June 24, 1986

Docket No. 50-334

Mr. J. J. Carey, Vice President
Nuclear Group
Duquesne Light Company
Post Office Box 4
Shippingport, PA 15077

Dear Mr. Carey:

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Subject: Issuance of Amendment (Licensing Action TAC 59824)

The Commission has issued the enclosed Amendment No. 102 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your application dated February 5, 1986.

The amendment changes the Technical Specifications for Beaver Valley Unit No. 1 by revising the reporting requirements on reactor coolant specific activity from "Special Report" to "Annual Report," and by deleting an action statement regarding limits on operation when radioiodine level is greater than 1 uCi/gm in the primary coolant. Both of these changes are in accordance with NRC Generic Letter 85-19.

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

Sincerely,

/s/

Peter S. Tam, Project Manager
PWR Project Directorate #2
Division of PWR Licensing-A

Enclosures:
1. Amendment No. 102 to DPR-66
2. Safety Evaluation

cc w/enclosures:
See next page

LA:PAD#2	PM:PAD#2	D:PAD#2	OELD
DMiller	PTam:hg	LRubenstein	
6/4/86	6/4/86	6/5/86	6/12/86

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

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-334

BEAVER VALLEY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 102
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company (the licensees) dated February 5, 1986, 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.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 102 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This amendment is effective on issuance, to be implemented no later than 30 days after issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Daniel G. McDonald

acting for Lester S. Rubenstein, Director
PWR Project Directorate #2
Division of PWR Licensing-A

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 24, 1986

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 102 TO FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Revise Appendix A as follows:

Remove Pages	Insert Pages
3/4 4-18	3/4 4-18
3/4 4-19	-
B 3/4 4-5	B 3/4 4-5
6-14	6-14
6-23	6-23

REACTOR COOLANT SYSTEM

SPECIFIC ACTIVITY

LIMITING CONDITION FOR OPERATION

3.4.8 The specific activity of the primary coolant shall be limited to:

a. $\leq$ 1.0μCi/gram DOSE EQUIVALENT I-131, and

b. $\leq 100/\overline{E}$ μCi/gram.

APPLICABILITY: MODES 1, 2, 3, 4 and 5

ACTION

MODES 1, 2, and 3*

a. With the specific activity of the primary coolant >1.0 μCi/gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding the limit line shown on Figure 3.4-1, be in HOT STANDBY with T_{avg} <500°F within 6 hours.

b. With the specific activity of the primary coolant > $100/\overline{E}$ μCi/gram, be in HOT STANDBY with T_{avg} < 500°F within 6 hours.

MODES 1, 2, 3, 4 and 5

a. With the specific activity of the primary coolant > 1.0 μCi/gram DOSE EQUIVALENT I-131 or > $100/\overline{E}$ μCi/gram, perform the sampling and analysis requirement of item 4a of Table 4.4-12 until the specific activity of the primary coolant is restored to within its limits.

SURVEILLANCE REQUIREMENTS

4.4.8 The specific activity of the primary coolant shall be determined to be within the limits be performance of the sampling and analysis program of Table 4.4-12.

* With $T_{avg} \geq$ 500°F

The ACTION statement permitting POWER OPERATION to continue for limited time periods with the primary coolant's specific activity > 1.0 µCi/gram DOSE EQUIVALENT I-131, but within the allowable limit shown on Figure 3.4-1, accommodates possible iodine spiking phenomenon which may occur following changes in THERMAL POWER. Operation with specific activity levels exceeding 1.0 µCi/gram DOSE EQUIVALENT I-131 for more than 48 hours during one continuous time interval or exceeding the limits shown on Figure 3.4-1 must be restricted since the activity levels allowed by Figure 3.4-1 increase the 2-hour thyroid dose at the site boundary by a factor of up to 20 following a postulated steam generator tube rupture.

Reducing T_{avg} to <500°F prevents the release of activity should a steam generator tube rupture since the saturation pressure of the primary coolant is below the lift pressure of the atmospheric steam relief valves. The surveillance requirements provide adequate assurance that excessive specific activity levels in the primary coolant will be detected in sufficient time to take corrective action. Information obtained on iodine spiking will be used to assess the parameters associated with spiking phenomena. A reduction in frequency of isotopic analyses following power changes may be permissible if justified by the data obtained.

3/4.4.9 PRESSURE/TEMPERATURE LIMITS

All components in the Reactor Coolant System are designed to withstand the effects of cyclic loads due to system temperature and pressure changes. These cyclic loads are introduced by normal load transients, reactor trips, and startup and shutdown operations. The various categories of load cycles used for design purposes are provided in Section 4.1.4 of the FSAR. During startup and shutdown, the rates of temperature and pressure changes are limited so that the maximum specified heatup and cooldown rates are consistent with the design assumptions and satisfy the stress limits for cyclic operation.

During heatup, the thermal gradients in the reactor vessel wall produce thermal stresses which vary from compressive at the inner wall to tensile at the outer wall. These thermal-induced compressive stresses tend to alleviate the tensile stresses induced by the internal pressure. Therefore, a pressure-temperature curve based on steady state conditions (i.e., no thermal stresses) represents a lower bound of all similar curves for finite heatup rates when the inner wall of the vessel is treated as the governing location.

ANNUAL REPORTS[1]

6.9.1.4 Annual reports covering the activities of the unit as described below for the previous calendar year shall be submitted prior to March 1 of each year. The intitial report shall be submitted prior to March 1 of the year following intitial criticality.

6.9.1.5 Reports required on an annual basis shall include:

a. A tabulation of the number of station, utility, and other personnel (including contractors) receiving exposures greater than 100 mrem/yr and their associated man-rem exposure according to work and job functions[2] (e.g., reactor operations and surveillance, inservice inspection, routine maintenance, special maintenance (describe maintenance), waste processing, and refueling). The dose assignments to various duty functions may be estimated based on pocket dosimeter, TLD, or film badge measurements. Small exposures totalling less than 20 percent of the individual total dose need not be acounted for. In the aggregate, at least 80 percent of the total whole body dose received from external sources should be assigned to specific major work functions.

b. Documentation of all challenges to the pressurizer power operated relief valves (PORVs) or pressurizer safety valves.

c. The results of specific activity analysis in which the primary coolant exceeded the limits of Specification 3.4.8. The following information shall be included: (1) Reactor power history starting 48 hours prior to the first sample in which the limit was exceeded; (2) Results of the last isotopic analysis for radioiodine performed prior to exceeding the limit, results of analysis while limit was exceeded and results of one analysis after the radioiodine activity was reduced to less than limit. Each result should include date and time of sampling and the radioiodine concentrations; (3) Clean-up system flow history starting 48 hours prior to the first sample in which the limit was exceeded; (4) Graph of the I-131 concentration and one other radioiodine isotope concentration in microcuries per gram as a function of time for the duration of the specific activity above the steady-state level; and (5) The time duration when the specific activity of the primary coolant exceeded the radioiodine limit.

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[1] A single submittal may be made for a multiple unit site. The submittal should combine those sections that are commmon to all units at the site.

[2] This tabulation supplements the requirements of Section 20.407 of 10 CFR Part 20.

a. ECCS Actuation, Specifications 3.5.2 and 3.5.3..

b. Inoperable Seismic Monitoring Instrumentation , Specification 3.3.3.3.

c. Inoperable Meteorological Monitoring Instrumentation, Specification 3.3.3.4.

d. Seismic event analysis, Specification 4.3.3.3.2.

e. Sealed source leakage in excess of limits, Specification 4.7.9.1.3.

f. Fire Detection Instrumentation, Specification 3.3.3.6.

g. Fire Suppression Systems, Specifications 3.7.14.1, 3.7.14.2 and 3.7.14.3 and 3.7.14.5.

h. Miscellaneous reporting requirements specified in the Action Statements for Radiological Effluent Technical Specifications.

i. Containment Inspection Report, Specification 4.6.1.6.2.

6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five (5) years:

a. Records and logs of facility operation covering time interval at each power level.

b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.

c. All REPORTABLE EVENTS.

d. Records of surveillance activities, inspections and calibrations required by these Technical Specifications.

e. Records of reactor tests and experiments.

f. Records of changes made to Operating Procedures.

g. Records of radioactive shipments.

h. Records of sealed source leak tests and results.

i. Records of annual physical inventory of all sealed source material of record.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 102 TO FACILITY OPERATING LICENSE NO. DPR-66

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

BEAVER VALLEY POWER STATION, UNIT NO. 1

DOCKET NO. 50-334

Introduction

Generic Letter 85-19 was issued on September 27, 1985, to inform licensees and applicants for operating licenses that reporting requirements regarding iodine concentration in the primary coolant can be relaxed. Model technical specifications were enclosed with that Generic Letter. By letter dated February 5, 1986, Duquesne Light Company (the licensee, DLC) submitted a request to amend the Beaver Valley Unit 1 Technical Specifications to conform with the model specifications issued in GL 85-19.

Discussion and Evaluation

As part of our continuing program to delete unnecessary reporting requirements, the staff has reviewed the reporting requirements related to primary coolant specific activity levels, specifically, primary coolant iodine spikes. The staff has determined that the reporting requirements for iodine spiking can be reduced from a short-term report (Special Report or Licensee Event Report) to an item which is to be included in the Annual Report. The information to be included in the Annual Report is similar to that previously required in the Licensee Event Report but has been changed to more clearly designate the results to be included from the specific activity analysis and to delete the information regarding fuel burnup by core region.

In our effort to eliminate unnecessary technical specification requirements, we have also determined that the existing requirements to shut down a plant if coolant iodine activity limits are exceeded for 800 hours in a 12-month period can be eliminated. The quality of nuclear fuel has been greatly improved over the past decade with the result that normal coolant iodine activity (i.e., in the absence of iodine spiking) is well below the limit. Appropriate actions would be initiated long before accumulating 800 hours above the iodine activity limit. In addition, 10 CFR 50.72(b)(1)(ii) requires the NRC to be immediately notified of fuel cladding failures that exceed expected values or that are caused by unexpected factors. Therefore, this technical specification limit is no longer considered necessary on the basis that proper fuel management by licensees and existing reporting requirements should preclude ever approaching the limit.

The licensee requested the following changes in the Beaver Valley Unit 1 technical specifications:

(1) delete from Section 3.4.8 the action statement regarding limits on operation when radioiodine level is greater than 1 uCi/gm in the primary coolant;

(2) delete from Section 3.4.8 the action statement regarding submittal of a Special Report;

(3) add item (c) to Section 6.9.1.5 to include the results of specific activity analysis in the Annual Report when the primary coolant has exceeded the limits of Specification 3.4.8;

(4) revise Bases 3/4.4.8 to reflect the new Action statements of Section 3.4.8; and

(5) delete Administrative Control 6.9.2.i to reflect the change in reporting requirements from Special Report to Annual Report.

All the requested changes comply with the model specifications provided in Generic Letter 85-19. Furthermore, these changes do not involve any physical changes to plant safety-related systems, components or structures, will not increase the likelihood of a malfunction of safety-related equipment, increase the consequences of an accident previously analyzed, nor create the possibility of a malfunction different from that previously evaluated. Therefore, the staff concludes that the requested amendment is acceptable.

Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves 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. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 this amendment.

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 the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: June 24, 1986

Principal Contributor:

Peter S. Tam