

APPLICATION FOR AMENDMENT  
TO  
FACILITY OPERATING LICENSE NO. NPF-3  
FOR  
DAVIS-BESSE NUCLEAR POWER STATION  
UNIT NO. 1

Enclosed are forty-three (43) copies of the requested changes to the Davis-Besse Nuclear Power Station Unit No. 1 Facility Operating License No. NPF-3, together with the Safety Evaluation for the requested change.

The proposed changes include Table 3.3-5 and 3.6-2.

By /s/ R. P. Crouse  
Vice President, Nuclear

Sworn and subscribed before me this 7th day of February, 1984

/s/ Laurie A. Hinkle, nee (Brudzinski)  
Notary Public, State of Ohio  
My Commission Expires May 16, 1986

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Docket No. 50-346  
License No. NPF-3  
Serial No. 1017  
February 7, 1984

Attachment

I. Changes to Davis-Besse Nuclear Power Station Unit 1, Appendix A  
Technical Specifications Table 3.3-5 and 3.6-2.

A. Time required to Implement. This change is to be effective upon NRC approval.

B. Reason for Change (Facility Change Request 83-132).

Toledo Edison has installed a new Post-Accident Radiation Sampling System for containment air that is qualified for temperature and pressure. The old system was not qualified for the accident environment inside the containment (pressure) and needed to be isolated during an accident. Due to qualification of the new system it is not required to be isolated.

C. Safety Evaluation  
(See Attached)

D. Significant Hazard Consideration  
(See Attached)

## SAFETY EVALUATION

This Amendment request is to disconnect the automatic Safety Feature Actuation System (SFAS) closure signals to the Containment Air Sample Isolation Valves, listed below:

HV5011A, HV5011B, HV5011C, HV5011D, HV5011E  
HV5010A, HV5010B, HV5010C, HV5010D, HV5010E

The original safety function of the Containment Purge and Exhaust Air Sample Isolation Valves were as follows:

- 1 - To automatically isolate the containment
- 2 - Allow to take samples of hydrogen and airborne activity in post-accident conditions
- 3 - To protect the radiation detectors from containment high pressure conditions

The present Technical Specifications require the air sample isolation valves to automatically close from their normally open position on SFAS actuation. This requirement was established for the original radiation detection system components that were not designed to withstand the higher than normal temperature and pressure that exist in the containment during accident conditions. The new radiation detectors RE-4597A & RE-4597B are qualified for accident conditions and therefore the valves do not need to be closed to protect equipment. Keeping the valves in normally open position will facilitate taking the containment air samples without having to block the SFAS trip signal and then re-opening these sample valves after safety actuation (SA) initiation. To keep the air sample isolation valves in normally open position with remote controls, does not present any hazard to the public or safe plant operation. Control switches with safety grade valves positions are provided locally and in the Control Room. The containment air sampling system is a closed piping system penetrating to and from the containment. The one inch piping system is designed to contain the airborne activity in normal and accident conditions. All components of this system are designed to requirements that are equivalent to the ASME Code, Section III, Class 2, and are designed as seismic Class 1. Since the system is designed to equivalent requirement as established for containment system and the components are qualified for accident conditions, the original safety function to isolate the containment and protect the radiation-detectors from containment high pressure conditions are not required. The only safety function left for the purge and exhaust isolation valves is to allow to take samples of hydrogen and airborne activity in post-accident conditions, and these valves, in open position, will facilitate this function.

The request requires the deletion of the automatic SFAS closures on these isolation valves, their Technical Specification closure response time requirements are also deleted.

Prior to the implementation of the modification to the SFAS System, revisions to the Technical Specifications are required. This request does not degrade or adversely affect the safety functions of the containment isolation system.

Pursuant to the above, this is not an unreviewed safety question.

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## SIGNIFICANT HAZARD CONSIDERATION

The amendment request to disconnect the automatic Safety Features Actuation System (SFAS) closure signals to the Containment Sample Isolation Valves for the Containment Air Sampling System (CASS) does not contain a Significant Hazard. Toledo Edison has installed a new post-accident radiation detection system that replaces the original detectors. The original detectors installed at Davis-Besse (DB-1) were not qualified for containment pressure during a LOCA. For protection of the equipment, an SFAS signal was provided to the valves on the instrument lines.

A new post-accident radiation detection system was installed at DB-1 in accordance with NUREG-0737. The equipment is qualified for post-accident pressure and temperature. This equipment takes a suction from containment through isolation valves, through the radiation monitor and discharges into the containment through isolation valves. Because of the closed loop for containment air sample and the qualification of the post-accident radiation detection system the system is not required to be isolated on SFAS closure signal.

All components of this system are designed to requirements that are equivalent to the ASME Code, Section III, Class 2, Safety Guide 11 and are designed as seismic Class 1. Since the system is designed to equivalent requirement as established for containment system and the components are qualified for accident conditions, the original safety function to isolate the containment and protect the radiation-detectors from containment high pressure conditions are not required.

The Commission has provided guidance concerning the application of the standards in 10 CFR 50.92 by providing certain examples (48 FR 14870). One of the examples of actions involving no significant hazards considerations relates to a change which either may result in some increase to the probability or consequences of a previously-analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan: for example, a change resulting from the application of a small refinement of a previously used calculational model or design method (example (vi)).

The granting of the request would not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated (10CFR50.92(C)(1)).

The deletion of the SFAS signal to the CASS will not increase the probability of an accident previously evaluated. The qualification of the equipment for the post-accident environment and the design criteria for instrument lines ensures there is no increase in the probability or consequence of an accident previously evaluated.

- 2) Create the possibility of a new or different kind of accident previously evaluated 10CFR50.92(C)(2).

All accidents are still bounded by previous analysis and no new accidents are involved.

- 3) Involve a significant reduction in a margin of safety 10CFR50.92(C)(3).

The proposed change could possibly involve a reduction in a margin of safety. However, as explained above, the equipment and instrument lines are qualified for post-accident conditions and the information gained from the instrument will be of aid in operation during post-accident condition. Therefore, we consider the possible reduction of a margin of safety not significant.

On the basis of the above, Toledo Edison has determined that the amendment request does not involve a significant hazard consideration.

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