

FEB 16 1978

MEMORANDUM FOR: K. Goller, Assistant Director for Operating Reactors, DOR
FROM: B. Grimes, Chief, Environmental Evaluation Branch, DOR
SUBJECT: DAVIS-BESSE 1 - SPENT FUEL POOL EXPANSION

PLANT NAME: Davis-Besse Nuclear Power Station Unit 1
DOCKET NO.: 50-346
RESPONSIBLE BRANCH: ORB #3
PROJECT MANAGER: J. Hannon
REVIEW STATUS: EEB - Continuing

The Environmental Evaluation Branch has reviewed the December 5, 1977 submittal from the Toledo Edison Company, which contains information on the proposed expansion of the capacity of the spent fuel pool at Davis-Besse Nuclear Power Station Unit 1. Additional information identified in the enclosure is needed to continue our review.

This review was performed by S. Block, J. Donohew and M. Wohl.

/s/ Brian K. Grimes, Chief
Environmental Evaluation Branch
Division of Operating Reactors

Enclosure:
As stated

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DATE		2/16/78	2/16/78	2/16/78	2/16/78	2.

ENCLOSURE 1

QUESTIONS FOR THE DAVIS-BESSE

SPENT FUEL POOL MODIFICATION

1. Have the spent fuel pool water become contaminated so that the low density fuel racks would be contaminated prior to modification?
If the SFP racks are contaminated, the following information is required with respect to removal and disposal of the low density racks and installation of the high density racks:
 - (a) Describe the manner in which the SFP became contaminated.
 - (b) Identify the principal radionuclides and their respective concentrations in the SFP as a result of the contamination.
 - (c) Describe the method that will be used to remove and dispose of the low density racks (i.e., crating intact racks or cutting and drumming them) and install the high density racks.
 - (d) How many workers will be required for each operation (include divers, if necessary)
 - (e) Discuss the dose rates associated with each phase of the operation, the occupancy times and the total man-rem that will be received for the entire operation.
 - (f) Demonstrate that the method used for removal and disposal of the racks will provide as low as is reasonably achievable exposures.

2. Identify the principal radionuclides and their respective concentration expected in the SFP following the first refueling, after completion of the modification, and thereafter.
3. Provide the dose rates above and around the SFP from the concentrations of the radionuclides identified in (2) above, and the concomitant estimated collective occupational exposure, in annual man-rem, due to all operations in the SFP area.
4. If the spent fuel pool has been contaminated, provide the estimated volume of contaminated material (e.g., spent fuel racks, seismic restraints) expected to be removed from the spent fuel pool and shipped from the plant to a licensed burial site because of the modification.
5. For the modified pool, you explained on page 13 of your December 5, 1977 submittal that the pool bulk water temperature may be above the FSAR design value of 120°F during normal refuelings. Discuss when this may occur and for what period of time.
6. Provide a list of any loads other than those listed in Section 2.3.2.2 of your December 5, 1977 submittal that might be carried near or over the spent fuel pool. Provide the weight and dimensions of each load including those listed in your December 5, 1977 submittal. Discuss the load transfer path, including whether the load must be carried over the pool, the maximum height at which it could be carried and the expected height during transfer. Provide a description of any

written procedures instructing crane operators about loads to be carried near the pool. Provide the number of spent fuel assemblies that could be damaged by dropping and/or tipping each typical load carried over the pool.

7. Discuss the instrumentation to indicate the spent fuel pool water temperature and level. Include their capability to alarm.