August 15, 2000

Mr. Thomas J. Palmisano
Site Vice President and General Manager
Palisades Nuclear Generating Plant
Consumers Energy Company
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

SUBJECT: PALISADES - NRC INSPECTION REPORT 50-255/2000013(DRS)

Dear Mr. Palmisano:

On July 28, 2000, the NRC completed an inspection at your Palisades Nuclear Generating Plant. The enclosed report presents the results of that inspection which were discussed on July 28, 2000, with Mr. D. Cooper and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to radiation safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. The inspection focused on occupational radiation safety and included a review of your performance indicator data collecting and reporting process.

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS)*. *ADAMS is accessible from* the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

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

Sincerely,

/RA/

Gary L. Shear, Chief
Plant Support Branch
Division of Reactor Safety

Docket No. 50-255
License No. DPR-20

Enclosure: Inspection Report 50-255/2000013(DRS)

cc w/encl: R. Fenech, Senior Vice President, Nuclear
Fossil and Hydro Operations
N. Haskell, Director, Licensing and Performance Assessment
R. Whale, Michigan Public Service Commission
Michigan Department of Environmental Quality
Department of Attorney General (MI)
Emergency Management Division, MI Department
of State Police

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

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Docket No. 50-255
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Fossil and Hydro Operations
N. Haskell, Director, Licensing and Performance Assessment
R. Whale, Michigan Public Service Commission
Michigan Department of Environmental Quality
Department of Attorney General (MI)
Emergency Management Division, MI Department
of State Police

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DATE	08/9/00		08/15/00		08/15/00			

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U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-255
License No:	DPR-20
Report No:	50-255/2000013(DRS)
Licensee:	Consumers Energy Company 212 West Michigan Avenue Jackson, MI 49201
Facility:	Palisades Nuclear Generating Plant
Location:	27780 Blue Star Memorial Highway Covert, MI 49043-9530
Dates:	July 24–28, 2000
Inspector:	D. Nelson, Radiation Specialist
Approved by:	Gary L. Shear, Chief Plant Support Branch Division of Reactor Safety

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 50-255/2000013(DRS); on 07/24–07/28/00; Consumers Energy; Palisades Nuclear Generating Plant. The inspection covered the occupational radiation safety cornerstone and focused on radiological instrumentation. In addition, the inspector reviewed the licensee's performance indicator (PI) data collection and assessment program.

The inspection was conducted by a regional radiation specialist. There were no findings identified.

Report Details

Summary of Plant Status: The plant was at full power during the inspection period.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS3 Radiation Monitoring Instrumentation

.1 Source Tests and Calibration of Radiological Instrumentation

a. Inspection Scope

The inspector verified that radiological instruments associated with transient high and very high radiation areas (area radiation monitors (ARM)), and instruments used for coverage of high radiation work and/or for air monitoring for jobs with the potential for workers to receive greater than 100 millirem committed effective dose equivalent (CEDE), had been properly calibrated and their alarm set-points (if applicable) properly set. The inspector verified that selected ARMs (spent fuel pool, refueling isolation and containment isolation) had been appropriately calibrated, and function and operation tested in 1999 and 2000. The inspector reviewed the calibration procedures and 1999 and 2000 calibration records to verify that selected portable radiation survey instruments (RO-2, RO-2A and RO-20 ion chambers), selected portable continuous air monitors (AMS-4), selected portable area radiation monitors (AM-2), and selected portable teledosimeters (Telescan) had been properly calibrated. The inspector also reviewed the calibration procedures and 1999 and 2000 calibration records for the whole body counter (Canberra Fastscan WBC) and selected contamination monitors (PCM-1B) to verify that they had been properly calibrated. The inspector observed the calibration of a RO-2A portable survey instrument and an AMS-4 continuous air monitor to verify that the instruments were calibrated in compliance with the appropriate procedures. The inspector also observed several Chemical and Radiological Services (C&RS) technicians source check portable radiation survey instruments to verify compliance with procedures.

b. Findings

There were no findings identified.

.2 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspector verified compliance with HP 9.45, “Operational and Functional Checks of Health Physics Portable Instrumentation,” by observing several Chemical and Radiological Services (C&RS) technicians’ selection and operational checks of portable radiation survey instruments used for radiation protection (RP) technician job coverage.

b. Findings

There were no findings identified.

.3 Self-Contained Breathing Apparatus Program

a. Inspection Scope

The inspector reviewed HP 7.5, "Self-Contained Breathing Apparatus (SCBA) Survivair Mark-2 Model 9842," Revision 4, and verified the adequacy of the program to provide SCBA for unknown or emerging conditions. The inspector walked down the available equipment, reviewed the status and surveillance records of SCBA staged for use in the plant, verified the licensee's capability for refilling and transporting SCBA bottles to the control room and support locations in the plant, verified the training and qualification records of selected individuals in 2000, reviewed the licensee's actions relative to Information Notices 98-20 and 99-05 (no specific response was required by the notices) and interviewed control room operations staff regarding the use of SCBA in the control room.

b. Findings

There were no findings identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed Nuclear Performance Assessment Department field monitoring reports and audits, which had been performed during 1999 and 1998, to verify that the staff conducts radiation monitoring instrument program assessments. The scope and findings of the licensee reviews were reviewed. In addition, the inspector reviewed all Condition Reports (CR) that addressed significant radiological incidents involving radiation instrument deficiencies for 1999 and 2000, to verify that the licensee had effectively implemented the corrective action program.

b. Findings

There were no findings identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspector verified the licensee's assessment of its performance indicator (PI) for occupational radiation safety. Since no reportable elements were identified by the licensee for the previous four quarters (3rd and 4th quarters of 1999 and the 1st and 2nd

quarters of 2000), the inspector reviewed a selection of those quarter's CRs to verify that there were no occurrences concerning locked high radiation (>1 rem/hr) and very high radiation (>500 rads/hr) areas or unintended individual doses greater than 100 millirem total effective dose equivalent.

b. Findings

There were no findings identified.

4OA5 Temporary Instruction 2515/144, "Performance Indicator Data Collecting and Reporting Process"

a. Inspection Scope

The inspector reviewed the performance indicator data collecting and reporting process for the "Occupational Radiation Safety-Occupational Exposure Control Effectiveness" performance indicators. The inspector reviewed Procedure No 3.09, "Data Collection, Review and Reporting for NRC Performance Indicator Program," and interviewed those individuals responsible for the indicator data collecting and reporting process. The review was conducted to verify that the individuals involved had a clear understanding of the indicator definitions, data reporting elements, calculation methods, and definition of terms and clarifying notes to ensure that the process would produce accurate performance indicators consistent with industry guidance document NEI (Nuclear Energy Institute) 99-02, "Regulatory Assessment Performance Indicator Guideline (Revision 0)."

b. Findings

There were no findings identified.

4OA6 Management Meetings

Exit Meeting Summary

The inspector presented the inspection results to Mr. Cooper, Plant General Manager, and other members of licensee management at the conclusion of the inspection on July 28, 2000. The licensee acknowledged the findings and identified no proprietary information.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

E. Bogue, C&RS, Manager
T. Brown, C&RS, Supervisor
J. Beer, C&RS, Supervisor
D. Cooper, Plant General Manager
N. Haskell, Licensing Director
S. King, Licensing
G. Szczotka, NPAD, Manager
S, Wawro, Maintenance and Planning, Director

NRC

None

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
AM	Area Monitor
ARM	Area Radiation Monitor
C&RS	Chemistry and Radiological Services
CEDE	Committed Effective Dose Equivalent
CR	Condition Report
HP	Health Physics
NEI	Nuclear Energy Institute
NPAD	Nuclear Performance Assessment Department
PCM	Personnel Contamination Monitor
PI	Performance Indicator
RP	Radiation Protection
SCBA	Self-Contained Breathing Apparatus
TI	Temporary Instruction

LIST OF DOCUMENTS REVIEWED

Station Procedures

Proc No 3.09 (Revision 0)	Data Collection, Review and Reporting for NRC Performance Indicator Program
HP 7.5 (Revision 4)	Self-Contained Breathing Apparatus (SCBA) Survivair Mark-2 Model 9842
HP 9.13 (Revision 9)	Eberline Model RO-2A and Model RO-20 Portable Ion Chambers
HP 9.15 (Revision 9)	Operation and Calibration of the Eberline Model 6112 Teletector and Xetec Model 330A Telescan
HP 9.45 (Revision 4)	Operational and Functional Checks of Health Physics Portable Instrumentation
HP 9.65 (Revision 1)	Operation and Calibration of the Dosimeter Corp Area Monitor - Models 3090-3 and 3096-3
HP 9.67 (Revision 9)	Operation and Calibration of the MGP Instruments CDM-21 Calibrator and DMC Electronic Dosimeters
HP 9.77 (Revision 11)	Eberline Model AMS-4
Proc No MI-6 (Revision 7)	Area Monitor Operational Check
Proc No RI-86A-13 (Revision 4)	Spent Fuel Area Monitor RIA-2313 Calibration
Proc No RI-86E (Revision 7)	Refueling Isolation Monitors Calibration
Proc No RI-86F (Revision 7)	Containment Isolation Monitor Calibration
Proc No RIA-I-4 (Revision 4)	Digital Area Radiation Monitors Calibration

Certificates of Calibration

Xetec Model 330A Telescan	Instru No 45390 (6/28/00)
	Instru No 45372 (5/22/00)
Ludlum Model 177	Instru No 725 (9/3/99)
	Instru No 723 (11/19/99)
Dosimeter Corp 3090-3	Instru No 12788 (12/8/98)
	Instru No 12788 (12/1/99)
PCM-1B	Instru No 820 (12/8/99)
	Instru No 263 (7/7/00)
Eberline AMS-4	Instru No 122 (6/15/00)
	Instru No.116 (5/30/00)
	Instru No 116 (12/3/99)
Electronic Dosimeter (DMC)	Instru No 001039 (1/3/00)
	Instru No 808142 (1/3/00)
	Instru No 807338 (1/3/00)
	Instru No 807435 (1/3/00)
Spent Fuel Pool Area Monitor	Instru No RIA-2313 (1/24/00)
Refueling Isolation Monitor	Instru No RIA-2316 (10/20/99)
	Instru No RIA-2316 (10/20/99)
Containment Isolation Monitor	Instru No RIA-1805 (10/29/00)
Canberra FASTSCAN	3/22/00

Functional and Operational Tests

Technical Specifications Area Monitor Operational Checks (7/17/00)

Non-Technical Specification Area Monitor Functional Checks (3/10/00)

Nuclear Performance Assessments and Field Monitoring (FM) Reports

FM-P-98-033 (4/16/98)
FM-P-98-094 (7/15/98)
FM-P-98-110 (10/7/98)
FM-P-98-135 (12/14/98)
FM-P-99-070 (5/18/99)
FM-P-99-102 (8/18/99)

“Palisades Radiation Protection and Radwaste Shipping Audit,” Nuclear Performance Assessment Department Audit (9/1/98)

“Palisades Radiation Protection Audit,” Nuclear Performance Assessment Department Audit (9/10/99)

Condition Reports

CPAL # 9901914, CPAL # 9902888, CPAL # 9902928, CPAL # 9903017 and CPAL # 0000354

Other Documents

Maintenance Rule Scoping Document

Database Printouts for SCBA location codes as well as training, medical exams, and fit testings records

NRC Letter to Palisades Plant, “NUREG-0737, Item III.D.3.4, Control Room Habitability Palisades Plant,” (5/2/83)