50-412

ORDER EXTENDING CONSTRUCTION COMPLETION DATE (BEAVER VALLEY POWER STATION, UNIT NO. 2) DATED: JAN 30 1980

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JAN 3 0 1980

Docket No: 50-412

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

Dear Mr. Woolever:

SUBJECT: ORDER EXTENDING CONSTRUCTION COMPLETION DATE (BEAVER VALLEY POWER STATION, UNIT NO. 2)

In response to your request of May 9, 1979, the Nuclear Regulatory Commission has issued an Order extending the construction completion date for Beaver Valley Power Station, Unit No. 2. In lieu of the latest completion date of February 1, 1980, as specified in Construction Permit No. CPPR-105, the latest completion date has been extended to December 31, 1984.

A copy of the Order, the staff safety evaluation, negative declaration, and environmental impact appraisal are enclosed for your information. The Order and the negative declaration have been transmitted to the Office of the Federal Register for publication.

Sincerely,

Original Signed by

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Enclosures:
1. Order Extending Completion Date
2. Staff Safety Evaluation
3. Negative Declaration
4. Environmental Impact Appraisal

cc:
See next page

	DPM:LWR:AD	DPM:DD
	SAVarga	DBVassallo
	12/30/79	1/30/79

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DATE	12/31/79	12/2/79	12/2/79	12/10/79	12/17/79	12/30/79

Mr. Earl J. Woolever

cc: Gerald Charnoff, Esq.
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Governor's Office of State
Planning & Development
ATTN: Coordinator, Pa. State
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Mr. Thomas J. Czerpah, Mayor
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Shippingport, Pennsylvania 15077

U. S. Environmental Protection Agency
ATTN: EIS Coordinator
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Boston, Massachusetts 02107

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
DUQUESNE LIGHT COMPANY
OHIO EDISON COMPANY
THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412
BEAVER VALLEY POWER STATION, UNIT NO. 2
ORDER EXTENDING CONSTRUCTION COMPLETION DATE

The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and the Toledo Edison Company are holders of Construction Permit No. CPPR-105 issued by the Atomic Energy Commission* on May 3, 1974, for construction of Beaver Valley Power Station, Unit No. 2 presently under construction in Beaver County, Pennsylvania, at a site jointly owned by the companies listed above as tenants in common without right of partition. The Construction Permit was amended on April 19, 1977 by the Nuclear Regulatory Commission to delete Pennsylvania Power Company as one of the holders of the Permit.

On May 9, 1979 the companies listed above filed a request for an extension of the completion date because construction has been delayed due to (1) increase in construction costs and the attending difficulties in obtaining capital funds, (2) a downward revision in the demand forecast for power, (3) construction difficulties with soil densification and containment liner welding, and (4) additional requirements for safety related matters which affected the schedule for construction more severely than the companies anticipated. While all of these matters contribute to the delay requested, the pacing matters controlling the overall delay are items (1) and (2) stated above.

*Effective January 20, 1975, the Atomic Energy Commission became the Nuclear Regulatory Commission and Permits in effect on that day were continued under the authority of the Nuclear Regulatory Commission.

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This action by the Nuclear Regulatory Commission to extend the construction completion date involves no significant hazards consideration; good cause has been shown for the delay; and the requested extension is for a reasonable period, the bases for which are set forth in a staff evaluation.

Copies of the above documents and related material are available for public inspection at the Commission's Public Document Room, 1717 H street, N. W., Washington, D. C. 20555 and at the B. F. Jones Memorial Library, 663 Franklin Avenue, Aliquippa, Pennsylvania 15001.

IT IS HEREBY ORDERED that the latest completion date for CPPR-105 is extended from February 1, 1980 to December 31, 1984.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
D. F. Ross

D. F. Ross, Jr., Acting Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: JAN 30 1980

AD:LWR
Svarga
1/30/80

OFFICE	DPM:LWR #1	DPM:LWR #1	DPM:LWR #1	OELD	DPM:D	DD:DPM
SURNAME	EGHylton:pcm	JAngelo	JFStolz	S. Schinki	DFRoss	DBVassallo
DATE	12/31/79	12/2/79	12/2/79	12/10/79	12/30/79	1/30/80

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
DUQUESNE LIGHT COMPANY
OHIO EDISON COMPANY
THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412
BEAVER VALLEY POWER STATION, UNIT NO. 2
ORDER EXTENDING CONSTRUCTION COMPLETION DATE

The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and the Toledo Edison Company are holders of Construction Permit No. CPPR-105 issued by the Atomic Energy Commission* on May 3, 1974, for construction of Beaver Valley Power Station, Unit No. 2 presently under construction in Beaver County, Pennsylvania, at a site jointly owned by the companies listed above as tenants in common without right of partition. The Construction Permit was amended on April 19, 1977 by the Nuclear Regulatory Commission to delete Pennsylvania Power Company as one of the holders of the Permit.

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This action by the Nuclear Regulatory Commission to extend the construction completion date involves no significant hazards consideration; good cause has been shown for the delay; and the requested extension is for a reasonable period, the bases for which are set forth in a staff evaluation.

Copies of the above documents and related material are available for public inspection at the Commission's Public Document Room, 1717 H street, N. W., Washington, D. C. 20555 and at the B. F. Jones Memorial Library, 663 Franklin Avenue, Aliquippa, Pennsylvania 15001.

IT IS HEREBY ORDERED that the latest completion date for CPPR-105 is extended from February 1, 1980 to December 31, 1984.

FOR THE NUCLEAR REGULATORY COMMISSION

D. F. Ross, Jr., Acting Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: JAN 30 1980

EVALUATION OF REQUEST FOR EXTENSION
OF THE CONSTRUCTION PERMIT FOR THE
BEAVER VALLEY POWER STATION, UNIT NO. 2
DOCKET NO. 50-412

Introduction

On May 9, 1979, Duquesne Light Company filed a request for extension of the latest completion date of the Construction Permit for Beaver Valley Power Station, Unit No. 2, from February 1, 1980 to December 31, 1984. This request was filed by Duquesne Light Company on behalf of itself and Ohio Edison Company, The Cleveland Electric Illuminating Company, and the Toledo Edison Company, all holders of the Construction Permit which was issued on May 3, 1974. In accordance with 10 CFR Section 50.55(b), the NRC staff, having found good cause shown, is extending the latest completion date to December 31, 1984 for the reasons stated below.

Analysis

The requested extension of the latest completion date to December 31, 1984 will result in an additional five years compared to the original date of February 1, 1980. The holders of the construction permit estimate that the plant will be ready for fuel loading by December 31, 1983. The interval from December 31, 1983 and December 31, 1984 is considered to be a reasonable allowance for uncertainties in predicting all of the factors that could influence the completion of construction.

Construction was begun in May 1974 when the construction permit was issued. In September 1974 the permit holders virtually halted construction based on the sizeable increase in the estimated construction cost and the unavailability of capital funds through financing. The estimated costs increased from approximately $360 million (1971 estimate) to $560 million (April 1974 estimate). Construction was resumed in March 1976 but at a pace to complete construction by April 1981, a delay of two years due to difficulties in obtaining capital funds, especially because of the increased costs of construction. By the time construction was resumed in March 1976, the estimated costs of construction had increased to $795 million. The present estimate of construction is now stated by the permit holders to be $1.4 billion, nearly four times the original estimate. Factors which contribute to these increases are stated to be the increase in interest on capital investment, labor rates, and material costs.

Shortly after construction was resumed in 1976, the constructors encountered loose granular soil during the excavation for the reactor containment. The permit holders began an extensive program in September 1976 of installing pressure injected concrete footings to densify the loose material. This program was completed in June 1977 and resulted in an appreciable delay in construction since no significant work could proceed until the foundation soil was densified.

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In their request for extension of the construction completion date, the permit holders state that additional design and construction for safety and environmental requirements influenced both the cost of the construction and the time to complete the construction. The permit holders state that their experience with nuclear plant construction was limited during the early planning stages, and presumably was not sufficient to estimate with better accuracy what the impact of these requirements would be upon the construction schedule and cost.

The permit holders further state that in their request for an extension of the construction completion date that there has been a considerable reduction in the load growth of the utilities which own Beaver Valley Power Station, Unit No. 2. The permit holders state that the projected summer peak load for 1984, the year in which the unit will be ready for commercial operation, will be 13,563 Megawatts. This peak load is actually less than was forecasted for the year 1978 in the year 1971 when the project was in the planning stages. This matter regarding the need for power based on the estimated load demand is discussed in our Environmental Impact Appraisal.

The NRC staff has considered all of the factors stated by the permit holders in their request and discussed in the paragraphs above. The NRC staff analysis finds that two factors are predominant. The first factor is the construction funding problem that developed in the year 1974 which was the first year of construction. This factor caused a delay of approximately two years and was somewhat aggravated by the soil density problem which was discovered when construction was resumed in 1976. The second predominant factor was the need for power as estimated by the load demand. This power demand factor contributes to a delay of nearly three years. The other factors stated by the permit holders appear to the NRC staff as having a minor effect when taken individually. When these other factors are weighed in the aggregate, they appear to contribute to the general problems associated with the large construction project but are probably submerged by the effects of the two predominant reasons.

Conclusion

The NRC staff has reviewed the information provided by the permit holders in their request and conclude that the factors discussed above are reasonable and constitute good cause for delay; and that the extension of construction is justified. The NRC staff finds that this action does not involve a significant hazards consideration, and that good cause exists for the issuance of an Order extending the completion date.

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Accordingly, issuance of an Order extending the latest completion date for construction of Beaver Valley Power Station, Unit No. 2, as set forth in the Construction Permit to December 31, 1984, is reasonable and should be authorized.

Original Signed by

John Angelo, Project Manager
Light Water Reactors Branch No. 1
Division of Project Management

Original Signed by

John F. Stolz, Chief
Light Water Reactors Branch No. 1
Division of Project Management

Dated: JAN 30 1980

OFFICE	DPM:LWR #1	DPM:LWR #1				
SURNAME	JAngelo:pcm	JFStolz				
DATE	12/2/79	12/2/79				

7590-01

NEGATIVE DECLARATION

SUPPORTING: EXTENSION OF CONSTRUCTION PERMIT NO. CPPR-105 FOR

BEAVER VALLEY POWER STATION UNIT NO. 2

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY
DUQUESNE LIGHT COMPANY
OHIO EDISON COMPANY
THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

The U.S. Nuclear Regulatory Commission (the Commission) has reviewed a request from The Cleveland Electric Illuminating Company, Duquesne Light Company, Ohio Edison Company, and The Toledo Edison Company for 59 month extension of the construction permit for Beaver Valley Power Station, Unit No. 2, located in Beaver County, Pennsylvania. The extension would permit revision of the construction completion to December 31, 1984.

The Commission's Division of Site Safety and Environmental Analysis has prepared an environmental impact appraisal relative to the proposed extension. Based on the appraisal, the Commission has concluded that an environmental impact statement for this particular action is not warranted because there will be no significant environmental impact other than those which have been described in the Commission's Final Environmental Statement for Beaver Valley Power Station, Unit No. 2 published in July 1973, or evaluated in the present environmental impact appraisal.

The environmental impact appraisal is available for public inspection at the Commission's Public Document Room, 1717 H Street, NW, Washington, DC and in the B. F. Jones Memorial Library, 663 Franklin Avenue, Aliquippa, Pennsylvania. 15001.

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

Dated at Bethesda, Maryland, this 26th day of December, 1979.

FOR THE NUCLEAR REGULATORY COMMISSION

Donald E. Sells, Acting Chief
Environmental Projects Branch 2
Division of Site Safety and
Environmental Analysis

ENVIRONMENTAL IMPACT APPRAISAL

BY THE DIVISION OF SITE SAFETY AND

ENVIRONMENTAL ANALYSIS

SUPPORTING EXTENSION OF CONSTRUCTION PERMIT

NO. CPPR-105, FOR THE BEAVER VALLEY POWER

STATION, UNIT 2

DOCKET NO. 50-412

A. Description of the Proposed Action

The proposed action is the issuance of an order relative to extension of the construction completion date for Beaver Valley Power Station, Unit 2, from February 1, 1980 to December 31, 1984. This action was requested by the Duquesne Light Company in a letter dated May 9, 1979. The NRC staff has reviewed the request and found that good cause has been shown for extension of the construction permit (see attached Safety Evaluation). Approval of this extension requires a reexamination of the need for power and community impact assessments performed in accordance with the CP environmental review.

B. Environmental Impacts of the Proposed Action

The environmental impacts associated with construction of Unit 2 were addressed in the NRC staff's Final Environmental Statement (FES, July 1973). The staff has completed the reexamination of the need for power and community impact as follows:

Need for Power

The Beaver Valley Power Station, Unit 2, will be jointly owned by the Cleveland Electric Illuminating Company (CEL), Duquesne Light Company (DL), Ohio Edison Company (OE), and the Toledo Edison Company (TE). These utilities are members of the Central Area Power Coordinating group (CAPCO). Joint planning of generating units through the CAPCO agreement has been in effect since 1967 and among other accomplishments results in an orderly growth in power supply to meet the power demand in each service area. Because of the high degree of coordinated planning among these utilities, the need for Beaver Valley, Unit 2, is assessed in terms of the enlarged CAPCO service area.

The applicant has requested that the construction permit be extended to December 31, 1984 with a proposed commercial operating date of May 1, 1984. The newly proposed commercial operating date represents approximately a

six and one-half year delay from the applicant's initial plans and about a thirty-eight month delay from its revised projection submitted to the NRC in mid-1976. These delays are consistent however with the lower load growth experienced since 1973 and the applicant's latest projections for the future.

The staff has reviewed CAPCO's latest capacity plans and demand projections and concludes that Beaver Valley, Unit 2, can be delayed to May 1984 without adversely affecting reliability on member systems. The staff bases this conclusion on its review of an independent forecasting model which provides electrical energy demand projections pertinent to the CAPCO region. These forecasts were prepared for the U.S. Nuclear Regulatory Commission by the Energy Division of the Oak Ridge National Laboratory.[1] The forecasts are based on the ORNL State-level Electricity Demand (SLED) forecasting model[2] with key updates to capture revised projections on fuel prices, income, and population[3]. These updated results show electricity demand in Ohio growing at between 3.0% and 5.35% per annum between 1977 and 1985, with a base case (a most likely scenario) of 3.67%. Assuming that demand growth in Ohio is representative of growth in the CAPCO system (note - approximately 74% of CAPCO's energy requirements are in Ohio) and that energy sales and peak load will grow at approximately the same rate, we estimate that under our base case, the Beaver Valley Unit 2 will be needed for reliability purposes by the summer of 1984.

Community Impacts

The proposed extension will result in a shift in community impacts in time and extend the total time the region is subjected to these temporary construction impacts. At the present time, the construction labor force associated with Beaver Valley, Unit 2, approximates 1425 workers. However, the construction of the unit does not appear to have had any significant adverse effects on human activities near the plant beyond occasional traffic congestion. This relatively favorable situation is due to the site's proximity to the Pittsburgh area labor pool and the

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1. Sensitivity Analysis of Electrical Power Demand Growth in Ohio, W. S. Chern, B. D. Holcomb, ORNL, Energy Division, May 21, 1979.

2. Regional Econometric Model for Forecasting Electricity Demand by Sector and by State, ORNL, Energy Division, W. S. Chern, et al., October 1978.

3. Fuel price update from - Energy Information Administration, U.S. D.O.E., Annual Report to Congress, Vol. II, Appendix: Summary Data Inputs and Forecasts for 1985 and 1990, Washington, D. C., September 1978.

   Income and population update from - National Planning Association, The Geography of Growth, 1967-1990, Vol. i: Summary, Washington, D.C., December 1978.

preference of the construction labor force to commute to the site. As a result, stress or hardship on the local infrastructure such as on schools, housing, and public facilities have not materialized.

During the early stages of the extension period, the construction labor force is expected to peak at about 2000 workers and steadily decline thereafter. Based on the experience to date the applicant expects that in-movement within 20 miles of the site will be limited to about 150 workers at the peak. The staff views the increment from present levels small and does not expect any significant increase in community impacts. Moreover, it is likely that the extension may result in a moderation of impacts compared to those associated with a more compressed schedule. On balance, the staff finds no significant change in community impacts resulting from the extension.

During the period prior to startup of Unit 2, the remaining construction and startup personnel at Unit 2 may be exposed to sources of radiation from the operation of Unit 1. The NRC staff estimates that the integrated dose to such workers would be less than 10 man-rem. This is very small compared to about 400,000 man-rems/year received from natural radiation by the population within 50 miles of the plant. Consequently, no significant impact on such workers from Unit 1 radiation is expected.

C. Conclusion and Basis for Negative Declaration

On the basis of the foregoing information and evaluation, the NRC staff finds that, with the exception of the impacts noted above, which are judged to be insignificant, the proposed action would result in no impacts that were not considered in the Commission's FES.

The Nuclear Regulatory Commission therefore concludes that no environmental impact statement for the proposed action need be prepared, and that a negative declaration to this effect is appropriate.