APPLICATION FOR AMENDMENT
TO
FACILITY OPERATING LICENSE NUMBER NPF-3
DAVIS-BESSE NUCLEAR POWER STATION
UNIT NUMBER 1

Attached are requested changes to the Davis-Besse Nuclear Power Station, Unit Number 1 Facility Operating License Number NPF-3. Also included is the Safety Assessment and Significant Hazards Consideration.

The proposed changes (submitted under cover letter Serial Number 2405) concern:

Appendix A, Technical Specifications (TS):

1.0	Definitions
3/4.3.1.1	Reactor Protection System Instrumentation
3/4.3.2.1	Safety Features Actuation System Instrumentation
3/4.3.2.2	Steam and Feedwater Rupture Control System Instrumentation
3/4.3.3.1	Radiation Monitoring Instrumentation
3/4.3.3.5.2	Remote Shutdown Instrumentation
3/4.3.3.6	Post-Accident Monitoring Instrumentation
3/4.5.1	Emergency Core Cooling Systems (ECCS), Core Flooding Tanks
3/4.5.2	Emergency Core Cooling Systems, ECCS Subsystems - $T_{avg} \geq 280°F$.

By: _____
J. K. Wood, Vice President - Nuclear

Sworn to and subscribed before me this 11th day of December, 1996.

_____
Notary Public, State of Ohio
Nora Lynn Flood
My commission expires September 3, 1997.

The following information is provided to support issuance of the requested changes to the Davis-Besse Nuclear Power Station (DBNPS), Unit Number 1 Operating License Number NPF-3, Appendix A, Technical Specifications (TS) Section 1.0, Definitions; TS 3/4.3.1.1, Reactor Protection System Instrumentation; TS 3/4.3.2.1, Safety Features Actuation System Instrumentation; TS 3/4.3.2.2, Steam and Feedwater Rupture Control System Instrumentation; TS 3/4.3.3.1, Radiation Monitoring Instrumentation; TS 3/4.3.3.5.2, Remote Shutdown Instrumentation; TS 3/4.3.3.6, Post-Accident Monitoring Instrumentation; TS 3/4.5.1, Emergency Core Cooling Systems (ECCS), Core Flooding Tanks; and TS 3/4.5.2, Emergency Core Cooling Systems, ECCS Subsystems - $T_{avg} \geq$ 280°F.

A. Time Required to Implement: This change is to be implemented concurrent with related changes to be proposed by separate license amendment applications, prior to the commencement of the Eleventh Refueling Outage (11RFO). The 11RFO is presently scheduled to commence in April, 1998.

B. Reason for Change (License Amendment Request Number 95-0027):

The proposed changes would revise TS Definition Table 1.2, Frequency Notation. The frequency notations defined by Table 1.2 are utilized in various tables in the Instrumentation Technical Specifications. Notation "R", which is presently defined as a frequency of "At least once per 18 months," is proposed to be redefined as a frequency of "At least once per 24 months" for instrumentation surveillance frequencies being changed to a 24 month frequency. A new Notation "E" is proposed to be used to designate the existing frequency of "At least once per 18 months" for instrumentation surveillance frequencies remaining on an 18 month frequency.

The proposed changes would also modify presently specified 18 month surveillance frequencies in certain TS Surveillance Requirements contained in the above-mentioned TS Sections to new specified frequencies of once each Refueling Interval, or once each 24 months. These changes are in accordance with the NRC guidance provided by Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," and will support conversion of the DBNPS from an 18 month to a 24 month fuel cycle.

Certain TS Surveillance Requirements that are intended to remain on an 18 month frequency, but which presently utilize Notation "R", are proposed to be administratively changed to utilize the new Notation "E" described above.

C. Safety Assessment and Significant Hazards Consideration: See Attachment.

Docket Number 50-346
License Number NPF-3
Serial Number 2405
Attachment

SAFETY ASSESSMENT AND SIGNIFICANT HAZARDS CONSIDERATION
FOR
LICENSE AMENDMENT REQUEST NUMBER 95-0027

(144 pages follow)

SAFETY ASSESSMENT AND SIGNIFICANT HAZARD CONSIDERATION
FOR
LICENSE AMENDMENT REQUEST NO. LAR 95-0027

TITLE:

Proposed Modification to the Davis-Besse Nuclear Power Station (DBNPS), Unit Number 1 Operating License Number NPF-3, Appendix A, Technical Specifications to Revise Selected Technical Specifications Regarding Definitions, Instrumentation, and Emergency Core Cooling System for Conversion from an 18 Month to a 24 Month Fuel Cycle.

DESCRIPTION:

The Davis-Besse Nuclear Power Station (DBNPS) Unit No. 1 is converting from an 18 month to a 24 month fuel cycle. This conversion will allow the DBNPS to operate at full power for a longer period of time between refueling outages. In order to support this conversion, it is necessary that the DBNPS Operating License NPF-3, Appendix A, Technical Specifications be amended to change 18 month interval Surveillance Requirements to 24 month interval Surveillance Requirements. In addition, the continued application of TS 4.0.2, which allows surveillance intervals to be increased up to 25% on a non-routine basis, will allow a 24 month surveillance interval to be extended up to 30 months.

License Amendment Request (LAR) 95-0027 addresses only a portion of the scope of changes required for the 24 month cycle conversion. Additional required Technical Specification changes will be submitted under separate license amendment applications. Associated changes to the DBNPS Updated Safety Analysis Report (USAR), including the Chapter 15 Accident Analysis, are being evaluated under the 10 CFR 50.59 process. In accordance with 10 CFR 50.59, should this evaluation determine that an unreviewed safety question exists, the USAR changes would be submitted for NRC approval under the license amendment application process.

The NRC guidance provided by Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991, was utilized in the preparation of this Safety Assessment and Significant Hazards Consideration. Consistent with this guidance, the phrase "at least once per 18 months" or "at least once per 18 months, during shutdown" is proposed to be replaced with "at least once each REFUELING INTERVAL," and Notation "R", which is presently defined by TS Definition Table 1.2 as a frequency of "At least once per 18 months," is proposed to be redefined as a frequency of "At least once per 24 months."

REFUELING INTERVAL is being proposed by a separate license amendment application (LAR 95-0018; DBNPS letter Serial Number 2342 dated August 7, 1996) to be defined as "as a period of time $\leq$ 730 days" for the 24 month fuel cycle. The restriction "during shutdown" is being deleted in accordance with Generic Letter 91-04 wherein the NRC Staff concluded that the TS need not restrict surveillances as only being performed during shutdown, and that licensees are to give proper regard for performing refueling interval surveillances during power operation or during another mode that is consistent with the safe conduct of that surveillance.

This Safety Assessment and Significant Hazard Consideration (SASHC) proposes a revision to the frequency of several such Surveillance Requirements. These Surveillance Requirements are individually described in the enclosures to this SASHC and include:

4.3.1.1.1 - Table 4.3-1, Reactor Protection System Instrumentation Surveillance Requirements, Functional Unit 15, SCR Relays, Channel Functional Test.

4.3.1.1.2 - Reactor Protection System, Total Bypass Function, Channel Calibration.

4.3.1.1.3 - Reactor Protection System Response Time Test.

4.3.2.1.1 - Table 4.3-2, Safety Features Actuation System Instrumentation Surveillance Requirements, Functional Unit 3, Manual Actuation, Channel Functional Test, Note 1.

4.3.2.1.2 - Safety Features Actuation System Instrumentation, Total Bypass Function, Channel Calibration.

4.3.2.1.3 - Safety Features Actuation System Instrumentation Response Time Test.

4.3.2.2.1 - Table 4.3-11, Steam and Feedwater Rupture Control System Instrumentation Surveillance Requirements, Functional Unit 2, Manual Actuation, Channel Functional Test.

4.3.2.2.2 - Steam and Feedwater Rupture Control System Instrumentation, Total Bypass Function, Channel Calibration.

4.3.2.2.3 - Steam and Feedwater Rupture Control System Instrumentation Response Time Test.

4.3.3.5.2 - Remote Shutdown Instrumentation, Appendix R Control Circuits and Transfer Switches Capable of Performing Intended Function.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 12, PORV Block Valve Position Indicator, Channel Calibration.

4.5.1.d - Core Flooding Tank Isolation Valve Interlock Functional Verification.

4.5.2.d.2.b - Borated Water Storage Tank Low-Low Level Interlock Trip Functional Verification and Response Time Test.

As noted above, this SASHC also proposes modifications to TS Definition Table 1.2, Frequency Notation. The frequency notations defined by Table 1.2 are utilized in various tables in the Instrumentation Technical Specifications. Notation "R", which is presently defined as a frequency of "At least once per 18 months," is proposed to be redefined as a frequency of "At least once per 24 months" for instrumentation surveillance frequencies being changed to a 24 month frequency. A new Notation "E" is proposed to be used to designate the existing frequency of "At least once per 18 months" for instrumentation surveillance frequencies remaining on an 18 month frequency. In addition, the present asterisked footnote in Table 1.2 would continue to apply to Notation "R" and would also be proposed to apply to Notation "E". This footnote, in order to address 24 months, is proposed to be changed to read:

*In these Technical Specifications, 6 months is defined to be 184 days, 18 months is defined to be 550 days, and 24 months is defined to be 730 days.

Certain TS Surveillance Requirements that are intended to remain on an 18 month frequency, consistent with current TS requirements, but which presently utilize Notation "R", are proposed to be administratively changed to utilize the new Notation "E" (at least once per 18 months) described above. These Surveillance Requirements include:

4.3.1.1.1 - Table 4.3-1, Reactor Protection System Instrumentation Surveillance Requirements, Functional Unit 9, Containment High Pressure, Channel Calibration.

4.3.1.1.1 - Table 4.3-1, Reactor Protection System Instrumentation Surveillance Requirements, Functional Unit 10, Intermediate Range, Neutron Flux and Rate, Channel Calibration.

4.3.1.1.1 - Table 4.3-1, Reactor Protection System Instrumentation Surveillance Requirements, Functional Unit 11, Source Range, Neutron Flux and Rate, Channel Calibration.

4.3.2.1.1 - Table 4.3-2, Safety Features Actuation System Instrumentation Surveillance Requirements, Functional Unit 1.a, Instrument Strings, Containment Radiation - High, Channel Calibration.

4.3.2.1.1 - Table 4.3-2, Safety Features Actuation System Instrumentation Surveillance Requirements, Functional Unit 1.b, Instrument Strings, Containment Pressure - High, Channel Calibration.

4.3.2.1.1 - Table 4.3-2, Safety Features Actuation System Instrumentation Surveillance Requirements, Functional Unit 1.c, Instrument Strings, Containment Pressure - High-High, Channel Calibration.

4.3.2.1.1 - Table 4.3-2, Safety Features Actuation System Instrumentation Surveillance Requirements, Functional Unit 1.f, Instrument Strings, BWST Level - Low-Low.

4.3.2.1.1 - Table 4.3-2, Safety Features Actuation System Instrumentation Surveillance Requirements, Functional Units 2a through 2e, Output Logic for Incident Levels #1 through #5, Channel Calibration.

4.3.2.2.1 - Table 4.3-11, Steam and Feedwater Rupture Control System Instrumentation Surveillance Requirements, Functional Unit 1.a, Steam Line Pressure - Low, Channel Calibration.

4.3.2.2.1 - Table 4.3-11, Steam and Feedwater Rupture Control System Instrumentation Surveillance Requirements, Functional Unit 1.c, Steam Generator - Feedwater Differential Pressure - High, Channel Calibration.

4.3.2.2.1 - Table 4.3-11, Steam and Feedwater Rupture Control System Instrumentation Surveillance Requirements, Functional Unit 1.d, Reactor Coolant Pumps - Loss of, Channel Calibration.

4.3.3.1 - Table 4.3-3, Radiation Monitoring Instrumentation Surveillance Requirements, Instrument 1.a, Area Monitors, Fuel Storage Pool Area Emergency Ventilation System Actuation, Channel Calibration.

4.3.3.1 - Table 4.3-3, Radiation Monitoring Instrumentation Surveillance Requirements, Instrument 2.a.i, Process Monitors, Containment Gaseous Activity - RCS Leakage Detection, Channel Calibration.

4.3.3.1 - Table 4.3-3, Radiation Monitoring Instrumentation Surveillance Requirements, Instrument 2.a.ii, Process Monitors, Containment Particulate Activity - RCS Leakage Detection, Channel Calibration.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 7, High Pressure Injection Flow, Channel Calibration.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 8, Low Pressure Injection (DHR) Flow, Channel Calibration.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 9, Auxiliary Feedwater Flow Rate, Channel Calibration.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 14, BWST Level, Channel Calibration.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 18, Incore Thermocouples, Channel Calibration.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 20, Neutron Flux (Wide Range), Channel Calibration.

4.3.3.6 - Table 4.3-10, Post-Accident Monitoring Instrumentation Surveillance Requirements, Instrument 21, Neutron Flux (Source Range), Channel Calibration.

It is noted that there are other Instrumentation TS Surveillance Requirements, presently on an 18 month frequency under current TS requirements, that are not included in the above listings. All 18 month frequency Instrumentation TS Surveillance Requirements that are not addressed by this amendment application are intended to be addressed by license amendment application LAR 95-0024. The proposed change to TS Definition Table 1.2 redefining Notation "R" affects these various other Instrumentation TS Surveillance Requirements. Therefore, as noted in the cover letter to this SASHC, Toledo Edison is requesting that amendments for LAR 95-0024 and this amendment application, LAR 95-0027, be issued at the same time by the NRC.

Similarly, it is noted that whereas this amendment application includes a proposed change to Surveillance Requirement (SR) 4.5.2.d, there are several additional license amendment applications scheduled to be submitted to the NRC, LAR 95-0019, 95-0022, and 95-0024, which also affect SR 4.5.2.d. Therefore, as noted in the cover letter to this SASHC, Toledo Edison is also requesting that amendments for LAR 95-0019, 95-0022, 95-0024, and this amendment application, LAR 95-0027, be issued together by the NRC.

Each proposed change is described in further detail below and in the enclosures. Each of the proposed changes is also shown on the attached marked-up Technical Specification pages.

SYSTEMS, COMPONENTS, AND ACTIVITIES AFFECTED:

The basic activity affected by these proposed revisions is the performance of certain surveillance tests on a 24 month frequency instead of an 18 month frequency. The enclosures to this SASHC identify the specific system, components and activities affected by the individually proposed Surveillance Requirements.

The proposed revision to Technical Specification Table 1.2, Frequency Notation, and the related proposed revisions from an "R" frequency notation to an "E" frequency notation for Technical Specification

Surveillance Requirements that are remaining on an 18 month frequency, are administrative changes and do not affect systems, components or activities.

FUNCTIONS OF THE AFFECTED SYSTEMS, COMPONENTS, AND ACTIVITIES:

The enclosures to this SASHC describe the functions performed by the affected systems, components, and activities for those Surveillance Requirements proposed for revision from an 18 month frequency to a 24 month frequency.

EFFECTS ON SAFETY:

The enclosures to this SASHC describe the effects on safety due to increasing certain surveillance test intervals from 18 to 24 months and the continued application of TS 4.0.2 (which allows surveillance intervals to be increased up to 25% on a non-routine basis). Historical surveillance test data and maintenance records were reviewed in evaluating the effect on safety. In addition, the licensing basis was reviewed for each proposed revision to ensure it was not invalidated.

Based on the results of these reviews, it is concluded that there is no adverse effect on nuclear safety due to increasing the surveillance test intervals from 18 to 24 months and the continued application of TS 4.0.2. In addition, the licensing basis remains valid.

The proposed revision to Technical Specification Table 1.2, Frequency Notation, and the related proposed revisions from an "R" frequency notation to an "E" frequency notation for Technical Specification Surveillance Requirements that are remaining on an 18 month frequency, are administrative in nature and do not change current Technical Specification requirements. Therefore, these changes will have no adverse effect on plant safety.

Manufacturer or vendor maintenance information for components affected by the proposed revision to a 24 month surveillance interval is considered in the DBNPS Preventive Maintenance (PM) Program. The PM Program is being evaluated as a separate activity in support of the conversion from an 18 month to a 24 month fuel cycle. Changes will be made, as necessary, in the PM Program to facilitate a 24 month fuel cycle.

SIGNIFICANT HAZARDS CONSIDERATION:

The Nuclear Regulatory Commission has provided standards in 10 CFR 50.92(c) for determining whether a significant hazard exists due to a proposed amendment to an Operating License for a facility. A proposed amendment involves no significant hazards consideration if operation of the facility in accordance with the proposed changes would: (1) Not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) Not create the possibility of a new or

different kind of accident from any accident previously evaluated; or (3) Not involve a significant reduction in a margin of safety. Toledo Edison has reviewed the proposed changes and determined that a significant hazards consideration does not exist because operation of the Davis-Besse Nuclear Power Station, Unit No. 1, in accordance with these changes would:

1a. Not involve a significant increase in the probability of an accident previously evaluated because no such accidents are affected by the proposed revisions to increase the surveillance test intervals from 18 to 24 months for the subject Technical Specifications (TS) 3/4.3.1.1, Reactor Protection System Instrumentation; TS 3/4.3.2.1, Safety Features Actuation System Instrumentation; TS 3/4.3.2.2, Steam and Feedwater Rupture Control System Instrumentation; TS 3/4.3.3.1, Radiation Monitoring Instrumentation; TS 3/4.3.3.5.2, Remote Shutdown Instrumentation; TS 3/4.3.3.6, Post-Accident Monitoring Instrumentation; TS 3/4.5.1, Emergency Core Cooling Systems (ECCS), Core Flooding Tanks; and TS 3/4.5.2, Emergency Core Cooling Systems, ECCS Subsystems - $T_{avg} \geq 280°F$. Initiating conditions and assumptions remain as previously analyzed for accidents in the DBNPS Updated Safety Analysis Report.

These revisions do not involve any physical changes to systems or components, nor do they alter the typical manner in which the systems or components are operated.

Review results of historical 18 month surveillance data and maintenance records support an increase in the surveillance test intervals from 18 to 24 months (and up to 30 months on a non-routine basis) because little, if any, potential for an increase in a failure rate of a system or component was identified during these reviews.

These proposed revisions are consistent with the NRC guidance on evaluating and proposing such revisions as provided in Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

The proposed revision to Technical Specification Table 1.2, Frequency Notation, and the related proposed revision from an "R" frequency notation to an "E" frequency notation for Technical Specification Surveillance Requirements that are remaining on an 18 month frequency, are administrative in nature, do not change current actual Technical Specification requirements, and do not affect previously evaluated accidents.

1b. Not involve a significant increase in the consequences of an accident previously evaluated because the source term, containment isolation or radiological releases are not being changed by these proposed revisions. Existing system and component redundancy is not being changed by these proposed changes. Existing system and component operation is not being changed by these proposed changes. The assumptions used in evaluating the radiological consequences in the DBNPS Updated Safety Analysis Report are not invalidated.

The proposed revision to Technical Specification Table 1.2, Frequency Notation, and the related proposed revision from an "R" frequency notation to an "E" frequency notation for Technical Specification Surveillance Requirements that are remaining on an 18 month frequency, are administrative in nature, do not change current actual Technical Specification requirements, and do not affect the consequences of previously evaluated accidents.

2. Not create the possibility of a new or different kind of accident from any accident previously evaluated because these revisions do not involve any physical changes to systems or components, nor do they alter the typical manner in which the systems or components are operated.

   Review results of historical 18 month surveillance data and maintenance records support an increase in the surveillance test intervals from 18 to 24 months (and up to 30 months on a non-routine basis) because little, if any, potential for an increase in a failure rate of a system or component was identified during these reviews. No changes are being proposed to the type of testing currently being performed, only to the length of the surveillance test interval.

   The proposed revision to Technical Specification Table 1.2, Frequency Notation, and the related proposed revision from an "R" frequency notation to an "E" frequency notation for Technical Specification Surveillance Requirements that are remaining on an 18 month frequency, are administrative in nature, do not change current actual Technical Specification requirements, and do not affect the manner in which systems and components are operated or tested.

3. Not involve a significant reduction in a margin of safety because the review results of the historical 18 month surveillance data and maintenance records identified little, if any, potential for an increase in a failure rate of a system or component due to increasing the surveillance test interval to 24 months. Existing system and component redundancy is not being changed by these proposed changes.

   The proposed revision to Technical Specification Table 1.2, Frequency Notation, and the related proposed revision from an "R" frequency notation to an "E" frequency notation for Technical Specification Surveillance Requirements that are remaining on an 18 month frequency, are administrative in nature, do not change current actual Technical Specification requirements, and do not reduce the margin of safety.

   There are no new or significant changes to the initial conditions contributing to accident severity or consequences, therefore there are no significant reductions in a margin of safety.

Technical Specifications that must be reviewed by the Nuclear Regulatory Commission, this License Amendment Request does not constitute an unreviewed safety question.

ATTACHMENTS:

Attached are the proposed marked-up changes to the Operating License. Also attached are summaries of the licensing bases, surveillance data, and maintenance record reviews for the following Technical Specification Surveillance Requirements (SR):

SR 4.3.1.1.1, Table 4.3-1, Functional Unit 15	(Enclosure 1)
SR 4.3.1.1.2	(Enclosure 2)
SR 4.3.1.1.3	(Enclosure 3)
SR 4.3.2.1.1, Table 4.3-2, Functional Unit 3	(Enclosure 4)
SR 4.3.2.1.2	(Enclosure 5)
SR 4.3.2.1.3	(Enclosure 6)
SR 4.3.2.2.1, Table 4.3-11, Functional Unit 2	(Enclosure 7)
SR 4.3.2.2.2	(Enclosure 8)
SR 4.3.2.2.3	(Enclosure 9)
SR 4.3.3.5.2	(Enclosure 10)
SR 4.3.3.6, Table 4.3-10, Instrument 12	(Enclosure 11)
SR 4.5.1.d	(Enclosure 12)
SR 4.5.2.d.2.b	(Enclosure 13)

REFERENCES:

1. Davis-Besse Nuclear Power Station (DBNPS) Unit No. 1, Operating License NPF-3, Appendix A, Technical Specifications, through Amendment 211.

2. DBNPS Updated Safety Analysis Report, through Revision 19.

3. Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

4. 10 CFR 50.59, "Changes, Tests, and Experiments."