

JAN 13 1978

Docket No. 50-305/77-20

Wisconsin Public Service  
Corporation  
ATTN: Mr. E. W. James  
Power Generation and  
Engineering  
P.O. Box 1200  
Green Bay, WI 54305

Gentlemen:

Thank you for your letter dated December 21, 1977, informing us of the steps you have taken to correct the noncompliance identified in our letter dated November 22, 1977. We will examine your corrective action during a future inspection.

Your cooperation with us is appreciated.

Sincerely,

W. L. Fisher, Acting Chief  
Fuel Facility and Materials  
Safety Branch

cc: C. Luoma, Plant  
Superintendent

cc w/ltr dtd 12/21/77:  
Central Files  
Reproduction Unit NRC 20b  
PDR  
Local PDR  
NSIC  
TIC

60

OFFICE	RIII <i>WLF</i>	RIII	RIII <i>WLF</i>	RIII <i>RFW</i>		
SURNAME	Miller/jb	Schumaker	Fisher	Choules		
DATE	1/10/78					

WISCONSIN PUBLIC SERVICE CORPORATION



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

December 21, 1977

Mr. W. L. Fisher, Acting Chief  
Fuel Facility and Materials  
Safety Branch  
U. S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Dear Sir:

REF: Docket 50-305  
Operating License DPR-43  
IE Inspection Report #77-20

This refers to your letter transmitting the referenced inspection report conducted by Mr. Schumacher and Mr. Miller of your office concerning the findings of the inspection of the Kewaunee Nuclear Power Plant. In the inspection report two items of non-compliance were listed. The following is our response to those items.

INFRACTION 1 - Contrary to Technical Specification 6.13.1.b, the door to a high radiation area with posted readings greater than 1000 millirems per hour was not locked.

RESPONSE: The current design of the door referenced in the infraction will not permit an acceptable lock to be installed. Modification of the door will be initiated and this action is expected to take 30 days. Upon completion the referenced door will be in compliance with Technical Specification 6.13.1.b.

INFRACTION 2 - Contrary to 10 CFR 71.3, solid waste shipments made on July 28 and August 10, 1977 were not in accordance with the general license issued pursuant to 10 CFR 71.12.

RESPONSE: Two shipments of Type B packages were made through our contracted waste disposal vendor which were not in conformance to the general license issued to this vendor pursuant to 10 CFR 71.12. We did not have a copy of this license, and were acting upon information received as part of the contract

DEC 27 1977

Mr. W. L. Fisher  
Page 2  
December 21, 1977

proposal by the vendor. We have requested and received a copy of the general license issued to our contract waste disposal vendor which should eliminate any further errors of this nature.

It should be noted that we do not have a copy of the cask blueprints or safety analysis as implied that the user must possess by 10 CFR 71.12(b). Chem-Nuclear Systems, Inc. has filed a petition for rulemaking (Docket No. PRM-71-5) in this regard which states that these documents are proprietary in nature and the users of this cask have no need for the information possessed in these documents. Pending resolution of this petition for rulemaking, appropriate action will be taken to comply with the outcome of this decision.

Very truly yours,



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

EWJ:sna

CENTRAL  
FILES

JAN 13 1978

Docket No. 50-305

Wisconsin Public Service  
Corporation  
ATTN: Mr. E. W. James  
Power Generation and  
Engineering  
P.O. Box 1200  
Green Bay, WI 54305

Gentlemen:

Thank you for your letter dated December 21, 1977, informing us of the steps you have taken to correct the noncompliance identified in our letter dated November 22, 1977. We will examine your corrective action during a future inspection.

Your cooperation with us is appreciated.

Sincerely,

W. L. Fisher, Acting Chief  
Fuel Facility and Materials  
Safety Branch

cc: C. Luoma, Plant  
Superintendent

cc w/ltr dtd 12/21/77:  
Central Files  
Reproduction Unit NRC 20b  
PDR  
Local PDR  
NSIC  
TIC

OFFICE	RIII <i>WLF</i>	RIII	RIII <i>WLF</i>	RIII <i>RFW</i>		
SURNAME	Miller/jb	Schumacher <i>WLF</i>	Fisher	Choules <i>WLF</i>		
DATE	1/10/78					

WISCONSIN PUBLIC SERVICE CORPORATION



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

December 21, 1977

Mr. W. L. Fisher, Acting Chief  
Fuel Facility and Materials  
Safety Branch  
U. S. Nuclear Regulatory Commission  
Region III  
799 Roosevelt Road  
Glen Ellyn, IL 60137

Dear Sir:

REF: Docket 50-305  
Operating License DPR-43  
IE Inspection Report #77-20

This refers to your letter transmitting the referenced inspection report conducted by Mr. Schumacher and Mr. Miller of your office concerning the findings of the inspection of the Kewaunee Nuclear Power Plant. In the inspection report two items of non-compliance were listed. The following is our response to those items.

INFRACTION 1 - Contrary to Technical Specification 6.13.1.b, the door to a high radiation area with posted readings greater than 1000 millirems per hour was not locked.

RESPONSE: The current design of the door referenced in the infraction will not permit an acceptable lock to be installed. Modification of the door will be initiated and this action is expected to take 30 days. Upon completion the referenced door will be in compliance with Technical Specification 6.13.1.b.

INFRACTION 2 - Contrary to 10 CFR 71.3, solid waste shipments made on July 28 and August 10, 1977 were not in accordance with the general license issued pursuant to 10 CFR 71.12.

RESPONSE: Two shipments of Type B packages were made through our contracted waste disposal vendor which were not in conformance to the general license issued to this vendor pursuant to 10 CFR 71.12. We did not have a copy of this license, and were acting upon information received as part of the contract

DEC 27 1977

Mr. W. L. Fisher  
Page 2  
December 21, 1977

proposal by the vendor. We have requested and received a copy of the general license issued to our contract waste disposal vendor which should eliminate any further errors of this nature.

It should be noted that we do not have a copy of the cask blueprints or safety analysis as implied that the user must possess by 10 CFR 71.12(b). Chem-Nuclear Systems, Inc. has filed a petition for rulemaking (Docket No. PRM-71-5) in this regard which states that these documents are proprietary in nature and the users of this cask have no need for the information possessed in these documents. Pending resolution of this petition for rulemaking, appropriate action will be taken to comply with the outcome of this decision.

Very truly yours,



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

EWJ:sna



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
799 ROOSEVELT ROAD  
GLEN ELLYN, ILLINOIS 60137

CENTRAL FILES

Docket No. 50-305

↑ 2.2 1977

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

Gentlemen:

This refers to the inspection conducted by Messrs. M. C. Schumacher and D. E. Miller of this office on October 30 through November 4, 1977, of activities at Kewaunee Nuclear Power Plant authorized by NRC Operating License No. DPR-43 and to the discussion of our findings with Mr. Luoma and others at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements, as described in the enclosed Appendix A.

This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office within twenty days of your receipt of this notice a written statement or explanation in reply, including for each item of non-compliance: (1) corrective action taken and the results achieved; (2) corrective action to be taken to avoid further noncompliance; and (3) the date when full compliance will be achieved.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter, the enclosures, and your response to this letter will be placed in the NRC's Public Document Room, except as follows. If the enclosures contain information that you or your contractors believe to be

69

Wisconsin Public Service  
Corporation

- 2 -

22 1977

proprietary, you must apply in writing to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. The application must include a full statement of the reasons for which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

W. L. Fisher, Acting Chief  
Fuel Facility and Materials  
Safety Branch

Enclosures:

1. Appendix A, Notice  
of Violation
2. IE Inspection Report  
No. 50-305/77-20

cc w/encls:

Mr. C. Luoma, Plant  
Superintendent  
Central Files  
Reproduction Unit NRC 20b  
PDR  
Local PDR  
NSIC  
TIC

OFFICE >	RIII <i>SM</i>	RIII <i>SM</i>	RIII <i>WLF</i>	RIII <i>Choules</i>		
SURNAME >	Schumacher/jb	Miller	Fisher	Choules		
DATE >	11/17/77					



Appendix A

NOTICE VIOLATION

Wisconsin Public Service  
Corporation

Docket No. 50-305

Based on the inspection conducted October 30 through November 4, 1977, it appears that certain of your activities were in noncompliance with NRC requirements, as noted below. The following items are infractions.

1. Contrary to Technical Specification 6.13.1.b, the door to a high radiation area with posted readings greater than 1000 millirems per hour was not locked.
2. Contrary to 10 CFR 71.3, solid waste shipments made on July 28 and August 10, 1977 were not in accordance with the general license issued pursuant to 10 CFR 71.12.

U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-305/77-20

Docket No. 50-305

License No. DPR-43

Licensee: Wisconsin Public Service Corporation  
P. O. Box 1200  
Green Bay, WI 54305

Facility name: Kewaunee Nuclear Power Plant

Inspection at: Kewaunee Site, Kewaunee WI

Inspection conducted: October 30 through November 4, 1977

Inspectors: *M. C. Schumacher*  
M. C. Schumacher 11/21/77

*D. E. Miller*  
D. E. Miller 11/21/77

*W. L. Fisher*  
Approved by: W. L. Fisher, Acting Chief 11/22/77  
Fuel Facility and Materials  
Safety Branch

Inspection Summary

Inspection on October 30 through November 4, 1977 (Report No. 50-305/77-20)

Areas Inspected: Routine, unannounced inspection of radiation protection program, including: qualifications; audits; training; radiation protection procedures; instruments and equipment; exposure control; posting, labeling, and control; surveys; notifications and reports; solid waste shipments; review of reportable occurrences; and noncompliance corrective actions. The inspection involved 86 inspector-hours onsite by two NRC inspectors.

Results: No items were identified in ten of twelve areas inspected.

One infraction was identified in the area of high radiation area control and another in the area of solid waste shipments. (Paragraphs 12.d and 16)

## DETAILS

### 1. Persons Contacted

- \*C. Luoma, Plant Superintendent
- \*J. Richmond, Technical Supervisor
- C. Steinhardt, Assistant Superintendent, Operations
- \*G. Jarvella, Health Physics Supervisor
- W. Winnowski, Chemistry Supervisor
- K. Smolinske, Nuclear Engineer
- D. Ristau, Training Supervisor
- D. Brown, Shift Supervisor
- M. Reinhart, Lead Health Physics Technician
- D. McSwain, Instrument and Control Supervisor
- J. Hannon, I&C Leadman
- \*M. Marchi, Nuclear Systems Engineer (WPS Green Bay)

The inspectors also talked with other licensee employees, including health physics technicians, instrument maintenance technicians, and operators, during the course of the inspection.

\*Denotes those present at the exit interview.

### 2. General

This inspection began with a tour of the control room and selected areas of the auxiliary building at 9:00 p.m., on October 30, 1977. The tour was conducted to observe general radiation protection conditions and housekeeping within the plant and the status of radiation monitor alarms in the control room. Monitors and recorders were operating normally with no alarms showing. Housekeeping and radiation protection conditions were generally very good. One item of noncompliance involving a high radiation area barrier secured with a wire seal rather than a lock was noted. Additional visits were made to selected plant areas during the balance of the inspection.

### 3. Licensee Action on Previous Inspection Findings

(Open) Infraction 1 (305/77-11): Inadequate evaluation of bioassay data related to airborne exposures. The licensee has devised an improved method of evaluation that uses a computer generated table of body burdens as a function of exposure (MPC-hours). The method is being evaluated by the licensee's health physics consultant. This item remains open pending completion of the review and adoption by the licensee of a satisfactory procedure. (Paragraph 10)

(Open) Infraction 2 (305/77-11): Shipment of Type A packages containing greater than Type A quantities of Mixed Fission Products. The licensee has discontinued automatic assignment of shipped waste to Group II. Assignment is now based on an isotopic evaluation. An analysis done for two shipments made in July and August 1977 indicated the weighted isotope groups were within regulatory requirements. A formal procedure for determination of appropriate transport groups is being prepared; this item remains open pending its completion. (Paragraph 16)

4. Organization

Staffing is unchanged from the previous inspection. The health physics group consists of the health physicist, a lead technician, four health physics technicians, and one helper (contract employee). The chemistry group consists of the radiochemist, four technicians, and one helper. The health physicist and the radiochemist report to the technical supervisor. Licensee representatives stated that three additional technicians have been requested for 1978.

5. Licensee Audits

The inspectors reviewed the report of technical audit 77-01 of the health physics group done in July 1977. The report describes an apparently thorough review of health physics procedures and practices vis-a-vis federal regulations and philosophies; it also included evaluation of technician performance in the counting room after normal settings on the multichannel analyser had been covertly altered. A deficiency relating to high radiation area control was noted and corrected. Other suggestions resulting from the audit were being implemented according to licensee personnel.

6. Radiation Protection Training

The inspectors attended a one-hour tape presentation designed to orient contractors who require clean area access only. The inspectors discussed with the licensee the desirability of including portions of 10 CFR 19.13 information in the presentation. The licensee stated that new tapes are being made to augment the present tapes.

The inspectors spot-checked the training records for specific contractor persons and verified that training had been provided.

New employee training and retraining remains as discussed in the last radiation protection inspection report.

7. Radiation Protection Procedures

Five procedures from the Health Physics Procedures Manual concerning operational radiation protection had been revised or added since the last Radiation Protection Inspection. Review of these by the inspector revealed no significant problems. The procedures were approved by the plant superintendent.

8. Instruments and Equipment

The inspectors reviewed records of portable survey instrument and area radiation monitor checks, function tests, and calibrations for 1977. The requirements listed in Technical Specification Table 4.1-1 appear to have been met using approved procedures.

The licensee's inventory of portable survey instruments appeared to be adequate. Instruments bore current calibration stickers which includes an expected response to a specific external check source.

Licensee records indicated that semiannual calibration checks are made on self-reading dosimeters. Those reading in error by greater than 15% are discarded or sent for repair.

9. External Exposure Control

Personal monitoring records for the period December 1976 through September 1977 were reviewed. No individual doses greater than 3,000 millirems per quarter were noted. The maximum annual accumulated personal dose for 1976 was 3,120 millirems. External doses generally appeared to be well controlled, with in-house TLD badges, which are processed daily during outages, being worn by individuals on jobs with higher dose potential in addition to the vendor processed badge.

A spot check of forms NRC-4 for transient workers who received more than 1,250 millirems per quarter during the February through March 1977 outage showed that the exposure histories were adequately completed for those checked.

The licensee routinely and concurrently spikes his and the vendors TLD badges as a quality assurance check of the in-house and vendor programs.

10. Internal Exposure Control

a. Air Sampling

The inspector reviewed selected air sampling records for the period January to October 1977. As reported previously,<sup>1/</sup> the licensee's program had been strengthened; this review indicated that it remains adequate. The need for more specific identification of location of certain air samples was noted by the inspectors; licensee representatives stated that this would be improved.

b. Respirator Program

The respirator program continues to be satisfactory and in apparent compliance with 10 CFR 20.103. Initial fitting is done objectively with an aerosol generating and measuring system in an enclosure. A pulmonary function test has replaced use of a medical X-ray examination as a screening device for potential respirator users.

c. Bioassay Program

The inspectors reviewed records of 423 whole body counts done on 371 individuals during the period November 30, 1976 through August 15, 1977. Six individuals showed initial whole body counts greater than 5% of Maximum Permissible Organ Burden (MPOB) when counted after refueling outage work in February 1977. Licensee followup and evaluation was done in each case. No exposures in excess of regulatory limits were indicated.

The licensee has developed computer programs that calculate expected organ burdens of various times after exposure as a function of exposure duration and air concentration. The program is under review by the licensee's health physics consultant. Examination of a few selected values by the inspectors indicated agreement with the ICRP-2 Model for nuclides in soluble form. Licensee representatives stated that non-trans-  
portable nuclides will also be included and that a procedure will be prepared for use of the program in review of whole body counting results.

The licensee's procedures for scheduling whole body counting remains as previously described.<sup>2/</sup> However, licensee representatives indicated intent to improve the program with the installation of a leased counter on the Kewaunee site by year's end. The licensee presently shares use of a counter located at the nearby Point Beach site.

1/ RIII Inspection Rpt No. 50-305/77-11.

2/ RIII Inspection Rpt No. 50-305/77-01.

11. ALARA

The inspector asked the licensee what actions are taken to ensure that personal internal and external doses are as low as reasonably achievable. The licensee related the following examples of station attention to the matter:

- a. Use of portable HEPA and charcoal system to reduce the possibility of airborne activity during maintenance and in-service inspection on contaminated systems and components.
- b. Health Physics Section participation in refueling and major maintenance outage planning, including estimate of man-rem doses to perform each task and possible methods of reducing exposures.
- c. Conduct refueling critiques to review personal doses received on each job and discuss possible engineering controls or changes in work practices to reduce future exposures.
- d. Extensive use of radiation work permits along with an in-house TLD program to assure dose control and provide supervision with updated personal dose estimates.
- e. Installation of a hot machine shop with controlled ventilation to increase contamination control.
- f. Alteration of the equipment decontamination facility, adding fume hoods and ultrasonic cleaners to increase contamination controls.
- g. Use of two laundrys, one being used only for potentially highly contaminated protective clothing.
- h. Review of radiological occurrences during plant employee safety meetings.

12. Posting, Labeling, and Control

The inspectors toured selected portions of the controlled area in company with licensee representatives. Areas visited included radiochemistry laboratories, counting room, and several other areas within the auxiliary building. Licensee furnished instruments were used to observe radiation levels and to verify the adequacy of high radiation area controls. The following matters were specifically noted:

- a. Good housekeeping was evident.
- b. The licensee's control of radiation work with his system of Radiation Work Permits appears generally satisfactory.
- c. A packaged waste storage area contained accessible exposure rates of greater than 100 mR per hour but less than 1,000 millirems per hour. This area is not capable of being locked. The inspectors discussed with the licensee the need to assure that accessible dose rates in this area remain below 1,000 millirems per hour or provide a locking capability for use if needed. The licensee's technical specifications exempt the 10 CFR 20.203(c)(iii) locking requirement until the accessible dose rate is 1,000 millirems per hour. A licensee representative stated that a barricade capable of being locked is planned for the area.
- d. The tunnel entrance gate to the spent resin storage tank was fastened closed with a bent steel rod and secured by a wire security seal. The posted reading for the area was 25,000 millirem per hour. This is considered an item of noncompliance with Technical Specification 6.13.1.b., which requires that areas in which the intensity of radiation is greater than 1,000 millirems per hour be controlled by locked doors to prevent unauthorized entry.

13. Surveys

Records of routine and special direct radiation and surface contamination surveys conducted during February and October 1977 were reviewed. Frequency and extent of surveys appear to be adequate. Refueling outage surveys indicate that decontamination was frequently performed and generally successful.

A review of solid source inventory and leak test records indicated that source possession is in accordance with the license and leak testing is performed in accordance with Technical Specification 4.13.

14. Reports

The inspector reviewed the following matters and found no items which required corrective action.

- a. Reports required by 10 CFR 20.407 and 20.408.



- b. Report required by Technical Specification 6.9.1.b.(3) concerning personal exposure by type of worker and work performed.
- c. Notifications and reports to individuals required by 10 CFR 19.13.

15. Reportable Occurrences

The inspector reviewed an event identified and reported<sup>3/</sup> by the licensee wherein a reactor coolant leak detection system sensitive to radioactivity was not operable for a period of about six hours on July 29, 1977. It occurred when an operator failed to use a procedure when valving in monitor train R11/12 to monitor containment in place of monitor R21 and realigning the latter to the containment vent. The operator was admonished for failure to follow procedure. The inspector confirmed that a second leak detection system required by Technical Specification 3.1.d.4 was operable.

16. Solid Waste Shipments

The inspectors reviewed licensee corrective actions concerning a previously identified infraction wherein Type A package limits were exceeded. Corrective action consisted of assigning packages to transport groups based on isotopic analysis rather than making automatic assignment to Group II for mixed fission products. This item remains open until a formal procedure is approved.

In reviewing the two subsequent shipments made in Type B packages it was noted that the cask, Model No. BC-48-220, Certification No. 5026 was approved for use with a resin liner but not with 55-gallon drums. The licensee did not have a copy of the cask certificate; however, data supplied by cask owner, ATCOR, Inc., of Peekskill, New York, as part of the contract proposal (cover letter dated March 24, 1974) misleadingly implied the acceptability of shipping drums within the cask. The licensee confirmed via telephone to ATCOR that the cask license did not cover shipment in drums. Failure to ship in accordance with the general license issued pursuant to 10 CFR 71.12 is regarded as noncompliance with 10 CFR 71.3.

17. Management Interview

The inspection findings were discussed with Mr. Luoma and others (Paragraph 1) at the close of the inspection. Two items of apparent noncompliance were identified. The inspectors stated that previous inspection items involving evaluation of whole body counting data and determination of appropriate transport groups for solid waste shipments would remain open until satisfactory procedures are completed and approved. Licensee representatives stated these would be prepared.

3/ Reportable Occurrence 77-20.