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Samuel Chilk, Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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OFFICE OF SECRETARY
DISCRETION & SERVICE
BRANCH

Dear Sir:

Pursuant to the Federal Register Notice of June 26, 1992, regarding the proposed rule on additions to the list of approved casks for spent fuel cask storage, I would like to make the following comments. I have requested an extension of time on the comment period, because it has been difficult to get pertinent documents. If that extension is granted, which it has not been as of this date, I reserve the right to add to these comments within that added time frame.

These comments are limited to the VSC-24 which are intended for use at the Palisades n-plant, the only cask whose background of design and construction I have studied.

Approval of the VSC-24 cask should be denied for the following reasons:

1. The Safety Evaluation Report (SER), Mar. 29, '91, states that the VSC is a new system that has not been built or tested before and that approval of site-specific procedures is contingent on successful demonstration of "first-of-a-kind" features. These must be done on site of a nuclear plant with spent fuel pool facilities. This means that the first testing of the VSC-24 cask is to take place with the loading of fuel within the spent fuel facility at the Palisades n-plant.

It is unacceptable from a public health and safety standpoint to conduct the first actual test of this cask involving such a dangerous technology which places the power plant, workers, the public and the environment at risk. It is especially objectionable since these first 5 casks were constructed onsite before the criteria were determined and approved through a certificate of compliance from the NRC. It is further unacceptable to subject a population without their knowledge or consent to the series of accident and near-accident conditions that will have to be performed if the testing of this cask is to be meaningful. Such tests can jeopardize

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lives, people's homes and property and the priceless ecosystem of Lake Michigan.

Furthermore, SER, May 6, 1992, states that during this first test if "excessive temperatures cause the cask to perform in an unacceptable manner, and/or the temperatures cannot be controlled to within acceptable limits, the cask shall be unloaded." Where will the spent fuel be unloaded since Palisades is now operating with a full spent fuel pool? Is the NRC prepared to order a shutdown of Palisades in order to assure the fuel can be returned to the spent fuel pool in the event the results of the cask tests require this?

2. Permitting the first cask to be loaded at the Palisades site in order to determine certain safety parameters of the VSC-24 cask without a public hearing violates the NRC Final Rule 10 CFR Parts 50, 72, and 170 (Fed. Register, vol. 55, no. 138, Jul. 18, 1990) which states the rule does not violate hearing rights granted by the Atomic Energy Act because, "hearing processes do not apply when issues are resolved generically by rulemaking." (p. 29182--col. 3). However, in this case, there are outstanding safety issues that the NRC expects to resolve in the first test at the first cask loading at Palisades--issues that have not and cannot be resolved through the rulemaking process. (SER, Mar. 29, 1991, Rev. 2)

These outstanding safety issues include many parts and much equipment that is a part of the first test of the casks in the fuel transfer operation at the spent fuel pool at Palisades. These parts are frequently referred to in the SER's as needing further review and approvals. They include lifting cables, lifting yoke, lugs, the transfer vehicle, etc. For example, SER, Mar. '91, Rev. 2, p.1-10, refers to "a sling or cable set which is attached to lifting eyes bolted to the top cover plate of MSB and attached to a lifting hook for a hoist. No information was presented for this cable set. The above two pieces of equipment are used only in the spent fuel pool building. Therefore, the approval for their use is subject to 10 CFR Part 50 review." The cask cannot be approved by itself but only in conjunction with all the equipment, as well as operator training, that must be available and proved safe for fuel transfer. All these are safety problems that cannot be resolved through the rulemaking process and should be a part of a public review.

3. This cask has never been tested in any conditions that would approximate the harsh freeze-thaw conditions of a Midwest winter for any length of time nor are there any requirements in the

Safety Evaluation Reports for such tests. Yet, DOE's Final Version Dry Cask Storage Study(DOE/RW-0220) states that a potential safety issue "is the structural integrity of concrete at the temperatures expected in the cask." (p.1-5) The range of exterior severe temperature changes in winter weather which can be expected in Michigan will increase this stress on the concrete structures.

3. The cumulative dose of additional radioactive releases from these storage casks, even if they always functioned properly, would exceed the limits at the plant boundaries given the other kinds of routine releases and leakage vented to the atmosphere through valves from the safety injection and refueling water tank (SIRWT) that was reported in NRC Information Notice 91-56, Sept. 19, '91. That report concluded that this valve leakage, in addition to those from other sources that now exist at the plant, "could cause a dose to people at the site boundary equal to the limits in 10 CFR Part 100" during any accident condition at the plant. Adding to these releases through placing of these casks onsite loaded with spent fuel that could exceed these limits violates the Atomic Energy Act which states that public health and safety must be the primary consideration in the civilian reactor program.

4. The same NRC Information Notice 91-56 states that the "leak tightness of these three isolation valves has never been previously been verified at the Palisades plant", even though the plant has been in operation since 1972. It is important to note that this plant never received its full operating license for almost 20 years but operated under a provisional license because it could not meet the required NRC criteria. Consumers Power Co.'s dismal management record at both the Palisades plant and the Midland construction site which was eventually shut down is proof that this company does not have the competence to operate this new phase of onsite waste storage in such a way as to protect the public and the environment. Serious quality control violations on the part of Consumers Power Co. and its contractors are a matter of sworn testimony in the Palisades operating license proceedings, the Midland construction license hearings and the subsequent Dow-Consumers Power Co. lawsuit following the shutdown of the Midland plant construction.

The belated discovery of leakage as reported in Information Notice 91-56 and the below average operating capacity of the plant indicates that the utility's management capabilities have not improved. The fact that Bechtel is one of two companies that have recently bought a portion of this plant will not enhance its operating

performance. Bechtel was the architect-engineer for construction of the Palisades plant, and their cost-cutting and poor quality control practices were of such concern to Combustion Engineering(CE), which was also involved in that construction, that CE kept a log of all these practices for their own liability protection. This log of serious construction defects at Palisades was brought out in discovery during the operating license phase of Palisades, a licensing action that was initiated by a Palisades Park summer resident. At Midland, an indepth NRC inspection of the causes for five safety related buildings found to be sinking and cracking at an abnormal rate after construction, discovered the fact that Bechtel, which was also the architect-engineer for construction of the Midland plant, had failed to follow the specifications for soil compaction that were a requirement for the approval of the construction license for this plant.

5. Consumers Power Co. has stated that this VSC-24 cask was chosen because it was the most cost-effective solution to its high level waste problem. I question whether this short term judgment call is the solution for storing high level nuclear waste, dangerous for centuries, on the shores of Lake Michigan in storage-only casks that are not transportable. There is no evidence that the metal baskets that will hold the fuel with the concrete casks are viable for transportation to any repository. There is no evidence that any suitable repository for the ultimate storage of these wastes will be available in the foreseeable future even if they were. When legislation was introduced in the Michigan legislature in 1989 to allow onsite storage in casks at the Palisades site, Consumers Power Co. emphasized that this storage was to be temporary. The utility was also aware that the state agencies interested in the legislation requested that these wastes remain there "only during the term of its operating license." (Progress, Consumers Power publication, May, 1989, p. 18) Consumers Power Co. was also aware that "review for offsite transport of radioactive materials were not within the scope of the Topical Report on the Ventilated Cask Storage System for Irradiated Fuel and were not in the staff's review." (NRC letter to Pacific Sierra Associates, Mar. 29, 1991). In spite of this, Consumers has proceeded to order storage only casks that are so heavy when loaded--130 tons--that they cannot be transported. This is a violation of public trust, and if for no other reason, these casks should not be approved.

5. The surveillance requirements for the VSC as stated in SER, May 6, 1992, p. 14-30, which consists of visual inspection in a drive-by or walk-through inspection at intervals not to exceed once a week, will not provide adequate safety and protection for the public. These casks will stand upright to a height of 18 ft. and air vents at heights over 6 ft. cannot be visually inspected for blockage with those types of inspection modes. The chance of blockage from small animals and rodents, birds and bugs attracted to warmth and killed by the radiation, the debris of dust, leaves and seeds is an ever present possibility of air vent blockage for these casks. In addition, this SER report states that in case of complete blockage of all air inlets or outlets, the concrete can reach the accident temperature limit of 350° in a time period between 24 hours and one week. The surveillance requirements are totally inadequate to be able to identify and act on this type of potential accident.

6. While I have not been able to secure all pertinent documents, there does not seem to be any information in those that I do have on the types of instrumentation that will monitor the performance of the casks on a continuing basis, with back-up systems in case of failure. Any storage facility for nuclear spent fuel must have some type of monitoring system to assure continued safe performance. These casks should not be approved without such a system.

7. The SER, Mar. 29, '91(p.11-1) states that there is no credible chain of events that could spread contamination from the MSB. However, accidental flooding of these casks is a possibility since they are placed only 150 yards from the shoreline of Lake Michigan whose water level has fluctuated to such an extent in the past 10-15 years that fine homes built on top of sand dunes have tumbled into the lake. This flooding could cause steam explosions in contact with the heat within the cask and cause rupture of the cask and MSB. Air-coolant loss can cause the concrete cask to fail. There is also the potential of electrical fires, fuel-bucket support failure, and fuel-cladding failure caused by heat stress. Except for potential air-coolant loss due to blockage, none of these other potential accident scenarios has been adequately addressed and their consequences and prevention methods identified either by the utility, the vendor or the NRC. In addition, these casks will be standing on a pad that is built in a critical sand dunes area that shifts. No evaluation of the consequences to the casks from this natural phenomenon has been made.

8. The staff found a very significant error in the dose calculations of PSN. PSN calculated 440mrem/hr for the top of the MSB shield ring, while the staff's calculation was 4140 mrem/hr. (SER, Mar. 29, '91, p.6-9) No information as to how these discrepancies were resolved is provided. With the exception of a brief reference to the possible use of lead bricks, there is also no information as to how welders would be protected in this highly radioactive environment. Therefore, these casks should not be approved.

9. NRC's 10CFR 72 subpart L 72.236 (m) states that there should be consideration of "compatibility with removal of the stored spent fuel from a reactor site, transportation and ultimate disposition by the DOE." A cask that is licensed for storage only that cannot be transported, as the NRC is now in the process of doing, does not fulfill this requirement. In comments for DOE's Final Version Dry Cask Storage Study, the NRC stated, "the Commission is concerned that inadequate attention is being given to ensure the compatibility of the various steps in the storage, transport and disposal of spent fuel and thereby enhance the safety and efficiency of fuel handling." Noting their concern with the proliferation of storage options, the Commission recommended "system analysis and action at this early stage could result in minimizing these handling risks." Approval of the cask VSC-24 would contradict this position on the part of the NRC by adding to the lack of standardization and integration of the whole waste system and therefore, approval should be denied.

10. Subpart K of 10 CFR 72, section 72.218 states that the program for management of spent fuel at the reactor "must include a plan for removal of the spent fuel stored under this general license from the reactor site. Consumers Power Co. is relying on use of Subpart K as a reason for no public review of this action. The whole project violates this provision since there is no plan for removal of spent fuel, but there is clearly an obvious plan for keeping it onsite indefinitely. The cask should not be approved because this would be a violation of this rule.


11. Pacific Sierra Nuclear Associates (PSN) asked for and received permission to construct these casks before the NRC had issued a Certificate of Compliance for them which "provides the specific criteria for cask design and fabrication, according to NRC's

Final Rule on storage of spent fuel at reactor sites. This Rule further states that "if a vendor has not received a certificate, then the vendor does not have the necessary approved specifications and may design and fabricate casks to meet incorrect criteria." (Fed. Register, 29185, July 18, 1990). Therefore, we have no assurance that these casks were constructed according to required criteria, and they should not be approved.

12. Ivan Selin, the Chairman of the Nuclear Regulatory Commission, stated in an article in the New York Times (April 14, '92) that Palisades is on the brink of not being cost-effective because it confronts a serious question of pressure vessel embrittlement. Since Palisades with its low output of power has this problem and will have to be shut down or require huge outlays of capital in the near future to remedy it, what is the rationale for creating another dump on the shores of Lake Michigan at this time with these questionably constructed casks?

If the comment period is extended, I will make additions to these comments if I can secure the documents that I am now seeking.

Respectfully submitted,


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