

October 26, 1993

Docket No. 50-334

Mr. J. D. Sieber, Senior Vice President
and Chief Nuclear Officer
Nuclear Power Division
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077-0004

DISTRIBUTION

Docket File OGC
NRC & Local PDRs EJordan
PDI-3 File ACRS(10)
SVarga OPA
JCalvo RCooper, RI
WButler
SLittle

SUBJECT: BEAVER VALLEY, UNIT 1 - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT - SPENT FUEL POOL EXPANSION (TAC NO. M84673)

By letter dated November 2, 1992, as supplemented in letters dated February 23, 1993, June 28, 1993, July 9, 1993, August 16, 1993 (two letters), September 3, 1993, September 8, 1993, and October 8, 1993, you requested a license amendment to change the Technical Specifications to accommodate a proposed spent fuel pool (SFP) expansion at Beaver Valley, Unit 1. Enclosed is our Environmental Assessment related to this proposed action. Based on our assessment, we have concluded that there are no significant radiological or nonradiological impacts associated with the proposed SFP expansion and it will have no significant impact on the quality of human environment.

We have also enclosed a Notice of Issuance of Environmental Assessment and Finding of No Significant Impact. This notice is being forwarded to the Office of the Federal Register for publication.

Sincerely,

Original signed by
Gordon E. Edison, Sr. Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Environmental Assessment
- 2. Notice of Issuance of Environmental Assessment

cc w/enclosures:
See next page

DISTRIBUTION

OFFICE	PDI-3:LA	PDI-3:PM	PDI-3:PD	OGC	
NAME	SLittle	GEdison:lm	WButler	ADH	
DATE	10/19/93	10/19/93	10/26/93	10/22/93	

280004

NRC FILE CENTER COPY

9311010204 931026
PDR ADOCK 05000334
PDR

DFOI



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

October 26, 1993

Docket No. 50-334

Mr. J. D. Sieber, Senior Vice President
and Chief Nuclear Officer
Nuclear Power Division
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077-0004

SUBJECT: BEAVER VALLEY, UNIT 1 - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT - SPENT FUEL POOL EXPANSION (TAC NO. M84673)

By letter dated November 2, 1992, as supplemented in letters dated February 23, 1993, June 28, 1993, July 9, 1993, August 16, 1993 (two letters), September 3, 1993, September 8, 1993, and October 8, 1993, you requested a license amendment to change the Technical Specifications to accommodate a proposed spent fuel pool (SFP) expansion at Beaver Valley, Unit 1. Enclosed is our Environmental Assessment related to this proposed action. Based on our assessment, we have concluded that there are no significant radiological or nonradiological impacts associated with the proposed SFP expansion and it will have no significant impact on the quality of human environment.

We have also enclosed a Notice of Issuance of Environmental Assessment and Finding of No Significant Impact. This notice is being forwarded to the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in cursive script that reads "Gordon Edison".

Gordon E. Edison, Sr. Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Environmental Assessment
2. Notice of Issuance of Environmental Assessment

cc w/enclosures:
See next page

**Mr. J. D. Sieber
Duquesne Light Company**

**Beaver Valley Power Station
Units 1 & 2**

cc:

**Jay E. Silberg, Esquire
Shaw, Pittman, Potts & Trowbridge
2300 N Street, NW.
Washington, DC 20037**

**Nelson Tonet, Manager
Nuclear Safety
Duquesne Light Company
Post Office Box 4
Shippingport, Pennsylvania 15077**

**Commissioner Roy M. Smith
West Virginia Department of Labor
Building 3, Room 319
Capitol Complex
Charleston, West Virginia 25305**

**John D. Borrows
Director, Utilities Department
Public Utilities Commission
180 East Broad Street
Columbus, Ohio 43266-0573**

**Director, Pennsylvania Emergency
Management Agency
Post Office Box 3321
Harrisburg, Pennsylvania 17105-3321**

**Ohio EPA-DERR
ATTN: Zack A. Clayton
Post Office Box 1049
Columbus, Ohio 43266-0149**

**Bureau of Radiation Protection
Pennsylvania Department of
Environmental Resources
ATTN: R. Barkanic
Post Office Box 2063
Harrisburg, Pennsylvania 17120**

**Mayor of the Borough of
Shippingport
Post Office Box 3
Shippingport, Pennsylvania 15077**

**Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406**

**Resident Inspector
U.S. Nuclear Regulatory Commission
Post Office Box 181
Shippingport, Pennsylvania 15077**

**George S. Thomas
Vice President, Nuclear Services
Nuclear Power Division
Duquesne Light Company
P.O. Box 4
Shippingport, Pennsylvania 15077**



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENVIRONMENTAL ASSESSMENT
BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO EXPANSION OF THE SPENT FUEL POOL
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

1.0 INTRODUCTION

1.1 Description of Proposed Amendment

By letter dated November 2, 1992, as supplemented in letters dated February 23, 1993, June 28, 1993, July 9, 1993, August 16, 1993 (two letters), September 3, 1993, September 8, 1993, and October 8, 1993, Duquesne Light Company (DLC or the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. DPR-66 for the Beaver Valley Nuclear Station, Unit 1 (BV-1). The amendment would increase the combined number of storage locations from 833 to 1627 (including two cans for defective fuel). The increase in spent fuel pool (SFP) capacity would be accomplished by removing the existing storage racks and replacing them with free standing, high-density fuel racks. The new racks are not double-tiered, and will rest on either the fuel pool floor or pool floor plates.

The proposed reracking would meet the objective of keeping radiation exposure as low as is reasonably achievable (ALARA). Shielding from the spent fuel assemblies will be assured by maintaining the water level in the pool at or above a minimum level. Protective clothing and respirators will be worn as required by the Radiation Work Permit. The station radiation protection staff will closely monitor and control all aspects of the work.

1.2 Need for Increased Storage Capacity

BV-1 has a SFP which, at the present time, contains interconnected spent fuel storage racks with a total capacity of 833 storage cells. Because all spent fuel generated so far from operation of the facility has been stored onsite in this pool, the SFP is approaching its maximum storage capacity. After 1996,

the SFP will no longer have full-core offload storage capability. Therefore, to preclude this situation, the licensee will install high density spent fuel storage racks.

1.3 Alternatives

Commercial reprocessing of spent fuel has not developed as originally anticipated. In 1975, the Commission directed the staff to perform a Generic Environmental Impact Statement (GEIS) on spent fuel storage. The Commission directed the staff to evaluate alternatives for the handling and storage of spent light water power reactor fuel with particular emphasis on developing long-range policy. The GEIS was to consider alternative methods of spent fuel storage as well as the possible restrictions on termination of the generation of spent fuel through reactor shutdown.

A "Final Generic Environmental Impact Statement (FGEIS) on Handling and Storage of Spent Light Water Power Reactor Fuel" (NUREG-0575, Volumes 1-3) was issued by the Commission in August 1979. The finding of the FGEIS is that the environmental costs of interim storage are essentially negligible, regardless of where such spent fuel is stored. A comparison of the impact costs of various alternatives reflects the advantage of continued generation of nuclear power versus its replacement by coal-fired power generation. Continued generation of nuclear power versus its replacement by oil-fired generation provides an even greater economic advantage. In the bounding case considered in the FGEIS, that of shutting down the reactor when the existing spent fuel storage capacity is filled, the cost of replacing nuclear stations before the end of their normal lifetime makes this alternative uneconomical. The storage of spent fuel as evaluated in NUREG-0575 is considered to be an interim action, not a final solution to permanent disposal.

One spent fuel storage alternative considered in detail in the FGEIS is the expansion of the onsite fuel storage capacity by modification of the existing SFPs. Over 100 applications for SFP expansion have either been approved or are under consideration by the Commission. The finding in each has been that the environmental impact of such increased storage capacity is negligible. Since there are variations in storage design and limitations caused by spent fuel already in storage, however, the FGEIS recommends that licensing reviews be done on a case-by-case basis, so as to resolve plant-specific concerns.

The continuing validity and site-specific applicability of the conclusions in NUREG-0575 have been confirmed in the Environmental Assessments for the Surry and H.B. Robinson plants' independent spent fuel storage installations.

The licensee has considered several alternatives to the proposed action of the SFP expansion, including fuel consolidation and dry cask storage. The staff has evaluated these and certain other alternatives. The following alternatives were considered by the staff:

- (1) Shipment of fuel to a permanent Federal fuel storage/disposal facility.
- (2) Shipment of fuel to a reprocessing facility.
- (3) Shipment of fuel to another utility or site for storage.
- (4) Reduction of spent fuel generation.
- (5) Construction of a new independent spent fuel storage installation.
- (6) No action taken.

Each of these alternatives is discussed below.

(1) Shipment of Fuel to a Permanent Federal Fuel Storage/Disposal Facility

Shipment of fuel to a permanent Federal fuel storage disposal facility is an alternative to increasing the onsite spent fuel storage capacity. The U.S. Department of Energy (DOE) is developing a repository under the Nuclear Waste Policy Act of 1982 (NWP). The facility, however, is not likely to be able to receive spent fuel until approximately 2010, at the earliest. The existing BV-1 spent fuel storage pool will lose full core offload capability in 1996. Therefore, spent fuel acceptance and disposal by DOE is not an alternative to increased onsite pool storage capacity.

As an interim measure, shipment to a Monitored Retrievable Storage (MRS) facility is another alternative to increasing the onsite spent fuel storage capacity. DOE, under the NWP, has recently submitted its MRS proposal to Congress. Because Congress has not authorized an MRS, and because the data on the availability of this facility is uncertain, this alternative does not meet the near-term storage needs of BV-1.

Under the NWP, the Federal Government has the responsibility to provide not more than 1900 metric tons capacity for the interim storage of spent fuel. The impacts of storing spent fuel at a Federal Interim Storage (FIS) facility fall within those already assessed by the Commission in NUREG-0575. In enacting NWP, Congress found that the owners and operators of nuclear power stations have the primary responsibility for providing interim storage for spent nuclear fuel. In accordance with the NWP and 10 CFR Part 53, shipping of spent fuel to an FIS facility is considered a last resort alternative. At this time, the licensee cannot take advantage of FIS because existing storage capacity is not maximized.

(2) Shipment of Fuel to a Reprocessing Facility.

Reprocessing of spent fuel from BV-1 is not viable because there is no operating commercial reprocessing facility in the United States, nor is there the prospect of one in the foreseeable future.

(3) Shipment of Fuel to Another Utility or Site for Storage

The shipment of fuel from BV-1 to the storage facility of another utility would provide short-term relief from the storage problem. The NWPA and 10 CFR Part 53, however, clearly place the responsibility for the interim storage of spent nuclear fuel with each owner or operator of a nuclear power plant. The shipment of the fuel to another site is not an acceptable alternative because of increased fuel handling risks and additional occupational radiation exposure, as well as the fact that no additional storage capacity would be created.

(4) Reduction of Spent Fuel Generation

Improved usage of fuel in the reactor and/or operation at a reduced power level would extend the life of the fuel in the reactor. In the case of extended burnup of fuel assemblies, the fuel cycle would be extended, and fewer offloads would take place. Through increasing the enrichment of the fuel, the licensee is already working toward extended fuel cycles. As discussed in item 1, however, full-core offload capability will be lost in the near future. Operations at reduced power would not make effective use of available resources, and would cause unnecessary economic hardship on the licensee and its customers. Therefore, reduction of the amount of spent nuclear fuel generated is not a practical alternative for BV-1.

(5) Construction of a New Independent Spent Fuel Storage Installation (ISFSI)

Additional storage capacity could be developed by building a new ISFSI. This facility could be either a pool, similar to the existing facility, or a dry storage installation. The staff has generically assessed the impacts of the pool alternative and found, as reported in NUREG-0575, that the storage of spent light water reactor fuel in water pools has an insignificant impact on the environment. The staff has not made a generic assessment of the dry storage option; however, assessments for the dry cask ISFSI at the Surry Power Station and the dry modular concrete ISFSI at the H.B. Robinson Steam Electric Plant and the Oconee Nuclear Station resulted in findings of no significant impact.

While these alternatives are environmentally acceptable, such a new storage facility, either at BV-1 or offsite, would require new site-specific engineering and design, including equipment for the transfer of spent fuel. Commission review, evaluation, and licensing of such a facility would also be required. It is not likely that this entire effort would be completed in time to meet the need for additional capacity as discussed in item (1). Furthermore, such construction would not use the existing expansion capacity of the existing pool, and thus would waste resources.

(6) No Action Taken

If no action were taken, the storage capacity would become exhausted in the near future and BV-1 would have to shut down. This alternative is considered a waste of an available resource, BV-1 itself, and is not considered viable.

SUMMARY OF ALTERNATIVES

The only viable long-term alternative solution to the licensee's spent fuel storage problem is the construction of an ISFSI; however, it is not likely that the construction of such a facility could be completed in a timely manner. Furthermore, construction of such a facility would be a waste of available resources, in that it would fail to utilize the expansion capacity of the existing spent fuel pool.

1.4 Fuel Reprocessing History

Currently, commercial fuel is not being reprocessed in the United States. The Nuclear Fuel Services (NFS) plant at West Valley, New York, was shut down in 1972 for alterations and expansion. In September 1976, NFS informed the Commission that it was withdrawing from the nuclear fuel reprocessing business.

The proposed Allied General Nuclear Services (AGNS) plant in Barnwell, South Carolina, is not yet licensed to operate. The General Electrical Company (GE) Morris operation in Morris, Illinois, has been decommissioned.

In 1977, President Carter issued a policy statement on commercial reprocessing of spent nuclear fuel that effectively eliminated reprocessing as part of the near-term nuclear fuel cycle.

Although no plants are licensed for reprocessing fuel, the storage pools at Morris and West Valley are licensed to store spent fuel. The storage pool at West Valley is not full, but the licensee is not presently accepting any additional spent fuel for storage. On May 4, 1982, the license held by GE for spent fuel storage activities at its Morris operation was renewed for another 20 years; however, GE is committed to accept only limited quantities of additional spent fuel for storage at this facility from Cooper and San Onofre Unit 1.

2.0 RADIOACTIVE WASTES

The BV-1 design contains waste treatment systems designed to collect and process the gaseous, liquid, and solid waste that might contain radioactive material. The radioactive waste treatment systems are evaluated in the Final Environmental Statement (FES) dated July 1973. The proposed rerack will not involve any change in the waste treatment systems described in the FES.

2.1 Radioactive Material Released to the Atmosphere

With respect to releases of gaseous materials to the atmosphere, the only radioactive gas of significance that could be attributable to storing additional spent fuel assemblies for a longer time is the radionuclide Krypton-85 (Kr-85). Experience has demonstrated that after spent fuel has decayed 4 to 6 months, there is no longer a significant release of fission products, including Kr-85, from stored spent fuel containing cladding defects. To determine the average annual release of Kr-85, it was assumed that all of the Kr-85 released from any defective fuel discharged to the SFP would be released before the next refueling. Enlarging the storage capacity of the SFP has no effect on the calculated average annual quantities of Kr-85 released to the atmosphere. There may be some small change in the calculated quantities due to a change in fuel burnup; however, this is expected to be a small fraction of the calculated annual quantities. Historically, actual Kr-85 releases have been a small fraction of that assumed in the BV-1 FES. For example, the FES estimates release of 759 curies/year; actual release for 12 months during 1992 and 1993 was about 25 curies.

Iodine-131 releases from spent fuel assemblies to the SFP water will not increase significantly since Iodine-131 will decay to negligible levels between refuelings.

Most of the tritium in the SFP water results from activation of boron and lithium in the primary coolant and this will not be affected by the proposed changes. A relatively small amount of tritium is contributed during reactor operation by fissioning of reactor fuel and subsequent diffusion of the tritium through the fuel and cladding. Tritium releases from the fuel assemblies occur mainly during reactor operations and, to a limited extent, shortly after shutdown. Thus, expanding the SFP capacity will not increase the tritium activity in the pool.

Storing additional spent fuel assemblies is not expected to increase the bulk water temperature during normal refueling above the value used in the design analysis. Therefore, it is not expected that there will be any significant change in the annual release of tritium or iodine as a result of the proposed modifications from that previously evaluated in the FES. Most airborne releases of tritium and iodine result from evaporation of reactor coolant, which contains tritium and iodine in higher concentrations than the SFP. Therefore, even if there were a higher evaporation rate from the SFP, the resulting tritium and iodine releases would be small in comparison to the amount already evaluated in the FES. The SFP exhaust system must be operating and discharging through both high-efficiency particulate air (HEPA) and charcoal filters whenever spent fuel is being moved, and whenever loads are being carried over the pool.

2.2 Solid Radioactive Wastes

Currently, about 30 to 40 cubic feet of solid radioactive waste per year is generated by the SFP cleanup system. No significant increase in volume of solid radioactive wastes is expected as a result of the expansion of the capacity of the SFP.

There are 17 spent fuel racks (weighing approximately 450,000 pounds) that will be removed from the SFP and be disposed of. The licensee intends to decontaminate the old racks to the extent possible to minimize the amount of solid radioactive waste generated by the rerack project. That portion of the racks that is not able to be decontaminated will be packaged, shipped to a processing facility for volume reduction (to about 5-10% of their original volume), and either sent to a licensed radioactive burial site, or to a radioactive material melting facility.

It is not expected that either the rerack or the disposal of the existing spent fuel storage racks will have a significant effect on the quality of the human environment.

2.3 Radioactive Material Released to Receiving Waters

There should not be a significant increase in the liquid release of radionuclides from the plant as a result of the modifications. The SFP cooling and cleanup systems operate as a closed system. The SFP demineralizer resin removes soluble radioactive materials from the SFP water. These resins are periodically replaced (i.e., annually) and disposed of as solid radiative waste. The amount of activity in the resin may increase slightly due to the increased amount of spent fuel in the pool; however, the amount of radioactivity released to the environment as a result of the proposed change would be negligible.

3.0 RADIOLOGICAL IMPACT ASSESSMENT

Operating experience shows dose rates of 0.5 to 2.0 mrem/hour, with most areas less than 1 mrem/hour at the edge of and above the center of the pool, regardless of the quantity of fuel stored. These dose rates may temporarily increase to about 3 mrem/hour during refueling operations. This is not expected to change with the proposed reracking because radiation levels above the pool are due primarily to activity in the water, which experience shows will return to an equilibrium value. Stored spent fuel is so well shielded by the water in the pool that dose rates at the top of the pool from this source are negligible. Additionally, there has been no crud built up along the sides of the pool. Should crud buildup ever be detected, it could easily be washed down. Furthermore, the water level in the SFP will be kept as high as possible in order to maintain exposure levels as low as is reasonably achievable. Therefore, increased exposure due to this source is considered negligible. There is no noticeable concentration of airborne activity in the area of the SFP. The proposed reracking is not expected to increase this activity. Area monitors for airborne activities are available in the

immediate vicinity of the SFP. Therefore, the staff concludes that the proposed SFP expansion will not result in any significant long-term increases in doses received by workers.

The total occupational exposure to plant workers as a result of the reracking operation is estimated to be 6-12 person-rem, assuming dose rates between 2.5 mrem/hr to 5 mrem/hr for most of the operation. The effort is estimated to involve above 2000 person hours of work and it is not anticipated that divers will be needed to complete the operation. The reracking operation will utilize detailed procedures prepared with full consideration of ALARA principles. Similar operations have been performed at a number of other facilities in the past and there is every reason to believe that reracking can be safely and efficiently accomplished at BV-1, with minimum radiation exposure to personnel.

4.0 NONRADIOLOGICAL IMPACT

The only nonradiological effluent affected by the SFP expansion is the additional spent fuel waste heat rejected from the plant. The total increase in heat load rejected to the environment will be small in comparison to the amount of total heat currently being released. No impact on aquatic life is expected. Thus, the increase in rejected heat will have a negligible effect on the environment.

The licensee has not proposed any change in the use or discharge of chemicals in conjunction with the expansion of the SFP. The proposed expansion will not require any change to the National Pollution Discharge Elimination System permit. Therefore, the staff concludes that the nonradiological environmental impacts of expanding the SFP will be insignificant.

5.0 SEVERE ACCIDENT CONSIDERATIONS

The staff, in its related Safety Evaluation to be issued at a later date, has addressed both the safety and environmental aspects of a fuel handling accident. A fuel handling accident bounds the potential consequences of an accident attributable to operation of a SFP with high density racks. A fuel handling accident may be viewed as a "reasonably foreseeable" design basis event which the pool and its associated structures systems and components (including the racks) are designed and constructed to prevent. The environmental impacts of the accident were found not to be significant.

The staff has considered accidents whose consequences might exceed a fuel handling accident, that is, beyond design basis events. An accident evaluated by the staff involves a structural failure of the SFP resulting in loss of all contained cooling water followed by fuel heatup and Zircaloy cladding fire. The details of this severe accident are discussed in NUREG/ CR-4982, entitled "Severe Accidents in Spent Fuel Pools in Support of Generic Issue 82." Subsequently, the staff issued NUREG/CR-5176, entitled "Seismic Failure and Cask Drop Analysis of the Spent Fuel Pools at Two Representative Nuclear Power

Plants." This report considers the structural integrity of the SFP and the pool response to the circumstances considered. More recently, the staff issued NUREG//CR-5281, "Value/Impact Analysis of Accident Preventive and Mitigative Options for Spent Fuel Pools" and NUREG-1353 "Regulatory Analysis for the Resolution of Generic Issue 82: Beyond Design Basis Accidents in Spent Fuel Pools." In NUREG-1353, the staff concluded that Generic Issue 82 concerning the possibility of Zircaloy cladding fires in SFPs was resolved and required no further study.

The staff believes that the probability of severe structural damage occurring at BV-1 is extremely low. This belief is based upon the Commission's requirements for the design and construction of SFPs and their contents, and on the licensee's adherence to approved industry codes and standards. For example, in the BV-1 case the pool is an integral part of the fuel building. The spent fuel storage racks are Seismic Category 1 and, thus, are required to remain functional during and after a safe shutdown earthquake. The cooling water system is extremely reliable. In the unlikely event of a total loss of the cooling system, makeup water sources are available.

The staff acknowledges that if the severe accidents occurred as above the environmental impacts could be significant; however, these events are unlikely and are not reasonably foreseeable in light of the design of the SFP and racks. Therefore, further discussion of severe accidents is not warranted, and the staff concludes that an environmental impact statement need not be prepared.

6.0 SUMMARY

The FGEIS on Handling and Storage of Spent Light Water Reactor Fuel concluded that the cost of the various alternatives reflects the advantage of continued generation of nuclear power with the accompanying spent fuel storage. Because of the differences in SFP designs, the FGEIS recommended environmental evaluation of SFP expansions on a case-by-case basis.

The occupational radiation dose for the proposed operation of the expanded SFP is extremely small compared to the annual occupational exposure (normally about 400 person-rem in a year which includes a refueling outage) for a facility of this type. The small increase in radiation dose should not affect the licensee's ability to maintain individual occupational doses at BV-1 within the limits of 10 CFR Part 20, and as low as reasonably achievable. Furthermore, the nonradiological impacts of expanding the SFP will be insignificant, and none of the alternatives are practical or reasonable.

6.1 Alternative Use of Resources

This action does not involve the use of resources not previously considered in connection with the Commission's Final Environmental Statement, dated July, 1 1973, in connection with BV-1.

6.2 Agencies and Persons Consulted

The staff reviewed the licensee's request. The staff also consulted with the State of Pennsylvania regarding the environmental impact of the proposed action.

7.0 BASIS AND CONCLUSIONS FOR NOT PREPARING AN ENVIRONMENTAL IMPACT STATEMENT

The staff has reviewed the proposed SFP modification to BV-1 relative to the requirements set forth in 10 CFR Part 51. Based upon the environmental assessment, the staff has concluded that there are no significant radiological or nonradiological impacts associated with the proposed action and that the proposed license amendment will not have a significant effect on the quality of the human environment. Therefore, the Commission has determined, pursuant to 10 CFR 51.31, not to prepare an environmental impact statement for the proposed amendment.

Principal Contributor: G. Edison

Date: October 26, 1993

UNITED STATES NUCLEAR REGULATORY COMMISSION

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-334

NOTICE OF ISSUANCE OF ENVIRONMENTAL ASSESSMENT AND

FINDING OF NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-66, issued to the Duquesne Light Company (DLC, or the licensee), for operation of the Beaver Valley Nuclear Station, Unit 1 (BV-1), located in Beaver County, Pennsylvania.

Identification of Proposed Action:

The amendment would consist of changes to the Technical Specifications (TSs) and would authorize an increase of the storage capacity of the spent fuel pool (SFP) from 833 fuel assemblies to 1627 fuel assemblies.

The amendment to the TS is responsive to the licensee's application dated November 2, 1992, as supplemented in letters dated February 23, 1993, June 28, 1993, July 9, 1993, August 16, 1993 (two letters), September 3, 1993, September 8, 1993, and October 8, 1993. The NRC staff has prepared an Environmental Assessment of the Proposed Action.

Summary of Environmental Assessment:

The "Final Generic Environmental Impact Statement (FGEIS) on Handling and Storage of Spent Light Water Power Reactor Fuel" (NUREG-0575), Volumes 1-3, concluded that the environmental impact of interim storage of spent fuel was

negligible and the cost of the various alternatives reflects the advantage of continued generation of nuclear power with the accompanying spent fuel storage. Because of the differences in design, the FGEIS recommended evaluating SFP expansions on a case-by-case basis.

For BV-1, the expansion of the storage capacity of the SFP will not create any significant additional radiological effects or nonradiological environmental impacts.

The additional whole body dose that might be received by an individual at the site boundary and the estimated dose to the population within an 80 kilometer radius is believed to be too small to have any significance when compared to the fluctuations in the annual dose this population receives from exposure to background radiation. The occupational radiation dose for the proposed operation of the expanded SFP is estimated to be extremely small compared to the total annual occupational radiation exposure for this facility.

The only nonradiological impact affected by the SFP expansion is the waste heat rejected. The total increase in heat load rejected to the environment will be small in comparison to the amount of total heat currently being released. There is no significant environmental impact attributed to the waste heat from the plant due to this very small increase.

FINDING OF NO SIGNIFICANT IMPACT

The staff has reviewed the proposed SFP expansion to the facility relative to the requirements set forth in 10 CFR Part 51. Based on this assessment, the NRC staff concludes that there are no significant radiological or nonradiological impacts associated with the proposed action and that the

issuance of the proposed amendment to the license will have no significant impact on the quality of the human environment. Therefore, pursuant to 10 CFR 51.31, no environmental impact statement needs to be prepared for this action.

For further details with respect to this action, see (1) the application for amendment to the TSs dated November 2, 1992, as supplemented in letters dated February 23, 1993, June 28, 1993, July 9, 1993, August 16, 1993 (two letters), September 3, 1993, September 8, 1993, and October 8, 1993, (2) the FGEIS on Handling and Storage of Spent Light Water Power Reactor Fuel (NUREG-0575), (3) the Final Environmental Statement for the Beaver Valley Power Station, Unit 1 dated July 1973, and (4) the Environmental Assessment dated October 26, 1993 .

These documents are available for public inspection at the Commission's Public Document Room, 2120 L Street, NW., Washington, DC 20555, and at the local public document room located at B.F. Jones Memorial Library, 663 Franklin Avenue, Aliquippa, Pennsylvania 15001.

Dated at Rockville, Maryland, this 26th day of October 1993.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation