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COMMITTEE ON COMMERCE, SCIENCE,
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WASHINGTON, D.C. 20510

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April 10, 1978

SECRETARIAT RECORD COPY

Dr. Joseph M. Hendrie
 Chairman
 Nuclear Regulatory Commission
 Washington, D.C. 20555

Dear Dr. Hendrie:

The Nuclear Engineering Corporation has operated a low-level nuclear waste disposal site at Sheffield, Illinois, since 1967. The Nuclear Regulatory Commission is presently considering an application from the Nuclear Engineering Corporation for a license to continue and expand their operations at Sheffield. My concerns about the possible dangers to the safety of the citizens of Illinois have caused me to examine the problem of the handling of low-level waste.

The need to isolate radioactive material so that people and the environment are not unnecessarily exposed to radiation has long been recognized. The significance of exposures to small doses of radiation is under study, but early indications are that these small doses may represent a public health risk greater than previously assumed. Because these early indications of significant risk from low levels of exposure may be correct, I feel it is necessary to take every precaution to protect the public from unnecessary exposure to radiation.

Low-level radioactive waste is generated at many places in our society. The beneficial activities that result in the generation of the waste will be feasible only if we are able to dispose of the waste safely. I use the word "disposal" to mean permanent isolation of the radioactive waste from the biosphere without the need for surveillance. I question whether current methods of handling low-level waste constitute actual disposal.

As I understand it, low-level radioactive waste at Sheffield is now placed in trenches dug in the soil which, when filled with waste, are backfilled. Because of the long half-lives involved, the covering of the trench must resist the natural forces of erosion for several hundred years. This seemingly will require continual surveillance and, when appropriate, remedial action to maintain the covering. In addition, the soil covering does not appear to represent a substantial barrier to individuals who might wish

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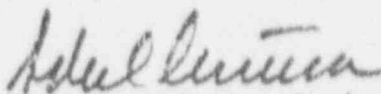
to obtain radioactive material for terrorist purposes. Protection against this very serious risk probably requires greater long-term security at the land fill sites than is now being considered.

In addition to these long-term problems, experience has revealed problems with current operations at low-level waste sites, including Sheffield. Physical security of the sites has not always been adequate. Migration of radioactive materials from the trenches has been detected, despite geological examination of the site prior to use which was intended to insure that such migration would not occur. While I am not aware of any exposures to the public above established safe dosages as a result of these experiences, the potential for excessive exposure would seem to exist.

These considerations have led me to question the adequacy of the current methods for handling low-level radioactive wastes. I would appreciate knowing whether the Nuclear Regulatory Commission shares these concerns. More specifically, does the Commission believe that more adequate disposal methods are necessary in order to protect persons living in the vicinity of disposal sites? Is there a need for additional studies to determine what to do with existing land fill sites in order to minimize current and long-term threats to public health? For example, should low-level wastes be stored on government reservations until more adequate disposal methods are developed? Should consideration be given to exhuming existing wastes?

I believe the Commission has the obligation to address these questions before approving any expansion of low-level waste storage operations at Sheffield. I would very much appreciate the Commission's views on this vital question.

Sincerely,



ADLAI E. STEVENSON, Chairman
Subcommittee on Science, Technology
and Space