

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
WISCONSIN PUBLIC SERVICE CORPORATION ) Docket No. 50-305  
 )  
(Kewaunee Nuclear Power Plant) )  
 )  
 )

ANSWER TO ORDER TO SHOW CAUSE

NOW COME Wisconsin Public Service Corporation,\* Wisconsin Power & Light Company and Madison Gas & Electric Company, ("Licensees") and in response to the Order to Show Cause in this docket signed by Harold R. Denton on January 2, 1980, state as follows:

The Licensees agree with the statements contained in Sections I and II of the Order. The Licensees agree that the operator has committed itself to implement all "Category A" requirements as stated in Section III. As to a single such item the Licensees have requested a time schedule for implementation based upon installation at the next reactor shutdown of sufficient duration (but in any event not later than the next refueling in May 1980). The only matter in dispute is the timing of the installation of one part of a

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\*This answer is made by Wisconsin Public Service Corporation as operator of the plant and as agent for the other owner-licensees. The Order to Show Cause erroneously failed to list the other Licensees.

single "Category A" requirement, namely short-term recommendation 2.1.3.a as it pertains to positive indication in the control room of pressurizer safety valve position. The Licensees disagree that the health and safety of the public require the shutdown of the Kewaunee Nuclear Plant if a positive indication in the control room derived from an additional reliable valve position detection device is not provided for the pressurizer safety valves prior to January 31, 1980 as stated in Section IV. In response to Section V, the Licensees state the issue to be considered is whether the one remaining "Category A" requirement should be implemented in accordance with the schedule prescribed by the Order. The Licensees hereby request a hearing on the action proposed in the Order to Show Cause in the event the proposed action is not modified as requested herein. Further Licensees request that the proposed action be stayed pending the hearing in this matter.

By way of specific response to the technical and policy matters raised by the action proposed in the Order to Show Cause, the Licensees respond further and state that cause exists for modification of the proposed action to permit later installation of the remaining "Category A" requirement.

The requirement of Sec. 2.1.3.a is discussed by the TMI-2 Lessons Learned Task Force at pages A-9 and A-10 of NUREG-0578. The basic requirement is that reactor system

safety valves be equipped with control room identification of valve position or flow within the discharge pipe. The operator has agreed to meet this requirement but has requested a variation in the time schedule for installation.

It should be noted that the discussion of NUREG-0578 regarding valve position indication in pages A-9 and A-10 is particularly valid for power operated relief valves. In the case of power operated relief valves, operator action can be directed at specific corrective measures, namely closure of the power operated relief valve isolation valve. For this reason, the Kewaunee plant has always been equipped with positive identification of PORV position. In the case of the pressurizer safety valve, however, its failure to close is functionally identical to a system fault (e.g., a broken pipe) which is not conducive to corrective measures, only mitigation of consequences by implementation of appropriate, approved Loss of Coolant Accident procedures and system operation. Accordingly, positive indication of safety valve position at best provides only limited additional useful information and adds little or nothing to the safety of the system.

To comply with this requirement, the Licensees intend to install acoustic monitors on the pressurizer safety valves. This installation consists of physical mounting of a transducer on each valve body, mounting a preamplifier

within the containment building, routing signal cable to the control room by means of approved routing so as to be consistent with separation criteria of electric wiring as specified in Section 8 of the Kewaunee FSAR, mounting the signal analyzer within the control room, and interconnecting the alarm signal from the analyzer to the control room alarm system. A shutdown of the unit is required to install the equipment within the containment building and specifically to install the monitors on the safety valves. The anticipated duration of the installation within containment is a minimum of three days. Problems may be encountered which could extend this activity to six or more days.

In all other aspects of the "Category A" requirements, the operator has fully complied. As to this item the Licensees do not contest the substantive requirement. However, it is the position of the Licensees, given all of the pertinent circumstances, that installation of the particular device at the Kewaunee plant is not a matter of such immediate concern to justify the costs (financial and environmental) created by shutting down the plant for this single installation.

The function to be served by the direct indicator

is performed by existing equipment at the Kewaunee plant. The pressurizer has pressure and level indicators which are safety grade devices. These devices, with read-outs located on the front of the control room panels, provide redundant indication of a major fault at the top of the pressurizer. If a safety valve is stuck open, reactor coolant pressure will tend to stabilize at less than 1,000 psi and continue to decrease as core average temperature is reduced due to the large heat removal capability of the safety valves. At the same time, level within the pressurizer will register high due to the mass flow through the pressurizer. Direct indication of valve tail pipe temperature is provided to the operator on the control panel. The alarms associated with the valve tail pipe temperature are also located in the control room and provide a further indicator of a stuck safety valve. Thus, the safety impact of any delay in installing the additional indicator is without significance. (It should be noted that the foregoing considerations were called to the attention of the Commission by the Licensees' response dated November 20, 1979, as well as by telephone discussions. The Commission staff has not, to date, responded to these comments except to continue the requirement of installation without regard to the particular circumstances.)

Further minimizing any safety consequences of a

delay in installation is the fact that we are unaware of any events within operating Westinghouse pressurized water reactors which have resulted in opening of pressurizer safety valves. The Westinghouse pressurized water reactor design is not as subject to pressure increase transients as other designs. In fact on May 10, 1979 in a presentation to the ACRS, Westinghouse noted that only 29 opening of power operated relief valves had occurred in 141 reactor operating years. The sole purpose of the power operated relief valve is to avoid opening of the pressurizer safety valves. With the extremely infrequent challenges to the pressure relief system in Westinghouse plants, it is highly unlikely that the safety valves of the Kewaunee plant (which have never been challenged) will be called to function.

Serious questions are also created concerning the genuineness of claimed immediate need for the additional device by the fact that other plants will be permitted to continue operation without the device merely upon a showing of delay in equipment availability or procurement. That exception is simply inconsistent with the contention that public safety requires shutdown or immediate installation if equipment is available. The safety of continued operation without the device until May, 1980 is not affected by the availability or non-availability of the device.

The Staff clarification dated October 30, 1979,

as to Sec. 2.1.3.a, waived environmental and seismic qualification prior to installation even though there is no advance assurance that the devices will survive to function when required. Thus, the Staff position regarding absence of environmental and seismic qualification of the devices indicates the existence of a desire simply to impose requirements without demonstrated justification and consideration of all safety aspects.

Contrasted with the limited safety concerns implicated by delay in the addition of a further valve position indicator, are significant direct and unrecoverable costs. Installation prior to January 31, 1980, will necessitate a plant shutdown which would otherwise not occur. The direct cost to customers of the Licensees, in the form of higher rates, will be approximately one million dollars assuming minimum anticipated shutdown (3 days) and seasonably warm weather. If the shutdown is of longer duration or the weather is colder, the costs would be sharply higher. The costs would also be higher if gas or oil fired units are required rather than back up coal units. These additional costs based upon utilization of more expensive plants are entirely avoided if the device is installed during the refueling shutdown.

Shutting down the Kewaunee plant at this time also creates a potential local energy supply crisis. Wisconsin,

being subjected to severely cold weather in January and February, is vulnerable to electric energy shortages should any substantial base plants become inoperative during those months for any reason. Thus, every effort should be made to avoid shutdown of such plants. Refueling and planned maintenance shutdowns are scheduled a year to 18 months in advance to avoid unnecessary duplicate shutdowns and to maximize the dependability of service throughout the area. In this regard it should be noted that Kewaunee has a capacity factor (between refueling outages) of approximately 95%. Its high dependability and usage make the plant an extremely important part of Wisconsin's energy supply picture which should not be shut down during winter months without specific, adequate justification.

Additionally, the national energy policy would be undermined. It is apparent that no consideration has been given to the effect an immediate shutdown would have on the national energy goals as compared with the benefits to be obtained.

Finally, there are elements of unfairness inherent in the proposed action when applied to the situation at Kewaunee. The various dates set forth in the Order to Show Cause are plainly arbitrary and not reflective of any particularized safety concerns when compared to other impacts discussed herein. The choosing of a January deadline

penalizes plants such as Kewaunee which are used to meet a winter peak energy demand. No justification has been provided for making identical requirements applicable to plants which are not identically situated.

The notation in the Order that most plants have agreed to comply by January 31 fails to include the reason for many of these plants achieving compliance, namely previously scheduled or unscheduled shutdowns of sufficient duration to permit accomplishment of the work. It does not make sense to punish Kewaunee because it has been able to operate relatively trouble free and has a scheduled refueling outage in May 1980.

Once the nature of this requirement was finally determined, the operator undertook extraordinary measures to procure equipment to satisfy the requirement. These steps included special expediting of the equipment order and the chartering of a twin engine plane specifically for the purpose of picking up the required equipment and delivering the same to Kewaunee. In this respect also, the proposed action unaccountably penalizes diligence by allowing utilities, unable to locate equipment, to continue operating.

#### CONCLUSION

It is the position of the Licensees that the

proposed action of requiring immediate installation of the valve indicator device is unwarranted by present safety considerations, and, as applied to Kewaunee, is the product of inadequate consideration and analysis of relevant factors and circumstances. The Order to Show Cause and the responses from the Staff preceding it fail to address the specific concerns and circumstances created by this requirement. No specific justification for immediate action is anywhere presented. Coupled with the costs associated with immediate installation, such meager safety considerations constitute cause for modification of the proposed action to permit installation at the next shutdown of sufficient duration. This result is reinforced by the unfairness which would otherwise be created. The imposition of regulatory requirements without regard to significant circumstances of individual cases is arbitrary and unreasonable in this situation. Appropriate regulation must include sufficient flexibility to tailor responsible requirements to the actual situation. Before generating the costs involved in this matter, the Commission should be fully apprised of the benefits and consequences.

In accordance with the foregoing, the Licensees respectfully request a hearing in the event the proposed action is not modified as requested herein and that the

effectiveness of the proposed action be stayed until such hearing and an order is thereafter issued.

WISCONSIN PUBLIC SERVICE  
CORPORATION  
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MADISON GAS & ELECTRIC COMPANY

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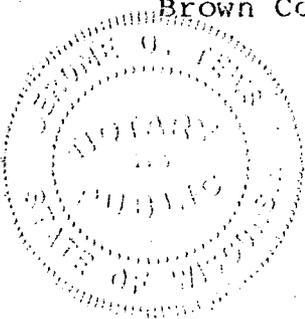
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BROWN COUNTY )  
 ) ss  
STATE OF WISCONSIN)

Eugene R. Mathews, first being duly sworn, deposes and states as follows: I am Vice President-Power Supply and Engineering of Wisconsin Public Service Corporation and make this affidavit on its behalf, being duly authorized to do so; I have read the foregoing Answer to Order to Show Cause submitted on behalf of Wisconsin Public Service Corporation; the answer was prepared with the advise and assistance of counsel and employees of said corporation, upon whose advise I have relied; said answer is true and correct to the best of my knowledge, information and belief.

E. R. Mathews  
Eugene R. Mathews

Subscribed and sworn  
before me this  
18<sup>TH</sup> day of January, 1980  
[Signature]  
Notary Public 2-6-83  
Brown County, Wisconsin



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STATE OF WISCONSIN )  
 ) ss.  
COUNTY OF BROWN )

\_\_\_\_\_, being first duly  
sworn on oath deposes and says that he/she is a resident of  
the State of Wisconsin in the County of Brown, and is (an  
employee of/ \_\_\_\_\_)  
Wisconsin Public Service Corporation; that on the \_\_\_\_ day of  
January, 1980, he/she served the annexed pleading as follows:  
he/she deposited a true copy of said papers in a United States  
Post Office Box in the City of \_\_\_\_\_,  
Wisconsin, enclosed in a postpaid envelope duly addressed to  
the following person at the following address:

MR. HAROLD R. DENTON, DIRECTOR  
Office of Nuclear Reactor Regulation  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

\_\_\_\_\_  
Subscribed and sworn to before me  
this \_\_\_\_ day of January, 1980.

\_\_\_\_\_  
NOTARY PUBLIC, State of Wisconsin  
Brown County  
My Commission: is permanent/expires \_\_\_\_\_