

May 11, 1989

Docket No. 50-305

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Dear Mr. Steinhardt:

Enclosed is a copy of the Environmental Assessment relating to your May 23, 1986 application for a license amendment for the Kewaunee Nuclear Power Plant. The proposed amendment would change the expiration date of Facility Operating License No. DPR-43 from August 6, 2008 to December 21, 2013.

A copy of the Notice of Environmental Assessment and Finding of No Significant Impact, which will be published in the Federal Register, is also enclosed.

Sincerely,

/s/

John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:  
As stated

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

ENVIRONMENTAL ASSESSMENT  
BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATING TO THE CHANGE IN EXPIRATION DATE OF  
FACILITY OPERATING LICENSE NO. DPR-43  
WISCONSIN PUBLIC SERVICE CORPORATION  
KEWAUNEE NUCLEAR POWER PLANT  
DOCKET NO. 50-305

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## 1.0 INTRODUCTION

The Kewaunee Nuclear Power Plant (KNPP) is currently licensed for plant operation for 40 years commencing with the issuance of the construction permit. Kewaunee's license expires on August 6, 2008.

By letter dated May 23, 1986, Wisconsin Public Service Corporation requested that the license expiration date for Kewaunee (Facility Operating License No. DPR-43) be extended to December 21, 2013 or 40 years after the issuance of the operating license.

## 2.0 THE NEED FOR THE PROPOSED ACTION

The granting of the proposed license amendment would allow the licensee to operate the Kewaunee Nuclear Power Plant for approximately 5 years and 4 months beyond the current license expiration date. This extension would allow the plant to operate for the full 40-year design basis lifetime consistent with previously issued Commission policy (Memorandum dated August 16, 1982 from William J. Dircks to the Commissioners).

## 3.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

In December 1972, the Atomic Energy Commission issued the "Final Environmental Statement Related to the Operation of Kewaunee Nuclear Power Plant." This document provides an evaluation of the environmental impact associated with the operation of KNPP. The NRC staff has reviewed this document to determine if any significant environmental impacts, other than those previously considered, would be associated with the proposed license extensions.

### 3.1 Radiological Impacts

The NRC staff has considered the radiological impacts as a result of a hypothetical design basis accident at KNPP, including the impact of revised population estimates.

In the 1972 Final Environmental Statement (FES) related to operation of KNPP, the staff evaluated the regional demography and found the KNPP to be situated in a large agricultural area comprising the central portion of eastern Wisconsin with essentially all of the surrounding land being farmland. The FES evaluated population distributions within a 50-mile radius of the plant.

The low population zone (LPZ) for this site is defined in the emergency plan as the area immediately surrounding the exclusion area which includes a residential population of which the total number and density are such that appropriate protective actions can be readily taken in the event of a serious radiological accident. The LPZ is approximately the area enclosed by a 2-mile radius from the plant and currently contains 105 persons based on the 1980 census data as shown in Figure C-3 of the Kewaunee Emergency Plan. The KNPP Updated Safety Analysis Report (USAR) population for 1970 and 2010 (projected) for the area within a 2-mile radius of the plant is 167 and 201, respectively. Actual census data for 1980 show that this projection is conservative. The 2010

projection was evaluated in the FES and approved. The FES projected a population within 2 miles of the plant to be 201 persons in 2010 (2 years beyond the current license expiration date). However, using the 1980 census data and the FES projected population increase (which is overly conservative based on the 1970-1980 actual growth rate), the LPZ population would be 133 persons in 2013 (the requested license extension date). Thus, the population within the LPZ for the extension period would be less than the 1970 population referenced in the FES. Consequently, the original analyses bound the date of the license extension.

The emergency planning zone for the plume exposure pathway is defined as the area within a 10-mile radius of the plant. Population projections for 1970 and 2010 as found in the USAR for the 10-mile EPZ were 12,759 and 23,561, respectively. The population projections based on the growth over the decade (1970-1980) suggests that the projections for 2010 slightly overpredict the population now expected. Consequently the staff does not regard the expected population increase within the 10-mile EPZ for the requested extension to be in excess of that already projected. Furthermore, even if the population projections were based on growth rates projected in the FES, the staff would not consider this population increase to be significant.

The FES also took into consideration population centers within a 50-mile radius of the site. A table on page II-7 of the FES lists the population centers within a 50-mile radius of the plant and their distance and direction from Kewaunee. The nearest population center of appreciable size is the town of Two Rivers located approximately 13 miles south of the plant with a population of about 13,500. The next nearest population center of appreciable size is the city of Manitowoc (located about 18 miles south-southwest of the site) with a population of about 42,000. No other population centers of appreciable size are concentrated within 25 miles of the plant.

While it is recognized that some population increase could occur during the period of the proposed license extension, the increase is not expected to be significant based on population projections derived from trend data studies conducted by the Wisconsin Department of Natural Resources. No significant shift in population density within the emergency planning zone of 50-mile radius of the plant is expected. Nor are there expected changes in site boundary, low population zone, or population center distances.

The staff finds, based on a comparison of population projections and 1970 and 1980 census data, the population forecasts are generally conservative, and are expected to remain so for the period of the license extension. Further, the small expected increases in population during the period of the license extension for the 10-mile EPZ are generally considered insignificant.

Therefore, the staff concludes that the population projections for the period of the license extension would not change the overall conclusions of the FES concerning radiological consequences following accidents.

The staff has assessed the public risks from reactor accidents per year of operation at other reactors of comparable design and power level (and larger). In all cases, the estimated reactor accident risks of early and latent cancer fatality per year of operation have been small compared to the background accident and cancer fatality risks to which the public is exposed and did not increase with longer periods of operation. If similar risks were estimated for Kewaunee, the staff would expect a similar comparison. Further, as shown in Table VI-2 of the FES, the estimated integrated exposure of the population within 50 miles of the plant from each postulated accident would be orders of magnitude smaller than that from naturally occurring radioactivity, which corresponds to approximately 156,000 man-rem/yr based on a natural background level of 130 mrem/yr and the population projected for 2010 (1,202,643). When considered with the probability of occurrence, the annual potential radiation exposure of the population from all the postulated accidents is an even smaller fraction of the exposure from natural background radiation and, in fact, is well within naturally occurring variations in the natural background. Therefore, the staff concludes that the proposed additional years of operation would not increase the annual public risk from reactor accidents.

The NRC staff has also evaluated the radiological environmental effects associated with normal operation of the facility. This evaluation was conducted to assure that the licensee's "as low as is reasonably achievable" (ALARA) measures and dose projections are applicable for the additional years of plant service and are in accordance with 10 CFR Part 20 and the guidance of Regulatory Guide 8.8, "Information Relevant To Ensuring That Occupational Radiation Exposures At Nuclear Power Stations Will Be As Low As Is Reasonably Achievable" (Revision 3).

The staff has previously issued Technical Specifications to the licensee for Kewaunee on July 29, 1985 which address control of radiological effluents. These Technical Specifications define limiting conditions for operation and surveillance requirements for radioactive liquid and gaseous effluent monitoring and provide for increased managerial review and reporting responsibilities. These Technical Specifications ensure continued compliance with the requirements of 10 CFR 50.34a, 10 CFR 50.36a and Appendix I to 10 CFR Part 50.

### 3.1.1 Radiological Impacts - General Public

The FES for Kewaunee provided NRC estimates for the annual releases and yearly doses resulting from normal operation of the plant in Tables III-2 and V-2 of the FES. Based upon a confirmatory review of the last several years of operation as reported in the Semiannual Effluent Release Reports, the Kewaunee releases have been well below the limits contained in the Kewaunee Technical Specifications which specify quarterly and annual limits for both gaseous and liquid effluents.

In the FES, liquid waste effluents were assumed to be mixed with the condenser coolant water at its minimum flow rate of 210,000 gallons per minute. Actual annual average flow rates are considerably higher. Gaseous radwaste effluent releases were also considered. Radiation dose estimates were based upon the postulated release of radioactive material, the population distribution and various dispersion models applicable for the area near the site, and the normal activities which determine the degree of intake or exposure by the individuals. (Site-specific information on meteorology, hydrology and population distributions are contained in sections II.D.3, II.D.1 and 2 and II.B of the FES, respectively). External exposure modes considered were the direct exposure from passing effluent clouds, from submersion in water (swimming and other water contact activities) and from shoreline exposure (due to radioactivity deposited on the sediment along the shoreline). Internal exposure modes considered were those from ingesting food and water affected by the effluents and from breathing air containing effluents. Table V-2 of the FES presents estimates of radiation dose from various pathways (as annual averages to individuals) at selected locations near the plant. Table V-5 of the FES presents the cumulative population, cumulative population dose, and cumulative average dose from gaseous effluents, at various radial distances from the plant. The cumulative average annual dose to persons within a 50-mile radius of the plant ranges from 0.056 millirem/yr within 1 mile to 0.00024 millirem/yr within 50 miles. The total cumulative dose within 50 miles of the plant was estimated to be 0.13 man-rem/yr or 5.2 man-rem for the lifetime of the plant. This is compared to the estimated annual cumulative background radiation of about 75,000 man-rem/year (assuming cumulative population as stated in Table V-5 of the FES).

The dose estimates are for annual doses which are only slightly affected by a change in the operating life of the plant. This is true because the doses are almost entirely produced by short-lived nuclides such as iodine-131 and by nuclides which are rapidly dispersed in the environment such as cesium-137 in water. The only pathways where build-up of long lived nuclides is significant are external radiation from shoreline contamination and internal radiation from foodstuff grown on land irrigated by plant effluent water. For these pathways the assumed build-up period is 15 years, a period slightly less than the nominal midlife of the plant. Cesium-137 is the only significant nuclide that does not reach secular equilibrium in 15 years. Therefore, an increase in operating life and the build-up period would only increase the doses from cesium-137 by the shoreline and the irrigated foodstuff pathways. Neither of these pathways is an important contributor to the doses from Kewaunee. Furthermore, cesium-137 is not the dominant nuclide in either pathway. Therefore, increasing the operating life to 40 years increases the calculated doses no more than a few percent. (Actual doses are expected to continue to be too small to measure). This theoretical increase is considered minor because (1) all doses will continue to be well below the guidelines of 10 CFR Part 50, Appendix I, and (2) the guidelines are a small fraction of the doses from natural background radiation.

There are no significant land use changes within a 50-mile radius of Kewaunee that have affected offsite dose calculations. Based upon continued operation of Kewaunee using existing liquid and gaseous radwaste treatment systems coupled with the current radiological monitoring program and Technical Specifications, the staff anticipates that liquid and gaseous effluent doses during the requested license extension period will remain a fraction of the 10 CFR Part 50, Appendix I, limits and will not adversely impact the environment.

### 3.1.2 Environmental Impacts of the Uranium Fuel Cycle Transportation of Fuel

The impacts of the uranium fuel cycle as considered for Kewaunee were originally based on 30 years of operation of a model light water reactor (LWR). The fuel requirements for the model LWR were assumed to be one initial core load and 29 annual refuelings (approximately 1/3 core per refueling). A 40-year operating life for Kewaunee would be expected to increase fuel use by about 10% over the amount originally considered in the FES. This entails a longer production run for the fuel cycle and, consequently, increased environmental costs related to mining, enrichment, and other fuel cycle impacts. The net annualized effects remain essentially unchanged from those considered in the FES. This small reduction in fuel requirements would not lead to significant changes in the annual impacts of the uranium fuel cycle. Based on the current annual refueling frequency, it is expected that no more than five additional refuelings would be required over the period of the license extension for Kewaunee (5 years and 4 months).

The environmental impacts (both radiological and nonradiological) attributable to transportation of fuel and waste to and from the Kewaunee site, with respect to normal conditions of transport and possible accidents in transport, would be in accordance with the impacts evaluated in the Kewaunee FES. The FES represents the contribution of such transportation to annual environmental costs including dose per reactor year to exposed transportation workers and to the general public (both onlookers and individuals located along the route), and the estimated numbers of such persons exposed each year. These annual environmental costs would not be changed by the extended period of operation. Although some incremental risk with respect to normal conditions of transportation and possible accidents in transport would be attributed to the additional years of operation, the incremental risk would not be significant because the annual risk for such transportation is small.

Therefore, the staff has determined that no changes to the environmental conclusions in the FES relating to fuel transportation impacts are necessary as a result of the proposed extension to authorize 40 years of power operation.

### 3.1.3 Environmental Impacts - Occupational Exposures

In evaluating occupational exposures associated with the proposed license extension, the staff compared historic Kewaunee occupational exposure data to industry occupational exposure data.

The average dose as reported in the Annual Results and Data Report for the years since the plant began operation has been consistently well below the industry average. The average annual dose for Kewaunee over the 5-year period ending 1987 was 175 man-rem. By comparison, the average annual dose per reactor for all U.S. pressurized water reactors over the same 5-year period was 456 man-rem. Although unforeseen circumstances, such as steam generator replacement or poor fuel performance, may result in a temporary increase in occupational exposures, the staff anticipates that a continued strong radiological control program at Kewaunee will ensure that occupational exposures remain relatively low.

Kewaunee's strong radiological controls program is evidenced by a Systematic Assessment of Licensee Performance rating of 1 for every SALP period except one (SALP cycle 3: 4/82 - 4/83) for which the licensee received a 2.

Spent fuel will be stored in the reracked spent fuel pool (previously evaluated and approved by the staff for radiological environmental consequences on March 6, 1979). Any further expansion of onsite spent fuel storage capacity (such as rod consolidation or dry storage), would be evaluated for environmental effects by the NRC staff.

Based on the above, the staff concludes that the licensee's projected dose assessment for the period of the requested license extension is reasonable and acceptable and the licensee has an outstanding radiological protection program in effect to ensure that occupational radiation exposures will be maintained ALARA and in continued compliance with the provisions of 10 CFR Part 20.

### 3.2 Nonradiological Impacts

The environmental impacts of operation of the Kewaunee Nuclear Power Plant are fully discussed in the FES. The nonradiological impacts evaluated were centered on land use, water use, biological impact (both terrestrial and aquatic); a discussion of probable adverse effects, short-term use versus long-term productivity, and the irreversible and irretrievable commitment of resources.

#### 3.2.1 Land and Water Use

The Kewaunee FES concluded that the operation of the plant would have no detrimental effects, such as fogging, icing, etc., on the use of the land. Hunting restrictions were applied to the land in the immediate area near the plant to prevent damage to the plant. Approximately 5 acres were reserved for school conservation classes. One other restriction was that residence within the area near the plant (comprising the exclusion area) is limited to plant employees. This is also of minor impact. These impacts will be extended for approximately an additional 5 years resulting from the license extension. No additional land use restrictions have been identified as a result of the proposed license extension.

Thermal effects of operating Kewaunee Nuclear Power Plant including the above ambient temperature, area affected and maximum distance from the discharge were evaluated in the FES. Synergistic thermal effects with Point Beach Nuclear Plant were also evaluated and found to be negligible. The biological impact of thermal and chemical effluent releases (both terrestrial and aquatic) was evaluated in the FES as summarized below.

### 3.2.2 Biological Impact

The biological impact on terrestrial species from operation of the Kewaunee Nuclear Power Plant was evaluated and found to be minor. There were no uncontrolled ways in which airborne solid or liquid contaminated wastes could interact with terrestrial plants and animals. Consequently, the total impact of plant operation on wildlife in the area appears to be slight. It was concluded that the migratory fowl habitat could be enhanced to the degree that heated effluent maintains an ice-free channel in Lake Michigan during the winter months.

With respect to aquatic biological impact, it was concluded that there were no significant impacts on phytoplankton or zooplankton as a result of plant operation. Nor were there any adverse impacts predicted with respect to thermal discharges accompanying plant operation.

The FES considered the interaction of both chemical and radioactive effluents. The worst conditions for the interaction of chemical and radioactive effluents are an additive effect on concentrations. Neglecting the dilution which will occur in the intervening distance of the two facilities, Point Beach and Kewaunee, there would be an approximate doubling of concentrations of the chemical and radioactive materials. The concentrations of these substances are already quite low, and even under the worst conditions it is not anticipated that a significant adverse impact would result. The biological impact of the interaction of effluents between the two plants is expected to be negligible. Environmental monitoring programs for Kewaunee were contained in Appendix B to the Technical Specifications. Appendix B to the Technical Specifications was subsequently deleted through Amendments 35 and 43 because the programs covered by Appendix B were covered by the NPDES permit administered by the State of Wisconsin.

The FES noted that if chlorination was required, monitoring of the total residual chlorine concentration in the plant effluent during and immediately following chlorination would be required. As a result of the retubing of heat exchangers with stainless steel, chlorination is now needed. The Wisconsin NPDES for Kewaunee contains the limitations and monitoring required for this chlorination.

In summary, the effect of all chemical releases is expected to be negligible and no long-term buildup is anticipated. This conclusion would remain unchanged during the period of the license extension.

### 3.2.3 Discussion of Adverse Effects

Chapter VII of the FES discussed adverse effects of Kewaunee. No major adverse effects were identified. Minor adverse effects included changes in land use, impacts on the water and air by plant operation, biological effects and finally aesthetic impacts. The staff has reviewed the discussion in the FES and has concluded that the impacts identified are unchanged by the license extension.

### 3.2.4 Short-Term Uses Versus Long-Term Productivity

The staff has reviewed the discussion in Chapter VIII of the FES relating to short-term uses of the environment and maintenance and enhancement of long-term productivity. In order to provide electrical power, it was necessary to utilize approximately 110 acres of farm land. Kewaunee continues to be an extremely reliable generator of electricity and there is no basis for changing this conclusion during the period of the license extension.

### 3.2.5 Irreversible and Irretrievable Commitment of Resources

Permanent resource commitments identified in the FES were reviewed by the staff with respect to the proposed license extension. Although there have been modifications to the plant since the initial licensing, these are generally considered within the scope of the normal operation such as repairs, improvements or those modifications determined and reviewed by the staff as important to safety. These modifications have generally involved normal construction materials such as wood, steel, concrete, etc., and those additional consumable items common to site construction activities (additional water for processing of laundry/sanitary wastes, additional gasoline for construction vehicles, etc.). The staff has not determined any significant resource commitments necessary as a result of the proposed license extension other than those already experienced as part of routine operation, maintenance or improvements. Consequently, the period of license extension represents no changes in the conclusion reached regarding the commitment of resources.

### 3.2.6 Design Change Review

Plant modifications and design changes have taken place at the Kewaunee Nuclear Power Plant since the FES was issued. Those changes that were safety-related or important to safety or required a change to the Facility Operating License or Technical Specifications were submitted to NRC for review and approval prior to implementation in accordance with 10 CFR Part 50. The NRC review and approval process included a determination of the environmental effects, both radiological and nonradiological, of the proposed change. Changes that were determined to be outside the scope of those cited above were implemented without prior NRC approval under 10 CFR 50.59; however, a safety analysis with respect to the proposed

to the proposed change must have been completed first and a copy of this analysis is to be retained on site for NRC inspection and audit. A description of the changes including a summary of the safety evaluation is provided in the Annual Operating Report. A complete detailed description of the changes and their impact on plant operations and procedures is also included where applicable in required annual updates to the USAR. Both the Annual Operating Reports and USAR are reviewed by the staff to verify that changes did not require prior NRC review and approval. In general, these changes improve plant reliability and do not adversely impact the environment. All changes are conducted in accordance with approved procedures, current license requirements and Technical Specifications and the current State of Wisconsin NPDES permit. While it is recognized that the requested license extension will require further routine design changes and modifications similar in nature to those already conducted, it is not anticipated that these would have any adverse effect on the environment.

Based on the above considerations, the staff concludes that the proposed license extension would not have any nonradiological impacts on the environment.

#### 4.0 ALTERNATIVES TO THE PROPOSED ACTION

The principal alternative to issuance of the proposed license extension would be to deny the application. This would require the Kewaunee Nuclear Power Plant to shut down upon expiration of the current operating license. In Chapter XI of the FES, a cost benefit analysis was presented for Kewaunee. The analysis was based upon operation of Kewaunee and includes a comparison with various other options for producing an equivalent electric power generation capacity. Even considering significant changes in the economics of the alternatives, operation of the Kewaunee Nuclear Power Plant for another 5 years remains the most economical and environmentally attractive alternative.

Nuclear electrical generation is the lowest cost reliable power source available in the Wisconsin service area. Historically, the annual operating costs of nuclear plants are far more inflation resistant than for fossil fuel plants due to the stability of nuclear fuel costs as opposed to fossil fuel costs and associated transportation costs. Also extension of the operating license would involve little or no additional capital costs for the period of the extension whereas capital costs associated with new fossil fuel replacement generating stations would be significant. Additionally, even though the size and salaries of the operating staffs of nuclear units are generally higher than for fossil fuel plants of comparable size, the higher availability and capacity factor of nuclear plants with respect to fossil fuel plants more than offsets this additional annual cost. Environmental impacts related to extending the operating life of the Kewaunee Nuclear Power Plant, including fuel cycle and transportations impacts, remain small and do not alter the previous staff conclusions regarding operation of Kewaunee.

In summary, the initial cost/benefit arguments and conclusions presented in the FES for Kewaunee Nuclear Power Plant are strengthened by extension of the operating license.

5.0 ALTERNATIVE USE OF RESOURCES

This action does not involve the use of resources not previously considered in the FES related to the operation of the Kewaunee Nuclear Power Plant.

6.0 AGENCIES AND PERSONS CONTACTED

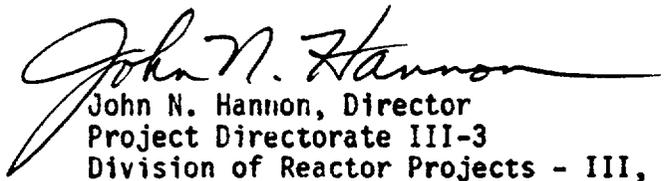
The NRC staff reviewed the licensee's request and consulted with the state technical representatives regarding the proposed no significant hazards consideration determination made with respect to the requested license extension.

7.0 BASIS AND CONCLUSION FOR NOT PREPARING AN ENVIRONMENTAL IMPACT STATEMENT

The staff has reviewed the proposed license amendment relative to the requirements set forth in 10 CFR Part 51. Based on this assessment, the staff concludes that there are no significant radiological or nonradiological impacts associated with the proposed action and that the issuance of the proposed license amendment will have no significant impact on the quality of the human environment. Therefore, pursuant to 10 CFR 51.31, an environmental impact statement need not be prepared for this action.

Dated at Rockville, Maryland this 11th day of May 1989.

FOR THE NUCLEAR REGULATORY COMMISSION

  
John N. Hannon, Director  
Project Directorate III-3  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

UNITED STATES NUCLEAR REGULATORY COMMISSION  
WISCONSIN PUBLIC SERVICE CORPORATION  
KEWAUNEE NUCLEAR POWER PLANT  
DOCKET NO. 50-305  
NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENT  
AND FINDING OF NO SIGNIFICANT IMPACT

The U. S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating Licence No. DPR-43 issued to Wisconsin Public Service Corporation (the licensee), for operation of the Kewaunee Nuclear Power Plant located in Kewaunee County, Wisconsin.

IDENTIFICATION OF PROPOSED ACTION:

The amendment would consist of a change to the operating license authorizing extension of the expiration date for the Facility Operating License No. DPR-43 from August 6, 2008 to December 21, 2013.

The amendment to the license is responsive to the licensee's application dated May 23, 1986. The NRC staff has prepared an Environmental Assessment of the Proposed Action, "Environmental Assessment by the Office of Nuclear Reactor Regulation Relating to the Change in Expiration Date of Facility Operating License No DPR-43, Wisconsin Public Service Corporation, Kewaunee Nuclear Power Plant, Docket No. 50-305 dated May 11, 1989 .

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SUMMARY OF ENVIRONMENTAL ASSESSMENT:

The NRC staff has reviewed the potential environmental impact of the proposed change in the expiration date of the Operating License for Kewaunee Nuclear Power Plant. This evaluation considered the previous environmental studies, including the "Final Environmental Statement Relating to Operation of Kewaunee Nuclear Power Plant" dated December 1972, and more recent NRC policy.

Radiological Impacts

Although the population in the vicinity of Kewaunee Nuclear Power Plant has increased slightly, and also would be likely to increase slightly for the period of the extension, the site requirements of 10 CFR Part 100 are now and would still be met with regard to Exclusion Area Boundary, Low Population Zone, and nearest population center distances. The net annualized environmental impacts attributable to the uranium fuel cycle, which form the basis for Table S-3 of 10 CFR Part 51, remain essentially unchanged from those considered upon initial licensing. The environmental impacts attributable to transportation of fuel and waste to and from the Kewaunee Nuclear Power Plant, with respect to normal conditions of transport and possible accidents in transport would continue to be as described in the FES. In addition, the proposed additional years of reactor operation would not increase the annual public risk from reactor operation.

With regard to normal plant operation, the license complies with the NRC guidance and requirements for keeping radiation exposures "as low as is reasonable achievable" (ALARA) for occupational exposures and for radioactivity in effluents. Technical Specifications are in place to ensure

continued compliance with these requirements during additional years of facility operation.

Nonradiological Impacts

The NRC review identified no anticipated additional degradation of the habitat surrounding the Kewaunee Nuclear Power Plant with regard to indigenous plant and animal species for the additional years of facility operation. In addition, the Wisconsin Pollutant Discharge Elimination System permit provides additional environmental protection from nonradiological effluent discharges for the period of the license extension.

The staff also verified that the original cost/benefit analysis provided in the Final Environmental Statement and discussions with respect to commitment of resources and alternatives are still valid.

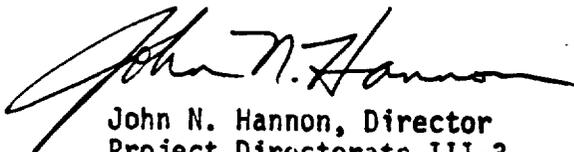
FINDING OF NO SIGNIFICANT IMPACT:

The staff has reviewed the proposed change to the expiration date of the Kewaunee Facility Operating License relative to the requirements set forth in 10 CFR Part 51. Based upon the environmental assessment, the staff concluded that there are no significant radiological or nonradiological impacts associated with the proposed action and that the proposed license amendment will not have a significant effect of the quality of the human environment. Therefore, the Commission has determined, pursuant to 10 CFR 51.31, not to prepare an environmental impact statement for the proposed amendment.

For further details with respect to this action, see (1) the application for amendment dated May 23, 1986, (2) the Final Environmental Statement Relating to Operation of the Kewaunee Nuclear Power Plant, issued December 1972, and (3) the Environmental Assessment dated May 11, 1989. These documents are available for public inspection at the Commission's Public Document Room, 2120 L Street, N. W. Washington, D. C. 20555 and at the University of Wisconsin Library Learning Center, 2420 Nicolet Drive, Green Bay, Wisconsin.

Dated at Rockville, Maryland, this 11th day of May 1989.

FOR THE NUCLEAR REGULATORY COMMISSION



John N. Hannon, Director  
Project Directorate III-3  
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IV, V and Special Projects  
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