

April 5, 1989

Docket No. 50-412

Mr. J. D. Sieber, Vice President
Nuclear Group
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

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Dear Mr. Sieber:

SUBJECT: BEAVER VALLEY UNIT 2 - ISSUANCE OF AMENDMENT (TAC NO. 72001)

The Commission has issued the enclosed Amendment No. 16 to Facility Operating License No. NPF-73 for the Beaver Valley Power Station, Unit 2, in response to your application dated January 30, 1989 and supplement dated March 9, 1989.

The amendment revises the license conditions regarding the plant safety monitoring system, detailed control room design review and safety parameter display system by changing the full implementation date for certain issues from the first to the second refueling outage.

We have also reviewed the status of two other time-sensitive license conditions. License condition 2.C(5), Inservice Inspection, was satisfied by your submittal dated June 1, 1988. License condition 2.C(10), Fire Protection Modifications, was satisfied based on the information you submitted on September 30 and December 31, 1987.

A copy of the related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

Peter S. Tam, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 16 to NPF-73
2. Safety Evaluation

cc w/enclosures:

See next page

[5520 Document Name: AMEND TAC 72001]

LA:PDI-4 SNorris 04/11/89	PM:PDI-4, PTam:lm 04/14/89	PD:PDI-4 JStolz 04/14/89	OGC* 04/ /89	BC:LHF WRegan 04/25/89
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* See previous concurrence sheet

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OP

Mr. J. Sieber
Duquesne Light Company

Beaver Valley Power Station
Units 1 & 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 16
License No. NPF-73

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated January 30, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the following paragraphs of Facility Operating License NPF-73 are amended to read as follows:*

2.C.(7) Plant Safety Monitoring System (PSMS)

DlCo shall submit, on or before November 27, 1987, a verification and validation (V&V) plan which will be able to demonstrate the reliability of the PSMS software. The approved V&V plan must be implemented before startup after the second refueling outage.

2.C.(8) Detailed Control Room Design Review (DCRDR)

Before startup after the first refueling outage, DlCo shall complete all activities, satisfactorily resolve all open issues as described in Section 18.1 of SER Supplement 6, and implement all DlCo-proposed control room improvements resulting from this review. For items specified in the safety evaluation issued with Amendment No. 16, implement before startup from the second refueling outage.

2.C.(9) Safety Parameter Display System (SPDS)

Before startup after the first refueling outage, DlCo shall perform the necessary activities, provide acceptable responses, and implement all proposed corrective actions related to issues as described in Section 18.2 of SER Supplement 6. For items specified in the safety evaluation issued with Amendment No. 16, implement before startup from the second refueling outage.

3. This license amendment is effective on issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate 4-4
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

*Pages 4 and 5 of the license are attached, for convenience, for the composite license to reflect these changes.

Date of Issuance: April 26, 1989

(3) Initial Startup Test Program (Section 14 of the SER, and Supplements 3 and 5)

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

(4) Fresh Fuel Storage

The following criteria apply to the storage and handling of new fuel assemblies in the fuel handling building:

- (a) No more than two fuel assemblies shall be out of approved shipping containers or fuel assembly storage racks at any one time.
- (b) The minimum edge-to-edge distance between the above two new assemblies, the shipping container array, and the storage rack arrays shall be at least 12 inches.
- (c) New fuel assemblies shall be stored in such a manner that water would drain freely from the assemblies in the event of flooding and subsequent draining of the fuel storage area.

(5) Inservice Inspection (Section 6.6 of SER Supplement 5)

DLCO shall submit an inservice inspection program in accordance with 10 CFR 50.55a(g)(4) for staff review by June 1, 1988.

(6) Formal Federal Emergency Management Agency Finding

In the event that the NRC finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

(7) Plant Safety Monitoring System (PSMS)

DLCO shall submit, on or before November 27, 1987, a verification and validation (V&V) plan which will be able to demonstrate the reliability of the PSMS software. The approved V&V plan must be implemented before startup after the second refueling outage.

(8) Detailed Control Room Design Review (DCRDR)

Before startup after the first refueling outage, DLCo shall complete all activities, satisfactorily resolve all open issues as described in Section 18.1 of SER Supplement 6, and implement all DLCo-proposed control room improvements resulting from this review. For items specified in the safety evaluation issued with Amendment No. 16, implement before startup from the second refueling outage.

(9) Safety Parameter Display System (SPDS)

Before startup after the first refueling outage, DLCo shall perform the necessary activities, provide acceptable responses, and implement all proposed corrective actions related to issues as described in Section 18.2 of SER Supplement 6. For items specified in the safety evaluation issued with Amendment No. 16, implement before startup from the second refueling outage.

(10) Fire Protection Modifications (Section 9.5.1 of SER Supplement 6)

By September 30, 1987, DLCo shall complete the installation of back draft dampers to mitigate overpressurization caused by carbon dioxide system discharge. Until the time that this work is complete, DLCo shall maintain fire watches in those areas in accordance with the commitments made in letters dated May 20 and 21, 1987.

D. Exemptions

The following exemptions are authorized by law and will not endanger life or property or the common defense and security, and certain special circumstances are present. With the granting of these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

- (1) The facility requires an exemption from the requirements of General Design Criterion (GDC) 4, Appendix A to 10 CFR 50. The staff has described in detail in Supplement 4 and Supplement 5 to the Safety Evaluation Report the technical basis and "special circumstances" associated with this exemption. The staff's environmental assessment was published on March 27, 1987 (52 FR 9979). Therefore, pursuant to 10 CFR 50.12(a)(1), 10 CFR 50.12(a)(2)(ii) and (iv), Beaver Valley Power Station, Unit 2 is exempt from the requirements of GDC 4, Appendix A to 10 CFR 50 with respect to the dynamic loading effects associated with the postulated pipe breaks described in detail in Section 3.6.3 of Supplement 4 to the Safety Evaluation Report. These dynamic loading effects include pipe whip, jet impingement, and break-associated dynamic transients. Specifically, this eliminates the need to install jet impingement barriers and pipe whip restraints associated with postulated pipe breaks in the pressurizer surge line, reactor coolant bypass system,



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 16 TO FACILITY OPERATING LICENSE NO. NPF-73

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

BEAVER VALLEY POWER STATION, UNIT NO. 2

DOCKET NO. 50-412

INTRODUCTION

On August 14, 1987, we issued Facility Operating License NPF-73 to Duquesne Light Company (the licensee, acting as agent for the above utilities) for Beaver Valley Power Station Unit 2. Included in the license are five time-sensitive license conditions, all of which required completion of certain activities according to their respective schedules.

By letter dated January 30, 1989, the licensee requested that the completion schedules of three of these conditions be extended by the duration of one fuel cycle (approximately 18 months). By letters dated March 9 and April 19, 1989, the licensee submitted supplemental information on the request. We have completed review of that request and results are as follows.

DISCUSSION AND EVALUATION

(1) Condition 2.C(7), Plant Safety Monitoring System (PSMS)

The licensee has satisfied the first part of this condition regarding submittal of the PSMS verification and validation (V&V) plan by its submittal dated December 10, 1987.

The condition also requires that the approved V&V plan be implemented before start-up after the first refueling outage. The licensee stated that implementation of the V&V plan is largely complete, with full implementation scheduled to occur before startup after the first refueling outage. However, NRC audit of the V&V plan only occurred recently (January 31 thru February 2, 1989), and results of the audit would be transmitted in the near future. Due to this lateness, the licensee

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does not have enough time to modify the V&V plan according to NRC-imposed requirements, and still meet the schedule imposed by this condition. Accordingly, the licensee requested that full implementation be postponed from the first refueling outage to the second.

Based on the facts that (1) our onsite audit of the licensee's V&V plan uncovered no glaring shortcomings, (2) that almost all variables have diverse instrumentation that is either independent or redundant from the PSMS and is available on the control boards (see SSER-6, NUREG-1057 Supplement 6), and (3) the licensee's best-faith efforts to implement the V V plan, we conclude that the requested delay will have no negative impact on overall plant safety. The implementation is thus acceptable.

(2) Condition 2.C(8), Detailed Control Room Design Review (DCRDR)

The licensee stated that all DCRDR evaluation process activities are complete. Over 270 human engineering discrepancies (HEDs) were identified and documented (letters to NRC, December 2, 1985 and January 8, 1987); most of these have been implemented or will be implemented before startup from the first refueling outage.

Thus, all DCRDR work will be completed, except the HEDs specified in Table 1. The requested extension of the duration of one fuel cycle only covers these HEDs. The licensee provided justification for the delayed implementation of these in its March 9, 1989 letter. In general, these have low safety significance, or do not have any direct impact on normal or post-accident plant operation.

We find the proposed extension of condition 2.C(8) to accommodate completion of the HEDs specified in Table 1 acceptable.

(3) Condition 2.C(9), Safety Parameter Display System (SPDS)

In a letter dated June 8, 1988, the licensee responded to NRC concerns addressed in Section 18.2 of Supplement 6 to the BVPS-2 Safety Evaluation Report (SSER-6). The licensee's response provided justifications for issues requested by the NRC, clarified certain assumptions made by the NRC which were not completely accurate, and identified resolution activities which were either completed or scheduled to be completed prior to start-up following the first refueling outage. Thus, the bulk of the required work will be completed according to the current schedule imposed by this condition.

However, all system faults identified through site acceptance testing and the final response time testing are not expected to be resolved prior to start-up following the first refueling outage. Some of these deficiencies or faults include failure to meet the specification response

time criteria, the system idle time goes to zero (specification requires greater than 30%), the lack of sufficient printer buffer capacity to support the correct printout of a large quantity of data, and a programming capability which does not function according to specification. These faults or deficiencies do not adversely affect the performance of the SPDS or the accuracy and reliability of the displayed information. However, the correction of all SPDS faults may result in a small increase in the SPDS response times. The licensee will continue to correct the system faults and/or accept the system condition and generate a specification change, if necessary. The activities are scheduled to be completed prior to start-up following the second BVPS-2 refueling outage. The licensee's March 9, 1989 letter provides details on these. We agree with the evaluation contained in this letter.

On the basis that most issues covered by this condition will be resolved/completed on schedule, and that incompleteness of the balance does not constitute a detriment to safe operation of the unit, we find the proposed extension of condition 2.C(8) to accommodate the completion of the HEDs as specified in Table 2 acceptable.

ENVIRONMENTAL CONSIDERATION

The amendment changes requirements with respect to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. We have determined that the amendment involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. We have previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Peter S. Tam and Garmon West, Jr.

Attachment:
Tables 1 and 2

Dated: April 26, 1989

TABLE 1
 DETAILED CONTROL ROOM DESIGN REVIEW

<u>HED NO.</u>	<u>TITLE</u>	<u>APPROVAL/DISAPPROVAL OF DELAYED IMPLEMENTATION</u>
2C1C-5514	Digital Radiation Monitoring System Printout	Approved
2MCR-0202	Communications Console/Merge Switch	Approved
2MCR-0203	Walkie-Talkie Communications Systems	Approved
2MCR-0001	Control Room Noise/Computer Fan Replacement/HVAC Improvements Study	Approved
2MCR-0002	Radiation Monitor System/Cabinet Fan Replacement	Approved
2MCR-0008 2MCR-0009	HVAC System Air Flow Adjustments	Approved
2MCR-0019 2ES*-0020 2AB*-0021	Emergency Lighting	#
2V**-2128	Annunciator "Dark Board"	Approved

The NRC staff finds all of the licensee's commitments and justifications in its letter of April 20, 1989 (regarding re-evaluating emergency lighting levels) acceptable for resolving HEDs 2MCR-0019, 2ES*-0020 and 2AB*-0021.

TABLE 2

SAFETY PARAMETER DISPLAY SYSTEM

<u>TITLE</u>	<u>APPROVAL/DI S APPROVAL FOR DELAYED IMPLEMENTATION</u>
Fire protection system valves associated with containment isolation, 2FPW*AOV204, 205, 206 and 2FPW*AOV221	Approved
Main steam isolation/bypass valve position for 2MSS*AOV101A, B and C	Approved
Valves associated with the safety injection system, 2SI S*MOV863A and B, 2SI S*MOV8887A and B, 2SI S*MOV8811A and B	Approved
Turbine trip valves, TV-1, 2, 3 and 4	Approved
Chemical injection pumps, 2QSS*P24A and B	Approved
VI STA display generator 173, 176 and 309	Approved
System faults 47 and 228	Approved
Digital radiation monitoring system inputs, 244 and 379	Approved
Deletion of communication processor, 138	Approved
Display-related faults, 383	Approved
Point processing faults, 223, 225, 297, 343, 359, 377, 382	Approved
Documentation-related faults, 287, 362	Approved
Logging faults, 331	Approved