

exposure. This overlooks, at the very least, the potential for malicious attack on the facility from the air, such as the United States has engaged in wiping out "strategic targets" in other countries.

*Response.* A more accurate characterization of the offsite emergency planning component for an MRS is as follows: "(7) Responsibilities. A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC;" and "(9) Information to be communicated. A brief description of the types of information on facility status; radioactive release; and recommended protective actions, if necessary, to be given to offsite response organizations and to the NRC." and "(10) \* \* \* special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel;" and "(12) \* \* \* The licensee shall invite offsite response organizations to participate in the annual exercises."

Additionally, the offsite emergency planning component for an MRS includes:

- (i) Arrangements for requesting and effectively using offsite assistance on site have been made.
- (ii) Provisions exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite.
- (iv) Adequate methods, systems, and equipment for assessing and monitoring actual potential consequence of a radiological emergency condition are available.
- (vi) Radiological Emergency Response Training has been made available to those offsite who may be called to assist in an emergency onsite.

(16) Arrangements made to provide information to the public.  
Also, see the Commission's response to Issue 46.

*Issue 45.* The discussion of MRS emergency planning indicates the dependence upon offsite emergency responders. The fact that individuals would be called upon to respond to radiological crises without any special training, without protective gear and equipment is deeply disturbing to local community officials with whom we have reviewed this proposal. The full liability for dealing with emergency situations should reside with the operators of such a facility and those who are specially trained and understand that they are at risk, and are compensated on that basis. Dependence upon untrained local responders in a true emergency would amount to human sacrifice, and is not acceptable.

*Response.* The regulations allow for extensive coordination, communication, and training of offsite response organizations. (See Commission Response to Issue 19.)

*Issue 46.* Although the MRS will represent the largest concentration of irradiated fuel, to date, in one location, the U.S. Nuclear Regulatory Commission has recently proposed a rule that would waive any offsite emergency planning or evacuation, in direct contradiction to the promises of safety to prospective host communities.

*Response.* In the final NRC Generic Environmental Impact Statement on the handling and storage of light water reactor fuel,<sup>5</sup> it is stated that

- \* \* \* To be a potential radiological hazard to the general public, radioactive materials must be released from a facility and dispersed offsite. For this to happen:
- The radioactive material must be in a dispersible form

- There must be a mechanism available for the release of such materials from the facility, and
- There must be a mechanism available for offsite dispersion of such released material.

Although the inventory of radioactive material contained in 1000 MTHM of aged spent fuel may be on the order of a billion curies or more, very little is available in a dispersible form; there is no mechanism available for the release of radioactive materials in significant quantities from facility; and the only mechanism available for offsite dispersion is atmosphere dispersion \* \* \*

Furthermore, NRC has conducted Safety Evaluations on many different storage systems. Those studies included evaluations of the effects of corrosion, handling accidents such as cask drops and tipovers, explosions, fires, floods, earthquakes, and severe weather conditions. As documented in each of those Safety Evaluation Reports (SER), NRC was not able to identify any design basis accident that would result in the failure of a confinement boundary. However, to provide a conservative bounding analysis of the threat to the public health and safety, the failure of the confinement barrier was postulated. As discussed in each of the SERs and again in the response to Issue 48 the consequences of this postulated failure do not result in an increased risk to the public health and safety.

In the environmental assessment for 10 CFR part 72,<sup>6</sup> the accident judged the most severe was the failure of a packaged fuel element. In this analysis, the accident involves the failure of a storage system containing 1.7 MTHM. The postulated individual doses are presented in Table 1.<sup>7</sup>

TABLE 1.—TOTAL DOSE TO AN INDIVIDUAL AS A RESULT OF A FUEL CANISTER FAILURE ACCIDENT AT A SURFACE STORAGE INSTALLATION (MREM)

Pathway	Skin	Total body	Thyroid	Lung
Air Submersion .....	1.0 × 10 <sup>-1</sup>	1.1 × 10 <sup>-3</sup>	1.1 × 10 <sup>-3</sup>	1.1 × 10 <sup>-3</sup>
Inhalation .....		1.2 × 10 <sup>-5</sup>	1.1 × 10 <sup>-2</sup>	7.3 × 10 <sup>-5</sup>
Total .....	1.0 × 10 <sup>-1</sup>	1.1 × 10 <sup>-3</sup>	1.2 × 10 <sup>-2</sup>	1.1 × 10 <sup>-3</sup>

**Note:** The maximum individual is defined as a permanent resident at a location 1600 meters southeast of the stack with a time-integrated atmospheric dispersion coefficient (E/Q of 1.5 × 10<sup>-4</sup> sec/m<sup>3</sup>). The accident involves failure of a fuel canister containing approximately 1.7 MTHM.

Since the time these calculations were performed, the storage canisters have increased in capacity, and today the capacity of the largest approved design is approximately 9 MTHM. However, because dose varies directly with

inventory, when the totals are increased by a factor of ten, they are still a very small fraction of the 300 mrem/yr<sup>8</sup> an individual receives from natural background radiation, and is below the EPA protective action guides.

Also see the Commission's response to Issues 19 and 48.  
*Issue 47.* It is premature for the Commission to make a rule with regard to emergency planning for an MRS. We also agree with others who point out

<sup>5</sup>NUREG-0575 Vol. 1 sec. 4.2.2 Safety and Accident Considerations.

<sup>6</sup>NUREG-1092 Environmental Assessment for part 72 "Licensing Requirements for Independent Spent Fuel and High-Level Radioactive Waste."

<sup>7</sup>NUREG-1092 Table 2.2.4-2  
<sup>8</sup>NRCP Report No. 94.