

JUL 7 1976

Docket No. 50-334

Duquesne Light Company  
Attn: Mr. Earl J. Woolever  
Vice President  
435 Sixth Avenue  
Pittsburgh, Pennsylvania 15219

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Attorney, OELD  
INelson, PNL

Gentlemen:

The Commission has issued the enclosed Amendment No. 5 to Facility License No. DPR-66 for the Beaver Valley Power Station, Unit No. 1. This amendment is in response to your request dated March 24, 1976.

This amendment revises the provisions in the Technical Specifications relating to the plankton entrainment monitoring procedures and clarifies the monitoring procedures for dissolved oxygen. The amendment also corrects a typographical error in the original Technical Specifications.

We have evaluated the potential for environmental impact of plant operation in accordance with the enclosed amendment. The amendment applies to monitoring procedures and to administrative details. This amendment will provide for more accurate monitoring data which will reflect actual conditions for ichthyoplankton entrainment. The amendment also clarifies the ambiguity regarding dissolved oxygen instrument calibration requirements. Therefore, the Commission is in agreement with the proposed change. We determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level, and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §1.5(d)(4) that an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Since the amendment applies only to monitoring procedures and administrative details, it does not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a

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Duquesne Light Company

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significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

A copy of the related Federal Register Notice is also enclosed.

Sincerely,

*Original signed by  
Wm. H. Regan, Jr.*

Wm. H. Regan, Jr., Chief  
Environmental Projects Branch 3  
Division of Site Safety and  
Environmental Analysis

Enclosures:

- 1. Amendment No. 5 to DPR-66
- 2. Federal Register Notice

cc w/encl: (see attached list)

bcc w/encl:

- J. R. Buchanan, ORNL
- T. B. Abernathy, DTIE
- A. Rosenthal, ASLAB
- J. Yore, ASLBP

*No concurrence -  
see note  
mjh*

OFFICE →	DSE:EP-3	DSE:EP-3	DSE:EP-3	LWR-5	OELD	DSE:ADEN
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DATE →	6/8/76	6/9/76	6/9/76	6/10/76	6/15/76	6/19/76

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Mr. Carl Frasure  
Committee of State Officials on  
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2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

S/  
 Voss A. Moore, Assistant Director  
 for Environmental Projects  
 Division of Site Safety and  
 Environmental Analysis

Attachment:  
 Changes to the  
 Technical Specifications

Date of Issuance: JUL 7 1976

OFFICE >	DSE:EP-3	DSE:EP-3	DSE:EP-3	LWR-5	OELD	DSE:ADEP
SURNAME >	<i>md</i> MDuncan:wm	SBajwa <i>MB</i>	WReg <i>WR</i>	JAngeTo	<i>mws</i>	<i>VM</i>
DATE >	6/8/76	6/9/76	6/9/76	6/ /76	6/15/76	8/6/76

ATTACHMENT TO LICENSE AMENDMENT NO. 5

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Replace the existing pages of the Appendix B Technical Specifications listed below with attached revised pages bearing the same numbers, except as otherwise noted. Changes on these pages are shown by marginal lines.

Pages iii

- v
- 2-11
- 3-9
- 3-15
- 3-15a (Add)
- 3-15b (Add)
- 3-15c (Add)
- 3-15d (Add)
- 3-16

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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. 5  
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 March 24, 1976, 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;
  - E. After weighing the environmental aspects involved, 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.

LIST OF FIGURES

<u>Figure Number</u>	<u>Title</u>	<u>Page No.</u>
3.1-1	Study Area and Sampling Locations for BVPS Unit 1	3-5
3.1-2	The Plant Water Intake Structure	3-15b
3.1-3	BVPS Intake Structure	3-15c
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3.2-1	Environmental Media and Exposure Pathways	3-23
3.2-2	Environmental Monitoring Offsite Sampling Locations - Water	3-26
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3.2-5	Environmental Monitoring Sampling Locations - Milk	3-29
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3.2-7	Environmental Monitoring Sampling Locations - TLD's	3-31
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5.1-1	Duquesne Light Co., Power Stations Department, Partial Organizational Chart Relative to Environmental Matters	5-2

Schedule for the Implementation of  
the Environmental Technical  
Specifications

- a. All Sections will be implemented with the issuance of the Operating License.

TABLE 2.4-3  
GAMMA AND BETA DOSE FACTORS FOR  
BEAVER VALLEY, UNIT 1

Noble Gas Radionuclide	$X/Q = 2.6 \times 10^{-5} \text{ sec/m}^3$ (610 meters, NE)				$X/Q = 1.1 \times 10^{-8} \text{ sec/m}^3$ (515 meters, NE)			
	Dose Factors for Vent				Dose Factors for Stack			
	$K_{iv}$ Total Body $\frac{\text{rem/yr}}{\text{Ci/sec}}$	$L_{iv}$ Skin $\frac{\text{rem/yr}}{\text{Ci/sec}}$	$M_{iv}$ Beta Air $\frac{\text{rad/yr}}{\text{Ci/sec}}$	$N_{iv}$ Gamma Air $\frac{\text{rad/yr}}{\text{Ci/sec}}$	$K_{is}$ Total Body $\frac{\text{rem/yr}}{\text{Ci/sec}}$	$L_{is}$ Skin $\frac{\text{rem/yr}}{\text{Ci/sec}}$	$M_{is}$ Beta Air $\frac{\text{rad/yr}}{\text{Ci/sec}}$	$N_{is}$ Gamma Air $\frac{\text{rad/yr}}{\text{Ci/sec}}$
Kr-83m	$9.0 \times 10^{-4}$	0	7.5	0.63	$9.0 \times 10^{-7}$	0	$3.2 \times 10^{-3}$	$4.1 \times 10^{-5}$
Kr-85m	8.5	38	51	9.0	0.22	0.016	0.022	0.23
Kr-85	0.10	35	51	0.11	$4.3 \times 10^{-3}$	0.0015	0.021	$4.6 \times 10^{-3}$
Kr-87	25	250	270	27	1.4	0.11	0.11	1.4
Kr-88	64	62	76	67	3.5	0.026	0.032	3.7
Kr-89	4.8	260	280	5.1	0.61	0.11	0.12	0.64
Xe-131m	3.2	12	29	4.2	0.046	$5.2 \times 10^{-3}$	0.012	0.049
Xe-133m	2.5	26	38	3.6	0.039	0.011	0.016	0.042
Xe-133	2.9	7.9	27	3.7	0.030	$3.4 \times 10^{-3}$	0.012	0.031
Xe-135m	9.5	19	19	10	0.51	$7.8 \times 10^{-3}$	$8.1 \times 10^{-3}$	0.54
Xe-135	13	48	64	13	0.39	0.020	0.027	0.41
Xe-137	0.75	320	330	0.79	0.067	0.13	0.14	0.071
Xe-138	22.0	110	120	23	1.4	0.045	0.052	1.4

### Specification

Dissolved oxygen shall be monitored monthly in a vertical profile at Sampling Station (transect) Nos. 1, 2 and 3 (Table 3.1-2) using portable equipment. Measurement of DO shall be performed at three positions and two depths (surface and bottom) along each transect. The three positions shall be left and right banks and mid-river. Instrument calibration shall be performed before measurements are taken on any given sampling day, and following completion of sampling (end of day).

### Reporting Requirement

Results of the data gathered in the program element shall be reported in accordance with Section 5.6.1. In the event that concentrations less than 4.0 mg/l are found, a report shall be submitted as specified in Section 5.6.2 B if attributable to BVPS operation.

### Bases

For the protection of aquatic life, the Pennsylvania Department of Environmental Resources and the Ohio River Valley Sanitation Commission (ORSANCO) have established the following Dissolved Oxygen Criteria: minimum daily average 5.0 mg/l; no values less than 4.0 mg/l.

### 3.1.3.3 Benthos

#### Objective

To determine the ecological condition of the benthic community and to assess if adverse environmental impact to the benthic community shall occur from BVPS operation.

#### Specification

Benthic data describing species composition, abundance and diversity shall be evaluated to determine if community changes can be related to the BVPS Unit 1 discharge.

Benthic samples shall be taken quarterly at Sampling Stations 1, 2 and 3 (Table 3.1-2). At each station, triplicate Ponar dredge samples shall be collected at three positions (right and left banks and mid-river) along each transect line. In the back channel of Phillis Island (Station No. 2) three dredge samples shall be taken, one along each shoreline and mid-channel.

Dredge samples shall be washed through standard sieves and wash buckets to remove as much of the mud and fine particulate matter as possible. Samples are then transferred to containers, labeled and preserved with formaldehyde.

During the 24-hour period, the number and length of each species which washes through the holes in the trash basket shall be determined by: (1) placing a 1/4" mesh net around and under the trash basket or (2) placing a similar net around the discharge pipe returning screen wash water to the river or (3) placing 1/4 mesh net inside the trash basket.

#### Reporting Requirement

An assessment of data collected in this program element shall be reported in accordance with Section 5.6.1.

#### Bases

Collection of impinged fish in the river water trash basket on a weekly basis shall assure that the majority of the fish species being impinged shall be identified and an estimate of fish loss resulting from normal plant operation shall be provided. The significance of these losses shall be assessed by comparing impingement at the intake with data collected in the river.

### 3.1.3.8 Plankton Entrainment

#### A. Ichthyoplankton

##### Objective

To determine the number and kinds of ichthyoplankton (fish eggs and larvae) entrained in the intake water and quantitatively compare these data with ichthyoplankton data from the river.

##### Specification

A set of day samples and a set of night samples shall be collected at each operating intake bay and along a transect crossing the river in front and just upstream of the intake structure. These samples shall constitute one (1) 24 hour ichthyoplankton entrainment survey. A total of eight (8) surveys shall be conducted, one (1) every two (2) weeks beginning in April and ending in July. This time period encompasses the spawning season of the majority of fish species present in the Ohio River near the BVPS. The entrainment program surveys will alternate with the surveys in Section 3.1.3.6 within the limits noted.

Intake samples (Figure 3.1-2) shall be collected at each operating intake bay by making a number of vertical plankton net hauls to encompass the width of each operating intake bay. River samples shall be collected by making a number of stationary plankton net collections at five equidistant locations and several depths along the transect.

Intake samples shall be collected from a walkway which crosses the width of each intake bay (Figures 3.1-3 and 3.1-4). A composite sample at each operating intake bay shall be collected by making plankton net (Size 505 micron, one meter) vertical hauls. The number of hauls shall vary depending on the water depth in the bay. A total volume of approximately 75 cubic meters of water will be sampled. This volume is based on a 100% filtration efficiency of the haul.

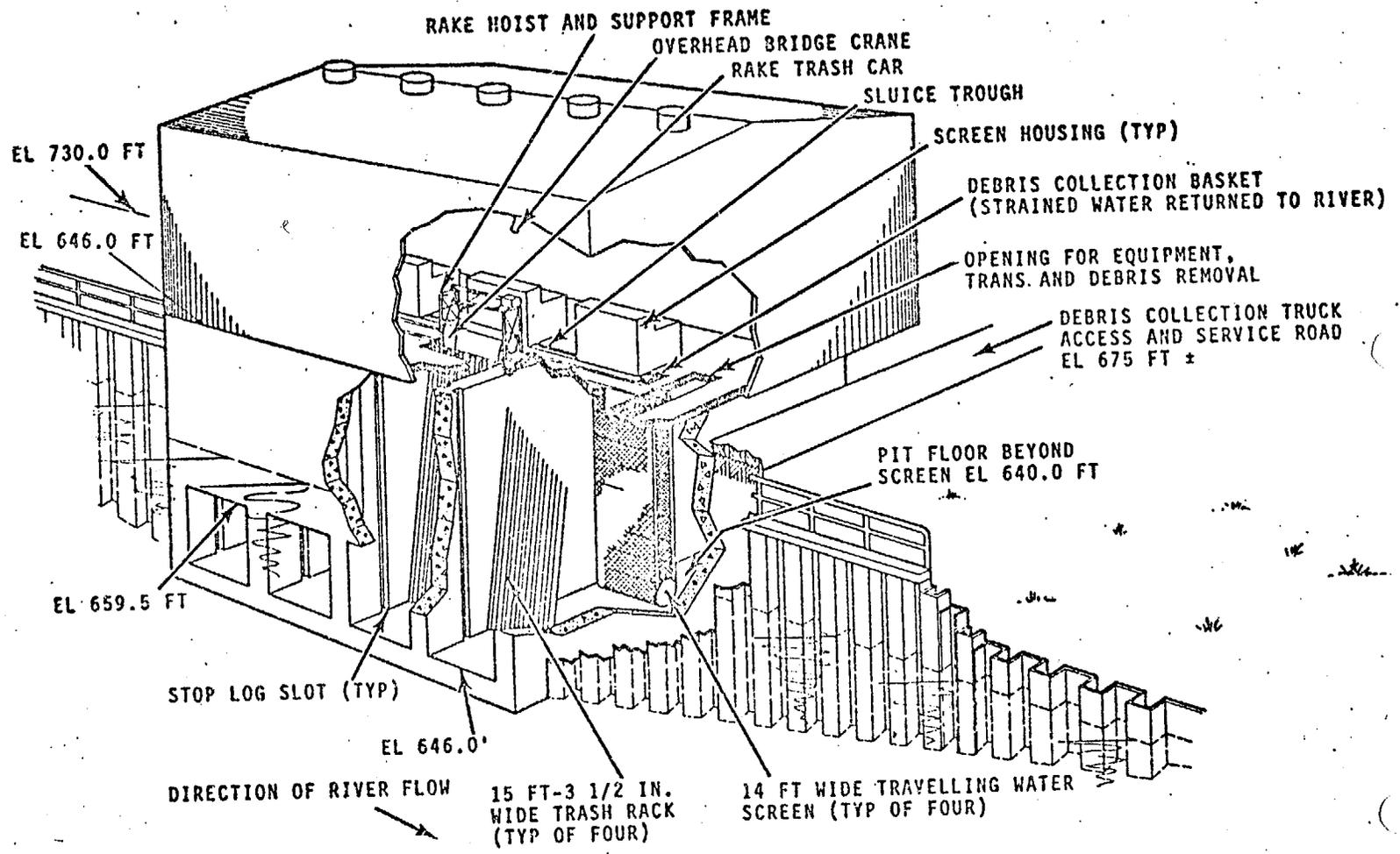
Each composite sample shall consist of an equal number of hauls made at four locations across the width of each sampled bay (Figure 3.1-4). Hauls at locations 1 and 4 shall be made simultaneously and hauls at 2 and 3 simultaneously. For example, a typical procedure follows:

- 1) lower nets at locations 1 and 4,
- 2) wait for the water to return to normal,
- 3) lift the nets simultaneously through the water column as quickly as possible,
- 4) wash nets using water spray from submersible pump,
- 5) empty contents of cod end jars into a large container for compositing,
- 6) repeat steps 1) through 5) at locations 2 and 3,
- 7) repeat all steps until approximately 75 m<sup>3</sup> of water have been filtered,
- 8) take contents of container (step 6) and filter through plankton net, retain material as composite sample,
- 9) preserve sample with 10% buffered formalin to an approximate final concentration of 5%.

The above procedure shall be followed at each operating intake bay for the set of day samples and the set of night samples.

River samples shall be collected at five locations and several depths along a transect crossing the river in front of the intake structure (Figure 3.1-5) and within the same time frame as the intake day and night sample collections.

A total of ten samples shall be collected for the day set of samples and 10 for night set of samples by making 2 to 5 minute stationary plankton net hauls.



**FIGURE 3.1-2 THE PLANT WATER INTAKE STRUCTURE**

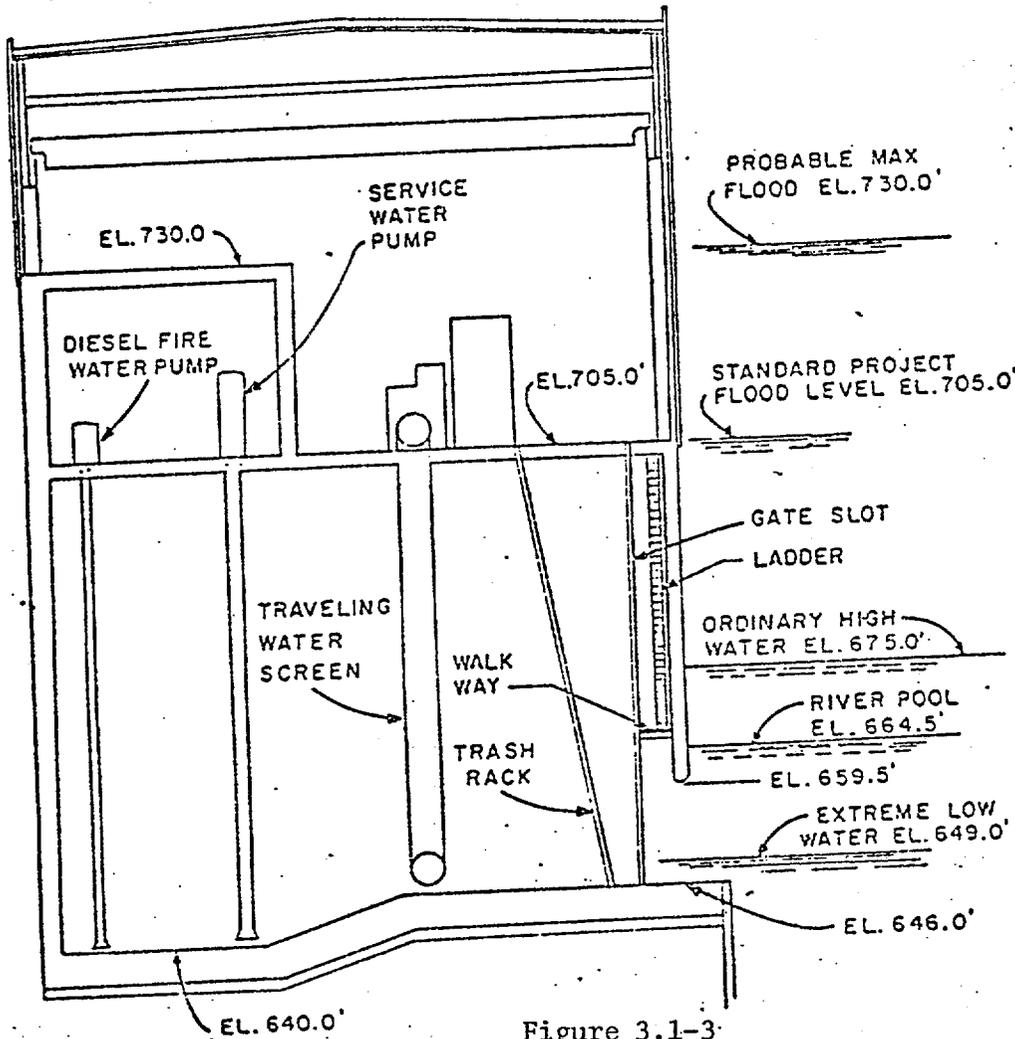


Figure 3.1-3  
 BVPS Intake Structure

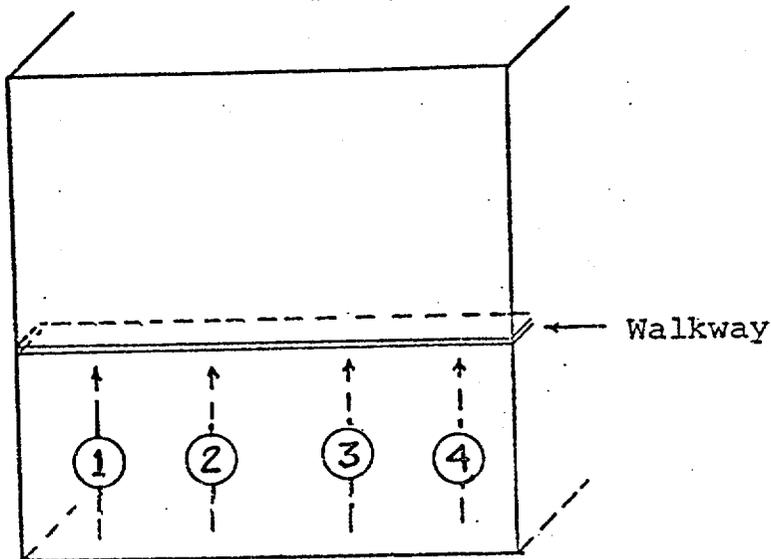
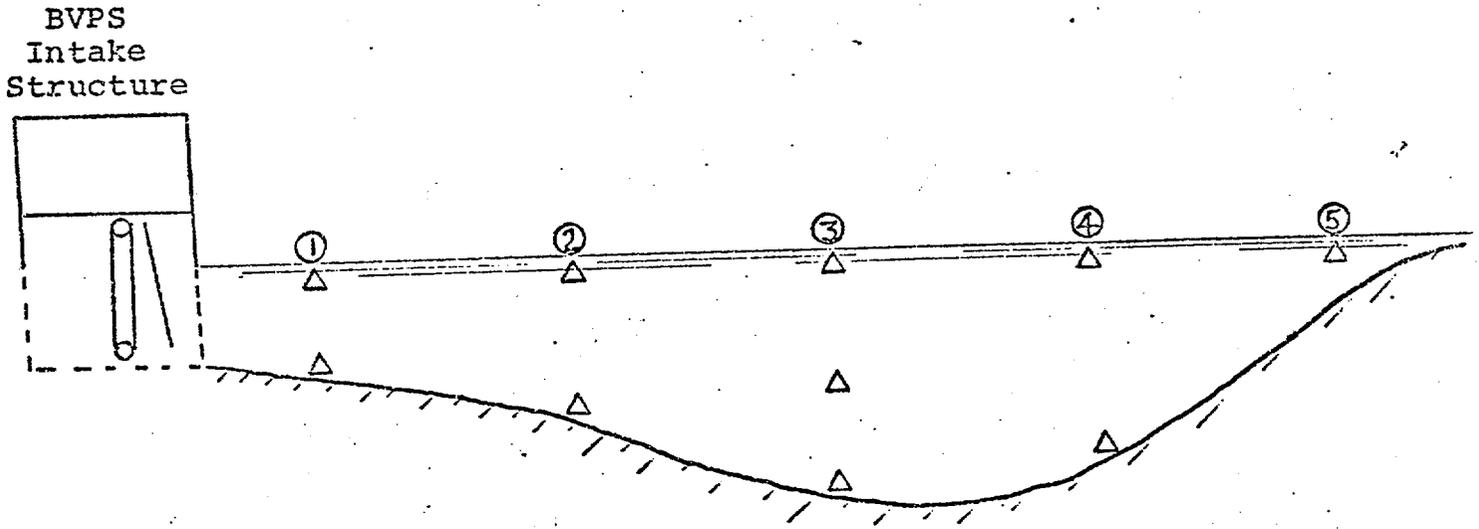


Figure 3.1-4  
 Typical BVPS Intake Bay

FIGURE 3.1-5

RIVER TRANSECT SAMPLING LOCATIONS



⊙ - Sample locations

△ - Stationary plankton tows

Data collected from the river shall be compared with intake data for species composition and densities, and, to the extent possible, relate the percentage of fish eggs and larvae entrained at the intake to those passing by the plant.

#### Reporting Requirement

An assessment of data obtained in this program element shall be submitted in accordance with Section 5.6.1.

#### Bases

Species composition and densities of entrained ichthyoplankton shall be compared with river ichthyoplankton data to evaluate possible differences. Survival of ichthyoplankton through the plant need not be evaluated because BVPS Unit 1 shall operate a closed-cycle condenser cooling water system and 100 percent mortality of entrained organisms is assumed.

### B. Phytoplankton and Zooplankton

#### Objective

To determine the composition and quantities of phytoplankton and zooplankton entrained in the intake water system.

#### Specification

Composite plankton samples shall be collected every 4 hours for one 24-hour period per month at each operating intake bay. A composite sample shall consist of representative surface and bottom water collected with a submersible pump or water sampler (e.g., Kemmerer). After compositing, a one gallon sample shall be withdrawn into a light-resistant bottle containing Lugol's solution as preservative.

Laboratory analysis shall determine species composition and abundance. Data shall be presented to characterize the composition and quantities

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-334

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

Notice is hereby given that the U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 5 to Facility Operating License No. DPR-66 issued to Duquesne Light Company, Ohio Edison Company, and Pennsylvania Power Company which revised Technical Specifications for operation of the Beaver Valley Power Station Unit No. 1, located in Beaver County, Pennsylvania. The amendment is effective as of its date of issuance.

The amendment permits a change in the plankton entrainment monitoring procedures and clarifies the monitoring procedures for dissolved oxygen. The amendment also corrects a typographical error in the original Technical Specifications.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license

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amendment. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental statement, negative declaration or environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated March 24, 1976, and (2) Amendment No. 5 to License No. DPR-66. These items are available for public inspection at the Commission's Public Document Room, 1717 H Street N. W., Washington, D. C. and at the Beaver Area Memorial Library, 100 College Avenue, Beaver, Pennsylvania.

A copy of item (2) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Site Safety and Environmental Analysis.

Dated at Rockville, Maryland, this 7th day of July 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by  
Wm. H. Regan, Jr.  
Wm. H. Regan, Jr., Chief  
Environmental Projects Branch 3  
Division of Site Safety and  
Environmental Analysis

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DATE →	6/8/76	6/9/76	6/9/76		6/15/76 <i>6/30/76</i>	