


Docket No. 50-301

JUL 25 1968

Distribution:
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 J. A. Harris, PI
 E. B. Tremmel, IP
 R. L. Leith, OC

Wisconsin Electric Power Company
 Wisconsin Michigan Power Company
 231 West Michigan Street
 Milwaukee, Wisconsin 53201

Attention: Mr. Alfred Grahl

Gentlemen:

Reference is made to your application filed July 17, 1967, for authorization to construct and operate the Point Beach Nuclear Plant, Unit No. 2. A copy of Provisional Construction Permit No. CFP-47 granted your company is enclosed, together with a related notice which has been transmitted to the Office of the Federal Register for filing and publication.

The permit has been issued pursuant to the Initial Decision of the Atomic Safety and Licensing Board. A copy of the decision is enclosed.

Sincerely,

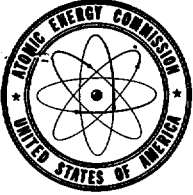
Original signed by
 E. Schroeder

for Peter A. Morris, Director
 Division of Reactor Licensing

Enclosures:

1. Construction Permit
2. Fed. Reg. Notice
3. Initial Decision

OFFICE ▶	RL:RPB-1	RL:RPB-1	RL:RPB-1	RL	OGC	
SURNAME ▶	<i>NMB</i> NMBlunt:brm	<i>RR DM</i> DRMuller	<i>RS</i> RSBoyd	<i>PA</i> PAMorris	<i>JOC</i>	<i>C.P.</i>
DATE ▶	7/25/68	7/25/68	7/25/68	7/25/68	7/24/68	



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

WISCONSIN ELECTRIC POWER COMPANY

AND

WISCONSIN MICHIGAN POWER COMPANY

(POINT BEACH NUCLEAR PLANT UNIT NO. 2)

DOCKET NO. 50-301

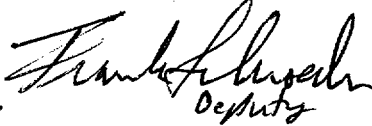
PROVISIONAL CONSTRUCTION PERMIT

Construction Permit No. CPPR-47

1. Pursuant to Section 104(b) of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter 1, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the order of the Atomic Safety and Licensing Board, the Atomic Energy Commission (the Commission) hereby issues a provisional construction permit to Wisconsin Electric Power Company and Wisconsin Michigan Power Company (the applicants) for a utilization facility (the facility), designed to operate at 1396 megawatts (thermal), described in the application and amendments thereto (the application) filed in this matter by the applicants and as more fully described in the evidence received at the public hearing upon that application. The facility, known as Point Beach Nuclear Plant Unit No. 2, will be located at the applicants' site in the Town of Two Creeks, Manitowoc County, Wisconsin.
2. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:
 - A. The earliest date for the completion of the facility is January 1, 1971, and the latest date for completion of the facility is June 30, 1971.
 - B. The facility shall be constructed and located at the site as described in the application, in the Town of Two Creeks, Manitowoc County, Wisconsin.
 - C. This construction permit authorizes the applicants to construct the facility described in the application and the hearing record in accordance with the principal architectural and engineering criteria set forth therein.

3. This permit is provisional to the extent that a license authorizing operation of the facility will not be issued by the Commission unless (a) the applicants submit to the Commission, by amendment to the application, the complete final safety analysis report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; and (c) the applicants submit proof of financial protection and the execution of an indemnity agreement as required by Section 170 of the Act.

FOR THE ATOMIC ENERGY COMMISSION



Deputy

to Peter A. Morris, Director
Division of Reactor Licensing

Date of Issuance: JUL 25 1968

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-301

WISCONSIN ELECTRIC POWER COMPANY

AND

WISCONSIN MICHIGAN POWER COMPANY

NOTICE OF ISSUANCE OF PROVISIONAL CONSTRUCTION PERMIT

Notice is hereby given, that pursuant to the Initial Decision of the Atomic Safety and Licensing Board, dated July 24, 1968, the Director of the Division of Reactor Licensing has issued Provisional Construction Permit No. CPPR-47 to Wisconsin Electric Power Company and Wisconsin Michigan Power Company for the construction of a pressurized water nuclear reactor at the applicants' site in the Town of Two Creeks, Manitowoc County, Wisconsin. The reactor, known as the Point Beach Nuclear Plant Unit No. 2, is designed for initial operation at approximately 1396 thermal megawatts with a net electrical output of approximately 454 megawatts.

A copy of the Initial Decision is on file in the Commission's Public Document Room, 1717 H Street, Washington, D. C.

FOR THE ATOMIC ENERGY COMMISSION

Original signed by

F. Schroeder

Deputy

for Peter A. Morris, Director
Division of Reactor Licensing

Dated at Bethesda, Maryland
this 25th day of July, 1968.

UNITED STATES OF AMERICA
ATOMIC ENERGY COMMISSION

In the Matter of the Application by

WISCONSIN ELECTRIC POWER COMPANY and
WISCONSIN MICHIGAN POWER COMPANY

For a Provisional Construction Permit
for the Point Beach Nuclear Plant Unit No. 2

Two Creeks, Manitowoc County, Wisconsin

DOCKET NO. 50-301

Appearances

Robert H. Gorske, Esq. and John G. Quale, Esq.
on behalf of Wisconsin Electric Power Company
and Wisconsin Michigan Power Company

William E. Torkelson, Esq. and Mr. R. E. Purucker
on behalf of the Intervenor,
Public Service Commission of Wisconsin

Gerald F. Hadlock, Esq.
on behalf of the U. S. Atomic Energy Commission
Regulatory Staff

INITIAL DECISION

Preliminary Statement

1. This proceeding involves the application of Wisconsin Electric Power Company and Wisconsin Michigan Power Company (Applicants) seeking now a provisional construction permit for a closed-cycle pressurized-water reactor, to be known as Point Beach Nuclear Plant Unit No. 2, to be located on the Lake Michigan shore at Point Beach in the town of Two

Creeks, Manitowoc County, Wisconsin. Unit No. 2 will be constructed adjacent to Unit No. 1 for which a provisional construction permit was issued in July of 1967, as directed in a Decision (Docket No. 50-266) by an Atomic Safety and Licensing Board whose members comprise this Board.

2. The application was reviewed by the Regulatory Staff (Staff) of the Atomic Energy Commission (Commission) and by the Advisory Committee on Reactor Safeguards (ACRS). Each review concluded that the Applicant's proposal affords reasonable assurance that the utilization facility can be constructed and operated without undue risk to the health and safety of the public. Pursuant to duly published notice, this Board conducted a hearing in Manitowoc in which the parties were the Applicant, the Staff, and the Public Service Commission of Wisconsin. Limited appearance statements by local officials and residents endorsed the application, and no opposition to a grant of the provisional construction permit was expressed.

Findings of Fact

3. This record does not involve a contested proceeding as that term is defined in Section 2.4(n) of the Commission's Rules of Practice. Hence, under applicable rules and the Notice of Hearing, the issues for Board review are limited to determining whether the application and the record contain sufficient information, and the review by the Staff has been adequate, to support those appropriate findings and that issuance

of the provisional construction permit which are proposed by the Director of Regulation.

4. Point Beach Unit No. 2 is substantially similar in virtually all safety-related features to the Applicant's Unit No. 1 which was considered by the members of this Board in reaching the decision of July 18, 1967, as noted above. The principal findings and conclusions concerning Unit No. 1 are deemed sufficiently applicable to the present proposal to warrant omitting repetitious restatements in this initial decision. However, some safety aspects of Unit No. 2 have been accorded different treatment and emphasis. Although Unit No. 2 is called "identical" to the previously approved Unit No. 1, it is now shown that Unit No. 1 is being altered to conform with the new Unit No. 2. Some shifting of design features was attributed in part to recently published proposed reactor design criteria. The evidence indicates that the changes made in response to the proposed new criteria were not required to ensure a safe and reliable facility, nor did compliance with such changes compromise plant safety.^{1/}

1/ A principal witness for the applicant explained:

"It will be noted that a number of these changes have been made in response to Atomic Energy Commission review on the basis of the proposed General Design Criteria for Nuclear Power Plant Construction Permits which were issued for comment on July 11, 1967. The Applicants do not consider that the changes made in response to these proposed criteria are required to ensure a safe and reliable facility. However, such changes were made in order to expedite agreement with the Staff concerning the complete acceptability of the plant design, and to incorporate the evolutionary improvement which some of the changes appeared to reflect. In our opinion, these changes do not compromise plant safety, and, for Staff purposes, tend to bring about a degree of consistency among the many applications that the Staff processes."

5. Illustrative of the design modifications is the current provision for fixed burnable neutron poison rods to assure a negative moderator temperature coefficient at operating temperatures. Another change in Unit No. 2 involves the means for iodine removal within the containment during assumed major accident conditions. Whereas for Unit No. 1 a spray system using sodium thiosulfate was proposed by the Applicant--and sanctioned by the Staff and in the Board's decision--it is now proposed to use sodium hydroxide to avoid possible problems of instability and incompatibility in using sodium thiosulfate.^{2/} The record evidence concerning this change is not sufficiently clear nor adequately convincing to warrant this Board's approval of the chemical additive now favored by the parties. Nevertheless, conclusions adverse to safety do not follow, because the record otherwise shows that iodine scrubbing is not required for this facility to assure that leakage and off-site radiation doses will be well within the limits fixed by Commission regulations. Moreover, research and experimentation to be carried further promise assurance that other possibly undesirable consequences of spray system additives will not be risked.

6. The Unit No. 2 safeguards systems for containment isolation, spraying, core flooding, and high pressure coolant injection are so

^{2/} A recent initial decision involving a similar reactor containment spray system notes a proposal "to base this scrubbing system on the use of a sodium hydroxide and boric acid solution." Initial Decision, Docket No. 50-275 (Diablo Canyon), April 23, 1968.

designed as to afford reasonable assurance that the effects of any credibly postulated accident would not involve radiation effects exceeding the permissible limits of the applicable regulations.

These systems are similar, except as explained in the preceding paragraph, to the Unit No. 1 safeguards noted in the earlier decision.

Each of these safeguards systems for Unit No. 2 is independent of duplicate systems provided for Unit No. 1 and consists of redundant sets of equipment so designed that the malfunction of one set will not prevent the system from performing its function. Multiple electrical supply systems including separate transmission lines to the site from other plants, the nuclear plant's two diesel generators, and the plant storage battery, assure an adequate supply of electric power for safe shutdown in any circumstance including a complete loss of external power simultaneous with a loss of coolant accident.

7. The proposed facility incorporates design features requiring research and development and further test and evaluation programs in order to finalize design detail. The more significant areas awaiting additional information include:

- a. Emergency core cooling system.
- b. Accident blowdown and injection cooling effects upon the reactor vessel and reactor vessel internals.
- c. Reactivity transients, heat transfer data and analytical approaches.

- d. Core thermal-hydraulic, nuclear, and mechanical design.
- e. Pump seizure analysis.
- f. System details for use of spray additive.
- g. Safety and control instrumentation to meet nuclear reactor criteria and standards.

Such programs are reasonably planned to resolve any safety questions associated with the features named above and will provide the data necessary to construct the proposed facility in accordance with the criteria and specifications set forth in the application.

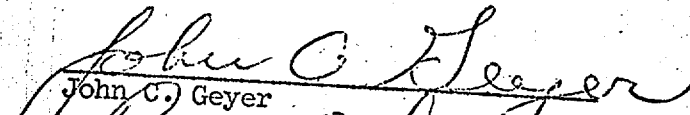
Conclusions and Order

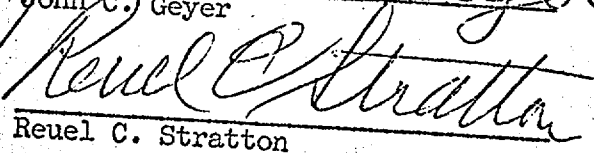
8. The application under consideration seeks at this time a provisional construction permit as authorized by Section 50.35 of the Commission's Rules and Regulations. It is found, to meet the stated basic premise of that rule, that the Applicant has not supplied initially all of the technical information required to complete the application and support the issuance of a construction permit which approves all proposed design features. Upon consideration of the hearing record, it is further found and concluded that the application and the record of the proceeding contain sufficient information, and the review of the application by the Staff has been adequate to warrant issuance of the permit as proposed.

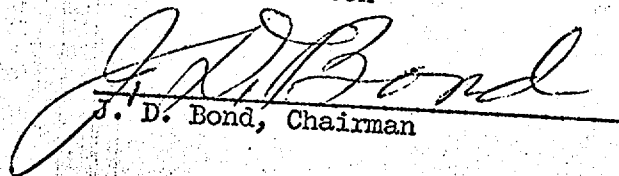
IT IS ORDERED this 24th day of July 1968, pursuant to the Atomic Energy Act and the Commission's Rules and Regulations, that the Director of Regulation issue to Wisconsin Electric Power Company and Wisconsin Michigan Power Company a provisional construction permit in the form and content set out in Appendix A to the Notice of Hearing which was published on May 24, 1968 at 33 Fed. Reg. 7701.

IT IS FURTHER ORDERED, in accordance with the Commission's rules, particularly §§ 2.760, 2.762 and 2.764, that this Initial Decision shall be effective immediately and shall constitute the final action of the Commission forty-five days after the date of issuance, subject to the review thereof and further decision by the Commission upon its own motion or upon exceptions filed pursuant to the cited rules.

ATOMIC SAFETY AND LICENSING BOARD


John C. Geyer


Reuel C. Stratton


J. D. Bond, Chairman

Issued:
July 24, 1968
Germantown, Maryland

A. IDENTIFYING & DESCRIPTIVE DATA

REACTORS

01. PROGRAM CODE 211	12. PROJ. NO.	03. DOCKET NO. 50-301	09. TASK NO.	10. TYPE OF REACTOR Pressurized-Water	11. CLASS OF REACTOR 104(b)
18. APPLICANT Wisconsin Electric Power Company (owner)					19. NAME OF REACTOR Point Beach - 2
21. STREET - BUILDING 231 West Michigan Street			POWER LEVEL		
24. CITY Milwaukee			27. STATE WIS	30. ZIP 53201	
			TYPE	UNIT	REQUESTED. DESIGN AUTHORIZED
			ELEC.	MW	454 480
			THER.	MW	1396 1518

B. ACTION DATA

BASIC PROCESSING STAGES

PRE-APPLICATION CONSIDERATION	ACTIV. CD.	74. FIRST ACTION			78. LATEST COMPL. DATE			79. END ACTION (DATE APPL. CONSID.)			
	31	YR.	MO.	DAY	YR.	MO.	DAY	YR.	MO.	DAY	
PROCESSING APPLICA. FOR CONSTRUCTION	35	APPLIC. REC.			CONSTRUCTION PER. ISSUED			78. LATEST COMPL. DATE			
		33. YR.	MO.	DAY	76. NO.	77. YR.	MO.	DAY	78. YR.	MO.	DAY
PROCESSING OPERATING AUTHORITY	PROVIS- IONAL	36	STARTED			PROV. OP. AUTHORITY ISSUED			39. EXPIRATION DATE		
	FULL TERM	38	80. YR.	MO.	DAY	81. NO.	82. YR.	MO.	DAY	83. NO.	

SUPPLEMENTARY ACTION

TASK NO. (SAME AS FIELD 09)	86. DATE SUPPLE. REQUEST REC'D.	YR.	MO.	DAY	88. bbb	87. DATE SUPPLEMENTARY REQUEST (TASK COMPLETED)	YR.	MO.	DAY
	42. PURPOSE OF REQUEST (TASK)					54. RESULT OF TASK (AM. NO., CHANGE NO., ETC.)			

C. STATISTICS

TYPE OF ACTION REQUESTED AND TAKEN		48. REQ.	51. TAK.	52. VOID INPUT ENTERED UNDER CODES IN FIELDS 01, 03 OR 12, AND 09 AS RECORDED ABOVE AND ACTIVITY CODE _____
A	REACTOR CONCEPT REVIEW			53. CONSOLIDATE INPUT ENTERED UNDER CODES IN FIELDS 01, 03 OR 12, AND 09 AS RECORDED ABOVE AND ACTIVITY CODE _____ WITH PROG. _____ PROJ. _____ TASK _____ ACT. _____
B	PRELIMINARY SITE REVIEW			
C	PRECONSTRUCTION STAGE REVIEW			
D	CONSTRUCTION PERMIT (C.P. REVIEW)	X	X	
E	AUTHORITY TO OPERATE (OP. STAGE REVIEW)			
F	AUTHORITY TO POSSESS ONLY			
G	AMENDMENT TO CONSTRUCTION PERMIT			
H	AMENDMENT TO OPERATING LICENSE			
I	CHANGE TO TECHNICAL SPECIFICATIONS			
J	EXEMPTION			
K	CONSTRUCTION PERMIT EXTENSION			
L	OPERATING LICENSE (OR AUTHORITY) EXTENSION			
M	DRL ORDER			
N	SPECIAL AUTHORITY!			
T	LICENSE (OR AUTHORITY) TERMINATED OR EXPIRED			
O	OTHER (EXPLAIN)			