

A CMS Energy Company

Palisades Nuclear Plant
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Nathan L. Haskell
Director, Licensing and
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April 27, 2000

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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**DOCKET 50-255 LICENSE DPR-20 - Palisades Plant
LICENSE AMENDMENT REQUEST - PROPOSED CHANGE TO THE OPERATING
LICENSE EXPIRATION DATE**

Palisades Plant is currently licensed for operation for 40 years commencing with issuance of its construction permit. This application for amendment to the Palisades Plant Operating License proposes to revise the expiration date of the license to forty (40) years from the date of issuance of the license to operate. A license term of 40 years from the date of issuance of the operating license is permitted under 10 CFR 50.51.

An Amendment Application is provided as Enclosure 2. The amendment application provides information supporting the change, a No Significant Hazards Consideration, and an Environmental Consideration. The amendment application requests that the Palisades Operating License expiration date be changed from March 14, 2007 to March 24, 2011.

This Amendment Application, including the determination of no significant hazards consideration, has been reviewed by the Palisades Plant Review Committee and the Independent Safety Review Group. In accordance with 10 CFR 50.91, a copy of this application has been submitted to the designated State of Michigan Official.

This amendment request was modeled after the San Onofre Nuclear Generating Station, Units 2 and 3 submittals (References 1 and 2). The reference for the NRC approval of the SONGS request is also provided (Reference 3).

ADD

Consumers Energy Company requests approval of this license amendment not later than October 31, 2000. Approval is needed to support long-term financial and operational planning, and staff retention programs.

SUMMARY OF COMMITMENTS

This letter contains no new commitments and no revisions to existing commitments.



Nathan L. Haskell
Director, Licensing and Performance Assessment

CC Administrator, Region III, USNRC
Project Manager, NRR, USNRC
NRC Resident Inspector, Palisades

Enclosure(s)

CONSUMERS ENERGY COMPANY

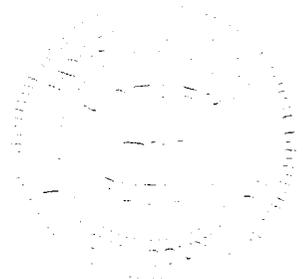
To the best of my knowledge, the contents of this License Amendment Request, which proposes a change to the Palisades Operating License expiration date, is truthful and complete.

By Nathan L. Haskell
Nathan L. Haskell
Director, Licensing and Performance Assessment

Sworn and subscribed to before me this 27th day of April 2000.

Janice M. Milan

Janice M. Milan, Notary Public
Allegan County, Michigan
(Acting in Van Buren County, Michigan)
My commission expires September 6, 2003



ENCLOSURE 1

**CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255**

**LICENSE AMENDMENT REQUEST - PROPOSED CHANGE TO THE OPERATING
LICENSE EXPIRATION DATE**

REFERENCES

References:

- 1) Letter from D. E. Nunn (Southern California Edison) to the Document Control Desk (NRC) dated December 13, 1999; Subject: Proposed Change to the Operating License Expiration Date(s) for San Onofre Nuclear Generating Station (SONGS) Units 2 and 3
- 2) Letter from D. E. Nunn (Southern California Edison) to the Document Control Desk (NRC) dated February 24, 2000; Subject: Supplement for the Proposed Change to the Operating License Expiration Date(s) for SONGS Units 2 and 3
- 3) Letter from L. Raghavan (NRC) to Mr. Harold B. Ray (Southern California Edison) dated March 9, 2000; Subject: Issuance of Amendments Re: Extended License Expiration Dates for SONGS Units 2 and 3

ENCLOSURE 2

**CONSUMERS ENERGY COMPANY
PALISADES PLANT
DOCKET 50-255**

**LICENSE AMENDMENT REQUEST - PROPOSED CHANGE TO THE PALISADES
OPERATING LICENSE EXPIRATION DATE**

DESCRIPTION AND SAFETY ANALYSIS

12 Pages

DESCRIPTION AND SAFETY ANALYSIS
OF PROPOSED CHANGE TO THE PALISADES PLANT
OPERATING LICENSE, DPR-20

This Proposed Change is a request to revise the expiration date of the Palisades Plant Operating License as stated in License Condition 2.H. of the Amended Facility Operating License from March 14, 2007 to March 24, 2011. This change does not affect the 32 Effective Full Power Years (EFPY) design life as described in the Updated Final Safety Analysis Report.

Section I - Description of Changes

This proposed change is a request to revise the expiration date of the Palisades Operating License to allow for forty (40) years of operation from the date of issuance of its Operating License (March 24, 1971, Ref 1). Specifically, Condition 2.H. of the Amended Facility Operating License DPR-20 is to be changed as follows:

EXISTING

"... and shall expire at midnight on March 14, 2007."

PROPOSED:

"... and shall expire at midnight on March 24, 2011."

Section II - Evaluation of Changes

Prior to 1982, the Commission typically granted operating licenses to nuclear power reactors with the date of expiration linked to the issuance date of the construction permits. This practice was modified in response to a request by Commonwealth Edison Company for the Commission to issue an operating license (OL) for La Salle Units 1 and 2, for a full term of 40 years beginning with the date of issuance of the OL. This request was approved, and La Salle Unit 1 received an OL for 40 years from the date of OL issuance in 1982. In an August 16, 1982 memorandum to the Commission, Mr. William I. Dircks, Executive Director for Operations, elaborated on the new OL position and directed the staff to issue an OL for the term requested by the applicant, but in no case to exceed 40 years from date of issuance of the OL. Several plants, including Palo Verde Units 1, 2, and 3, St. Lucie 2, and Waterford were granted 40 year terms from the issuance of the OL.

The Commission's practice of granting 40 year OLs has also, upon request by the licensee, been extended to plants licensed before 1982. Baltimore Gas and Electric Company requested a license amendment to change the OL expiration dates of Calvert Cliffs Units 1 and 2 to account for 40 years of operation from the date of issuance of the OL. The Commission granted this request and issued licensing amendments on May 1, 1985. The Commission, in amending the Calvert Cliffs licenses, noted that the issuance of OLs for 40 years from the date of the construction permit issuance rather than 40 years from the date of the OL issuance was arbitrary, and had no safety basis. Subsequently, the Commission has approved revision of the OL expiration date for a number of plants licensed for construction

prior to 1982, including the St. Lucie 1, Arkansas Nuclear One - Unit 2, and San Onofre Nuclear Generating Station, Units 2 and 3.

Palisades Plant is currently licensed for plant operation for 40 years from the date of issuance of its construction permit. Accounting for the time that was required for construction, this represents an effective OL term of slightly less than 36 years.

Palisades Plant was designed, licensed, and constructed for 40 years of operation as discussed in various places in the Updated Final Safety Analysis Report (UFSAR) (Ref 2). This 40 year design life presumed operation at a design reactor thermal power level of 2650 MW with a cumulative lifetime capacity factor of 80%, or 32 effective full power years (EFPY). To date, Palisades has operated at no more than 2530 MW, and has attained a cumulative gross capacity factor of approximately 56%, equivalent to about 16 EFPY. While Consumers Energy could foresee Palisades achieving a cumulative gross capacity factor of nearly 80% by the end of plant life, Palisades will not exceed 32 EFPY.

Equipment Considerations

The Palisades reactor vessel was initially designed and licensed based on a 40 year service life with an 80% capacity factor. A vessel material surveillance program is maintained in accordance with 10 CFR 50, Appendix H. A schedule for removal of reactor vessel surveillance capsules has been established and received NRC approval, and is included as Table 4-20 in the UFSAR. The limiting reactor vessel beltline material pertaining to the fracture toughness requirements of 10 CFR 50, Appendix G, is plate D-3804-1 located in the lower shell. This plate is projected to have an upper shelf energy above the lower limit of 50 ft-lb at the end of the proposed license life in 2011. The pressure-temperature limits of 10 CFR 50 Appendix G are addressed in plant technical specifications and remain valid at the end of the proposed license life in 2011. The limiting reactor vessel beltline material pertaining to the Pressurized Thermal Shock (PTS) Rule, 10 CFR 50.61, are the beltline axial welds. These welds are projected to remain below the 270°F screening criterion at the end of the proposed license life in 2011. In 1996, based on the then accepted analysis, NRC issued a Safety Evaluation Report (SER) establishing "approximately 2003" as the date when the rule's screening criterion will be reached (Ref 3). The above conclusions regarding material acceptability through 2011 are based on updated analyses of vessel fluence which were submitted for NRC review on February 21, 2000 (Ref 4). The updated analyses account for the effects of ultra-low-leakage core designs that have been in use for several cycles, and will continue to be used for the remainder of plant life. Based on this submittal and the projected fluence accumulation rate, the Palisades reactor vessel is not expected to reach the PTS screening criteria until 2014. The NRC is presently reviewing this submittal. A final NRC conclusion on the reactor vessel fluence estimate is beyond the scope of this license expiration extension submittal. This issue will be adequately addressed so as to assure compliance with the PTS rule, regardless of the effect on useful plant operating life or the license expiration date.

With regard to equipment lifetime, Palisades was designed, licensed, and constructed for a 40-year service life. Although the General Design Criteria (GDC) (10 CFR 50, Appendix A) had not been issued when Palisades was designed, the reactor coolant system components and support systems were designed and analyzed for the integrated effects of radiation damage and cyclic loadings (with added margin) that could reasonably be expected to occur in a 40-year lifetime. The NRC Integrated Plant Safety Assessment Systematic Evaluation Program for Palisades (NUREG-0820), conducted in the early 1980's, established that

Palisades meets selected GDC or acceptable alternatives, and that other GDC did not need to be addressed (Ref 5). To assure equipment continues to perform as designed, surveillance and maintenance programs have been implemented, and will continue, in accordance with: the ASME Code for Inservice Inspection and Inservice Testing of Pumps and Valves; a maintenance program satisfying the "Maintenance Rule" (10 CFR 50.65) requirements; and the facility Technical Specifications. The Technical Specifications are part of the plant's operating license and have been approved by the NRC, as are all subsequent changes. As such, they are unaffected by the requested change to the Palisades Plant OL expiration date. These programs will ensure the operating integrity of the plant for the entire OL. While it can be expected that some components will require replacement during the life of the plant, the design features and ISI programs that are in place will facilitate inspection and testability of structures, systems and equipment, and provide reasonable assurance that any unexpected degradation in plant equipment will be identified and corrected. Equipment replacement is typical for all power plants and is part of expected plant maintenance activities. To date, some of the major component replacements at Palisades have included the steam generators, condenser and low pressure turbines. These upgrades were performed to increase the efficiency and/or the reliability of Palisades' plant systems.

The structural integrity of Palisades' critical plant structures (the containment liner encased within a concrete shell, the internal concrete and steel structures, and the other safety related structures such as the Spent Fuel Pool, Intake Structure, and Auxiliary Building) and supports is assured for periods well in excess of the proposed 40 year operating license term. The conservative load combinations used during the plant's design phase resulted in much stronger structures than required to support conventional operational loads. Material testing during construction ensured compliance to strict construction and quality control procedures. Palisades personnel regularly inspect concrete surfaces and protective coatings under 10 CFR 50.65 (the "Maintenance Rule") and other Inservice Inspection (ISI) requirements to establish condition assessments of the structures. The maintenance staff at Palisades completes the required repairs in accordance with the applicable codes to ensure the continued structural integrity and preservation of the buildings. Research conducted by the American Concrete Institute (ACI) (ACI-SP-117, "Long Term Serviceability of Concrete Structures," January 1989 - Ref 6) for nuclear power plant structures concludes that planned service lives in excess of 60 years are appropriate, provided the owner completes appropriate preservation actions. Therefore, it can be concluded that the design life of critical plant structures can be projected to exceed the proposed term of the Operating License.

Environmental qualification (EQ) aging analyses of plant safety related electrical equipment, in accordance with 10 CFR 50.49, has identified qualified lifetimes for this equipment. These lifetimes have been incorporated into the Palisades Plant maintenance and surveillance procedures to ensure that safety related electrical equipment remains qualified and available to perform its safety function regardless of the overall age of the plant. The NRC Staff's safety evaluation for Palisades' program for environmental qualification of safety-related electrical equipment was issued on January 31, 1985, in which the Staff documented Palisades' compliance with 10 CFR 50.49 requirements (Ref 7).

Public and Environmental Considerations

The proposed change in Operating License expiration date would have little or no effect on the environment and the general public. With regard to non-radiological discharges, a National Pollutant Discharge Elimination System (NPDES) permit was issued November 1, 1999 and will not expire until November 1, 2004 (Ref 8). Consumers Energy expects

subsequent NPDES permits will be issued every five years upon expiration. There will be no significant non-radiological impact on the environment with regard to liquid discharges from Palisades as a result of changing the OL expiration date, since Consumers Energy will abide by the NPDES permits. In fact, continued operation of Palisades will avert non-radiological environmental effects of airborne effluents from non-nuclear plants that would be required to operate in order to replace the power supplied by Palisades.

Release of radioactive liquids and gases have historically been lower for Palisades than those estimated in the Final Environmental Statement (FES) (Ref 9) and the Final Addendum to the FES (Ref 10), and are expected to remain so. Table 1 is a summary of the most recent Palisades offsite dose assessments, covering the period January 1, 1999 through December 31, 1999.

Land use changes that have occurred over time have been duly reported and incorporated into offsite dose calculations. These doses are typical and demonstrate that releases at Palisades are well below the FES estimates and the 10 CFR 50 Appendix I limits. As such, no significant impact of these releases is expected in connection with the proposed change.

The volume of radioactive solid waste shipped from Palisades has historically been consistent with that projected in the FES (2100 to 10,000 cubic feet per year). The approximate volume of the solid radioactive waste shipped from Palisades for the last four years is listed below. The major contributor to the higher than usual volume in 1999 was the shipment of 1900 cubic feet of soil with very low-level activity. (See the Radioactive Shipment topic in the "Annual Radioactive Effluent Release Reports" for the four year time period for the exact amount and classification of wastes shipped.)

1996	2906 cubic feet
1997	1753 cubic feet
1998	1517 cubic feet
1999	3693 cubic feet

In addition, the volume of radioactive wastes generated due to processing of radioactive liquids (filters and resins), and due to routine maintenance on equipment, has decreased dramatically since the late 1980's, due, in part, to processing of dry active waste by incineration. Palisades continues to pursue waste volume reduction technology to minimize costs and impacts associated with radioactive waste management. Palisades currently has access to a licensed offsite low-level waste disposal facility in another state (Michigan does not have such a facility). Should this access become unavailable in the future, Palisades could provide the capability for on-site storage meeting applicable regulatory requirements.

Nuclear Fuel Considerations

Palisades Plant is currently in its 15th fuel cycle. The energy demands for this cycle and the cycles before it have varied from approximately 300 to 461 Effective Full Power Days (EFPD), and the fuel design specifications have been set to meet these demands. Generally, cycle length has been increasing since Cycle 9. Consumers Energy is tentatively planning to go to 488 EFPD cycles in the future. Fuel enrichment (batch average) has ranged from a minimum of 1.65 weight percent U-235 up to 4.02 weight percent U-235. At present, Palisades is licensed (DPR-20 and DPR 72-7 (Ref 11)) to store fuel with enrichments up to 4.40 weight percent U-235. It should be noted that, to date, the maximum burn-up of any single fuel assembly is 51,500 MWD/MTU, on an assembly that was discharged at the end of

Cycle 14. The average burn-up of all assemblies stored onsite from recent fuel cycles is approximately 44 GWD/MTU.

Consumers Energy reviewed the staff's assessment of the environmental effects of transportation (53 FR 30355). The Palisades Technical Specifications currently restrict the enrichment of reload fuel to no more than 4.40 weight percent of uranium-235. Palisades has some fuel assemblies in the Spent Fuel Pool with a burnup of greater than 33,000 MWD/T (but less than 60,000 MWD/T). The NRC generic assessment (53 FR 30355) indicates that the environmental impact of extended fuel irradiation up to 60,000 MWD/T and increased enrichment up to 5 weight percent are bounded by the impacts reported in Table S-4 of 10 CFR 51.52. This generic assessment is applicable to Palisades; therefore, a detailed analysis as described in 10 CFR 51.52(b) does not have to be performed. Palisades may, in the future, request NRC permission to alter Technical Specifications to allow maximum enrichment up to 5% U-235 and maximum burnup of up to 60,000 MWD/T.

The total projected number of fuel cycles from now to the current OL expiration date (March 14, 2007) is five. Revising the OL expiration date to be 40 years from the issuance of the License will increase the number of complete fuel cycles by approximately three to a total of twenty-two (22), based on projected cycle lengths. The spent fuel discharged per cycle along with the projected discharges out to 2011 is provided in Table 2. The total number of discharged fuel assemblies including a full core discharge at the end of Palisades' current OL expiration date (March 14, 2007) is projected to be 1453. The projected total number of spent fuel assemblies including a full core discharge for a 40 year operating life will be between 1577 and 1625.

Consumers Energy notes that the U. S. Department of Energy (DOE) did not begin removing spent fuel from nuclear facilities in time to provide for the storage of additional assemblies beyond the licensed capacity of the Palisades Spent Fuel Pool. Therefore, Consumers Energy began using dry storage for Palisades spent fuel in 1993 under a general license in accordance with 10 CFR 72 (Docket Number 72-7). Palisades is currently storing 593 spent fuel assemblies in the Spent Fuel Pool (SFP) and 432 in Dry Fuel Storage as a result of operation through Cycle 14 (October, 1999). Palisades Spent Fuel Pool (SFP) has a licensed capacity of 892 fuel assemblies. Since dry storage technology is feasible and has been licensed (DPR 72-7), dry fuel storage will provide a viable interim measure for storage of spent fuel. Furthermore, the projected use of alternative storage methods for fuel assemblies does not affect the NRC's Waste Confidence Rulemaking decision. Table 2 indicates the number of assemblies in dry storage at the end of each cycle through cycle 14, and projects storage needs out to end of license. Licensed dry fuel storage has provided, and is projected to continue to provide, sufficient extra spent fuel storage capacity to complete the requested license life. Changing the OL expiration date to 40 years from the issuance of the License will not change the alternate method of storage but will increase the total number of spent fuel assemblies for ultimate disposal by up to 172 assemblies.

Occupational Radiation Exposure

The occupational radiation exposure has historically been lower for Palisades than that projected in the Updated Final Safety Analysis Report (UFSAR) and the FES. As a result of the Palisades ALARA Program, collective occupational exposure has shown a steady decline. The three-year annual average collective occupational exposure has dropped from about 270 person-rem/year in 1996, to about 161 person-rem/year in 1999. The projected collective occupational exposure for Palisades for the period of 2007 to 2011 is expected to

average 125 person-rem per year. This projection is based on continued implementation of an aggressive ALARA program, including reviews of plant modifications, procedures, and maintenance activities, to ensure that occupational exposure is maintained as low as reasonably achievable.

The Palisades occupational radiation exposure for the last four years was:

1996	309 person-rem
1997	48 person-rem
1998	217 person-rem
1999	219 person-rem

Design Basis Accident Consequences

The consequences of design basis accidents are determined in terms of the resulting exposure to the general public. A comparison of the 1980 population in the UFSAR within a 10-mile radius of the plant with actual 1990 census data showed a decline in the permanent resident population of 3.5%. Using 1990 census data, coupled with recent surveys to establish possible transient population, the maximum probable population within the 10-mile Emergency Planning Zone has declined from that shown in the UFSAR for 1980 (from 54,224 to less than 50,000). The 1998 estimated population for the 13 cities and townships within 10 miles of the plant declined by one percent from the 1990 census (41,234 to 40,801). If these trends continue as expected, the population for the period 2007 through 2011 should be well within FES and UFSAR projections. Therefore, cumulative exposure to the general public due to a design basis accident would be less than originally projected because of the lower than projected population in the surrounding area.

The latest population data listed in the Palisades UFSAR were taken from the 1980 U.S. Census and are included in section 2.1.2 and Table 2-9. Population projections were made using the 1980 federal census data and estimated population growth rates based on area growth since 1960. The UFSAR projected a 1990 population for Michigan counties within 50 miles of the plant that was within 0.4% of the actual 1990 census. The UFSAR projected a 2000 population that is within 0.6% of current estimates for the same area.

Other Considerations

Palisades will continue to maintain and implement Security, Fire Protection and Emergency Preparedness programs that comply with applicable regulatory requirements and Operating License conditions (10 CFR 73, 10 CFR 50.48, 10 CFR 50.47). These programs provide for the physical security and protection of the site and its structures, systems and components important to safe and reliable operation, and provide the capability to respond to emergencies so as to preserve public health and safety. Program changes are governed by regulations that assure continued effectiveness.

Palisades has been, and continues to be, a reliable source of electricity for the rate payers of the state of Michigan. The potential economic benefits, based on wages for both Consumers Energy employees and contract employees, material purchases associated with the operation of the plant, and taxes (including payroll, property, and sales), for the additional four years of operation is estimated to be approximately \$371 million in nominal dollars for the period in question or \$280 million in constant 2000 dollars.

In addition to the economic benefits to the community, a substantial reduction in air emissions would also be a result of the proposed amendment. If the power from Palisades was replaced by a natural gas or coal-fired generator of similar capacity, annual emissions of hundreds of tons of carbon dioxide, nitrogen oxides, and sulfur-dioxide would occur. Continued operation of the Palisades Plant will avoid these emissions and the resultant adverse environmental impacts.

TABLE 1

RECENT OFFSITE DOSE ASSESSMENTS

<u>PATHWAY</u>	<u>MAXIMUM TOTAL BODY DOSE</u>
Gaseous Pathway:	
Noble Gases (gamma)(mrad)	1.47E-03
(beta)(mrad)	4.12E-03
Radiodines, Particulates and Tritium (mrem)	2.42E-02
Liquid Pathway:	
All Releases (whole body) (mrem)	4.83E-03
(organ) (mrem)	7.39E-03

Based on the period of January 1, 1999 through December 31, 1999.

TABLE 2
 NUCLEAR FUEL DISCHARGE INFORMATION
 Palisades Plant

Cycle No.	Shutdown Dates	Number of Spent Fuel Assemblies Discharged	Number in Dry Fuel Storage	Cumulative Total Assemblies Stored
01	12/1975	204	0	205
02	01/1978	68	0	273
03	09/1979	68	0	341
04	08/1981	68	0	409
05	08/1983	68	0	477
06	11/1985	68	0	545
07	08/1988	60	0	605
08	09/1990	52	0	657
09	02/1992	68	0	725
10	06/1993	68	48	793
11	05/1995	56	312	849
12	11/1996	60	312	909
13	04/1998	60	312	969
14	10/1999	56	432	1025
(ACTUAL CYCLE INFORMATION THROUGH CYCLE 14, PROJECTED THEREAFTER)				
15	03/2001	56	432	1081
16	09/2002	56	432	1137
17	03/2004	56	621	1193
18	09/2005	56	621	1249
19	03/2007	56	768	1305
20	09/2008	56	768	1361
21	03/2010	40	894	1401
22	03/2011	204	894	1605

Section III - No Significant Hazards Consideration and Environmental Consideration

No Significant Hazards Consideration

The commission has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92. A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with a proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or, (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or, (3) involve a significant reduction in a margin of safety. A discussion of these standards as they relate to this amendment request follows to show that operation of the facility in accordance with this proposed Amendment does not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated?

Response:

The proposed change does not involve any changes to the design or operation of the Palisades Plant which may affect the probability or consequences of an accident evaluated in the Updated Final Safety Analysis Report (UFSAR). Palisades Plant was designed and constructed on the basis of a 40 year operating life. The accidents analyzed in the UFSAR are not affected by the term of the license. No changes will be made that could alter the design, construction, or postulated scenarios regarding accident initiation and/or response. Existing surveillance, inspection, testing and maintenance practices and procedures ensure that degradation in plant equipment, structures, and components will be identified and corrected throughout the life of the plant. The effect of aging of electrical equipment, in accordance with 10 CFR 50.49, has been incorporated into the plant maintenance and surveillance procedures. Therefore, the probability or consequences of a postulated accident previously evaluated in the UFSAR are not increased as a result of the proposed change.

- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated?

Response:

The proposed change does not involve any changes to the physical structures, components, or systems of the Palisades Plant. Existing surveillance, inspection, testing, and maintenance practices and procedures will assure full operability for the plant's design operating lifetime of 40 years. Continued operation of Palisades Plant in accordance with these approved procedures and practices will not create a new or different kind of accident.

- (3) Involve a significant reduction in a margin of safety?

Response:

There are no changes in the design, design basis, or operation of the Palisades Plant associated with the proposed change. Existing surveillance, inspection, testing, and maintenance practices and procedures provide assurance that any degradation of equipment, structures, or components will be identified and corrected

throughout the lifetime of the plant. These measures, together with the continued operation of Palisades in accordance with the Technical Specifications, assure an adequate margin of safety is preserved on a continuous basis. Therefore, the proposed change does not result in a significant reduction in a margin of safety.

Based on the responses to these three criterion, because Palisades was originally designed for a 40 year life, and because measures are in place to ensure its continued safe operation, Consumers Energy Company considers that the proposed change does not involve a significant hazards consideration.

Environmental Consideration

Consumers Energy has determined that the proposed amendment involves no changes in the amount or type of effluent that may be released offsite, and results in no increase in individual or cumulative occupational radiation exposure from the original design. As described above, the proposed amendment involves no significant hazards consideration, and as such, meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

Section IV - Impact of Change

This change will not adversely impact the following:

- ALARA Program
- Security and Fire Protection Programs
- Emergency Plan
- UFSAR or NRC Safety Evaluation Report Conclusions
- Overall Plant Operations and the Environment

Section V - Conclusions

The incorporation of this change: a) will not increase the probability nor the consequences of an accident or malfunction of equipment important to safety as previously evaluated in the Safety Analysis Report; b) will not increase the possibility for an accident or malfunction of a different type than any evaluated previously in the Safety Analysis Report; c) will not reduce the margin of safety as defined in the bases for any Technical Specification; d) does not constitute an unreviewed safety question; and e) involves no significant hazards considerations as defined in 10 CFR 50.92.

Section VI - References

- 1) Interim Provisional Operating License IDPR-20, dated March 24, 1971
- 2) Palisades Plant Updated Final Safety Analysis Report (UFSAR)
- 3) Letter from J.N. Hannon (NRC) to T.C. Bordine (Consumers Energy) dated December 20, 1996; Subject: Palisades: Evaluation of Updated Reactor Pressure Vessel Fluence Values (PTS SER)
- 4) Letter from D.G. Malone (Consumers Energy) to Document Control Desk (NRC) dated February 21, 2000; Subject: Palisades Reactor Vessel Neutron Fluence Re-evaluation
- 5) Integrated Plant Safety Assessment Systematic Evaluation Program for Palisades Plant, NUREG-0820, and Supplement Number 1, dated November, 1983
- 6) American Concrete Institute, ACI-SP-117, "Long Term Serviceability of Concrete Structures," January 1989
- 7) Letter from J. Zwolinski (NRC) to D.J. VandeWalle (Consumers Energy) dated January 31, 1985; Subject: Palisades Plant - Environmental Qualification of Electrical Equipment Important to Safety (EEQ Program SER)
- 8) National Pollutant Discharge Elimination System Permit Number MI0001457, November 1, 1999 (NPDES permit)
- 9) Final Environmental Statement Related to Operation of Palisades Plant (NUREG-0343) June, 1972
- 10) Final Addendum to the Final Environmental Statement, February 3, 1978
- 11) Letter from F.C. Sturz (NRC) to R.A. Fenech (Consumers Energy) dated April 25, 1995; Subject: Established Docket Number 72-7 for dry fuel storage activities at the Palisades Nuclear Plant licensed under the general provision of 10 CFR 72, Subpart K, "General License for Storage of Spent Fuel at Power Reactor Sites"