

MAY 15 1978

Docket No. 50-305

Wisconsin Public Service Corporation  
ATTN: Mr. E. W. James  
Senior Vice President  
Power Generation and Engineering  
Post Office Box 1200  
Green Bay, WI 54305

Gentlemen:

This refers to the telephone conversation between you and Mr. Gaston Fiorelli of this office on May 10, 1978, regarding arrangements for a meeting between the President of Wisconsin Public Service Corporation, yourself, and management representatives of this office. This meeting is scheduled for 1:00 p.m., Thursday, May 18, 1978, in your corporate offices in Green Bay, Wisconsin.

The primary topic of discussion during this meeting will be the circumstances and personnel exposure related to a licensee employee entering a high radiation area in noncompliance with established controls and procedures.

Sincerely,

A. B. Davis, Chief  
Fuel Facility and Materials  
Safety Branch

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PDR FOIA  
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cc: Mr. C. Luoma, Plant Superintendent  
Central Files  
Reproduction Unit NRC 20b  
PDR  
Local PDR  
NSIC  
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OFFICE ▶	RIII <i>NKJ</i>	RIII <i>abd</i>	RIII <i>HW</i>	RIII <i>SE</i>	RIII <i>BN</i>	RIII <i>SK</i>
SURNAME ▶	Fisher/bk	Davis	Choules	Fiorelli	Noellius	Keppler
DATE ▶	5/11/78	5/12/78			5/12/78	



→ REID

## UNITED STATES NUCLEAR REGULATORY COMMISSION

OFFICE OF PUBLIC AFFAIRS, REGION III  
799 Roosevelt Road, Glen Ellyn, Illinois 60137

NEWS ANNOUNCEMENT: 78-68  
Contact: Jan Strasma  
312/858-2660

### NRC STAFF PROPOSES \$10,000 FINE AGAINST WISCONSIN PUBLIC SERVICE COMPANY'S KEWAUNEE NUCLEAR STATION

The Nuclear Regulatory Commission's Office of Inspection and Enforcement has proposed a \$10,000 fine against Wisconsin Public Service Corporation for alleged failure to comply with NRC requirements for personnel radiation protection at its Kewaunee Nuclear Power Station at Kewaunee, Wisconsin.

The alleged items of noncompliance occurred May 2, 1978, when a plant supervisor briefly entered a high radiation area beneath the reactor. The plant was shut down for refueling, and the supervisor was searching for the source of a water leak from the refueling area into the reactor containment.

Radiation levels near the entrance to the area beneath the reactor had been measured to be 30 to 70 roentgens per hour, but measurements made after the supervisor's entry showed radiation levels as high as 2,000 roentgens per hour in areas where he had been.

(A roentgen is a standard measure to radiation. Exposure to one roentgen of radiation produces one rem of radiation exposure.)

The NRC investigation determined the supervisor was in the high radiation area less than 30 seconds. His exposure was calculated by the NRC and the company to be 2.9 rems, which is less than the NRC limit of 3 rems per quarter.

Because of the licensee's apparent failure to follow applicable radiation protection procedures and the actual high radiation levels beneath the reactor, there was a potential for a serious radiation exposure to the supervisor, according to the NRC.

The company was cited for three alleged items on noncompliance identified during an NRC inspection evaluation the incident:

1. Failure to make required radiation surveys before the supervisor entered the high radiation area;
2. Failure to follow procedures governing review and approval of work in high radiation areas; and
3. Failure to equip the supervisor with a radiation monitoring device before he entered the high radiation area.

The proposed fine includes \$4,000 for the first item and \$3,000 each for the second and third items.

The company has 20 days to pay the fine or to protest it. If the company protests the fine and it is later imposed, the company may request a hearing.

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July 24, 1978

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WISCONSIN PUBLIC SERVICE CORPORATION



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

August 10, 1978

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Administrative routing grid with a large 'X' drawn through it. The grid contains the letters 'S' and 'File' in some of its cells.

Mr. Ernest Volgenau, Director  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

*Warwick*  
*Charles*

Dear Sir:

Wisconsin Public Service Corporation  
(Kewaunee Nuclear Plant) Docket No. 50-305  
July 19, 1978 Notice of Violation

This written explanation is provided pursuant to the requirements of 10 CFR § 2.201 in response to your letter of July 19, 1978 (apparently erroneously dated June 19, 1978) which transmitted a Notice of Violation and Imposition of Civil Penalties related to an event at the Kewaunee Nuclear Power Plant on May 2, 1978.

As to Item 1, Wisconsin Public Service Corporation (hereinafter "WPSC") denies the allegation of the violation. As to Item 2, WPSC also denies the allegation of an infraction. As to Item 3, WPSC admits an infraction subject to the explanation set forth below (See also the attached Answer to Notice.).

The following is WPSC's description and evaluation of the May 2, 1978, event. On the morning of May 2, 1978, the refueling operation of the refueling pool was interrupted with a water level of approximately 8" above the reactor vessel flange to perform an inspection. An operator was dispatched to inspect for leaks. That inspection indicated significant leakage about either the reactor vessel-refueling pool seal or the sand plug covers over the reactor vessel nozzles.

When this information was supplied to the Shift Supervisor, he decided to enter the containment area so as to be able to evaluate the nature and extent of the problem and to determine what corrective measures were indicated. The Shift Supervisor, in concurrence with the Night Refueling Coordinator, determined the most direct way to evaluate the leakage source and the extent of leakage, which appeared large, was to enter the reactor vessel cavity.

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

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Mr. Ernest Volgenau  
August 10, 1978  
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In accordance with established and approved procedures, the senior Health Physics ("H P") man on site was contacted to determine what measures were necessary for the proposed entry. A contracted HP technician was dispatched by the Health Physics Group to the area to perform a survey with a high range radiation monitor and a respirator to use during the entry. By dispatching an HP technician to the area with a respirator and a high range monitor, the senior HP man performed actions which indicated to the contract HP man working for him, to the Shift Supervisor and to the Night Refueling Coordinator that entry was appropriate provided the radiation levels determined in the survey by the HP technician were not beyond reasonable limits.

The HP technician performed a survey which indicated radiation levels in the 50-70 R/hr range. Those readings corresponded to the Health Physics Department posted radiation field strength for the area of 70 R/hr.

Subsequent evaluation disclosed that the results of the survey were inaccurate. Thus, the Shift Supervisor was given erroneous information upon which to base his entry decision. The survey inaccuracy apparently resulted from incomplete performance of the survey by the HP technician in light of the large radiation field variations. Although NRC has surmised that the survey may have been affected by intimidation of the technician by the Shift Supervisor, WPSC review of the incident indicates that the contracted HP technician did not know, until after the completion of the entry, that the person who proposed and made the entry was the Shift Supervisor.

Based upon the field strength disclosed by the survey, entry time limits were discussed. At that time a final decision to perform the entry was made. The survey information showing radiation levels insufficiently high to preclude entry was employed in that evaluation.

At that point it was the responsibility of the HP group to assure that a radiation monitoring device appropriate to the expected radiation field and level of exposure was provided to and worn by the person making the entry. As a result of oversight by all personnel involved, the only devices worn were the 0 to 200 mR range dosimeter (which was offscale following exit) and the TLD (which subsequent analysis found to indicate an exposure of 2.8 rem). Subsequent evaluation of the field strength and the circumstances of the entry provided the conclusion that the Shift Supervisor had a peak exposure to the head of 2.9 rem. See Report No. 50-305/78-07, pages 7-9.

It should be noted that under the procedures established by RC-HP-35 no Radiation Work Permit ("RWP") was required. The entry at issue involved an emergency situation and was of very short duration. In accordance with the alternative procedure available under RC-HP-35 an experienced HP person, kept in constant attendance, was substituted for the RWP requirement. This decision facilitated prompt and expeditious response to a potentially dangerous leak situation while providing the measure of safety mandated by radiation protection procedures.

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The precautions decided upon included the decision to make the entry very brief. This resulted in minimization of exposure risk and an actual exposure below regulatory limits.

Following the Shift Supervisor's exit from the cavity, the personal dosimeter offscale reading was identified, an investigation commenced, and NRC was subsequently notified of the event.

The following corrective steps have been and will be taken with regard to the above event:

During the plant safety meeting held on June 21, 1978, the reactor vessel cavity entry incident was discussed with the members of the plant staff. Included in that review and discussion was the identification of the requirement to carry a properly ranged dosimeter into high radiation areas and other monitoring devices as appropriate. All personnel who are granted unescorted access to radiation areas receive an annual refresher course in health physics. During that refresher course, the responsibilities of each individual to be aware of proper dosimetry and monitoring will be reviewed. The review of the incident with the members of the plant staff which has been completed and the yearly refresher training will provide meaningful assurance that personnel have been adequately trained to avoid such mistakes in the future.

Additionally, as a directive from Corporate Management, the Health Physics Group has been directed to split the day and night responsibility between the two most senior personnel available within that group. The Health Physics Department has also been ordered to review the entire plant for areas similar to the reactor cavity in terms of radiation hazards and assure that the posting of those areas clearly indicates the hazard potential of each area. The specific responsibilities of the Health Physics Group have been delineated such that there will be no misinterpretation of which organization provides assurance with the requirements of the Health Physics Program. Direction has been provided to assure that each proposed entry is fully evaluated such that there can be no misunderstanding as to the extent of the evaluation necessary by the various organizations. A formal inspection board has been established to assure that future investigations of significant incidents are carried out in an organized, complete and independent manner and communication with the NRC inspectors performing a parallel investigation is formally established.

In addition to the foregoing description and evaluation of the May 2, 1978, event and the corrective program undertaken, WPSG wishes to comment on certain assertions and implications evident in NRC reports and correspondence concerning this event. WPSG is particularly concerned with NRC identification of the problem as displaying management weakness. NRC has also indicated the belief that more controls were necessary.

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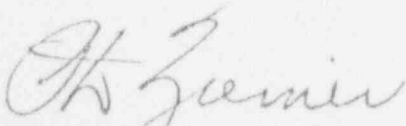
In view of the fact that our review and evaluation indicate that a personnel error by a contracted HP technician responsible for the incomplete survey was the cause of the event, we are at a loss to recognize how additional controls, which still depend upon avoidance of similar personnel errors as the only means to assure that recurrence will be avoided, provide any additional measure of safety. Associated with increased control is the danger of hampering emergency operations and creating unsafe conditions.

An isolated personnel failure to perform a task accurately, due at least in part to radiation field variation, cannot fairly be characterized as management weakness. Supervisory personnel must be entitled to rely on the validity of survey results reported to them. Evaluation of decisions must be made in light of the facts known to the decision maker at the time of the decision.

Finally, with regard to certain statements, in the letter accompanying the notices, it should be again noted that no overexposure occurred and no violations have been shown.

In conclusion, it is the position of WPSC as to Items 1 and 2 no violation or infraction has been shown. As to Item 3, significant corrective action has been undertaken and WPSC does not feel that any civil penalty is appropriate for Item 3 under applicable NRC guidelines.

Sincerely,

  
P. D. Ziemer  
President

snf

Enc.

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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Wisconsin Public Service Corporation )  
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    (Kewaunee Nuclear Power Plant) ) )  
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ANSWER TO NOTICE OF  
OF VIOLATION AND  
PROPOSED IMPOSITION  
OF CIVIL PENALTIES  
  
Docket No. 50-305

Pursuant to 10 C.F.R. § 2.205 and in answer to the Notice of Violation, Wisconsin Public Service Corporation (herewith "WPSC"), by its undersigned attorneys admits, denies and states as follows:

1. It is alleged that WPSC failed to make a survey required to assure compliance with 10 C.F.R. § 20.101, Section 20.101(b)(1) provides: "During any calendar quarter the dose to the whole body from radioactive material and other sources of radiation in the licensee's possession shall not exceed 3 rems. . . ." At no time during the event in question was this limit exceeded. As acknowledged by WPSC and NRC exposure to the individual was about 2.90 rem. (See I E Inspection Report No. 50-305/78-07, page 9.)

The statement that there was a failure to survey is simply factually inaccurate. Prior to making his entry to the reactor vessel cavity, the shift supervisor requested from Health Physics personnel clarification of the safety requirements for such an entry. As a result of that request, a survey of the area (as required by the applicable regulations) was in fact performed. This survey failed accurately to disclose the actual radiation field present, apparently

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