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 SCHROCK,C.A. Wisconsin Public Service Corp.  
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SUBJECT: Forwards response to violations noted in Insp Rept  
 50-305/94-08. Corrective actions: Engineering Support Request  
 (ESR 94-048) initiated to review problem & develop method of  
 control over fuel transfer tube area.

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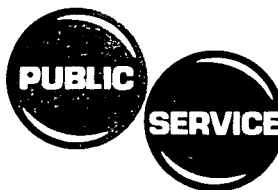
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**WISCONSIN PUBLIC SERVICE CORPORATION**

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June 24, 1994

10 CFR 2.201

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Ladies/Gentlemen:

Docket 50-305  
Operating License DPR-43  
Kewaunee Nuclear Power Plant  
Reply to a Notice of Violation, Inspection Report 94-008

Reference: Letter from W. L. Axelson (NRC) to C. A. Schrock (WPSC) dated May 25, 1994 (Inspection Report 94-008)

In the reference, the Nuclear Regulator Commission (NRC) provided Wisconsin Public Service Corporation (WPSC) with the results of a routine radiation protection inspection conducted May 9 through 13, 1994. This inspection also included a special review of the implementation of revised 10 CFR Part 20.

During the inspection, the NRC identified one violation concerning the lack of proper controls to a potential very high radiation area. The attachment to this letter provides our response to the violation.

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Document Control Desk  
June 24, 1994  
Page 2

Sincerely,

*Charles A. Schrock*

Charles A. Schrock  
Manager - Nuclear Engineering

DLR/san

Attach.

cc - US NRC Senior Resident Inspector  
US NRC Region III

ATTACHMENT 1

to

Letter From C.A. Schrock (WPSC)

to

U.S. Nuclear Regulatory Commission, Region III

Dated: June 24, 1994

Re: Reply to a Notice of Violation, Inspection Report 94-008

**NRC Notice of Violation**

10 CFR 20.1602 requires that "in addition to the requirements in 20.1601, the licensee shall institute additional measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 500 rads (5 Grays) or more in 1 hour at 1 meter from a radiation source or any surface through which the radiation penetrates."

Contrary to the above, a barrier to prevent access to the containment annulus area during spent fuel transfer from the containment to the spent fuel pool was inadequate in that although the gate and lock were sufficient the remainder of the barrier did not extend to the overhead and could be easily circumvented by climbing over the gate. During fuel transfers, radiation levels on the transfer tube have been measured in excess of 20,000 rads/hr (200 Grays/hr).

**WPSC Response**

Wisconsin Public Service Corporation does not contest this violation.

**Reason for Violation**

Two areas have been identified at Kewaunee Nuclear Power Plant (KNPP) which are Very High Radiation Areas (VHRA) under certain conditions. The one area in question is the transfer tube area when spent fuel is being transferred from the refueling cavity in containment to the spent fuel pool in the auxiliary building. Access to the transfer tube area is controlled by two locked gates at the two entry points to the containment annulus area, one at the 649 foot level and one at the 626 foot level. Both of these gates are maintained locked but the gate on the 649 foot elevation does not extend to the overhead and could be circumvented by climbing over the gate, providing access to a very high radiation area.

Kewaunee implemented the revised 10 CFR Part 20 on January 1, 1994. Regulatory Guide 8.38, "Control of Access to High and Very High Radiation Areas in Nuclear Power Plants," was used as guidance in developing our program. Section 1.5, "Physical Controls," states:

"Physical barriers should, to the extent practicable, completely enclose very high radiation areas sufficient to thwart<sup>1</sup> undetected circumvention of the barrier (i.e., fencing around very high radiation areas should extend to the overhead and preclude anyone from climbing over the fencing)."

The footnote states:

"Determined circumvention of a physical barrier, with wire cutters or other tools, cannot be prevented absolutely. Such instances should be addressed with appropriate disciplinary action."

The personnel reviewing the requirements of the revised 10 CFR Part 20 and the associated Regulatory Guide 8.38 had reviewed the design of the annulus gate on the 649 level (prior to January 1, 1994) and determined it was adequate. They came to this conclusion because, in their opinion, climbing over the gate intentionally is "determined circumvention." Therefore, since the gate was capable of thwarting access to the VHRA, it was decided a modification was not warranted. Since WPSC recognizes the potential hazards of circumventing the gate, and that

intentional circumvention could go undetected, corrective actions will be taken to address these concerns.

#### Corrective Actions

To correct this problem an Engineering Support Request (ESR 94-048) has been initiated to review this problem and develop a method of positive control over the fuel transfer tube area in the annulus during fuel movement. This request is the first step in KNPP's design change process and will result in a review of the issue and a proposed solution. At this time, the ESR has not been evaluated, therefore specific corrective actions cannot be stated.

#### Compliance Schedule

The fuel transfer tube area in the annulus is only a VHRA during refueling when fuel is being transferred through the tube. Therefore, the ESR and resulting corrective actions are scheduled to be completed prior to fuel movement during the 1995 Refueling Outage (currently scheduled to start in early April 1995). If physical modifications have not been completed prior to fuel movement, short term compensatory actions to thwart undetected circumvention of the gate will be taken.