



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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MAY 15 1978

MEMORANDUM FOR: Morris Howard, Director
Division of Safeguards Inspection, IE

FROM: Victor Stello, Director
Division of Operating Reactors, NRR

SUBJECT: SECURITY AT THE DOW RESEARCH REACTOR
(DOCKET NO. 50-264)

In response to Norm Haller's memorandum of April 7, 1978, concerning the recent security breakdown at the Dow Research Reactor, I offer the following:

The security plan developed and approved for this facility is based on "interim guidance" provided by the staff in 1974 as a means of implementing the requirements of §§50.34 and 73.40. The level of protection required was determined principally from the perceived risk of this facility as a target for theft of SNM although the stated purpose of the interim guidance is to protect against acts of sabotage. Inasmuch as both types of risks were not considered to be significant at this site, the approved security plan requires only a low level of control of access to and surveillance of the reactor and reactor controls. It is obvious that even this degree of protection was not provided during the January 10, 1978 inspection.

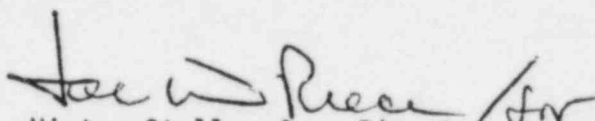
A review of the safeguard risks associated with this reactor has been made recently on the basis of current information related to sabotage and theft threats. The information obtained from this review was given to Loren Bush and used as the basis of the "Issue Paper" attached to Mr. Haller's memorandum. NRR's position is that a threat of "radiological" sabotage does not exist at the Dow facility because a release of fission products in amounts equivalent to the limiting doses in Part 100.11 is not possible since there is no realistic means for causing such a release through core melt or destruction. Additionally, there is only minimal threat of theft of SNM because all but possibly a few grams of SNM (20% enriched in U-235) is normally located in the core of the 100KW reactor. Although the 3.4kg of U-235 in the fuel may not have a radiation level that is self-protecting (100 rems/hr at three feet) at all times it is considered to be a very unattractive target for theft of SNM. However, because there is the potential for illicit acquisition of a significant amount of SNM through multiple thefts, a prudent level of protection must be provided for this small quantity.

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There are obvious hazards associated with the operation of any reactor and many other problems can result from the mere existence of such a facility. As part of the current NRR review of non-power reactors it is our intent to reassess the need and authority of the NRC to require a security plan (§50.34[c]) under the Commission's mandate to protect the public from dangers associated with radiation where these dangers are less than those provided for in Parts 20 and 100.



Victor Stello, Jr., Director
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cc: E. G. Case
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