

50-305

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO: Mr Pubple

FROM: Wisconsin Public Svc Corp
Green Bay Wis
E W James

DATE OF DOCUMENT

3-26-76

DATE RECEIVED

3-30-76

LETTER
 ORIGINAL
 COPY

NOTORIZED
 UNCLASSIFIED

PROP

INPUT FORM

NUMBER OF COPIES RECEIVED

one signed

DESCRIPTION
Ltr re our 2-19-76 ltr....furnishing info concerning Appendix I info.....

DO NOT REMOVE

ACKNOWLEDGED

PLANT NAME:
Kewaunee #1

ENCLOSURE

SAFETY

FOR ACTION/INFORMATION

ENVIRO

4-2-76

ehf

ASSIGNED AD :

ASSIGNED AD :

BRANCH CHIEF :

Purple (5)

BRANCH CHIEF :

PROJECT MANAGER:

Neighbors

PROJECT MANAGER :

LIC. ASST. :

Sheppard

LIC. ASST. :

INTERNAL DISTRIBUTION

~~REG. FILE~~

SYSTEMS SAFETY

PLANT SYSTEMS

ENVIRO TECH

NRC PDR

HEINEMAN

TEDESCO

ERNST

I & E (2)

SCHROEDER

BENAROYA

BALLARD

OELD

LAINAS

SPANGLER

GOSSICK & STAFF

ENGINEERING

IPPOLITO

MIPC

MACCARY

SITE TECH

CASE

KNIGHT

OPERATING REACTORS

GAMMILL

HANAUER

SIHWEIL

STELLO

STEPP

HARLESS

PAWLICKI

OPERATING TECH

HULMAN

PROJECT MANAGEMENT

REACTOR SAFETY

EISENHUT

SITE ANALYSIS

BOYD

ROSS

SHAO

VOLLMER

P. COLLINS

NOVAK

BAER

BUNCH

HOUSTON

ROSZTOCZY

SCHWENCER

J. COLLINS

PETERSON

CHECK

GRIMES

KREGER

MELTZ

HELTEMES

AT & I

SITE SAFETY & ENVIRO

SKOVHOLT

SALTZMAN

ANALYSIS

RUTBERG

DENTON & MULLER

EXTERNAL DISTRIBUTION

CONTROL NUMBER

LPDR: Kewaunee (4)

NATL LAB

BROOKHAVEN NATL LAB

TIC

REG. V-IE

ULRIKSON (ORNL)

NSIC

LA PDR

ASLB

CONSULTANTS

ACRS/6 HOLDING/SENT

TO LA Sheppard

3205

WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

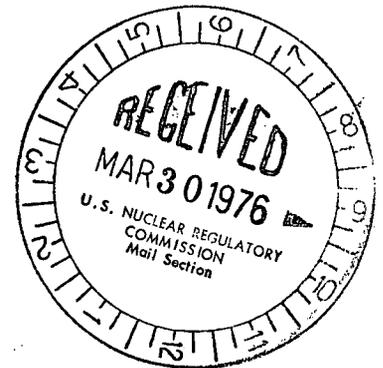
March 26, 1976

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

ATTN: Mr. Robert A. Purple, Chief
Operating Reactors Branch No. 1
Division of Operating Reactors

Gentlemen:

REF: Docket 50-305
Operating License DPR-43
Letter to Wisconsin Public Service Corporation
from Mr. R. A. Purple (NRC) dated 2/19/76



The referenced letter requested information as to the measures we intend to adapt or propose to meet the requirements of paragraph 50.34a.

The Kewaunee Nuclear Power Plant was designed and evaluated in light of the proposed 10 CFR 50 Appendix I with its "low as practicable" objectives. The operation of the facility is directed to be within the "low as practicable" objectives by the Technical Specifications. The change of terminology from "as low as practicable" to "as low as reasonably achievable," which was noticed for consideration in the Federal Register Volume 40, No. 152, and subsequently issued on December 19, 1975, according to explanation provided in the notice of change, did not alter the objective of the regulation nor the intent of the Commission, but merely clarified the language of the regulation. We, therefore, are of the opinion that the Kewaunee Plant complies with the requirements of 10 CFR 50, Section 50.34a and 10 CFR 50, Appendix I.

The following provides a discussion of the various requirements of 10 CFR 50, Section 50.34a and related specific references within the Kewaunee docket which address "as low as practicable" design and operating objectives.

The Kewaunee Plant Final Safety Analysis Report addresses the design of equipment installed to maintain control over and limit the release of radioactive material. Section 11.1 of the FSAR discusses the waste disposal system of the Kewaunee Plant which is designed to separate liquid waste and holdup gaseous waste to reduce discharges. Section 9.2 of the FSAR describes the design of the chemical and volume control system which is designed to limit radioactive material discharges by continuous purification and recycling of process water. To reduce radioactive gas release upon a steam generator tube leak upon the insistence of the staff due to the proposed Appendix I, the condenser air ejector was routed to the auxiliary building vent which includes HEPA filters and upon high radiation level automatic switching to include charcoal filters as described in Section 11.2.3 and 9.6.3 of the FSAR.

3205

The Kewaunee Nuclear Power Plant Environmental Report Operating License stage includes cost-benefit analyses which indicate that additional waste treatment equipment would not be justifiable on the basis of cost benefit. Section 2.5.4.6 of the Environmental Report addresses the radwaste system alternatives.

The AEC Safety Evaluation of the Kewaunee Nuclear Power Plant comments upon the design of the plant in comparison to the proposed Appendix I. Since the Kewaunee Plant was in the process of being evaluated for an operating license at the time the proposed Appendix I was issued for comment, the staff subsequently required that we compare the design of the Kewaunee Plant to intent of Appendix I. The staff reviewed the design in light of the proposed Appendix I and stated in the safety evaluation the following in regards to the radioactive wastes handling system design:

Liquid Wastes

"Based on our (AEC) analysis of the system, we conclude that liquid releases are unlikely to exceed the proposed 10 CFR Part 50 Appendix I limit of 5 curies per year, and will be as low as practicable."

Gaseous Waste

"Our (AEC) analysis indicates that noble gas releases are unlikely to result in annual doses offsite in excess of 5 mrem/yr and are as low as practicable."

In regards to solid wastes and the provisions implemented for solid waste disposal the staff stated:

"All solid wastes will be packaged and shipped to a licensed burial site in accordance with AEC and DOT regulations."

The Kewaunee Plant Operating License was issued post National Environmental Policy Act of 1969 and the associated Calvert Cliffs decision. The Kewaunee Plant Environmental Report was subsequently prepared, transmitted, and reviewed in accordance with 10 CFR 50 Appendix D. As a result of the AEC review of this Environmental Report and the preoperational environmental surveillance program review, the Directorate of Licensing in accordance with 10 CFR 50 Appendix D issued the "Final Environmental Statement."

The summary and conclusions of this Final Environmental Statement stated:

"The radwaste system has been designed and built to assure that releases of radioactive materials will be as low as practicable as required by Commission regulation. No adverse environmental effects are expected from the release of small quantities of radioactive materials from this Plant."

"The Staff has calculated that during normal operations, the Plant will release to the environment liquid effluents with a radioactivity content of less than or equal to 5 curies per year in addition to an estimated 1000 curies of tritium per year. Approximately 2000 curies per year of gaseous wastes will also be released."

The staff addressed the environmental impact of radioactive material releases postulated during plant operation in Section V.D. of the Final Environmental Statement. Table V-4 of this evaluation indicates that total postulated population dose from Kewaunee Plant operation would be approximately 9 man-rem/yr of which 2.4 man-rem/yr would be received by transportation workers. The non-transportation related dose is 5.5 man-rem/yr for the design basis of 1% failed fuel operation. This 5.5 man-rem/yr dose equates to an acceptable expenditure of \$5,500 to reduce the population dose to zero. Our Environmental Report indicates that any modification would be significantly more expensive than this \$5,500 cost benefit justifiable expenditure. Due to this current low anticipated man-rem/yr exposure resulting from the Kewaunee Plant assuming the limiting fuel failure condition, no additional modifications to the plant would be warranted and compliance with 10 CFR 50.34a and 10 CFR 50 Appendix I is now provided.

The Technical Specifications for the Kewaunee Plant were issued by the Commission and they specifically address radioactive releases in Section 3.9. The objective of the Specification 3.9 clearly states that releases are to be controlled to "as low as practicable." Definitive guidelines were provided by the staff as to what was considered as low as practicable and included in the specification objectives. Operation of the Kewaunee Plant has been in accordance with these objectives since initial startup. These objectives as presented in the Technical Specifications originated from the proposed Appendix I limits which have been relaxed in the approved Appendix I. We believe that some relaxation of the Section 3.9 Technical Specifications addressing radioactive releases would be in order as a result of the present Appendix I objectives and guidelines.

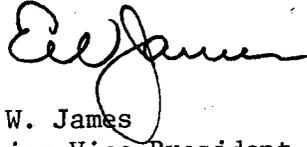
Significant costs have been incurred as a result of the development of the environmental monitoring program for the preoperational and operational periods, the development of the Environmental Report, the FSAR and the associated evaluations. The documents were developed and evaluated in accordance with the regulations in existence at that time and in certain cases (including Appendix I) proposed regulations in existence. The results of those presentations and evaluations was the issuance of a full term operating license for the Kewaunee Plant and statements by the staff that in the case of radioactive effluent control and limitation the Kewaunee Plant correspond to the "as low as practicable" objectives. Additional studies, changes to report or evaluation format and modification to equipment would not be justified in view of Appendix I's cost benefit criteria and preceding documented evaluations provided by the staff and ourselves.

Other than the modification of Technical Specification to provide adjustment of objectives in accordance with the approved less stringent

U. S. Nuclear Regulatory Commission
Page 4
March 26, 1976

Appendix I, we are not aware of any additional Appendix I or 10 CFR 50
Section 50.34a requirements which require action by us.

Very truly yours,



E. W. James
Senior Vice President
Power Supply & Engineering

EWJ:sna