September 4, 1987

Docket No. 50-334

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

Dear Mr. Sieber:

SUBJECT: ISSUANCE OF AMENDMENT (TAC #65008)

The Commission has issued the enclosed Amendment No. 114 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1, in response to your application dated March 9, 1987.

The amendment changes the Technical Specifications for Beaver Valley Unit 1 to permit the storage of fuel assemblies of enrichment up to 4.5 weight percent U-235 in the fresh fuel racks and the spent fuel storage pool.

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

Sincerely,

/s/

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

Enclosures:
1. Amendment No. 114 to DPR-66
2. Safety Evaluation

cc w/enclosures:
See next page

DISTRIBUTION:
Docket File
NRC & Local PDRs
PDI-4 Reading
S. Varga
B. Boger
P. Tam
OGC-Bethesda
D. Hagan
E. Jordan
J. Partlow
T. Barnhart (4)
Wanda Jones
E. Butcher
S. Norris
ACRS (10)
GPA/PA
ARM/LFMB

LAPDI-4	PDI-4	PDI-4	OGC-Beth	RI	AD:RI	Region I
SNorris	PTam PT	JStolz			BBoger	C. Tripp
8/26/87	8/26/87	8/31/87	/ /87	/ /87	8/31/87	8/31/87 (Concurrence by phone, PSTam)

8709080351 870904
PDR ADOCK 05000334
P PDR

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

September 4, 1987

Posted
Amdt 114
to DPR-66

Docket No. 50-334

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

Dear Mr. Sieber:

SUBJECT: ISSUANCE OF AMENDMENT (TAC #65008)

The Commission has issued the enclosed Amendment No.114 to Facility Operating License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1, in response to your application dated March 9, 1987.

The amendment changes the Technical Specifications for Beaver Valley Unit 1 to permit the storage of fuel assemblies of enrichment up to 4.5 weight percent U-235 in the fresh fuel racks and the spent fuel storage pool.

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

Sincerely,

Peter S. Tam

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

Enclosures:
1. Amendment No. 114 to DPR-66
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. J. D. Sieber
Duquesne Light Company

Beaver Valley 1 Power Station

cc:
Mr. W. S. Lacey
Station Superintendent
Duquesne Light Company
Beaver Valley Power Station
Post Office Box 4
Shippingport, Pennsylvania 15007

Mr. Kenneth Grada, Manager
Safety and Licensing
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077

Mr. John A. Levin
Public Utility Commission
Post Office Box 3265
Harrisburg, Pennsylvania 17120

Gerald Charnoff, Esquire
Jay E. Silberg, Esquire
Shaw, Pittman, Potts and Trowbridge
2300 N Street, N.W.
Washington, DC 20037

Charles E. Thomas, Esquire
Thomas and Thomas
212 Locust Street
Box 999
Harrisburg, Pennsylvania 17108

Marvin Fein
Utility Counsel
City of Pittsburgh
313 City-County Building
Pittsburg, Pennsylvania 15219

Resident Inspector
U.S. Nuclear Regulatory Commission
Post Office Box 298
Shippingport, Pennsylvania 15077

Pennsylvania Power Company
James R. Edgerly
Post Office Box 891
New Castle, Pennsylvania 16103

Mr. W. F. Carmichael, Commissioner
State of West Virginia Department
of Labor
1800 Washington Street, East
Charleston, West Virginia 25305

David K. Heydinger, M.D.
State Director of Health
State Department of Health
1800 Washington Street, East
Charleston, West Virginia 25305

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

Mr. R. Janati
Bureau of Radiation Protection
Pennyslvania Department of
Environmental Resources
P.O. Box 2063
Harrisburg, Pennsylvania 17120

John D. Burrows, P.E.
Director of Utilities
State of Ohio
Public Utilities Commission
180 East Broad Street
Columbus, Ohio 43266-0573

Pennsylvania Office of Consumer
Advocate
ATTN: Michael Bardee
1425 Strawberry Square
Harrisburg, Pennsylvania 17120

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. 114
License No. DPR-66

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

   A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated March 9, 1987, 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. 114 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/ B A Boger

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 4, 1987

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. 114
License No. DPR-66

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

   A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated March 9, 1987, 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. 114 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION

B A Boger

Bruce A. Boger, Assistant Director
for Region I Reactors
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 4, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 114

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove Pages	Insert Pages
-	3/4 9-14
-	3/4 9-15
B 3/4 9-3	B 3/4 9-3
5-4	5-4
5-5	5-5

3/4.9.14 FUEL STORAGE - SPENT FUEL STORAGE POOL

LIMITING CONDITION FOR OPERATION

3.9.14 Fuel is to be stored in the spent fuel storage pool with:

a. The boron concentration in the spent fuel pool maintained greater than or equal to 1050 ppm when moving fuel in the spent fuel pool; and

b. Fuel assembly storage in Region 1 restricted to fuel with an enrichment less than or equal to:

1) 4.5 w/o stored in a 2 of 4 checkerboard configuration; or

2) 4.0 w/o stored in a 3 of 4 checkerboard configuration; and

c. Fuel assembly storage in Region 2 restricted to fuel which has been qualified in accordance with Table 3.9-1

APPLICABILITY: During storage of fuel in the spent fuel pool.

ACTION:

a. Suspend all actions involving movement of fuel in the spent fuel pool if it is determined a fuel assembly has been placed in the incorrect Region until such time as the correct storage location is determined. Move the assembly to its correct location before resumption of any other fuel movement.

b. Suspend all actions involving the movement of fuel in the spent fuel pool if it is determined the pool boron concentration is less than 1050 ppm, until such time as the boron concentration is increased to 1050 ppm or greater.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.14.1 Prior to placing fuel or moving fuel in the spent fuel pool, verify through fuel receipt records for new fuel or by burnup analysis and comparison with Table 3.9-1 that fuel assemblies to be placed into or moved in the spent fuel pool are within the above enrichment limits.

4.9.14.2 Verify the spent fuel pool boron concentration is $\geq$ 1050 ppm:

a. Within 8 hours prior to and at least once per 24 hours during movement of fuel in the spent fuel pool, and

b. At least once per 31 days.

Table 3.9-1

BEAVER VALLEY FUEL ASSEMBLY MINIMUM BURNUP VS. INITIAL U_{235} ENRICHMENT FOR STORAGE IN REGION 2 SPENT FUEL RACKS

Initial U_{235} Enrichment	Assembly Discharge Burnup (GWD/MTU)
3.1	0
3.3	1.6
3.5	3.0
3.7	4.4
3.9	5.8
4.1	7.2
4.3	8.5
4.5	9.7

NOTE: Linear interpolation yields conservative results.

BASES

3/4.9.10 and 3/4.9.11 WATER LEVEL - REACTOR VESSEL AND STORAGE POOL

The restrictions on minimum water level ensure that sufficient water depth is available to remove 99% of the assumed 10% iodine gap activity released from the rupture of an irradiated fuel assembly. The minimum water depth is consistent with the assumptions of the accident analysis.

3/4.9.12 and 3/4.9.13 FUEL BUILDING VENTILATION SYSTEM

The limitations on the storage pool ventilation system ensure that all radioactive material released from an irradiated fuel assembly will be filtered through the HEPA filters and charcoal adsorber prior to discharge to the atmosphere. The OPERABILITY of this system and the resulting iodine removal capacity are consistent with the assumptions of the accident analysis. The spent fuel pool area ventilation system is non-safety related and only recirculates air through the fuel building. The SLCRS portion of the ventilation system is safety-related and continuously filters the fuel building exhaust air. This maintains a negative pressure in the fuel building.

3/4.9.14 FUEL STORAGE - SPENT FUEL STORAGE POOL

The requirements for fuel storage in the spent fuel pool ensure that: (1) the spent fuel pool will remain subcritical during fuel storage; and (2) a uniform boron concentration is maintained in the water volume in the spent fuel pool to provide negative reactivity for postulated accident conditions under the guidelines of ANSI 16.1-1975. The value of 0.95 or less for k_{eff} which includes all uncertainties at the 95/95 probability/confidence level is the acceptance criteria for fuel storage in the spent fuel pool.

The Action Statement applicable to fuel storage in the spent fuel pool ensures that: (1) the spent fuel pool is protected from distortion in the fuel storage pattern that could result in a critical array during the movement of fuel; and (2) the boron concentration is maintained at $\geq$ 1050 ppm (this includes a 50 ppm conservative allowance for uncertainties) during all actions involving movement of fuel in the spent fuel pool.

The Surveillance Requirements applicable to fuel storage in the spent fuel pool ensure that: (1) the fuel assemblies satisfy the analyzed U-235 enrichment limits or an analysis has been performed and it was determined that k_{eff} is $\leq$0.95; and (2) the boron concentration meets the 1050 ppm limit.

DESIGN PRESSURE AND TEMPERATURE

5.2.2 The reactor containment building is designed and shall be maintained for a maximum internal pressure of 45 psig and a temperature of 280°F.

PENETRATIONS

5.2.3 Penetrations through the reactor containment building are designed and shall be maintained in accordance with the original design provisions contained in Section 5.2.4 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

5.3 REACTOR CORE

FUEL ASSEMBLIES

5.3.1 The reactor core shall contain 157 fuel assemblies with each fuel assembly containing 264 fuel rods clad with zircaloy-4, except for fuel assemblies which may be reconstituted to replace fuel rods with non-fueled rods (e.g., zircaloy or stainless steel). Each fuel rod shall have a nominal active fuel length of 144 inches. Reload fuel shall be similar in physical design to the initial core loading and shall have a maximum enrichment of 4.5 weight percent U-235.

CONTROL ROD ASSEMBLIES

5.3.2 The reactor core shall contain 48 full length and no part length control rod assemblies. The full length control rod assemblies shall contain a nominal 142 inches of absorber material. The nominal values of absorber material shall be 80 percent silver, 15 percent indium and 5 percent cadmium. All control rods shall be clad with stainless steel tubing.

5.4 REACTOR COOLANT SYSTEM

DESIGN PRESSURE AND TEMPERATURE

5.4.1 The reactor coolant system is designed and shall be maintained:

a. In accordance with the code requirements specified in Section 4.2 of the FSAR, with allowance for normal degradation pursuant to the applicable Surveillance Requirements,

b. For a pressure of 2485 psig, and

c. For a temperature of 650°F, except for the pressurizer which is 680°F.

VOLUME

5.4.2 The total water and steam volume of the reactor coolant system is 9370 cubic feet at a nominal T_{avg} of 525°F.

5.5 EMERGENCY CORE COOLING SYSTEMS

5.5.1 The emergency core cooling systems are designed and shall be maintained in accordance with the original design provisions contained in Section 6.3 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

5.6 FUEL STORAGE

CRITICALITY

5.6.1 The spent fuel storage racks are designed with a minimum of 12.0625 inch center-to-center distance between fuel assemblies placed in the storage racks. The fuel will be stored in accordance with the provisions described in UFSAR Sections 3.3 and 9.12 to ensure a k_{eff} equivalent to ≤ 0.95 with the storage pool filled with unborated water.

DRAINAGE

5.6.2 The spent fuel storage pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 750' - 10".

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 114 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

By letter dated March 9, 1987, Duquesne Light Company (the licensee) submitted Proposed Operating License Change Request No. 132 to License No. DPR-66 of the Beaver Valley Power Station Unit No. 1 (Docket No. 50-334). The proposed license change would revise Design Features Sections 5.3.1 and 5.6.1 and incorporate a new Section 3.9.14 and associated bases into the Technical Specifications. In particular, the proposed changes would permit the use of fuel assemblies of enrichment up to 4.5 weight percent U-235 in the Beaver Valley spent fuel pool.

1.0 INTRODUCTION

The present spent fuel racks at Beaver Unit 1 consist of unpoisoned stainless steel storage cells which are maintained on a 12.06 in. (nominal) center to center spacing. The cells have walls that are 0.25 inches in thickness and have been licensed by the NRC for storage of fuel assemblies of enrichment up to 3.3 weight percent uranium. No limit on burnup is required and assemblies may be stored in all of the cells.

The proposed change would administratively divide the spent fuel pool into two regions. In region 1 unburned (fresh) fuel would be stored in one of two arrangements - (1) every other cell checkerboard for enrichment up to 4.5 weight percent U-235, or (2) up to 4.0 weight percent in a three out of four arrangement. In region 2 only fuel having a certain burnup dependent on initial enrichment would be stored.

The fresh fuel storage array contains cells similar to those in the spent fuel pool which are arranged in a configuration having a 21-inch center-to-center spacing. Analyses were performed to show that fuel assemblies having enrichments up to 4.5 weight percent U-235 may be safely stored in the array.

2.0 DISCUSSION

The calculations of the k-effective value of the racks were performed with the KENO IV Monte-Carlo code. Cross-sections were calculated with the AMPX system of codes. This calculation method is widely used in the industry and is acceptable. A set of 33 critical experiments were analyzed in order to verify the method and to obtain the calculational bias and uncertainty values to be applied to the results.

2.1 Region 1 Analyses

For the Region 1 Analyses certain input assumptions were used to assure that the results would be conservative. These include:

a. Use of fresh fuel with the maximum enrichment value for each storage configuration i.e., 4.5 weight percent U-235 for the checkerboard array and 4.0 weight percent for the 3 out of 4 array.

b. Use of the Optimized Fuel Assembly (OFA) design since previous calculations for similar fuel racks have shown this fuel to be most reactive.

c. Moderation with pure water at a density of 1.0 gm/cm^3.

d. Replacement of the spacer grids and sleeves by pure water.

e. Use of an array which is infinite in lateral and axial extent which precludes neutron leakage from the array.

Mechanical uncertainties (gap thickness, stainless steel thickness, assembly placement in the racks, etc.), are treated by using "worst case" values. Calculational uncertainties are obtained at 95 percent probability with a 95 percent confidence value and combined statistically. The resulting total uncertainty is added to the calculational bias and the sum is added to the nominal calculated value of k-effective. The result is compared with the staff acceptance criteria value of 0.95 for k-effective.

The input assumptions and treatment of uncertainties is consistent with staff guidance and is acceptable.

The values of k-effective, including biases and uncertainties is 0.905 for the checkerboard storage arrangement and 0.947 for the 3 of 4 storage arrangement. These values meet the staff criterion and are acceptable.

Accident conditions were examined for the Region 1 pool. Most accident conditions result in a reduction in pool k-effective. Those that have a potential for increasing k-effective include not maintaining a proper arrangement (checkerboard or 3 out of 4) and dropping an assembly between the racks and the pool wall. For these conditions credit may be taken for the presence of boron in the pool water. As little as 1000 parts per million of boron reduces the k-effective value by an amount sufficient to overcome any increase due to accident conditions. The staff concludes that accidents in Region 1 have been adequately accounted for.

2.2 Region 2

In Region 2 of the racks fuel will be stored in every location. In order to meet the k-effective value acceptance criterion fuel assemblies with enrichments greater than 3.1 weight percent U-235 will have been burned up by an amount which is dependent on the initial enrichment. The amount of burnup required is obtained by a process known as reactivity equivalencing. A transport theory code is used to obtain the amount of burnup for an assembly of a given enrichment greater than 3.1 weight percent U-235 which yields the same reactivity in the fuel rack geometry as that for the fresh 3.1 weight percent fuel. This is the standard industry procedure and is acceptable.

The transport theory code which was used is the PHOENIX code which was verified by comparison to a number of critical experiments. The atom densities for the fuel assemblies were obtained with the CINDER code which is an industry standard code for such calculations. The staff concludes that acceptable calculation techniques were used for the Region 2 analyses.

The analysis of the k-effective for the racks was performed for fresh fuel having an enrichment of 3.1 weight percent U-235. The PHOENIX code was used to obtain burnup values which yield the same K-effective for initial enrichments greater than 3.1 weight percent. The effect of post-irradiation decay on the k-effective value was studied and calculations were performed with fuel which had decayed to the point of maximum k-effective. Other assumptions made in order to assure conservatism were similar to those for Region 1. The staff concludes that appropriate analysis assumptions were made.

The treatment of uncertainties was similar to that for Region 1 except that an additional uncertainty was applied to the calculation of burnup effects. The staff concludes that uncertainties were appropriately treated for Region 2.

The results of the k-effective calculation for Region 2 was 0.946 including all uncertainties. This meets the staff acceptance criterion of 0.95 for this quantity and is acceptable.

Accident considerations for Region 2 are similar to those for Region 1 and are acceptable.

2.3 Technical Specification

The licensee has proposed Technical Specifications to implement the proposed increase in fuel enrichment. Specification 5.3.1 has been altered to increase the value of maximum enrichment to 4.5 weight percent U-235. This is consistent with the safety analysis and is acceptable. Specification 5.6.1 has been altered to reference the description of the revised storage arrangement in the UFSAR and is acceptable.

The new Specification 3/4.9.14 - Spent Fuel Storage Pool - has been added. This Specification provides the requirements for storage of fuel in Region 1 and 2 of the pool, including the table of required burnup as a function of initial enrichment for Region 2. These requirements are consistent with the analyses and are acceptable. The requirement to maintain the boron concentration in the pool water at 1050 parts per million or greater is also included. This is the amount assumed to be present in the accident configuration analyses and is acceptable.

The surveillance requirements on storage of fuel in the pool include determination of the suitability for storage based on fuel receipt records for new fuel or burnup records for spent fuel. The burnup analysis for storage in Region 2 would be performed prior to removal of the fuel from the reactor. Acceptable assemblies would then be moved directly from the reactor core to Region 2. The staff finds this procedure acceptable for Beaver Valley for the following reasons:

1. The amount of burnup required in order to qualify for storage in Region 2 is small (approximately one quarter of the design burnup). Thus any fuel which has been in the core for one cycle would qualify for storage in Region 2.

2. The burnup analysis will be done under the Beaver Valley quality assurance procedures which require an independent verification of the analysis by a second staff member.

The staff concludes that the proposed Technical Specification changes are acceptable.

2.4 Fresh Fuel Storage

The fresh fuel storage array consists of storage cells of one-eighth inch thick stainless steel with an 21-inch center-to-center spacing. The cells are arranged in a 5x14 array and fuel is stored dry in the cells. Under normal conditions (i.e., without moderator) low enrichment fuel cannot be made critical. It is necessary to explore credible accident conditions, however. Two configurations are analyzed - the case in which the racks are flooded with full-density water and the case in which low-density hydrogen (from sprays, fogs, etc.) surrounds the racks.

The same analysis techniques and initial assumptions were made as those for Region 1 of the spent fuel racks. Appropriate uncertainties were treated and the results were:

k-effective = 0.916 for full-density water
k-effective = 0.941 for optimum low density moderation.

These values meet the staff's acceptance criteria for these quantities and are acceptable.

* * * * * *

Based on the review described above the staff concludes that the proposed increase in the enrichment of fuel assemblies stored in the fresh fuel and spent fuel racks at Beaver Valley is acceptable. The staff further concludes that the proposed Technical Specifications including surveillance requirements provide assurance that the use of higher enrichment fuel will not endanger the public health and safety.

3.0 EMERGENCY CIRCUMSTANCES

These Technical Specifications changes are being issued without a normal 30-day notice period to preclude unjustified expenditure of resources by the licensee. The licensee submitted the amendment request in March 1987, but due to administrative problems solely attributed to the staff, the proposed no-significant-hazards determination was not published in a timely manner. On August 19, 1987, the staff issued a 15-day notice (52 FR 31101) and requested comments by September 3, 1987.

The staff concluded that the licensee did take timely action in this issue.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

In accordance with 10 CFR 50.92, the Commission may make a final determination that a license amendment involves no significant hazards consideration if operation of the facility in accordance with the amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The information in this section provides the staff's evaluation of this license amendment against the three criteria.

The staff has confirmed the basis of the no significant hazards findings described in the notice published in the Federal Register on August 12, 1987 (52 FR 29914) and renoticed on August 19, 1987 (52 FR 31101). The amendment does not involve a significant increase in probability or consequences of accidents previously evaluated.

There is no change in fuel pool hardware, but the associated Updated Final Safety Analysis Report will be changed to include analyses to demonstrate that fuel pool and stored fuel will comply with unchanged performance objectives and limitations (e.g., criticality and heat dissipation). The criticality analysis acceptance criteria ($K_{eff} < 0.95$) is consistent with that stated in the FSAR. The segregation of the spent fuel pool into regions 1 and 2 and appropriate administrative constraints ensure that analysis assumptions are valid and that performance criteria would be met when fuel is not being moved. In addition to the administrative constraints available to maintain appropriate fuel storage configurations, the minimum boron concentration will ensure that criticality will not be achieved even if new fuel assemblies were not stored in the specified checkerboard arrays. Fuel assembly decay heat production is a function of core power level, and since the core power level would remain unchanged, the decay heat load on the spent fuel pool cooling system would not be affected by the proposed enrichment limits.

The radiological consequences of the fuel handling accident are dependent, among other factors, upon power level of the reactor. There is no power level change associated with the proposed amendment and since all other factors would not be changed by this amendment, the consequences of the fuel handling accident would not be changed.

no hardware modification is involved and the changes to existing administrative controls involve only prescription of the loading patterns to accommodate a greater variety of fuel assembly enrichments without change in performance; there is no increase in the probability of the fuel handling accident previously analyzed in the FSAR, and there is no possibility of a new or different type of accident from any previously evaluated. Furthermore, there is no change in any acceptance criterion as stated above; therefore, there is no reduction of a safety margin.

Accordingly, the staff has made a final determination that the requested amendment does not involve a significant hazards consideration.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, consultation was held with the State of Pennsylvania by telephone. The State expressed no concern, either from the standpoint of safety or of our no significant hazards consideration determination.

6.0 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 and changes surveillance requirements. 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 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.

7.0 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: September 4, 1987

Principal Contributors:

W. Brooks, reviewer
W. Hodges, Branch Chief