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JUN 5 1980


Gaston County Board of Commissioners
 P. O. Box 1578
 Gastonia, North Carolina 28052

Gentlemen:

Reference: Docket No. 70-2623

We are happy to respond to the questions contained in your position document of April 28, 1980, pages 4 though 6, to the Atomic Safety and Licensing Board in the matter of the Duke Power Company application to transfer and store spent fuel from its Oconee Nuclear Station at its McGuire Nuclear Station, Unit 1, reactor basin (see enclosure). If we can be of further help, please let us know.

Sincerely,



John P. Roberts, Project Manager
 Advanced Fuel and Spent Fuel
 Licensing Branch
 Division of Fuel Cycle and
 Material Safety

Enclosure: Responses

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OFFICE	FCAF <i>JPR</i>	ECD <i>RKH</i>	FCTC <i>ch</i>	FCAF	
SURNAME	JPROberts:flb	RHoefling	VHodge	L.C. Rouse	
DATE	5/23/80	5/23/80	5/23/80	6/5/80	

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Question 1. In the event of an accident, what immediate area would be affected should a cask be ruptured during such a vehicular accident; i.e., the amount of radioactive gases released; area affected by the contaminated water from the cask. We would also want to know time periods involved for the affected areas to be safe for its use before said potential accident.

Response:

The area affected by gaseous release is dependent on existing meteorological conditions. The gases released would be dispersed and present no problem.

In the Environmental Impact Appraisal, a copy of which is included, Table A-9, "Source Terms for Transportation Accidents," on page A-32 lists the radioactive releases expected by isotope and activity. The release of the liquid coolant would not affect a large area because of the limited amount of liquid released (less than 100 gallons). If the accident should occur in an area where no curbs exist, the liquid would flow off the road and be absorbed in soil along the roadway.

Cleanup time would vary for various accidents. However, several days might be required to decontaminate the area.

Question 2. What would be the long-term physical effects to persons exposed to radiation leaks from the cask, should such occur?

Response:

This subject is discussed in Table I on page 5 of NRC Staff Exhibit No. 6, a copy of which is enclosed, and in Section 6.4 of NRC Staff Exhibit No. 3 (the Environmental Impact Assessment).

The staff concluded that the routine exposure from these proposed shipments would not be unacceptably large that since the proposed shipments will not cause a significant increase in radiation dose to persons near them, they will not pose an unacceptable hazard, and that the estimated health effects from postulated accidental releases of radioactivity would be less in quantity and no different in kind from the estimated health effects resulting from natural background radiation.

Question 3. What are the specific training methods and level of readiness of the first respondents (Highway Patrol) to a nuclear accident involving one of the casks?

Response:

Mr. James V. Hufham of the NRC staff has testified on this topic. See enclosed transcript in the Matter of the Duke Power Company (Oconee/McGuire), Docket No. 70-2623, 10 September 1979, pp 3862-3962 for the specific information presented by Mr. Hufham.

Question 4. What level of training should be received by County Emergency Services, County Police and Fire personnel in reacting to a nuclear emergency involving one or more of the casks, and who would provide and finance necessary training?

Response:

The NRC provides an eight-day course on radiological emergency response operations to state and local government emergency response personnel. One of the simulated accidents to which students respond is a transportation accident involving radioactive material. The course is conducted 16 times per year at the DOE's Nevada Test Site for 20 students per session. To date over 700 students have attended the course. The NRC has and will continue to invite state and local government emergency response personnel, and some federal personnel to attend this course and to underwrite the travel and per diem costs of the state and local participants. Inquiries about this course may be addressed to:

Marie Janinek
Office of State Programs
Nuclear Regulatory Commission
Washington, D.C. 20555
(301) 492-7794

Question 5. What would be the reaction time (both by air and ground) for the second respondent teams who are charged with determining the environmental damage and safety of the area?

Response:

Mr. James W. Hufham of the NRC staff has testified on this topic.

See enclosed transcript in the Matter of the Duke Power Company

(Oconee/McGuire), Docket No. 70-2623, 10 September 1979, pp 3862-3962.

for the specific information presented by Mr. Hufham.

Question 6. In the event of an accident, who would provide necessary warning equipment, such as lights warning devices, necessary equipment used in mop-up operation?

Response:

State and local governments are responsible for regulating certain aspects of carrier and shipper activity within their borders (vehicle weights, speed limits, routing away from weak roads or bridges, etc.); controlling the scene of an accident, implementing protective action if necessary; and developing emergency response plans for protection of public health and safety. State and local agencies, such as emergency crews, police, and health and environmental departments are expected to exercise their police and emergency powers to control traffic, provide communication, direct evaluation and sheltering actions if necessary, and to assure adequate cleanup of contaminated property.

Ordinarily, the carrier and not the shipper is responsible for proper care of cargo in transit. On the other hand in common and contract carriage, the shipper is responsible for proper packaging of radioactive material delivered to the carrier for transportation, and to provide specific information concerning the hazardous material offered for carriage. The carrier has a right and a responsibility to control such property in transit.

Under existing federal regulations the carrier is responsible for promptly notifying the shipper and the federal government of any incident involving death, hospitalization, property damage exceeding \$50,000, fire, breakage, actual or suspected leakage of radioactive materials or etiologic agents, or in the judgment of the carrier, a danger to life (49 CFR 179.15); for isolating any spilled radioactive materials from personnel contact, pending disposal instructions from qualified persons (49 CFR 177.861); and for not placing vehicles, buildings, areas, or equipment in which radioactive

materials have been spilled into service or routing occupancy until the radiation dose rate at any accessible surface is less than 0.5 millirem per hour and no significant removable radioactive contamination resides on the surface (49 CFR 177.851). In practice, the carrier may have to rely on expertise and services of others to accomplish these duties.

In an accident, the shipper is clearly the most appropriate party for providing hazards information on a shipment of radioactive material. At present, shippers are required by DOT regulations to provide such information for their shipments on the shipping papers (49 CFR 172.200 - 172.204, 173.22).

Question 7. Would Duke Power Company assume all legal responsibility and financial obligations in conjunction with any accident involving personal injury or property damage?

Response:

Ultimate financial responsibility for damages resulting from a transportation accident involving radioactive material depends on the particular circumstances associated with the accident and would be decided by the courts according to applicable state tort law. If the origin or destination of the radioactive material being transported is an indemnified facility (e.g., a nuclear power plant), then the provisions of the Price-Anderson Act (42 USC 2210) usually assure a source of funds (\$560 million per nuclear accident) for personal injury or property damage resulting from the transportation accident. These funds would be provided by a combination of facility licensee insurance and federal government indemnity. However, transportation of many types of radioactive material is not covered by the Price-Anderson Act. In the event of an accident involving transportation of these radioactive materials, there would be no sure source of funds for payment of liability claims as there would be if the Price-Anderson Act applied. Aside from the question of ultimate financial responsibility for a transportation accident involving radioactive material, the carrier should be prepared to assume initial costs required to discharge his responsibilities and the state or local agency involved should be prepared to assume initial costs incurred because of protective actions required by the agency as in other emergency situations, e.g., fires, floods, etc.

Question 8. What type education and awareness program would Duke Power Company be required to provide the citizens of the County before shipments would begin?

Response:

There are no regulatory requirements calling for a licensee or applicant to undertake an education or awareness program. Any such program would be undertaken by an applicant or licensee on its own initiative.

Question 9. Why have the additional safety measures of warning cars in both front and back of the shipment not been planned into the proposal?

Response:

Safety requirements for motor carriage of radioactive materials are established by the Department of Transportation. There are in addition the general safety requirements for motor transportation established by state and federal governments. The safety requirements of the DOT, do not specify warning cars such as those proposed by Gaston County, but they do specify clear labelling of spent fuel shipments. Warning signs (placards) are required on front, back, and each side of a shipment of spent fuel. See 49 CFR 172.500, 172.504, 172.556. The spent fuel shipments prepared by Duke Power Company must meet these requirements.

Question 10. Why has the Nuclear Regulatory Commission rejected the primary, safest and most logical route of Interstate 85-Interstate 77? The Board is aware of the rule which precludes nuclear shipments from population centers of over 100,000, but still does not understand why the NRC would deny the safest proposed route and opt for one of the proposed alternate routes where the shipments would be in greater danger of vehicular accidents or sabotage by traveling two-laned roads with many stops, and dangerous intersections, and municipal congestion.

Response:

Recently proposed amendments to 10 CFR Part 73 with respect to physical protection of irradiated reactor fuel in transit

(See attached SECY 80-166), have been approved by the Commission.

These new amendments, when effective, would permit shipment of spent fuel through populous areas if certain safeguards were applied.

Duke Power Company has committed to apply the required safeguards and so, the proposed primary route through Charlotte, North Carolina will be available to Duke if the proposed shipments are authorized.