 40.12; 70.12.

Although AEC possessed the authority to regulate the transport of AEA radioactive materials from its inception, it largely depended on the controls exercised by ICC and the other regulatory agencies through their independent authorities. Initially, AEC imposed some license conditions, primarily governing the packaging and shipping of special nuclear material, limitations on quantities to be shipped, and procedures to be followed by the shipper. In 1958, AEC first issued regulations specifically concerning transportation when it established requirements to protect against accidental conditions of criticality in the shipment of special nuclear material. 22 Fed. Reg. 7666 (Oct. 3, 1958). Early on, AEC developed informal working arrangements with ICC for obtaining necessary approvals for its own shipments, or those of its contractors, under ICC regulations.

As the number of shipments of radioactive materials per year increased, AEC staff became concerned about the adequacy of government regulation. ICC heavily relied upon the Bureau for the Safe Transportation of Explosives and Other Dangerous Articles (the Bureau of Explosives), for the regulation of the transport of radioactive materials, including shipments of large curie content and shipments of fissile materials. The Bureau of Explosives was a private organization created and sustained by the Association of American Railroads and had a small staff and limited expertise.

In 1965, the AEC staff perceived an urgent need for the then-existing ICC/Bureau of Explosives safety standards for shipment of radioactive materials to be expanded to include specifications for additional types of packages and more definitive standards for all shipping containers, particularly with respect to quantities and categories of radioactive material which may be safely shipped in specified containers without special authorization. At that time, AEC began work with ICC to revise the then-existing ICC regulations to provide standards for the majority of the shipments of radioactive material. AEC staff was of the view that the absence of ICC standards for evaluation of shipments of fissile material and large quantities of radioactive material, and the lack of nuclear technical competence within ICC and the Bureau of Explosives would not ensure radiation safety by ICC (or Bureau of Explosives) evaluation alone. Most shipments of large quantities of radioactive material up to that point had been AEC shipments subject to AEC internal controls that assured adequate safety provisions for such shipments. However, in view of the potential hazard resulting from unsafe practices in the shipment of large quantities of radioactive material and the increase in non-AEC shipments of such material, it was thought that AEC should, as an interim measure, adopt standards and controls for the shipment of large quantities of radioactive material. In addition, the AEC staff was of the view that AEC should continue its control of the packaging, limitation of contents of packages, and procedures for shipment of fissile material.

These concerns led AEC to enter into a Memorandum of Understanding (MOU) with ICC which was signed on March 21, 1966. The MOU contemplated that eventually ICC would become the sole regulator of safety in the transportation of radioactive materials within its jurisdiction, but that AEC would, in the interim, adopt regulations applicable to AEC licensees, and contractual requirements applicable to AEC contractors, establishing standards for the shipment of fissile materials and large quantities of radioactive materials.⁶ AEC would also be responsible for

⁶The MOU defined "fissile material" to mean "material, the nucleus of which can be split by low energy neutrons, in the thermal region, and includes uranium 233, uranium 235 and plutonium," and "large quantities" of radioactive material to mean "in excess of 20 curies of Am-

developing regulations and requirements for shipments made by AEC licensees and contractors not within the jurisdiction of the ICC. After ICC had developed its own regulations, AEC would withdraw from the field except with respect to its licensees and contractors not within ICC's jurisdiction.

B. The AEC - DOT Memorandum of Understanding of 1973

On April 1, 1967, DOT inherited the regulatory functions of the ICC with respect to the transport of radioactive materials. DOT discovered that it was unable to increase its staff capability sufficient to make safety evaluations of all packages for the transport of radioactive material as contemplated in the 1966 MOU. DOT informed AEC that it planned to discontinue its prior review of, and issuance of approval for, any packages for shipping radioactive material in favor of having shippers independently comply with published standards, and maintaining records of that compliance. DOT's approvals relied upon AEC's reviews of packages for shipping large quantities and fissile materials, but DOT itself had reviewed and issued approvals for Type B package designs.⁷ AEC staff took the view that it would be inconsistent with AEC radiation protection and control policies not to require review and approval of Type B package designs prior to use. For that reason, AEC and DOT determined to shift the function of reviewing the adequacy of the design of Type B packages from DOT to AEC.

A revised MOU between the two agencies was signed on March 22, 1973. 38 Fed. Reg. 8466 (April 2, 1973). Under the revised MOU, AEC committed to develop safety standards and regulations, and perform package review, for packages for fissile materials and Type B and large quantities of radioactive materials. DOT committed to develop safety standards for all other radioactive material packagings as well as the classification, labeling and marking of the packagings. DOT would adopt a requirement for AEC approval of the packages it reviewed by all persons not otherwise subject to the authority of AEC but subject to DOT jurisdiction. AEC similarly committed to require its licensees and license-exempt contractors to comply with DOT regulations when transporting radioactive materials when those persons were not otherwise subject to DOT authority. The MOU further specified that DOT would be the national competent authority with respect to the administrative requirements set forth in the Regulations for the Safe Transport of Radioactive Materials of the International Atomic Energy Agency (IAEA), but that in issuing certificates of national competent authority for the United States, DOT would require an AEC certificate of approval or a showing that the shipment is within the scope of an AEC exemption or general license. Significantly, the MOU eliminated any reference to an intent by DOT eventually to expand its regulatory oversight or for AEC eventually to retract its oversight to only persons not regulated by DOT. AEC incorporated these MOU commitments into its regulations at 10 CFR Part 71 on April 27, 1973 (38 Fed. Reg. 10437).

241, Sr-90, and others of a similar relative hazard; 200 curies of I-131, Ba-140, Co-60, and others of a similar relative hazard; or 5000 curies of solid chemically non-reactive materials or encapsulated sources.”

⁷"Type A quantity" and "Type B quantity" were defined to mean a quantity of radioactive material the aggregate radioactivity of which did not exceed amounts specified in a regulatory table. See 10 CFR 71.4(q) (1973). Generally, Type B quantities were intermediate between "large quantities" regulated by the AEC and Type A quantities regulated by DOT.

C. The NRC - DOT Memorandum of Understanding of 1979

An MOU between NRC and DOT was signed on June 8, 1979. 44 Fed. Reg. 38690 (July 2, 1979). This MOU updated the 1973 AEC-DOT MOU to take into account revised IAEA regulations, but left basically unaltered the division of regulatory functions between NRC and DOT agreed to in the earlier MOU. Under the 1979 MOU, DOT is to issue complete and comprehensive Federal regulations for the packaging and transportation of all radioactive materials as part of its overall body of Federal regulations for the packaging and transportation of all hazardous materials. However, DOT will rely upon NRC for the development of standards, regulations, and package review for the design and performance of packages for fissile materials and for quantities of other radioactive materials (other than low specific activity materials) exceeding Type A limits.

The 1979 MOU currently governs the division of functions between NRC and DOT in their joint regulation of safety in the transport of radioactive materials. The two agencies have committed to synchronizing regulatory changes to assure that a consistent and comprehensive body of regulations provides adequate protection of public health and safety in the movement of nuclear material.