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 PROPOSED RULE PR-73(44PR34466) ⁽³⁹⁾

August 17, 1979

Secretary of the Commission
 U.S. Nuclear Regulatory Commission
 Washington, D.C. 20555

Attention: Docketing & Service Branch

Gentlemen:

These comments refer to the Interim Final Rule on 10CFR Part 73 as published in Federal Register Vol. 44, June 15, 1977, at pages 34466-34468. A new section 73.37 was added, and its applicability was extended, through a new section 73.1 (b) (5), to reactor fuel exhibiting certain dose rates.

We believe the rule should be rescinded for the following reasons at least:

1. Spent fuel shipments, for reasons of economy, speed of delivery, and safety already use routes that avoid very densely populated areas and favor high-speed limited-access highways that decrease the time spent in built-up areas.
2. The dose-rate specification in 73.1 (b)(5) is trivial and should be removed. All spent fuel surely exceeds that specification very considerably, almost by definition. In fact, only 150 curies of a 1-MeV gamma emitter would give the same dose rate.
3. The need for advance approval, and the notifications to LEA and others along the proposed route, would seem to be inviting potential sabotage by making shipping data widely available in advance.
4. Routing shipments to avoid urbanized areas would likely involve roads of lesser safety, with increased risk of traffic accidents, with increased visibility leading to public alarm, with increased time the shipment is exposed to hazards, and decreased effectiveness of LEA. Secondary roads could provide better "stake-outs" for sabotage and likely be counter-productive to existing practices. Lack of an alternate limited-access route having 4 lanes or more should be a clearly-stated exception to the proposed ban on traversing urban areas.

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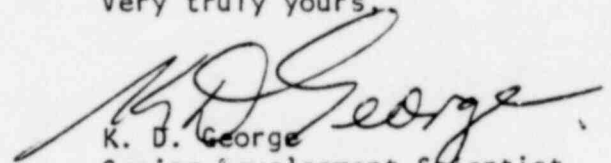
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5. In Chapter 6 of the Sandia report (SAND -77-1927) that is the basis for this Interim Rule it is concluded that massive spent fuel casks are unattractive and unlikely targets for sabotage due to the extreme measures that would have to be used to disperse some fraction of their contents. It is stated that thousands of pounds of high-explosive would be needed and that the casualties from blast and other effects of detonating such large charges would equal or exceed those that might result from radiological exposure. The analysis of radiological effects were, however, calculated assuming a particular release of radioactive material and leaving aside the unlikelihood of a sabotage attempt.
6. The case considered in the Sandia report (Chapter 6) is one of a "hyper-urban" environment with a particularly high urban population density (some 26,000-77,000/km² in a 100 km² area). The spent fuel shipment involves about 5x10⁶ curies of radionuclides with significant health effects. Assuming the greatest of several possible release fractions, the report estimates a level of early fatalities (1-20) that is an order of magnitude less than the expected fatalities from the high explosive (~150).
7. A lower limit should be specified for the curie content of a spent fuel cask shipment below which this Interim Rule would not apply. As stated above, this should not be 100 R/hr at 3ft. Based on the results of the Sandia analysis, if this limit were a factor of 5-10 below the amount assumed in that analysis the consequences should be acceptably low certainly well below those from high-explosive needed. For example, the lower limit could be 5-10 x 10⁵ curies. It should be noted that the reduction in thickness of shielding possible for a factor of 5-10 attenuation would not result in any significant reduction in the amount of H.E. needed.
8. It is not clear that the consequences of assumed sabotage (Chapter 6) are any worse than the extremely severe (low probability/high consequence) transportation accident treated in Chapter 4 of the Sandia report.
9. A better long-term answer to assumed sabotage of shipments would be expedited establishment and approval of regional spent fuel storage facilities. This would also reduce the chance of transportation accidents.
10. It is possible that many commenters may have difficulty in obtaining a copy of the 716-page Sandia report and evaluating its assumptions and conclusions within the time allotted in the Federal Register notice.

This commenter had to work from a microfiche copy which is not the ideal situation. An extension of time for comments may be in order.

Very truly yours,



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KDG/cem

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